PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D1
# SURFACE AND SUBSURFACE BEDDED SEDIMENT

**FINAL**

February 8, 2016

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D1.1
# CONTAMINANT AND PHYSICAL PARAMETERS IN BEDDED SEDIMENT—FIGURES

**FINAL**

February 8, 2016

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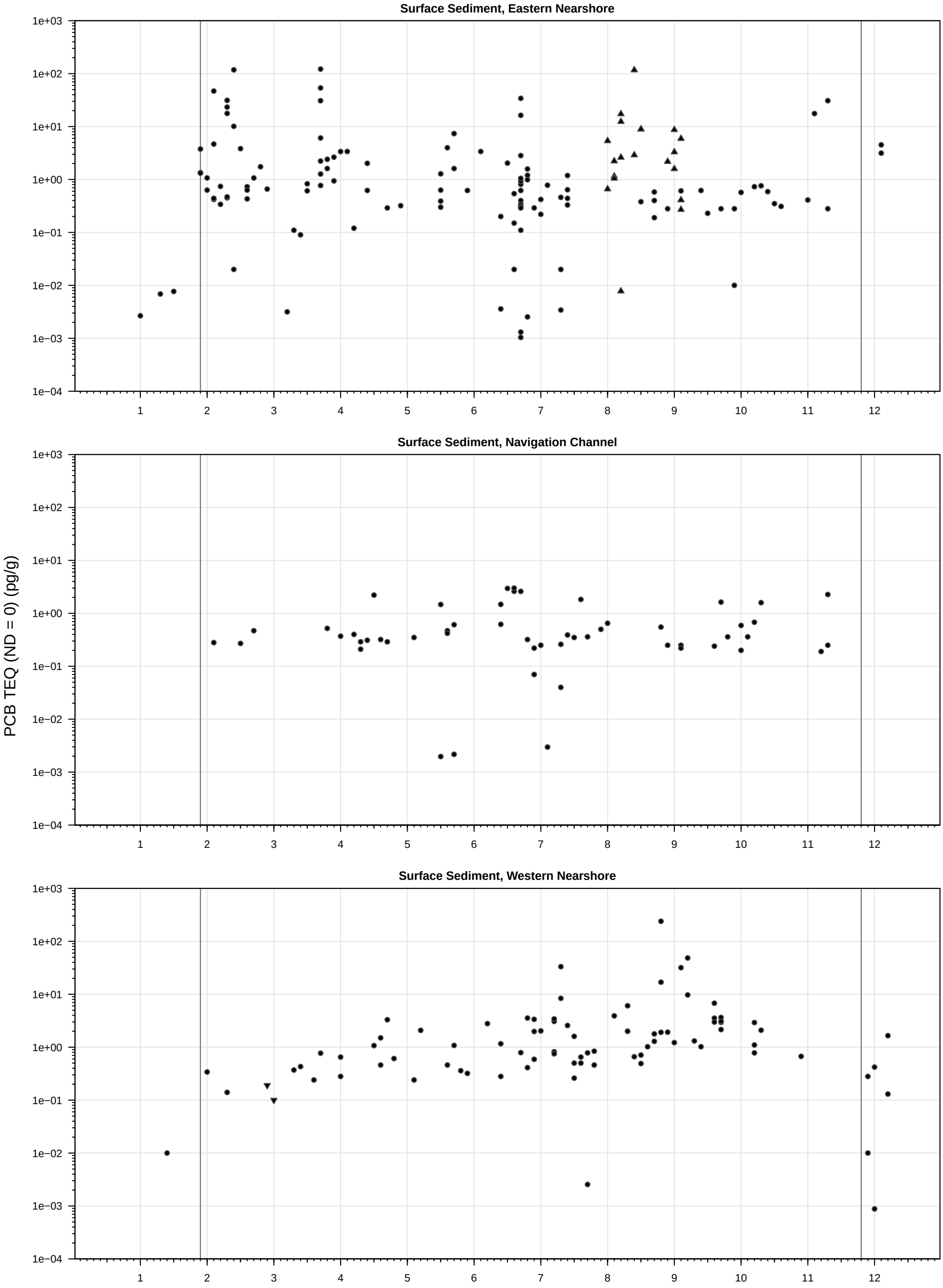


**Figure D1.1−1**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of PCB TEQ (ND = 0)
Concentrations in Surface Sediment, RM 0.8−12.2

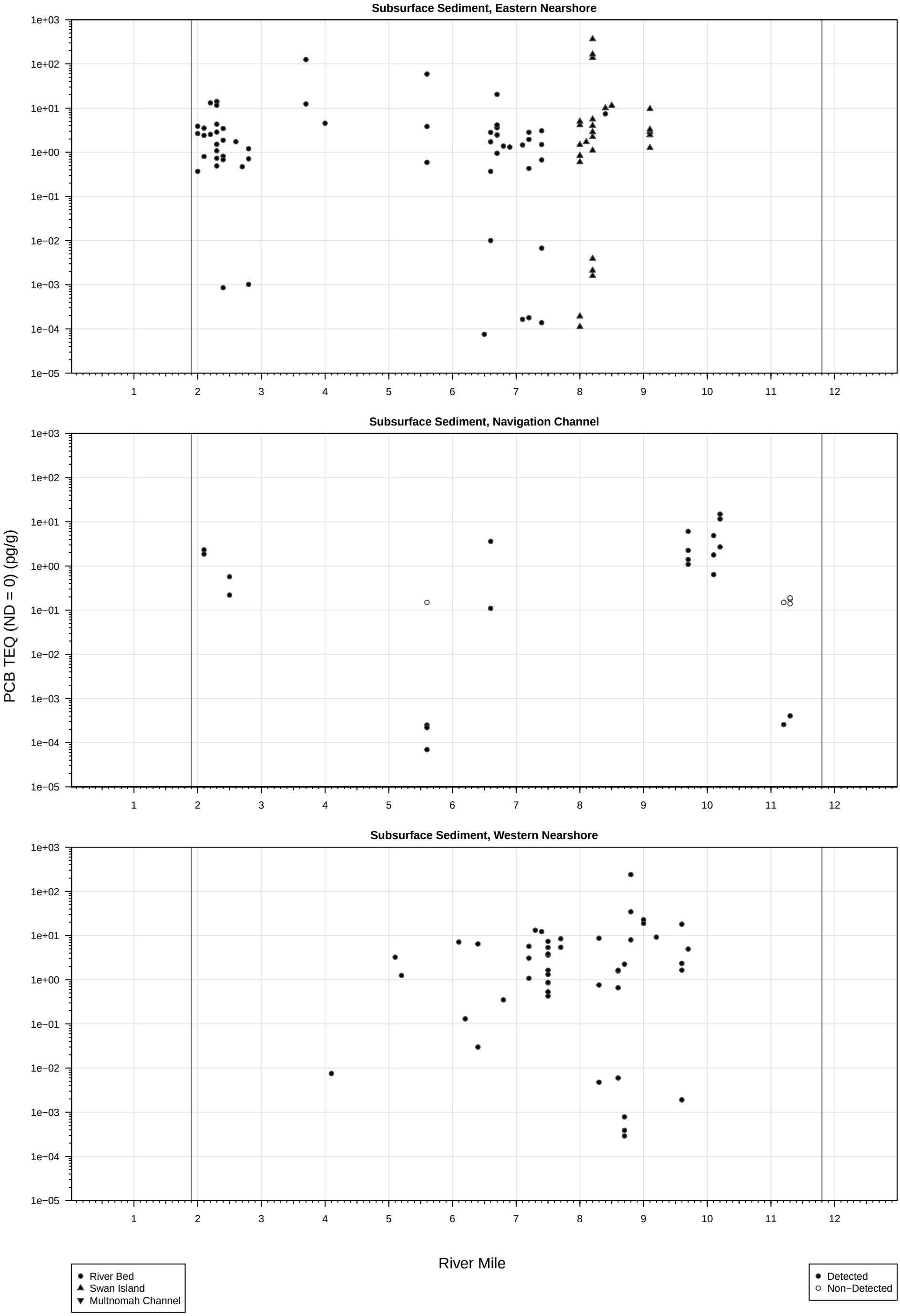


**Figure D1.1−2**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of PCB TEQ (ND = 0)
Concentrations in Subsurface Sediment, RM 0.8−12.2

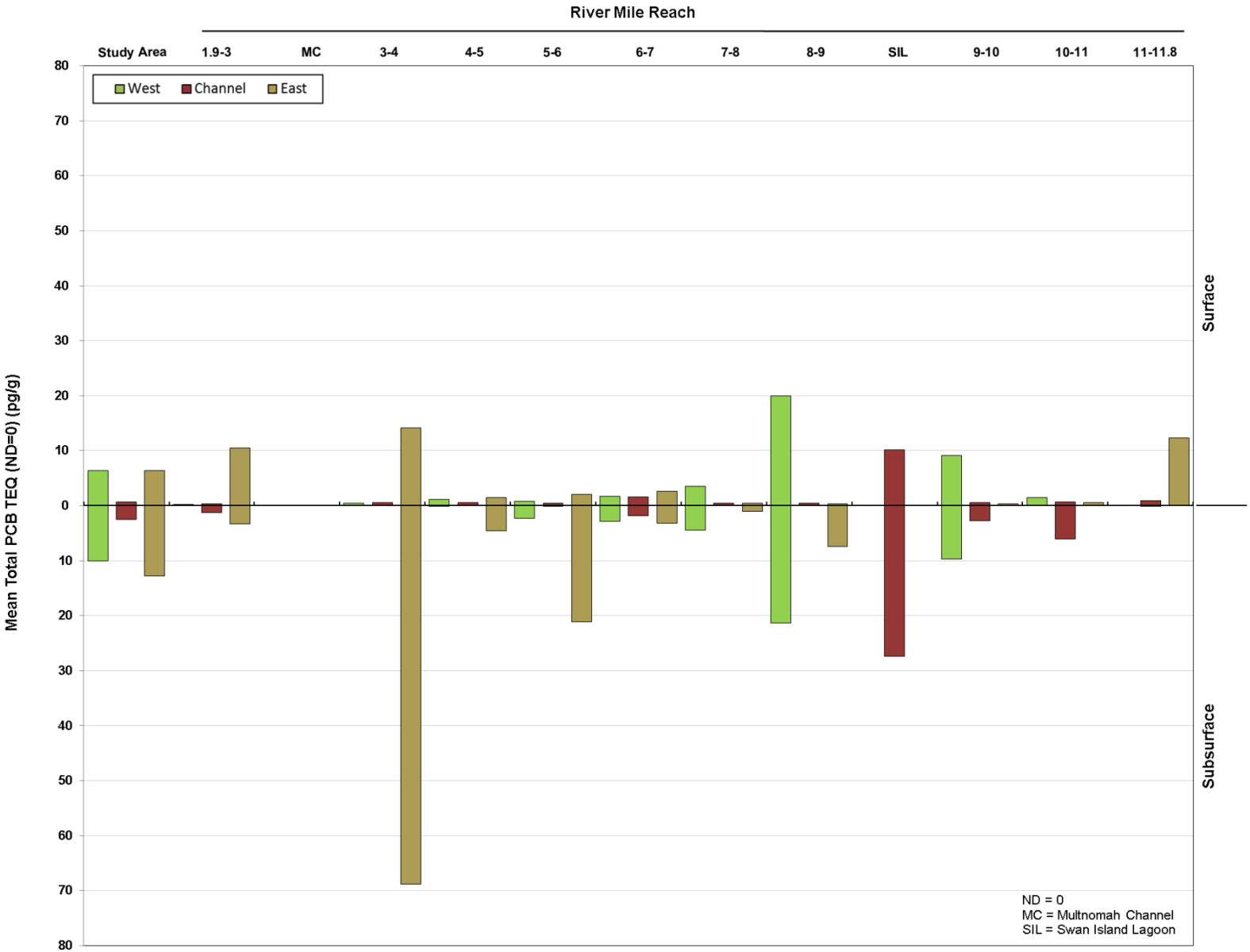


**Figure D1.1-3**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Total PCB TEQ (ND=0) Concentration
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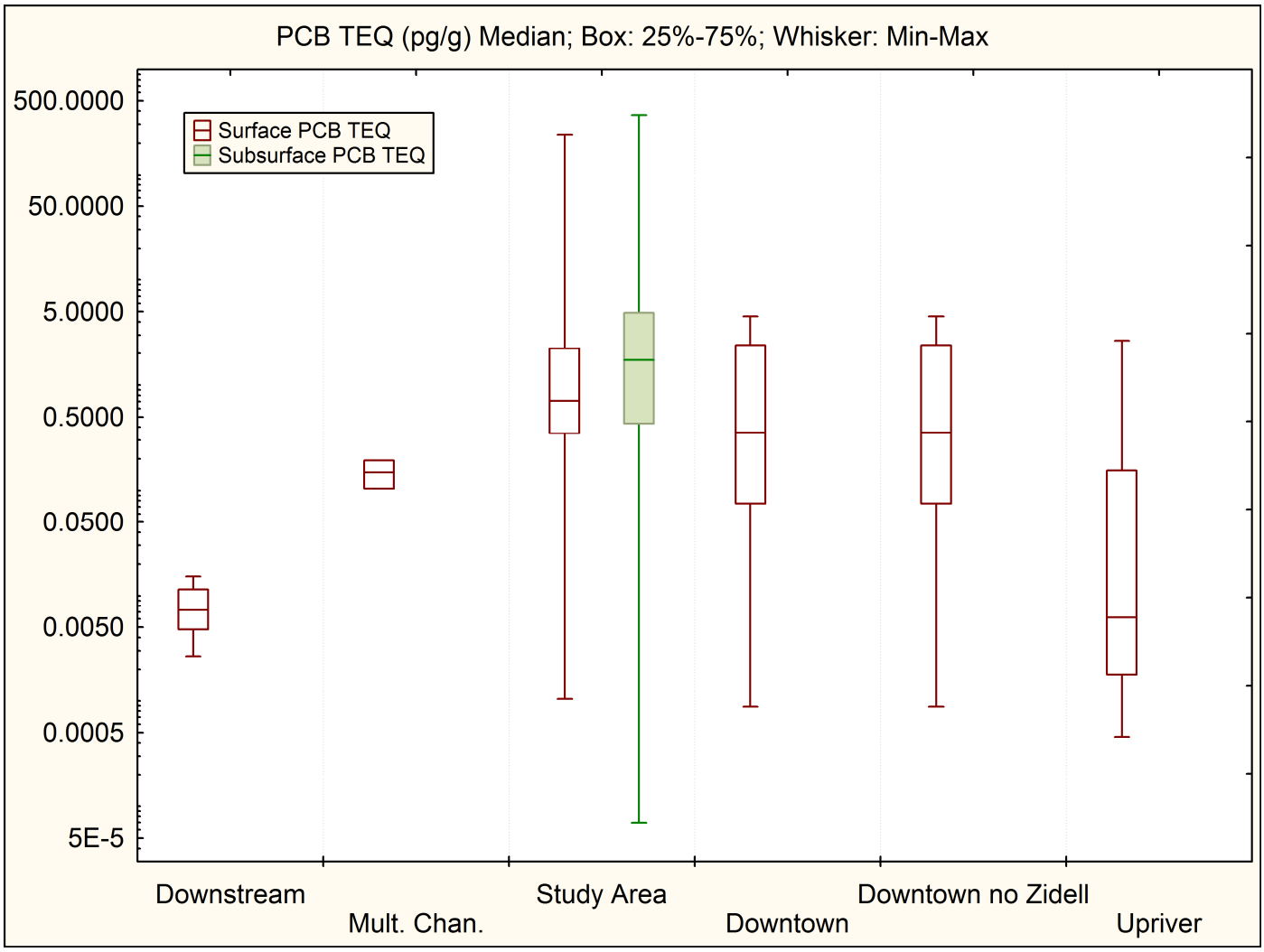


Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-4**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of PCB TEQ (ND=0) in
Surface and Subsurface Sediment by River Reach

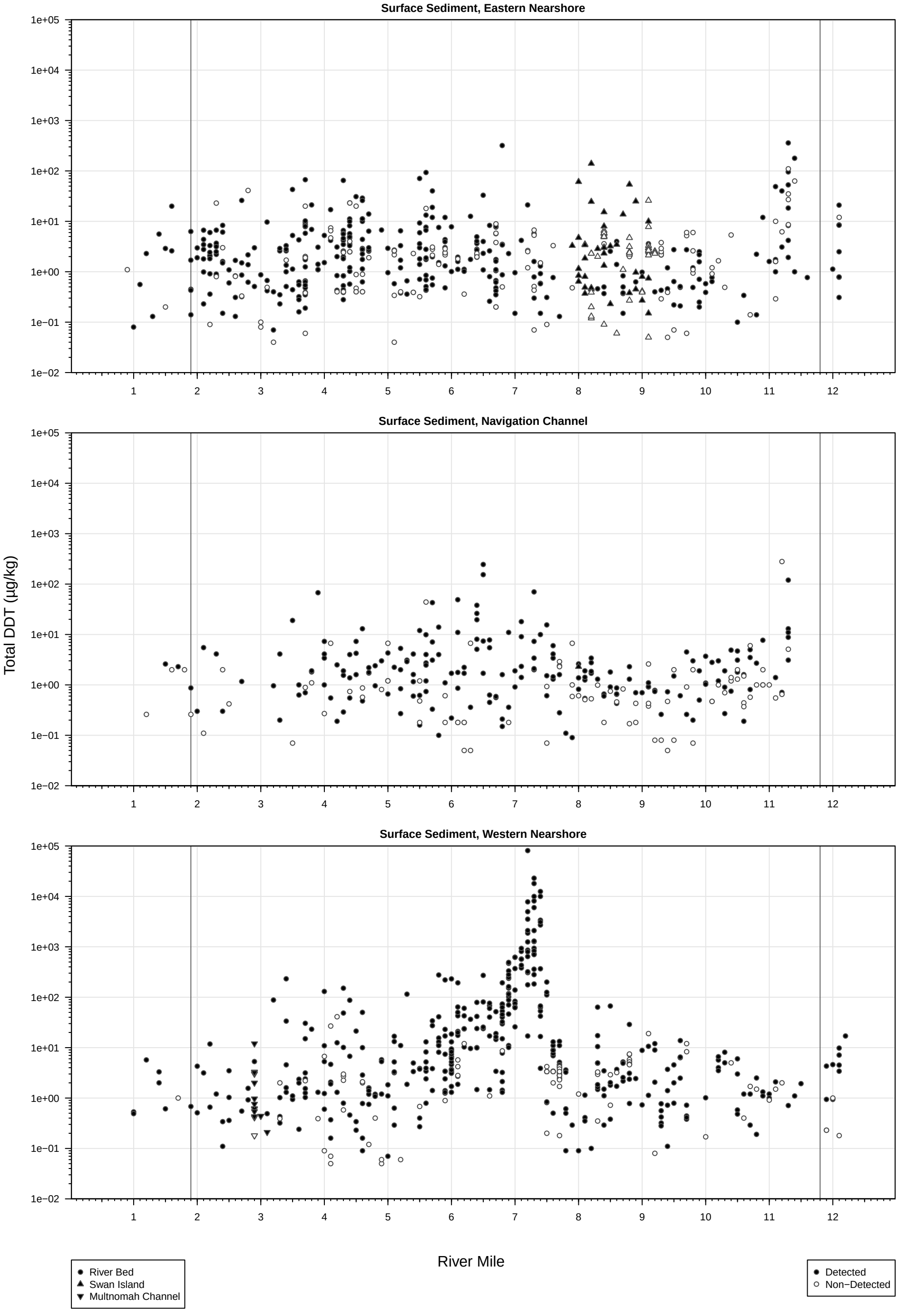


**Figure D1.1−5**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDT
Concentrations in Surface Sediment, RM 0.8−12.2

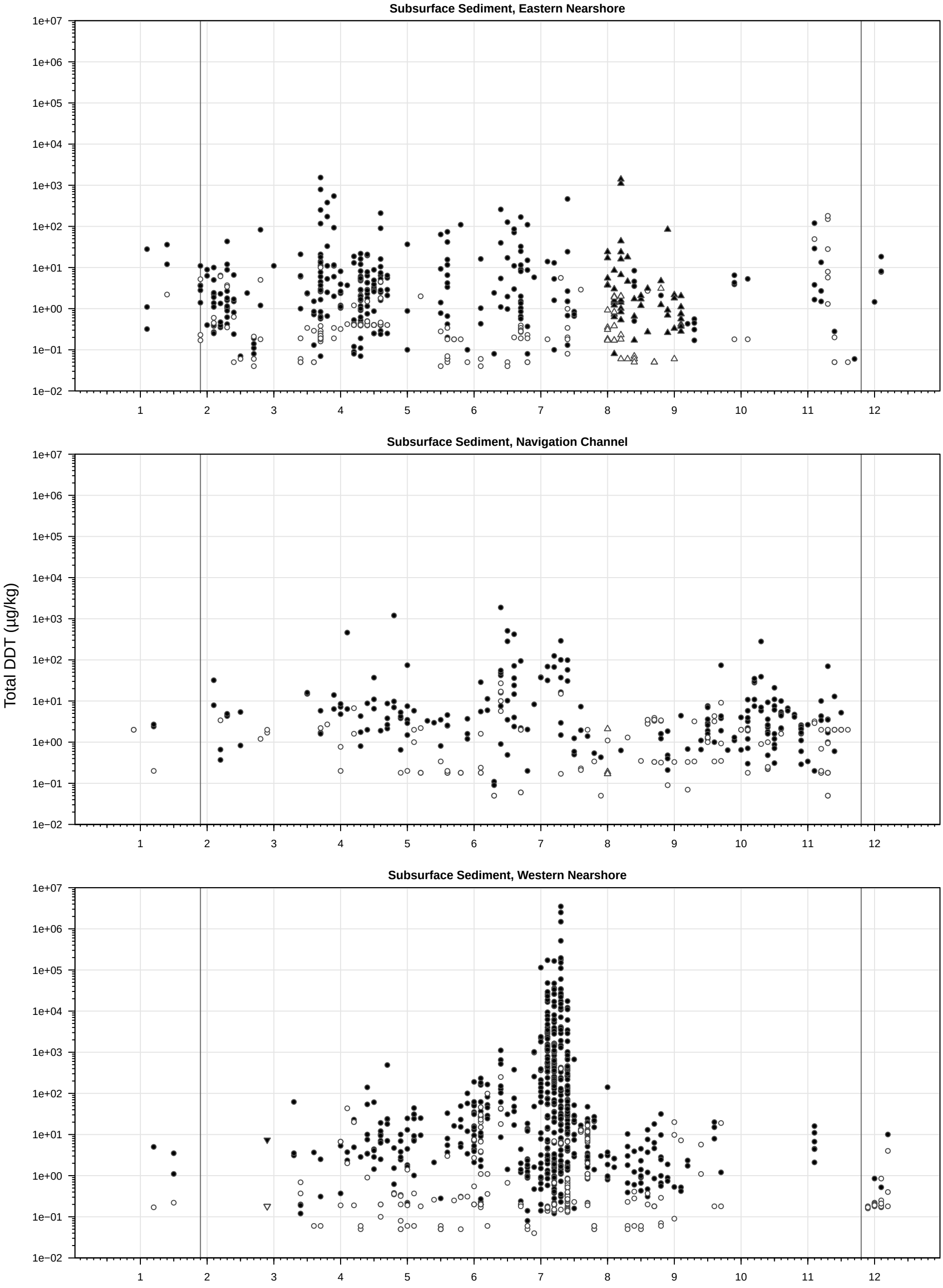


**Figure D1.1−6**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDT
Concentrations in Subsurface Sediment, RM 0.8−12.2

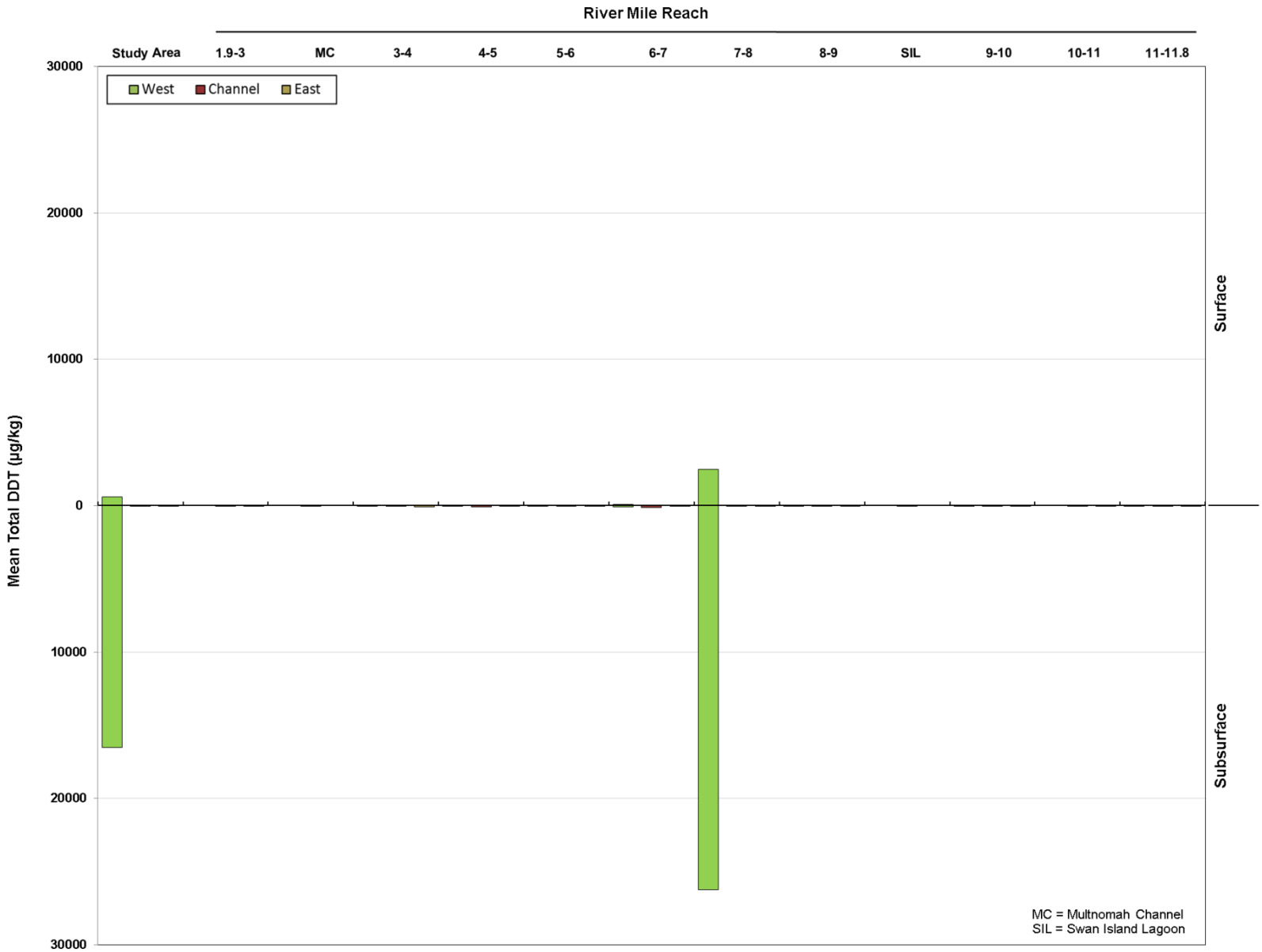


**Figure D1.1-7**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Total DDT Concentration
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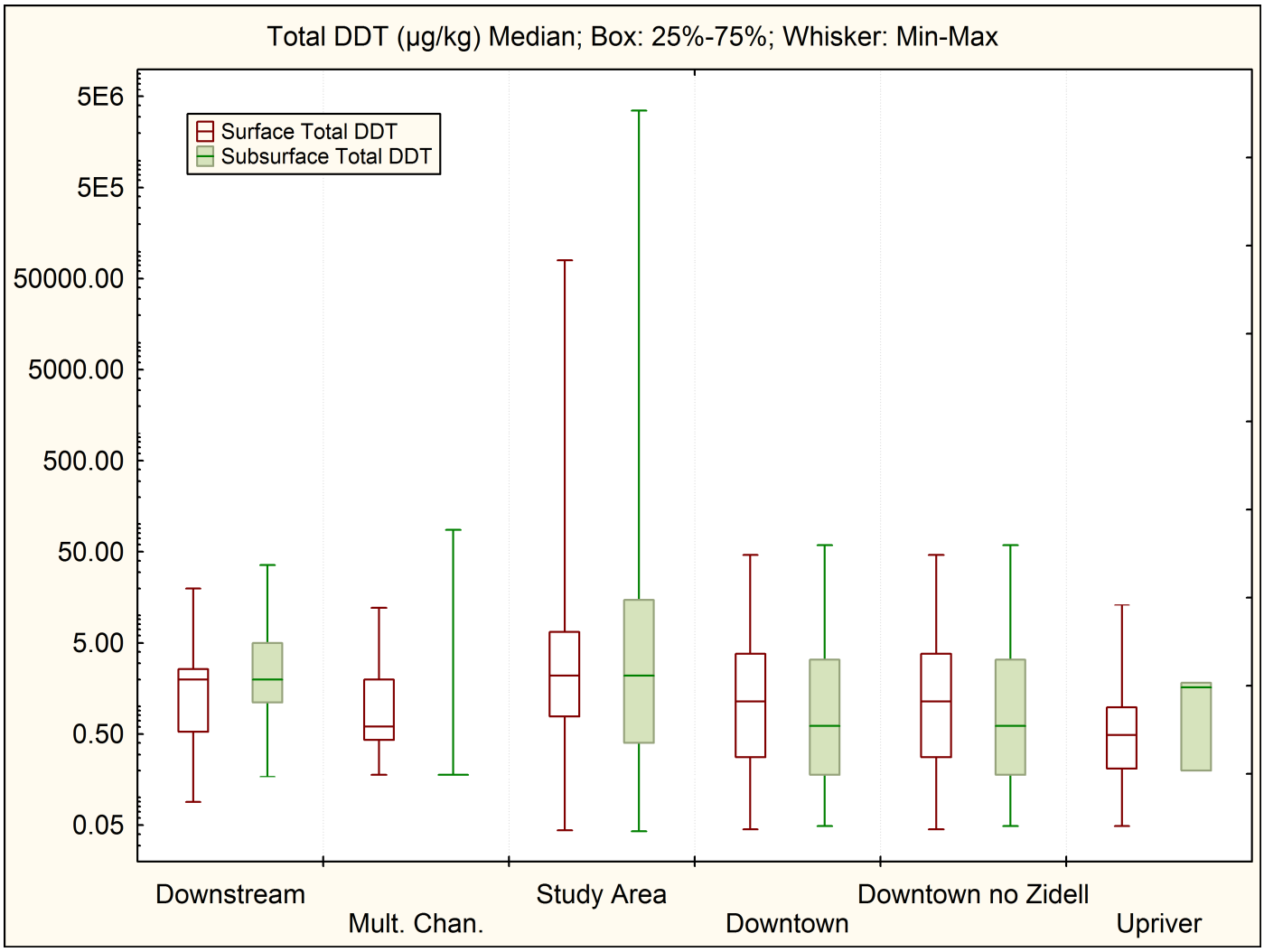



Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-8**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Total DDT in
Surface and Subsurface Sediment by River Reach

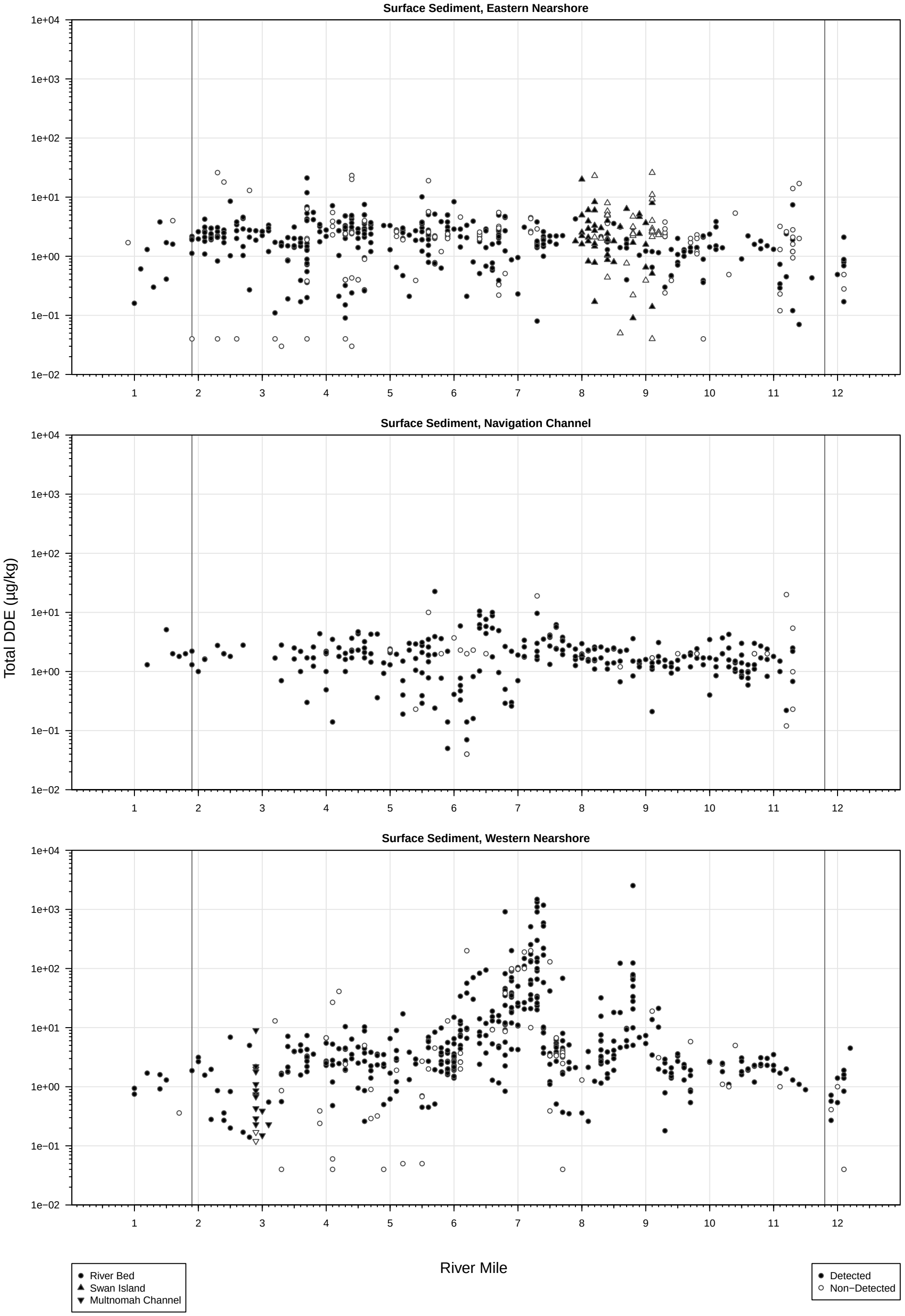



**Figure D1.1−9**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDE
Concentrations in Surface Sediment, RM 0.8−12.2

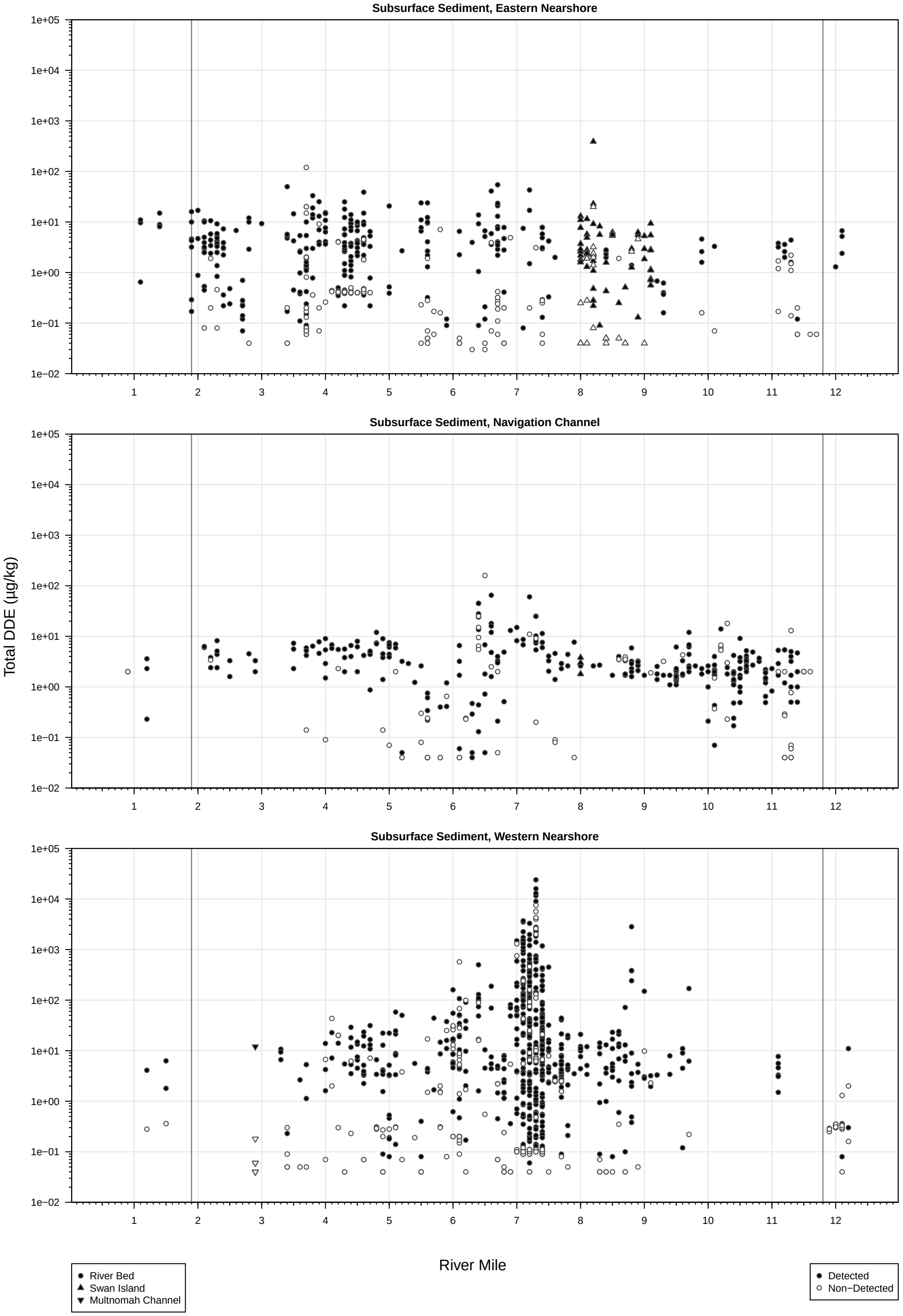



**Figure D1.1−10**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDE
Concentrations in Subsurface Sediment, RM 0.8−12.2

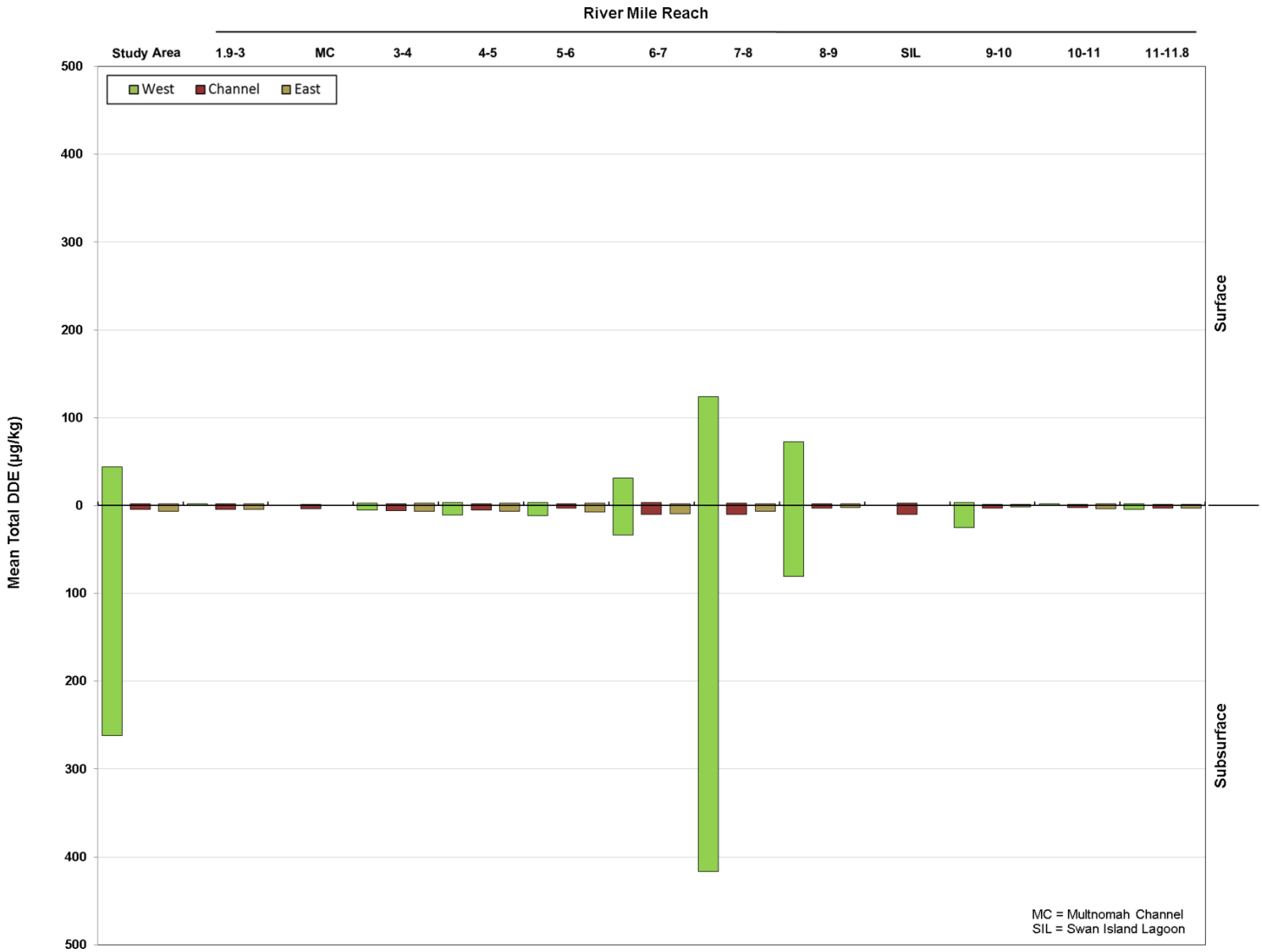
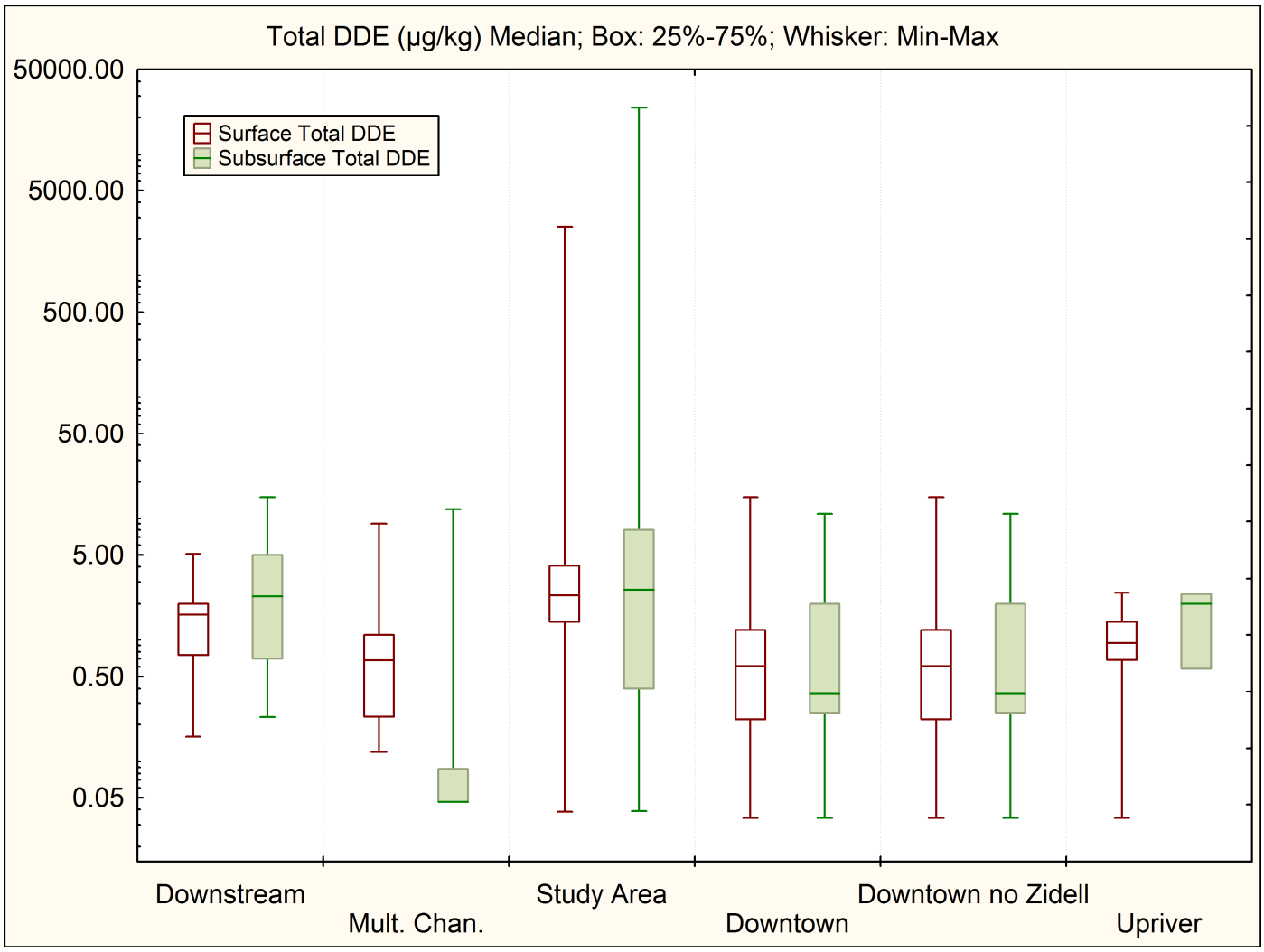



**Figure D1.1-11**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Total DDE Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-12**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Total DDE in
Surface and Subsurface Sediment by River Reach

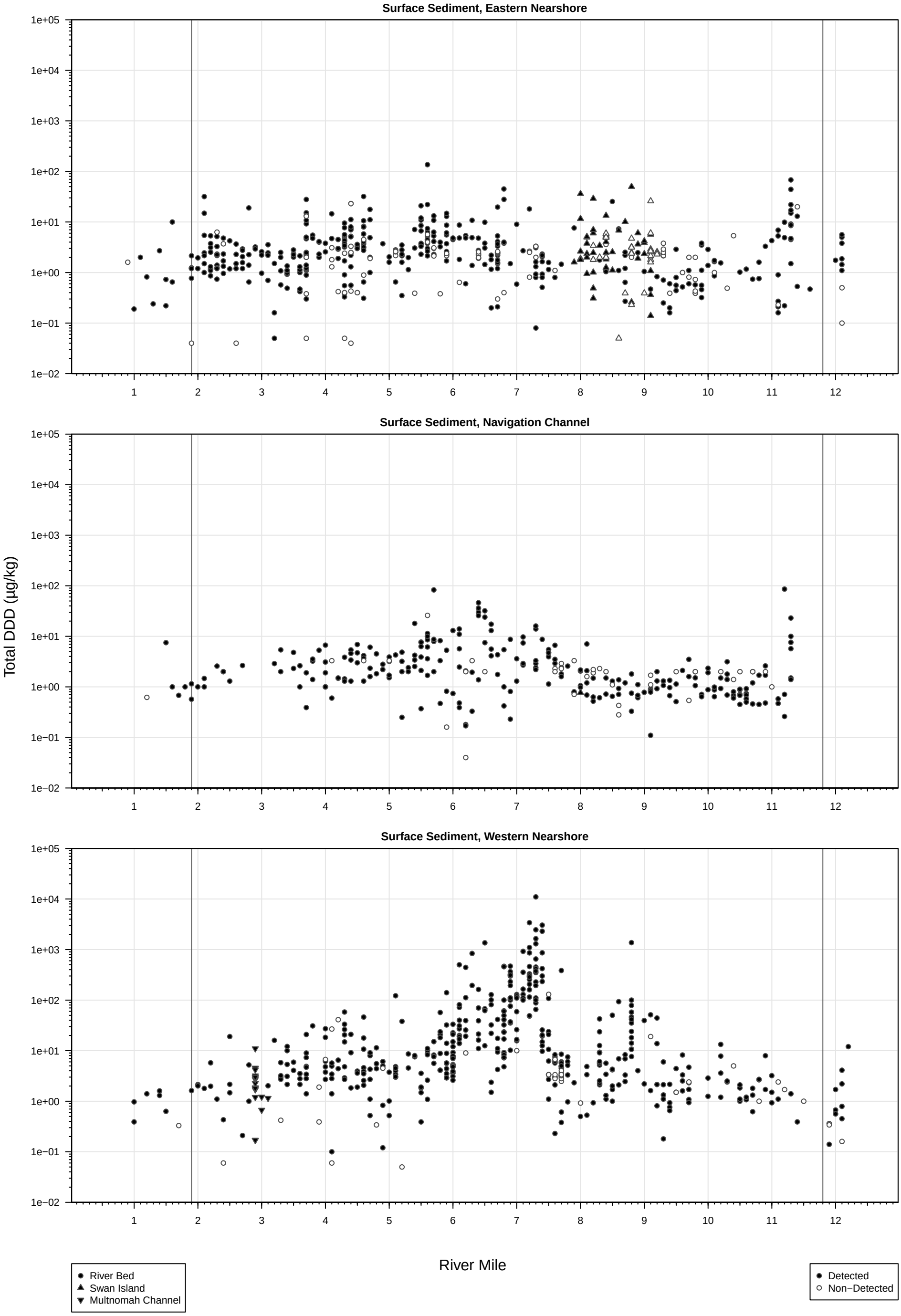



**Figure D1.1−13**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDD
Concentrations in Surface Sediment, RM 0.8−12.2

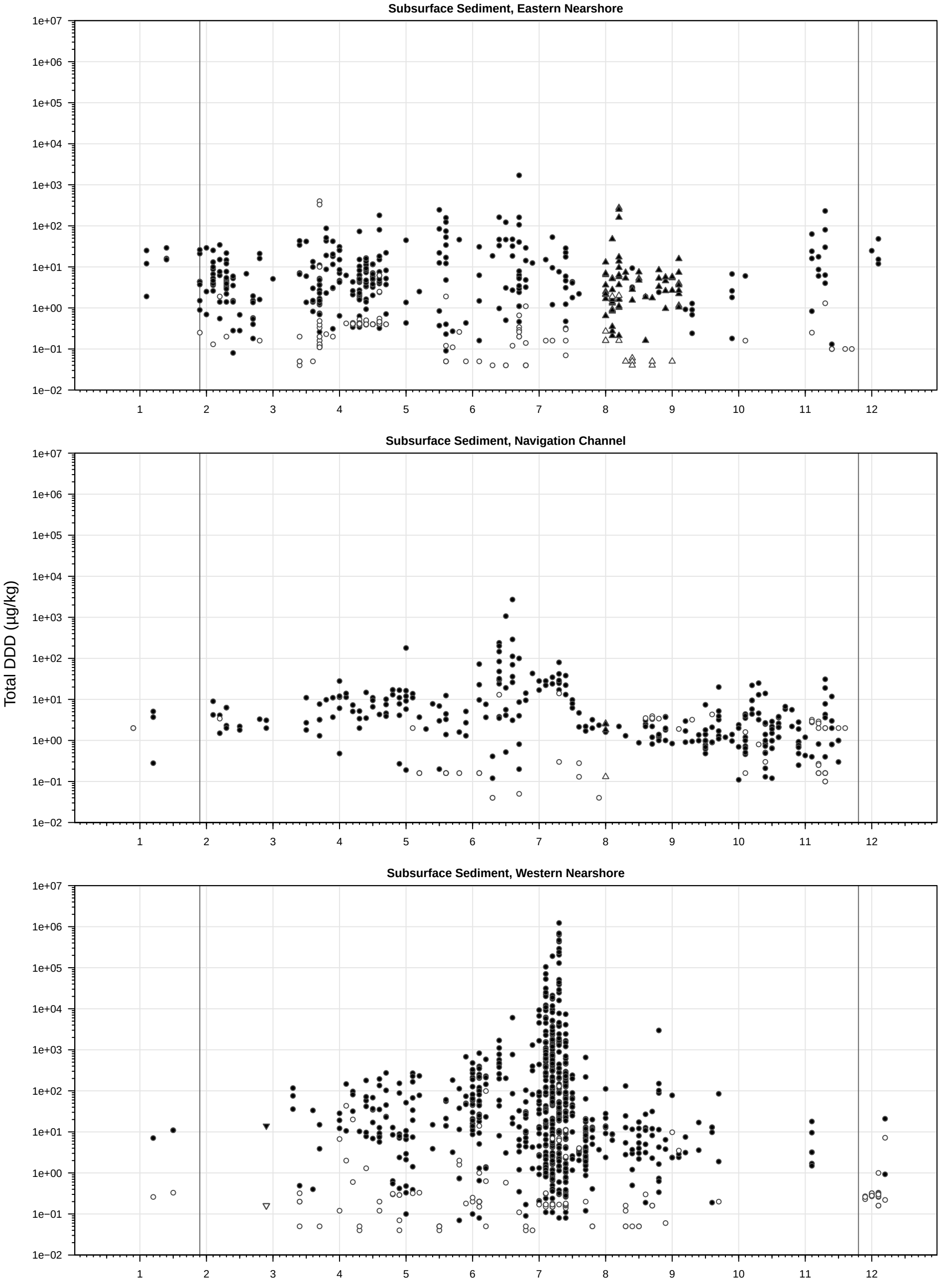



**Figure D1.1−14**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDD
Concentrations in Subsurface Sediment, RM 0.8−12.2

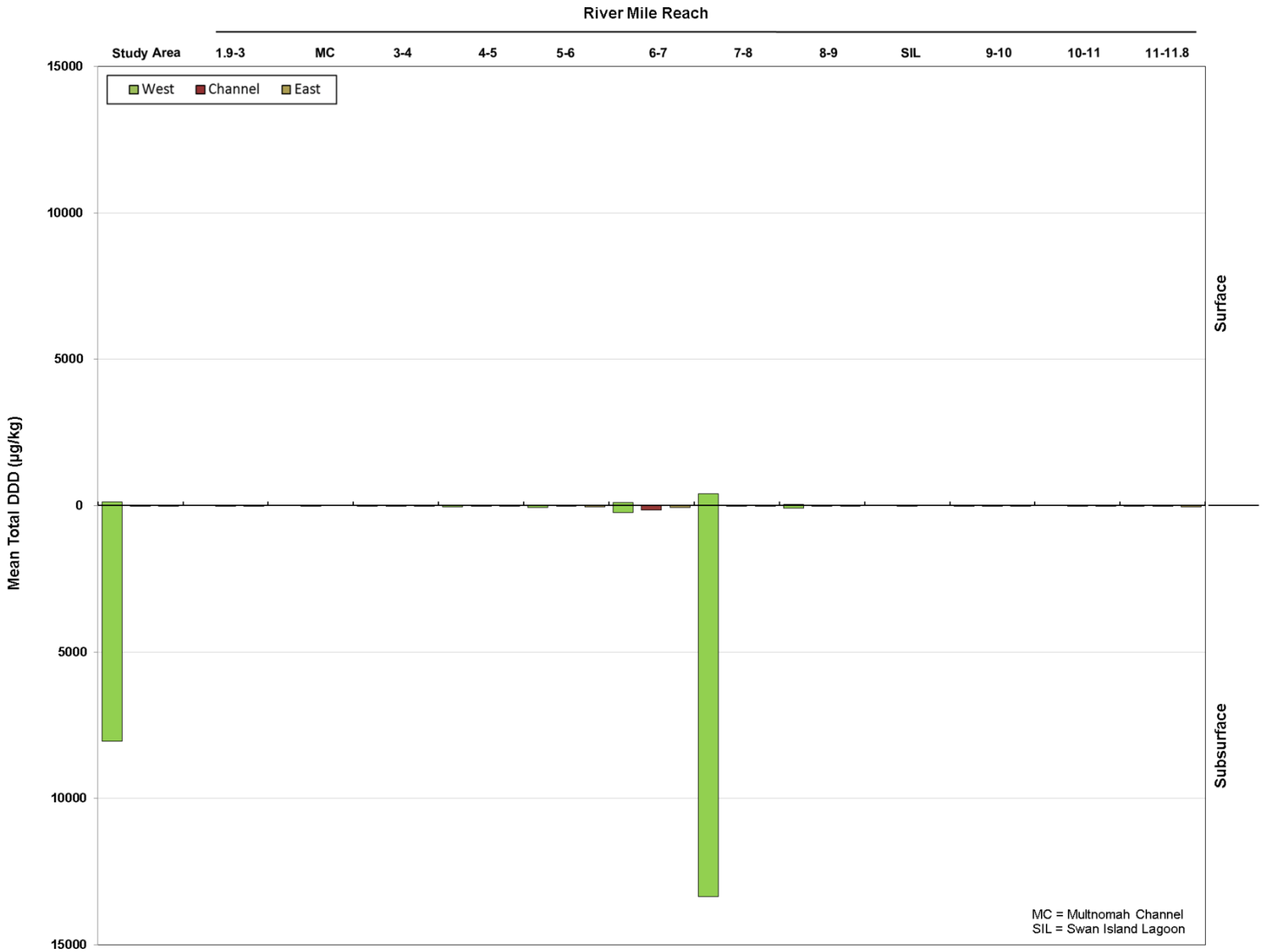
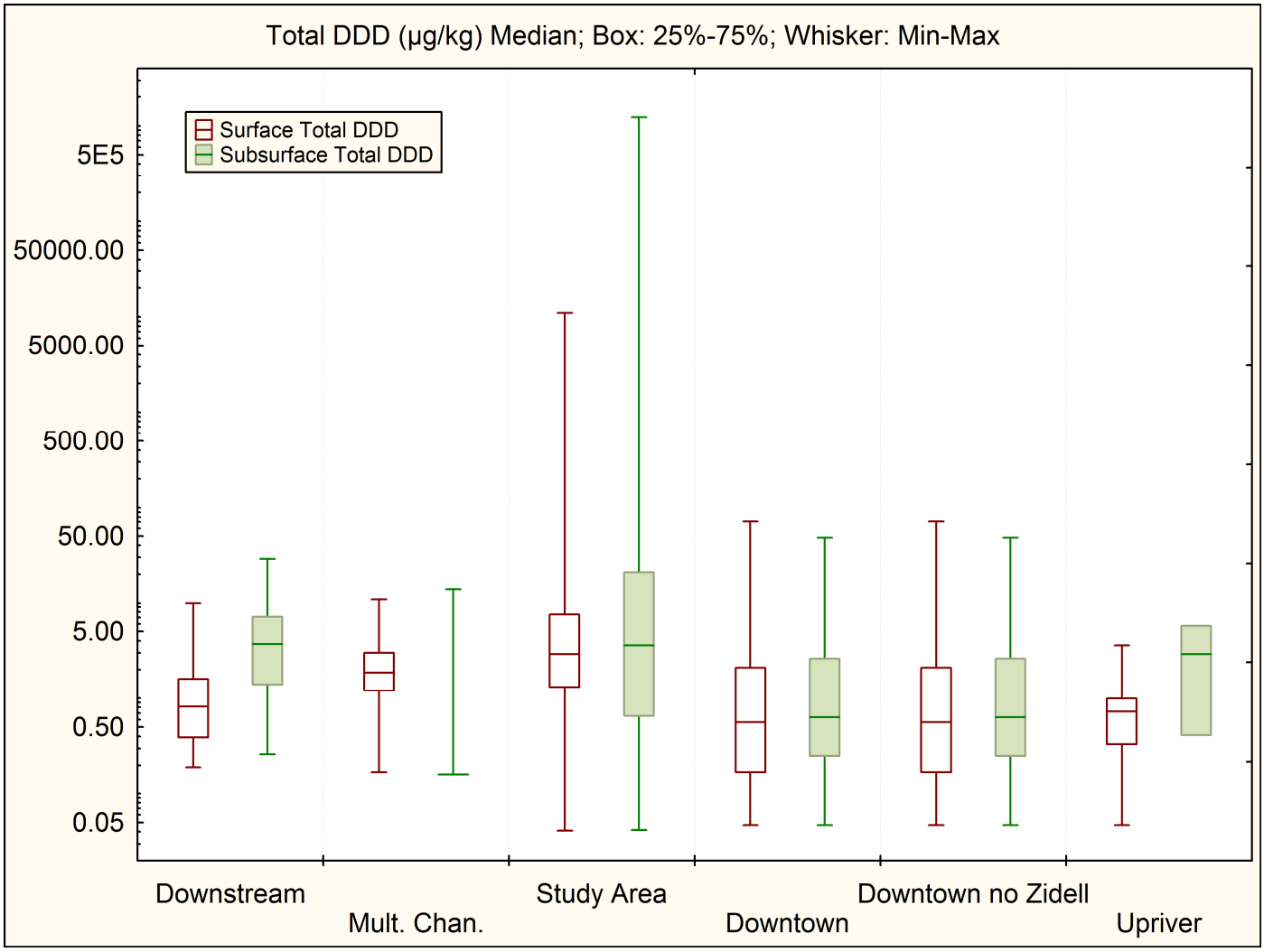



**Figure D1.1-15**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Total DDD Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-16**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Total DDD in
Surface and Subsurface Sediment by River Reach

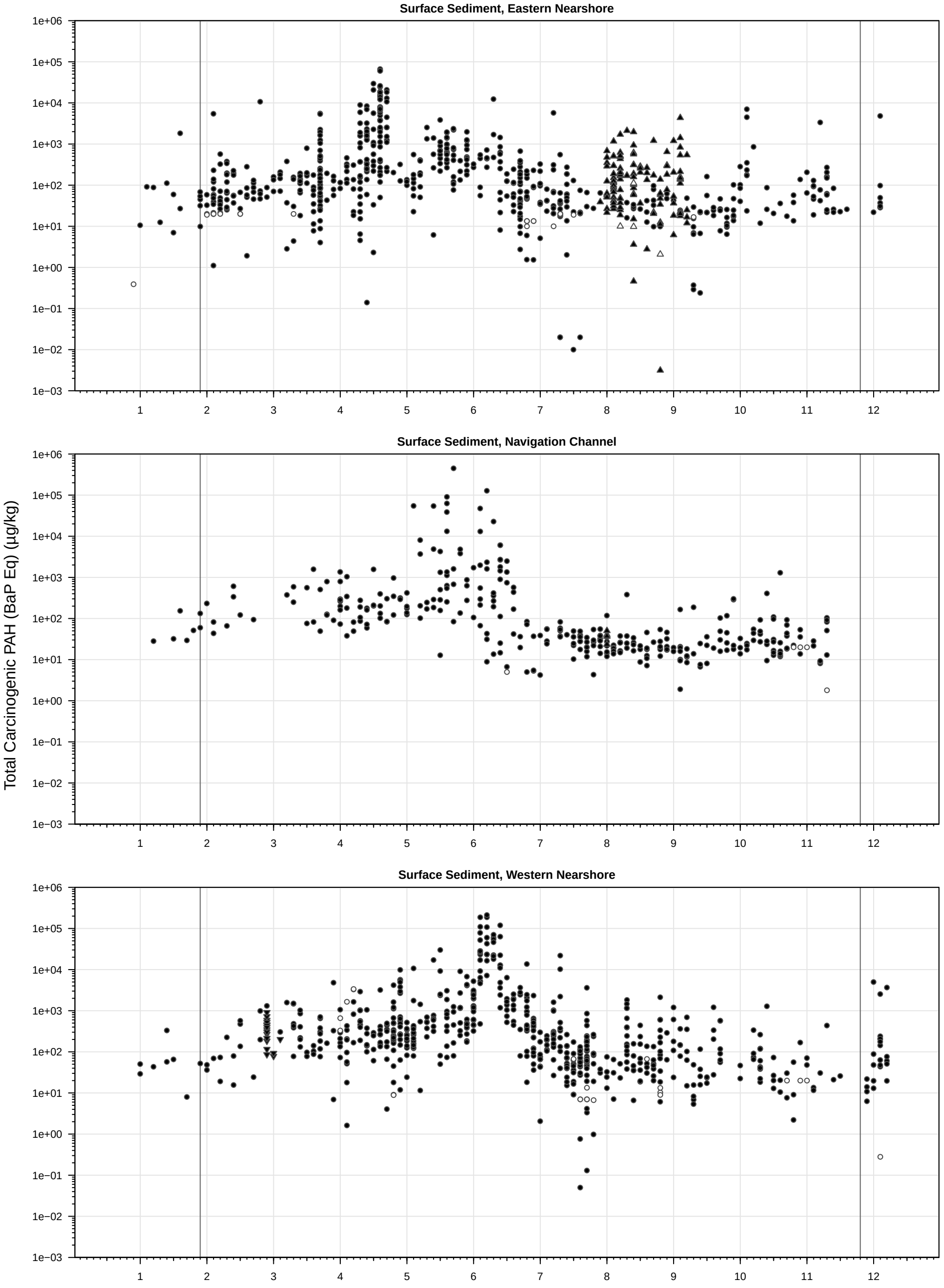



**Figure D1.1−17**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Carcinogenic PAH (BaP Eq)
Concentrations in Surface Sediment, RM 0.8−12.2

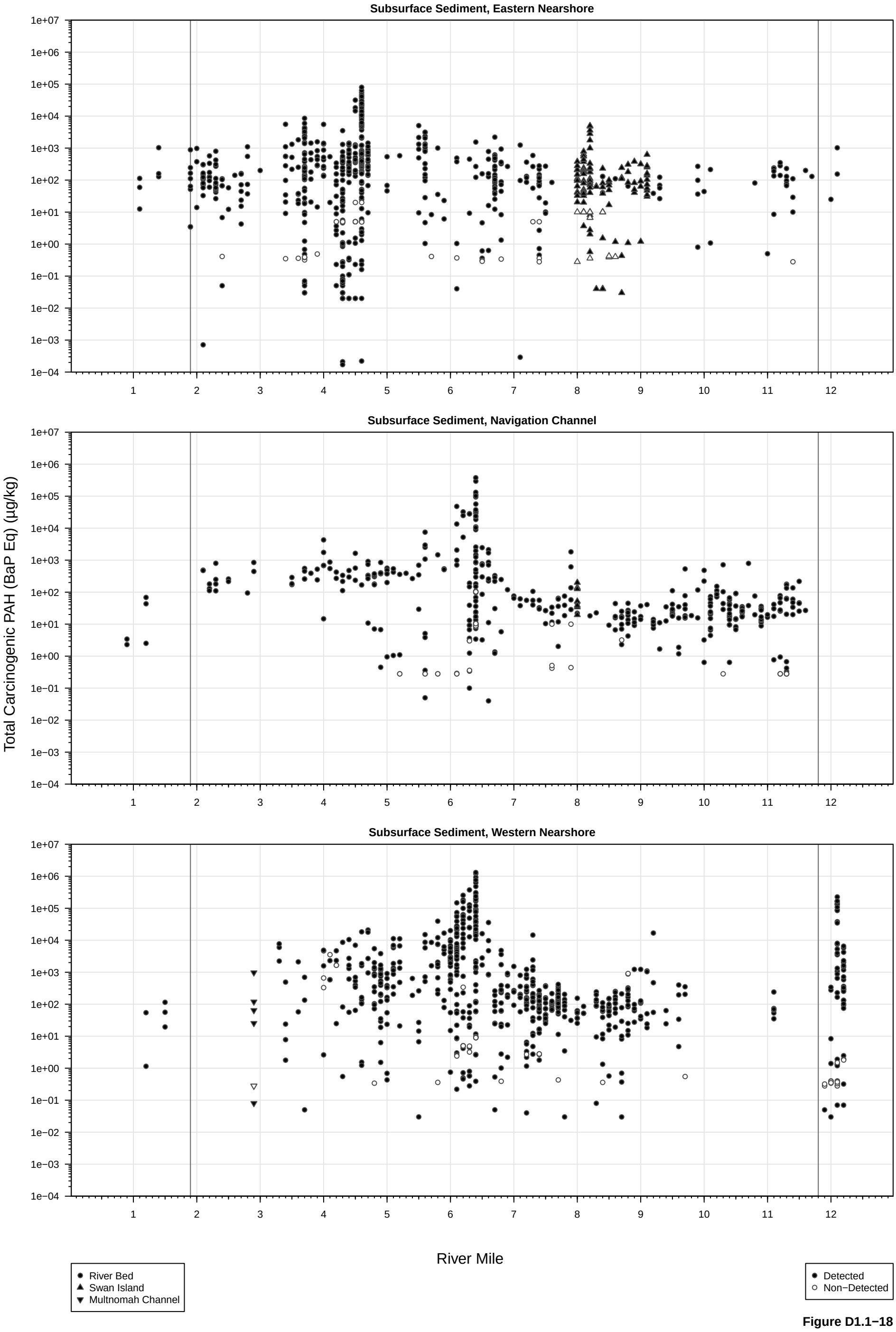



**Figure D1.1−18**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Carcinogenic PAH (BaP Eq)
Concentrations in Subsurface Sediment, RM 0.8−12.2

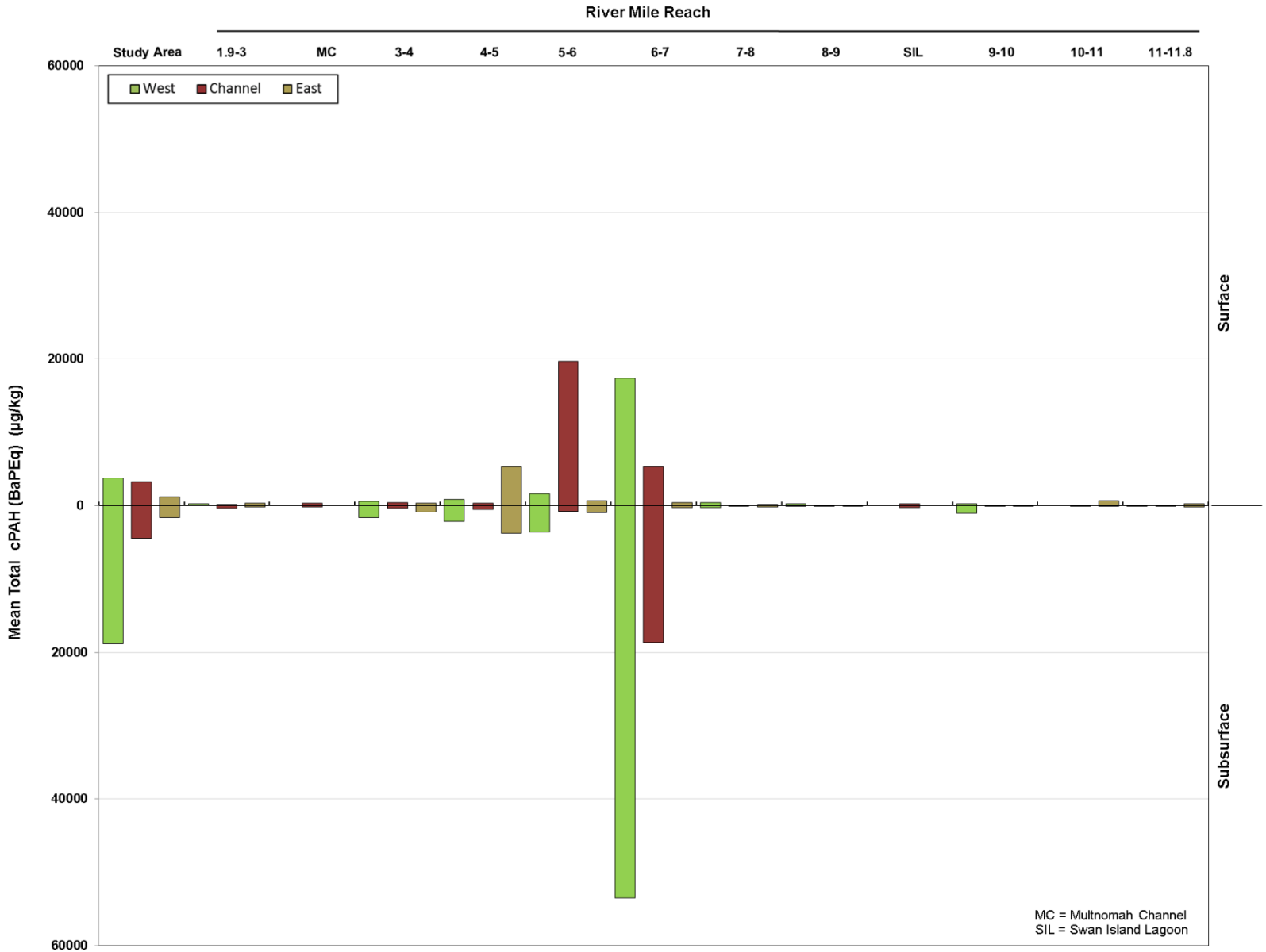
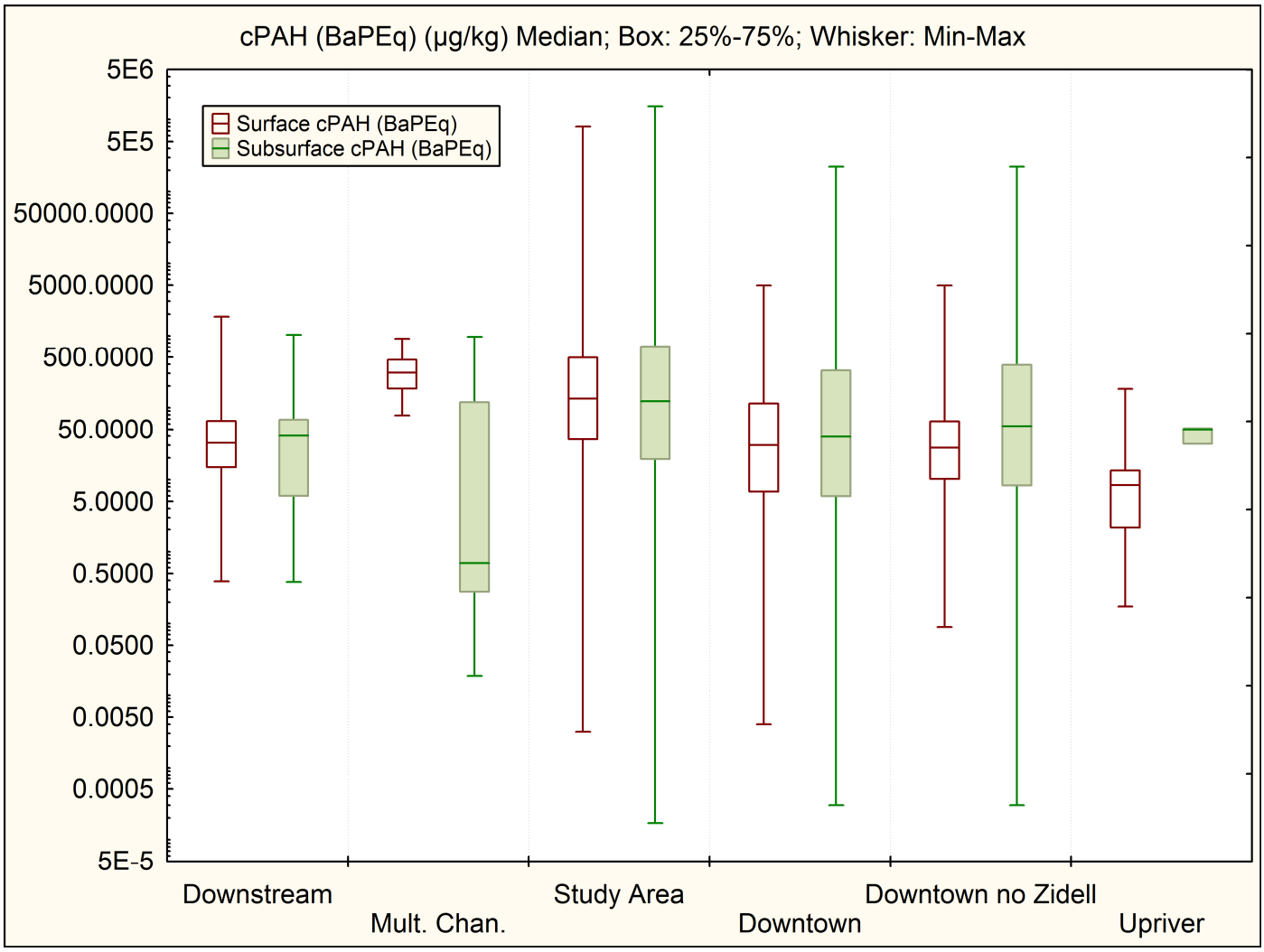



**Figure D1.1-19**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total Carcinogenic PAH (BaPEq) Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-20**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Total Carcinogenic PAHs (BaPEq) in
Surface and Subsurface Sediment by River Reach

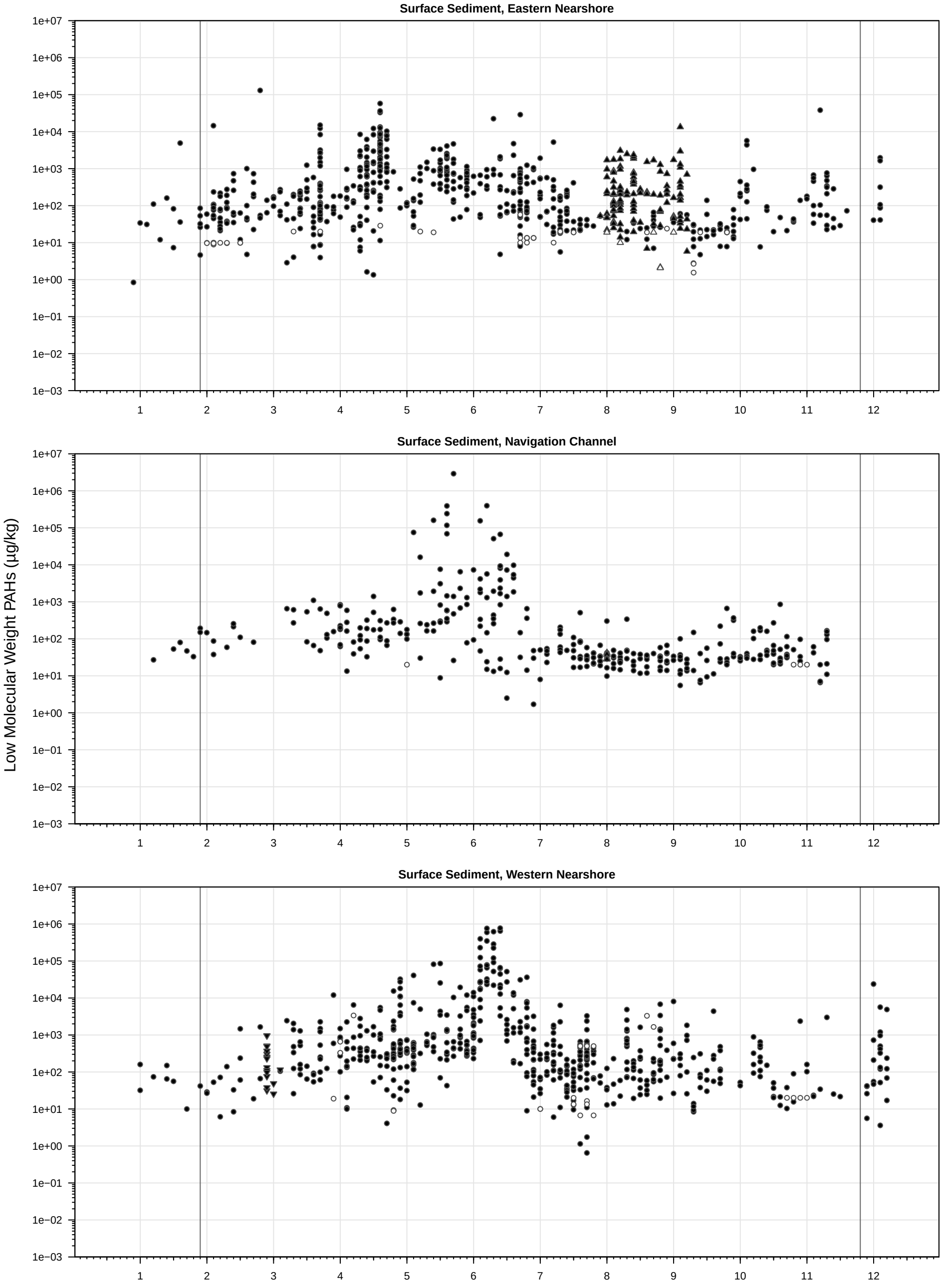



**Figure D1.1−21**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Low Molecular Weight PAH
Concentrations in Surface Sediment, RM 0.8−12.2

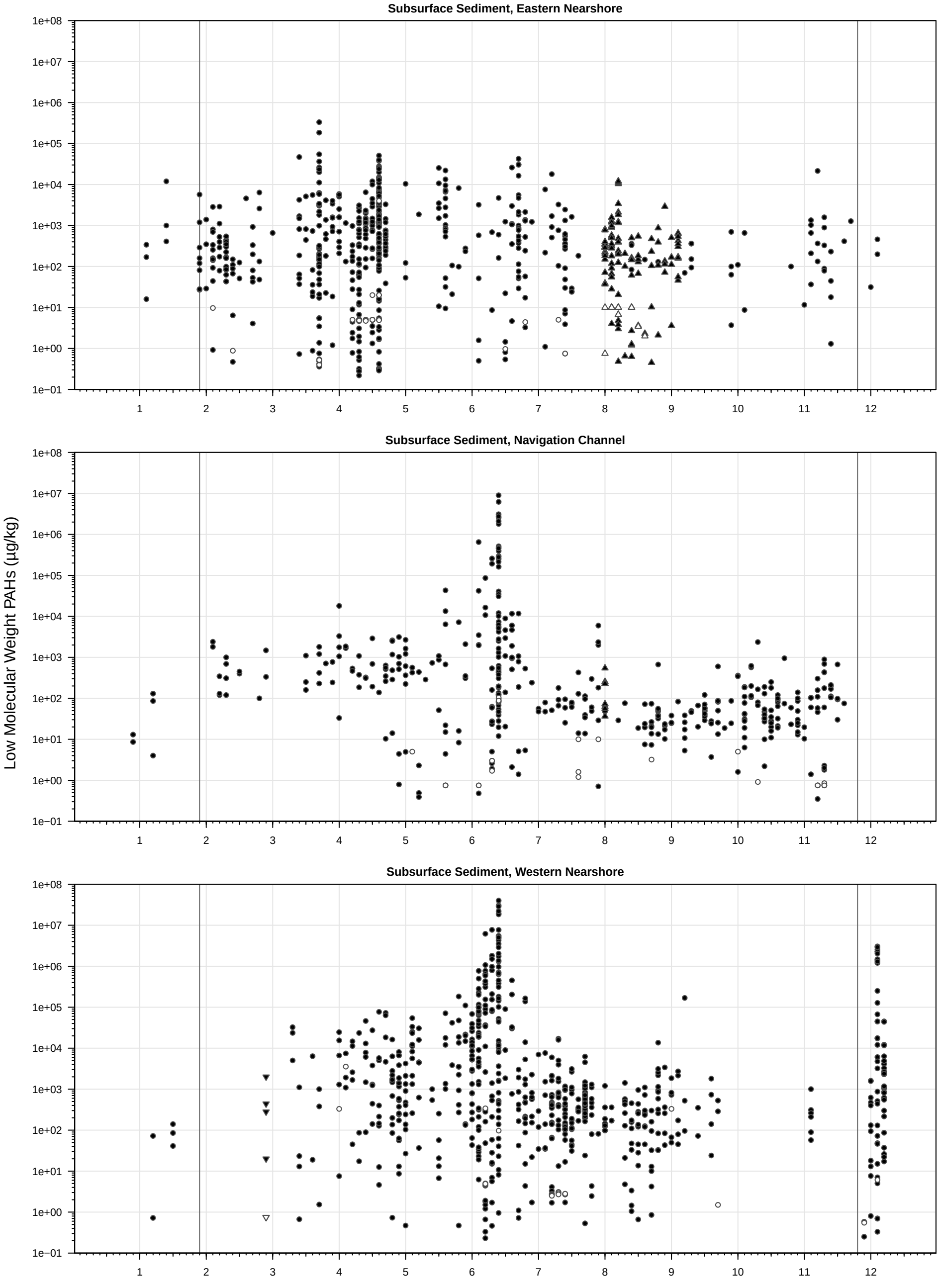



**Figure D1.1−22**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Low Molecular Weight PAH
Concentrations in Subsurface Sediment, RM 0.8−12.2

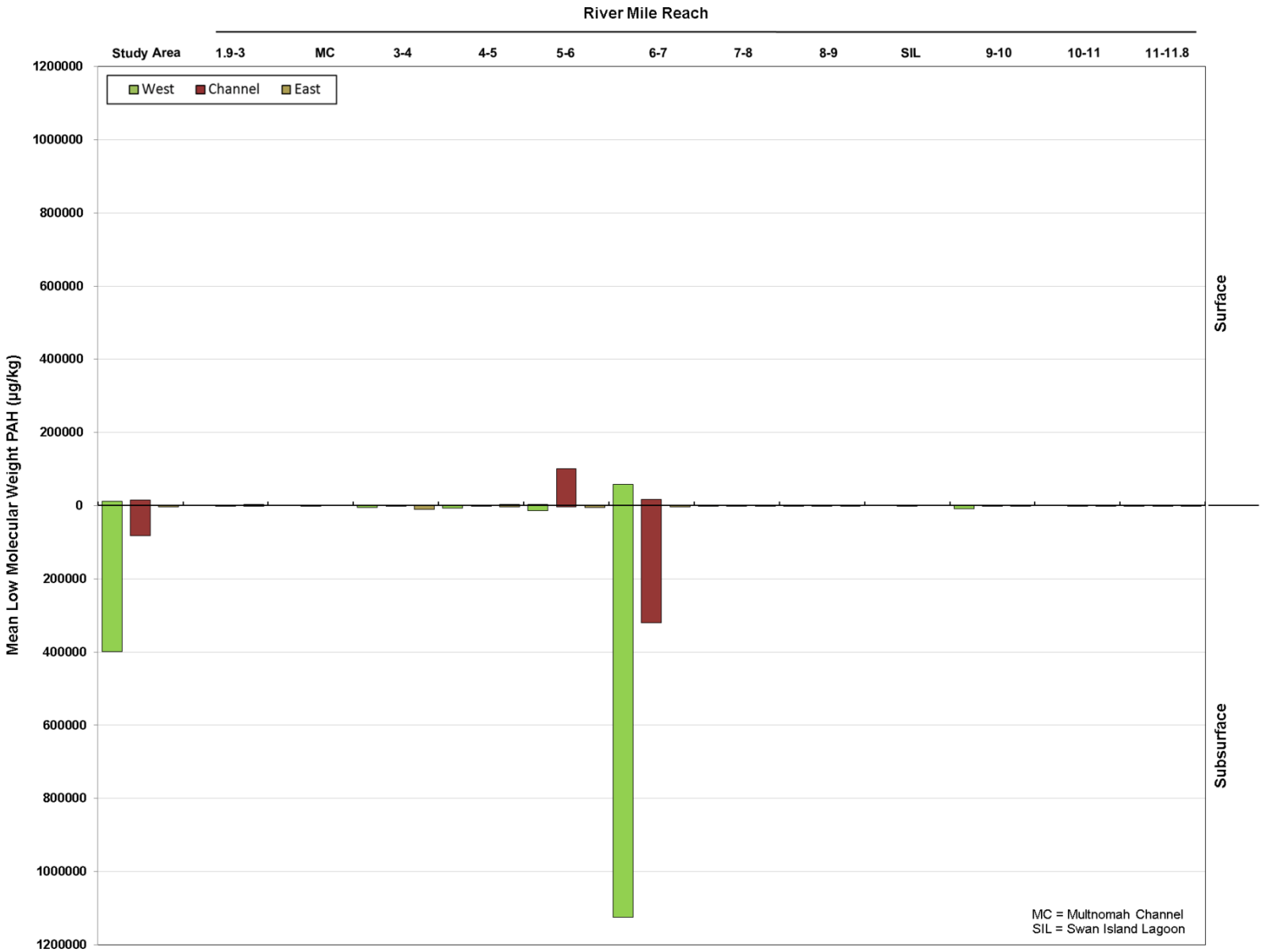
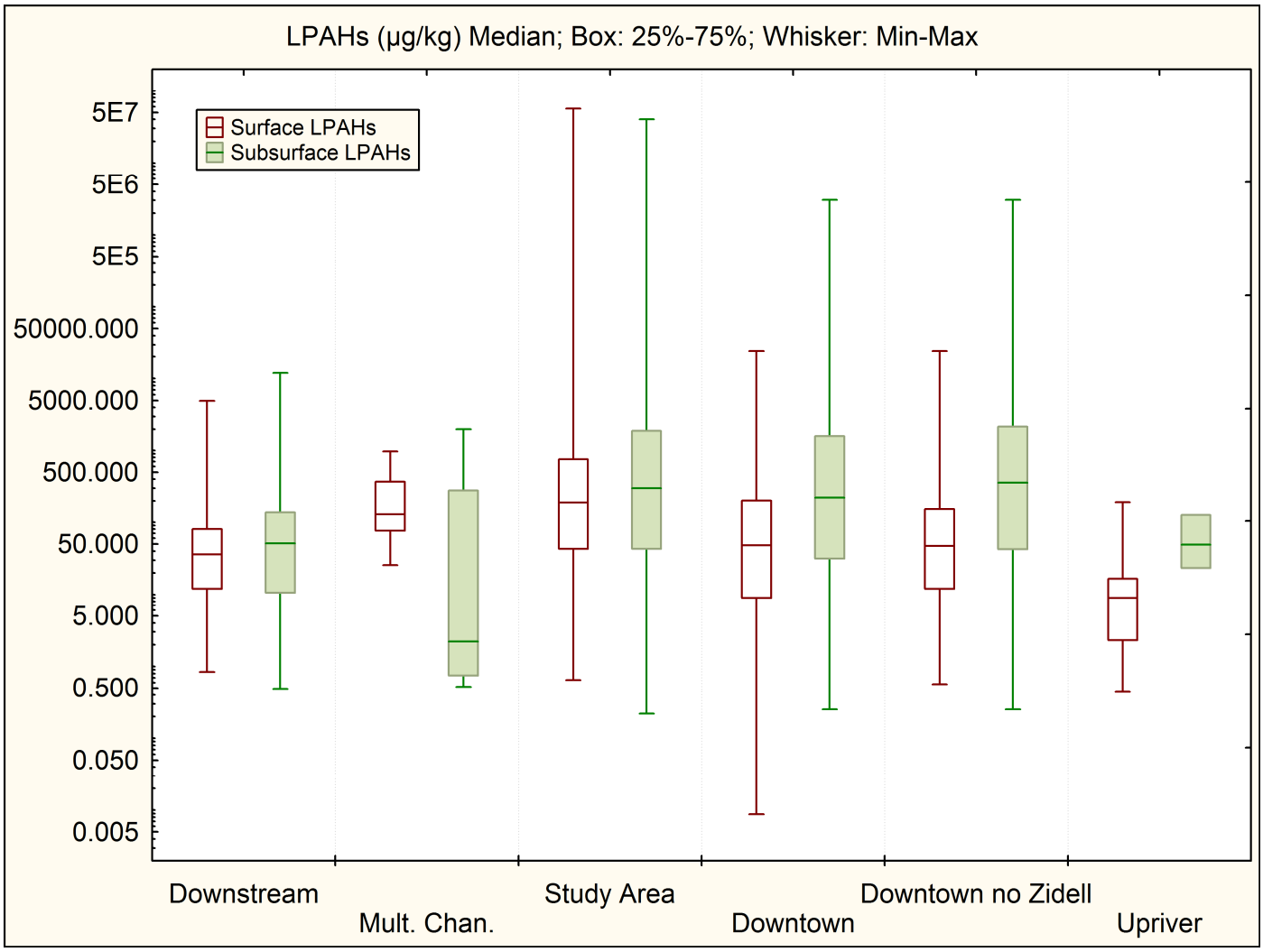



**Figure D1.1-23**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Low Molecular Weight PAH Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-24**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Low Molecular Weight PAHs in
Surface and Subsurface Sediment by River Reach

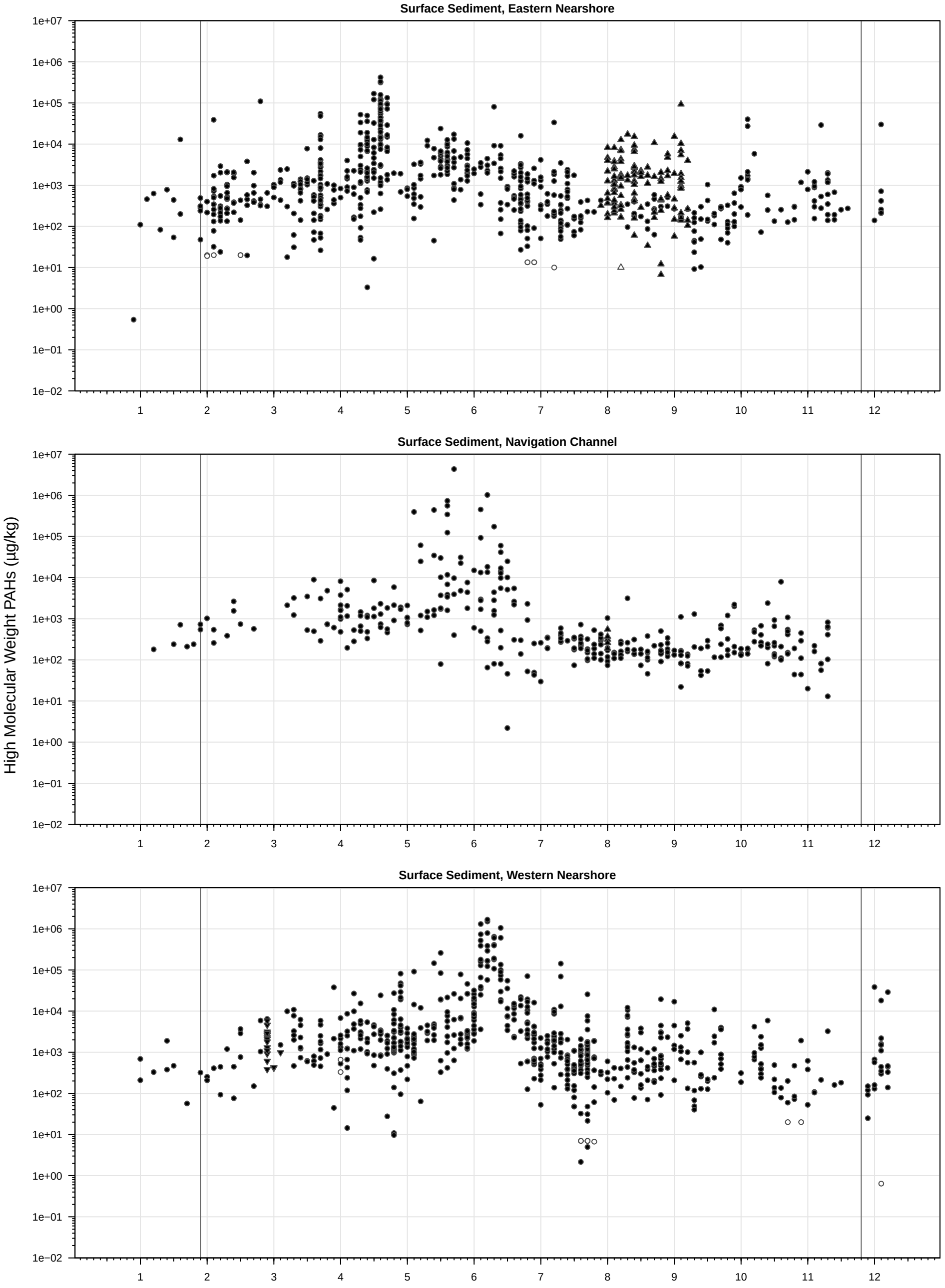



**Figure D1.1−25**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of High Molecular Weight PAH
Concentrations in Surface Sediment, RM 0.8−12.2

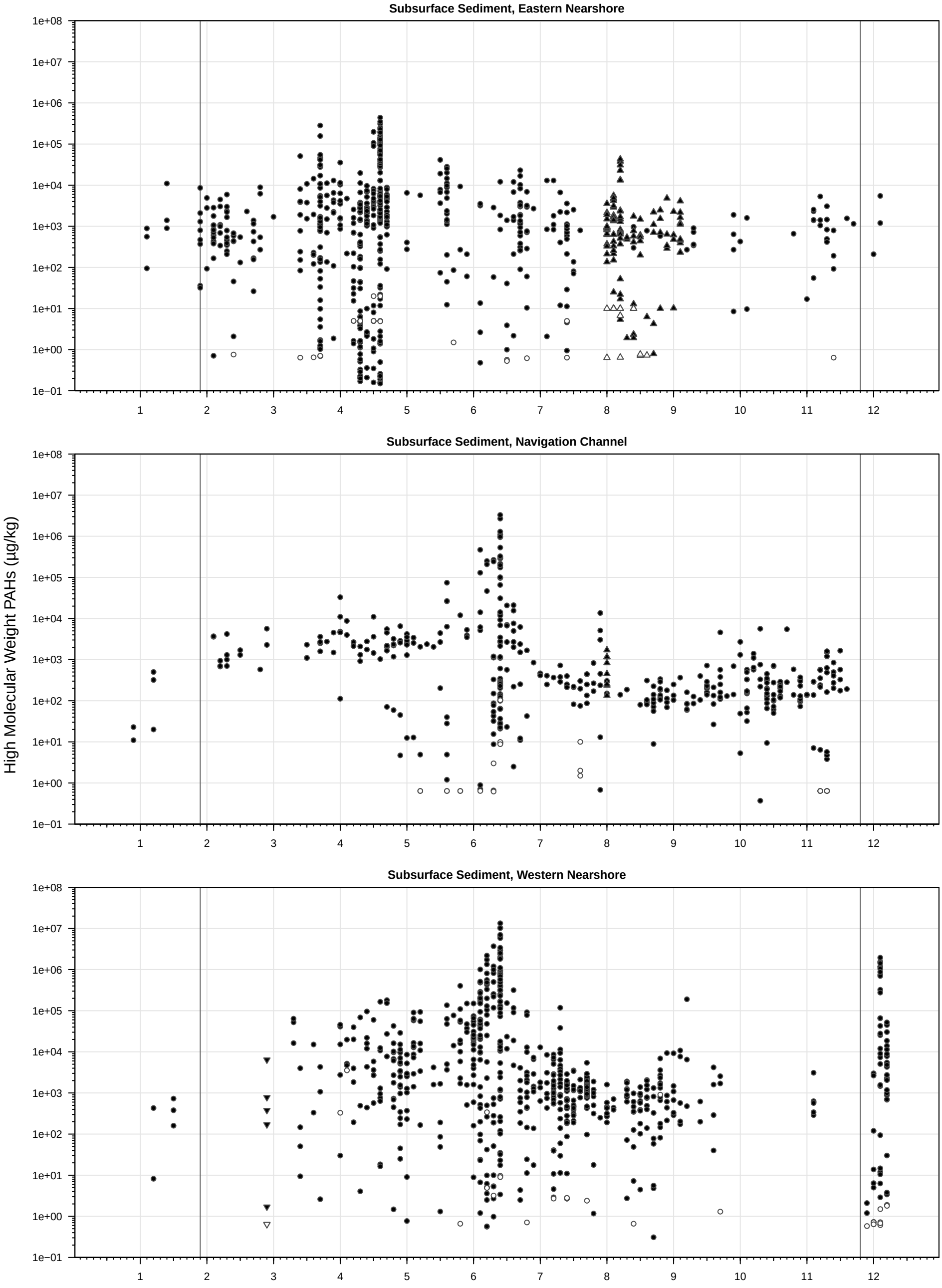



**Figure D1.1−26**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of High Molecular Weight PAH
Concentrations in Subsurface Sediment, RM 0.8−12.2

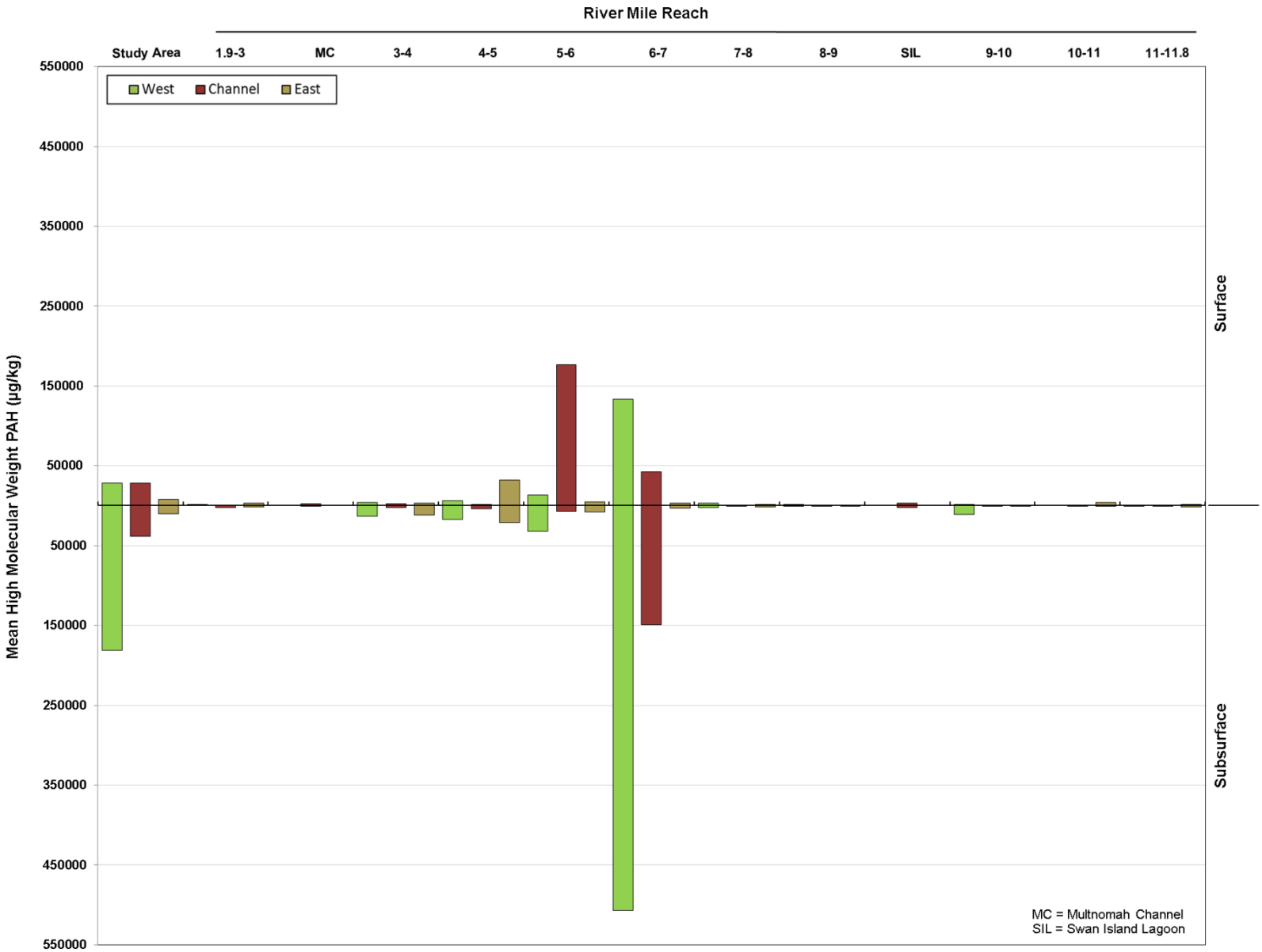
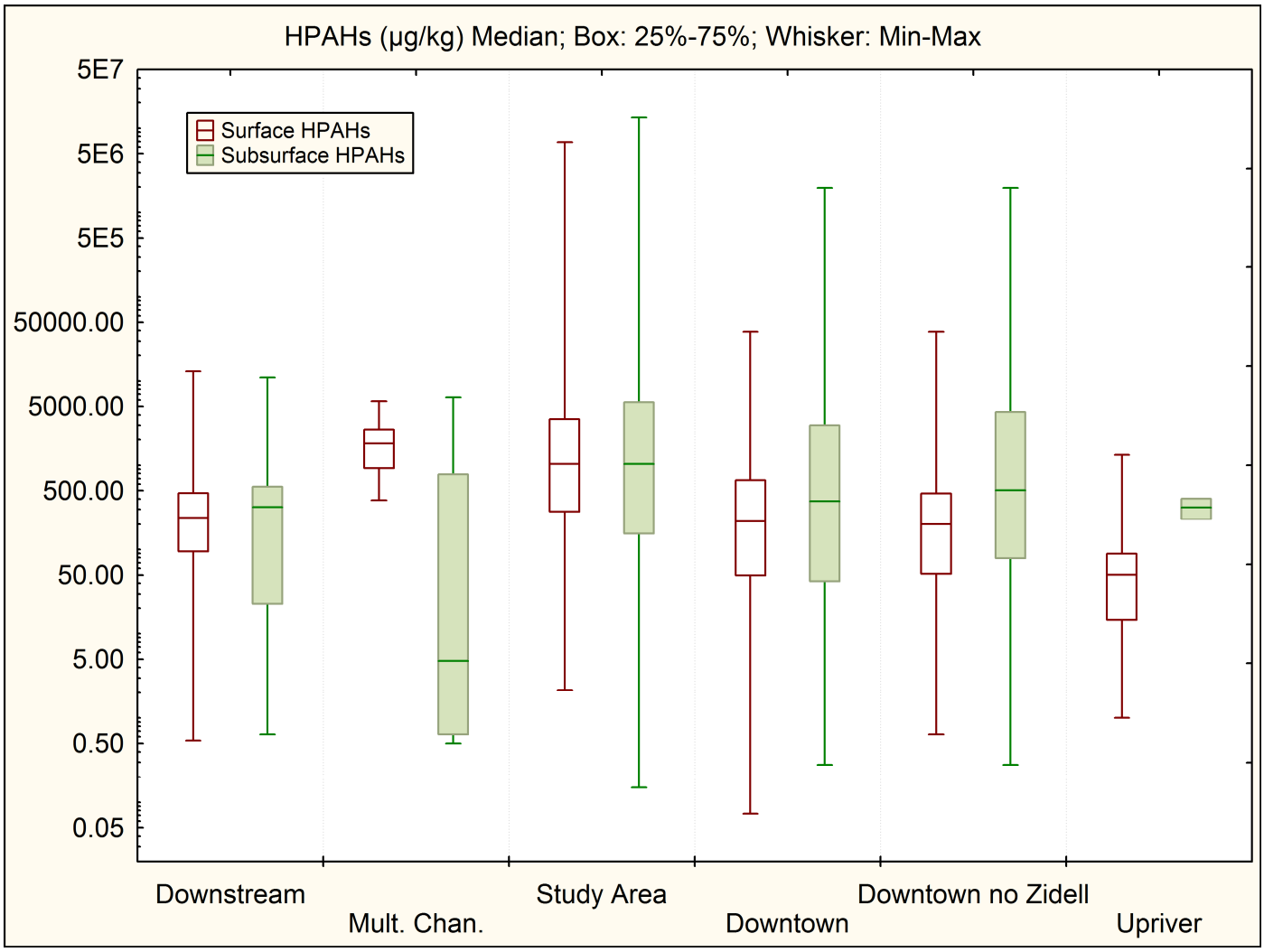



**Figure D1.1-27**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean High Molecular Weight PAH Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-28**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of High Molecular Weight PAHs in
Surface and Subsurface Sediment by River Reach

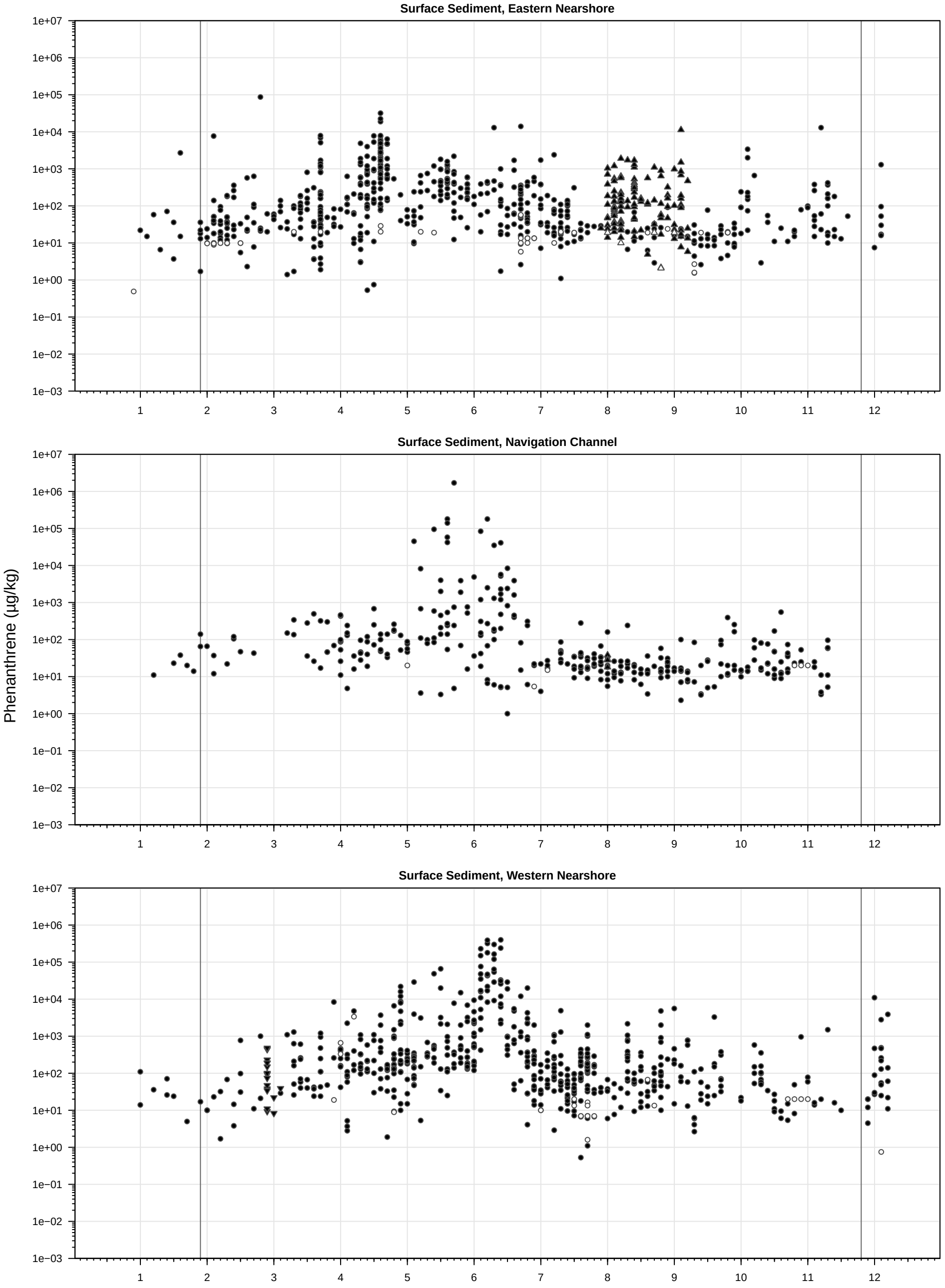



**Figure D1.1−29**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Phenanthrene
Concentrations in Surface Sediment, RM 0.8−12.2

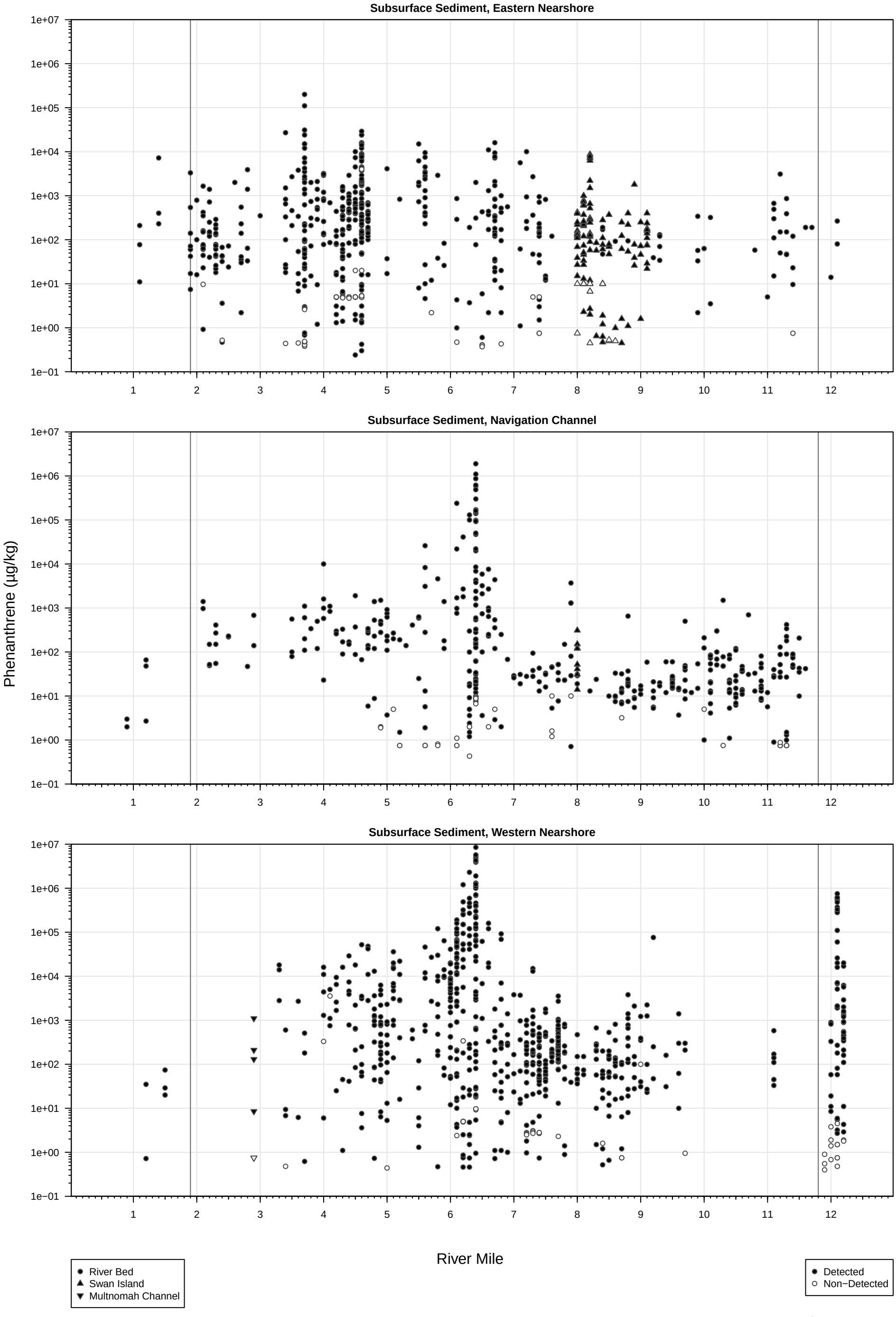



**Figure D1.1−30**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Phenanthrene
Concentrations in Subsurface Sediment, RM 0.8−12.2

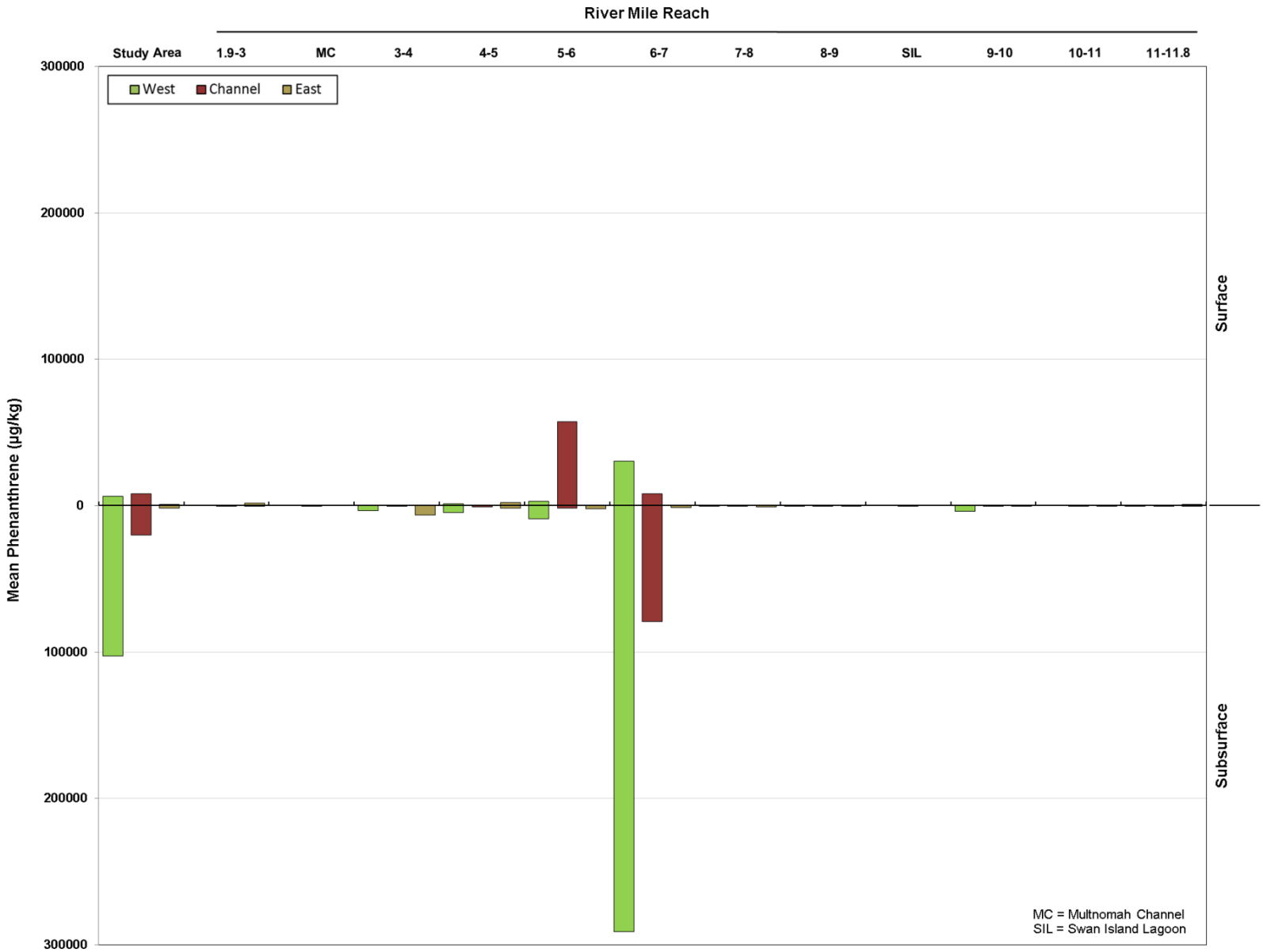
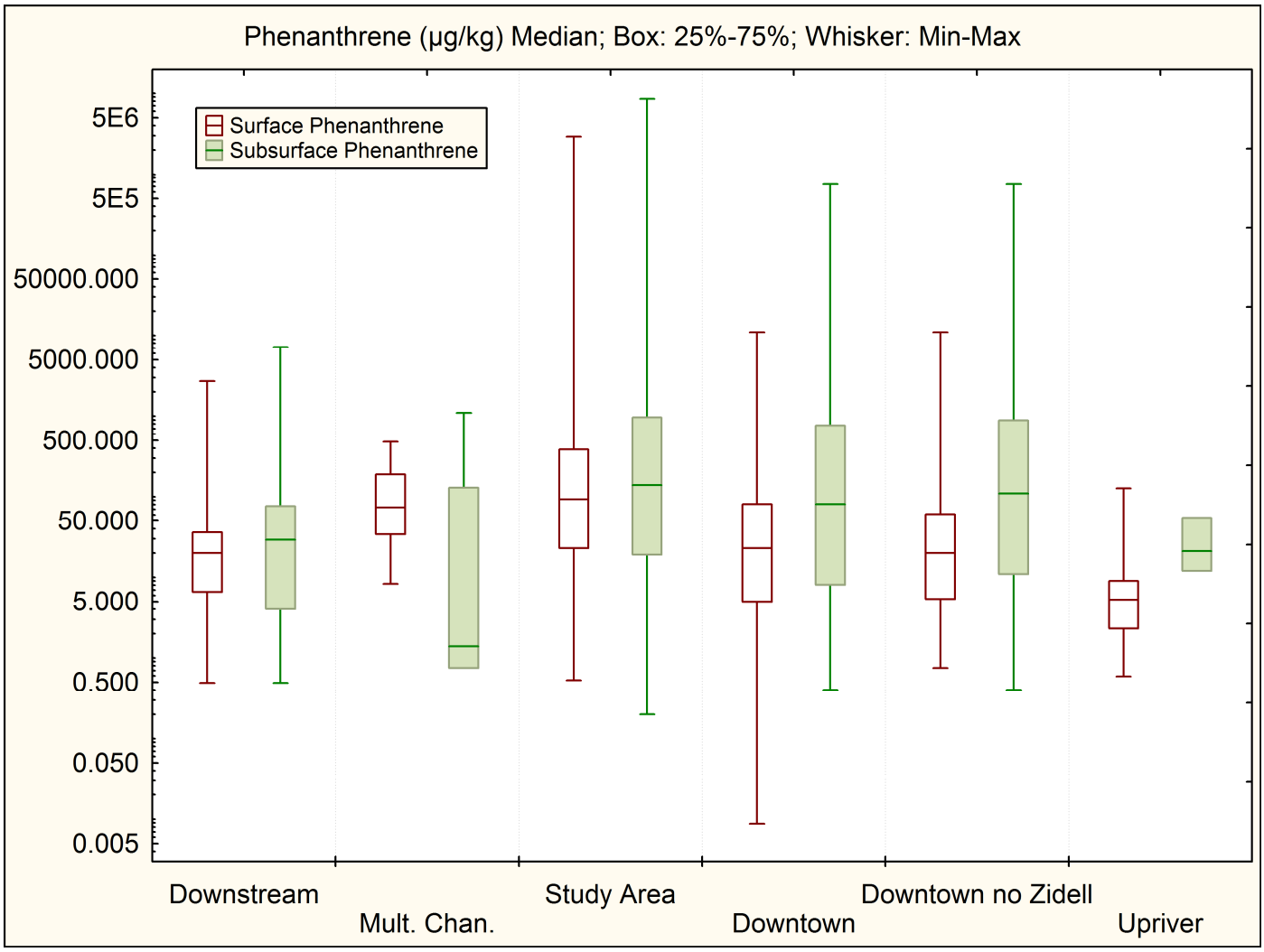



**Figure D1.1-31**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Phenanthrene Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-32**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Phenanthrene in
Surface and Subsurface Sediment by River Reach

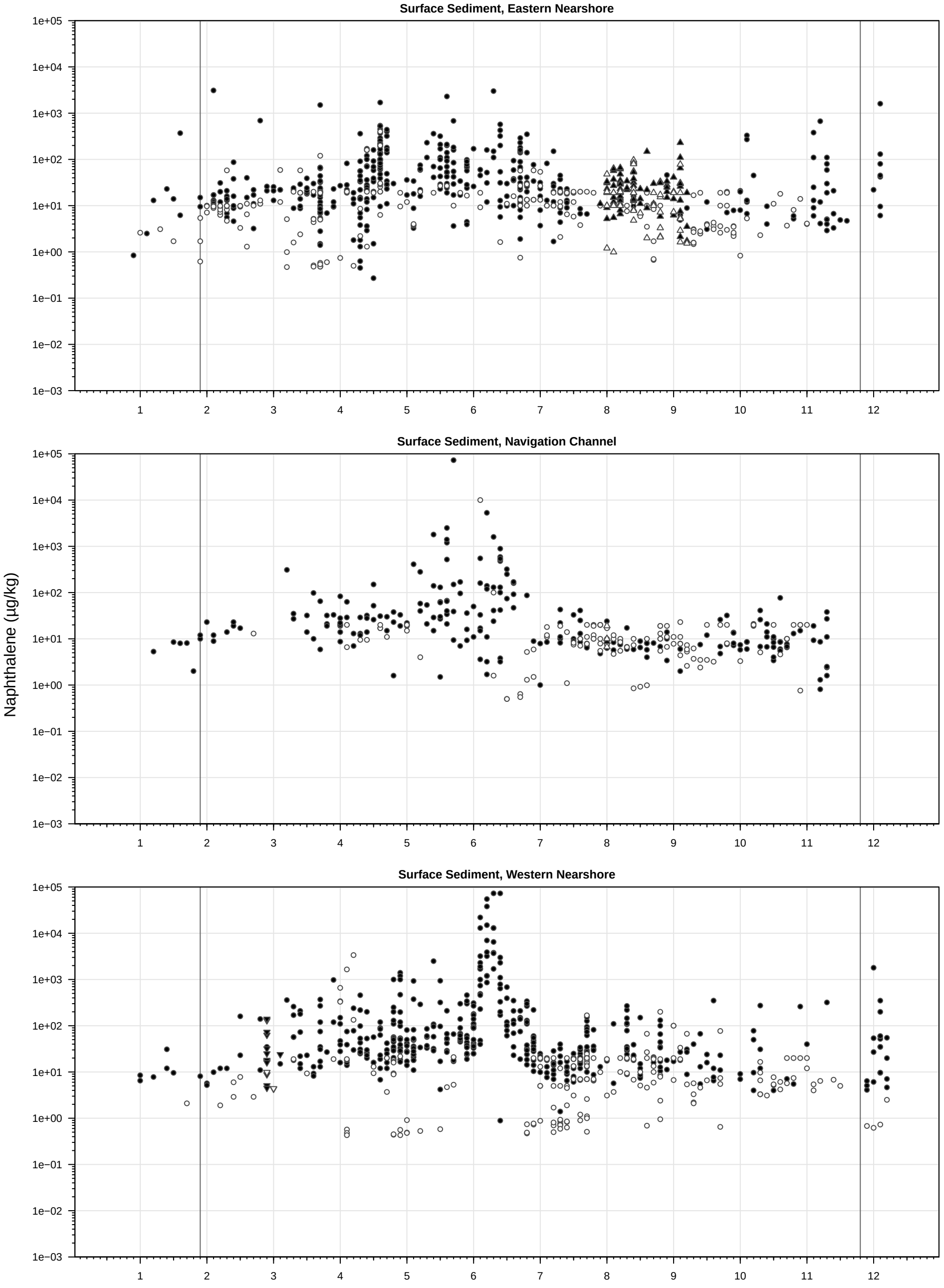



**Figure D1.1−33**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Naphthalene
Concentrations in Surface Sediment, RM 0.8−12.2

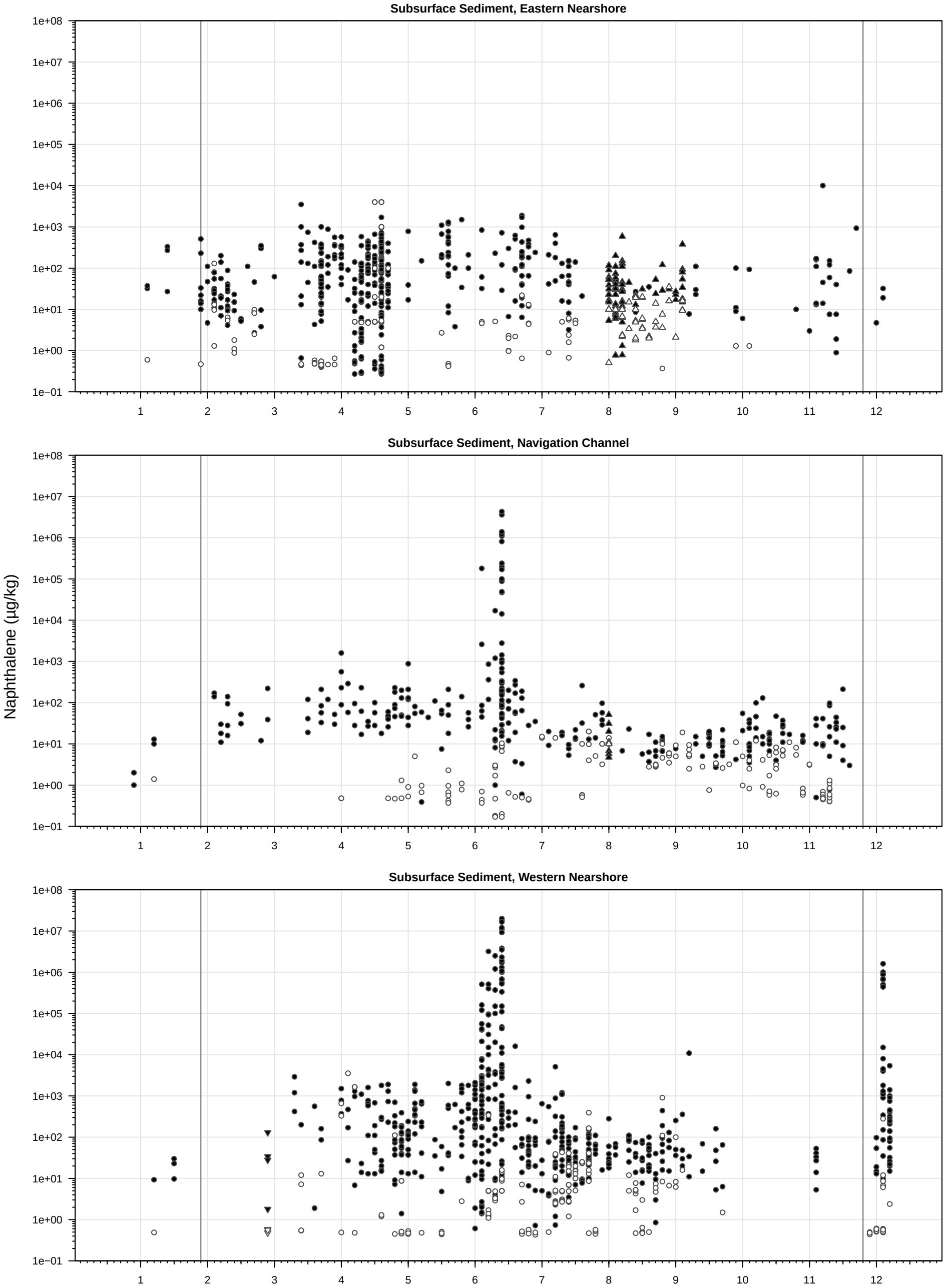



**Figure D1.1−34**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Naphthalene
Concentrations in Subsurface Sediment, RM 0.8−12.2

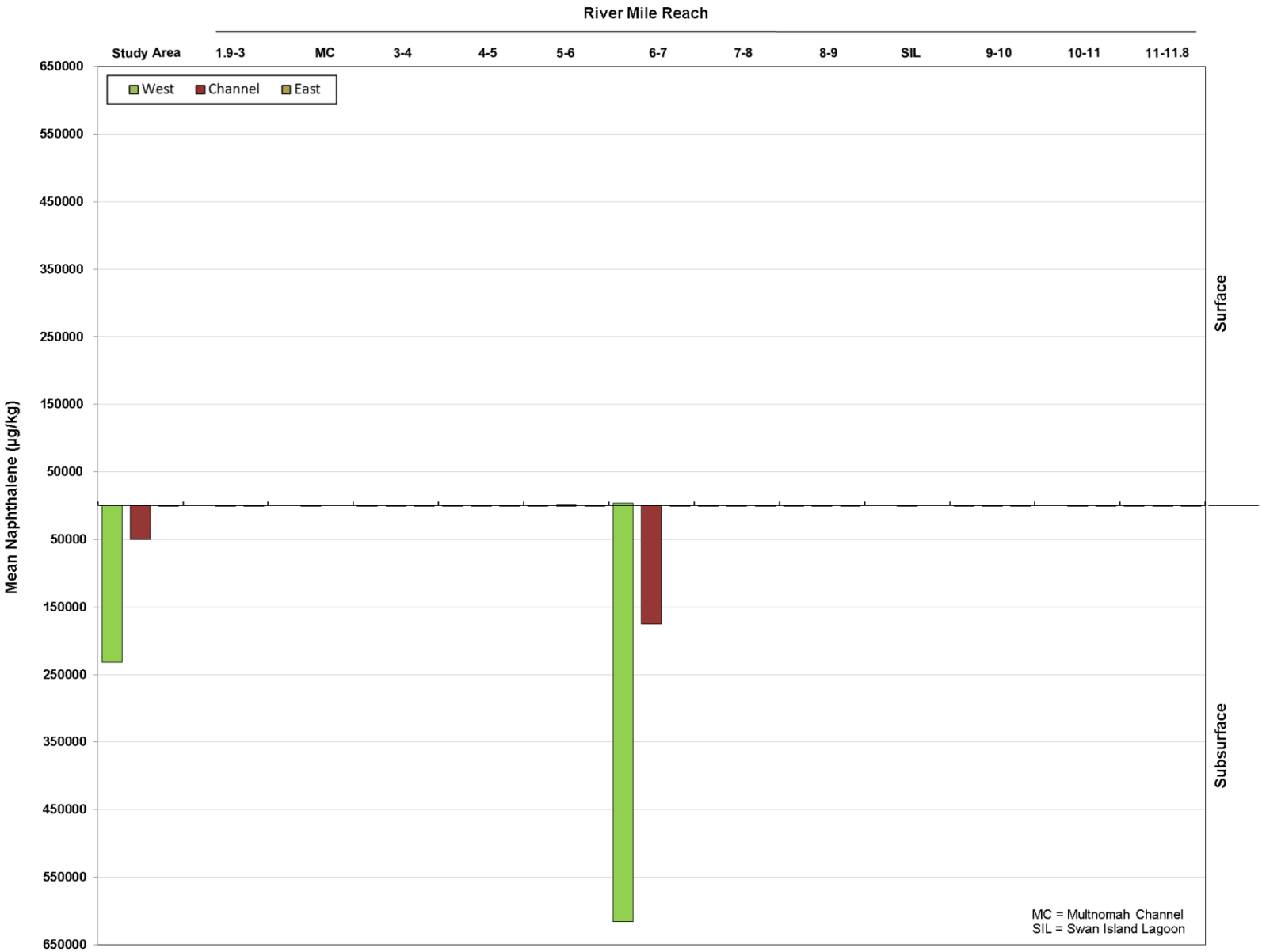
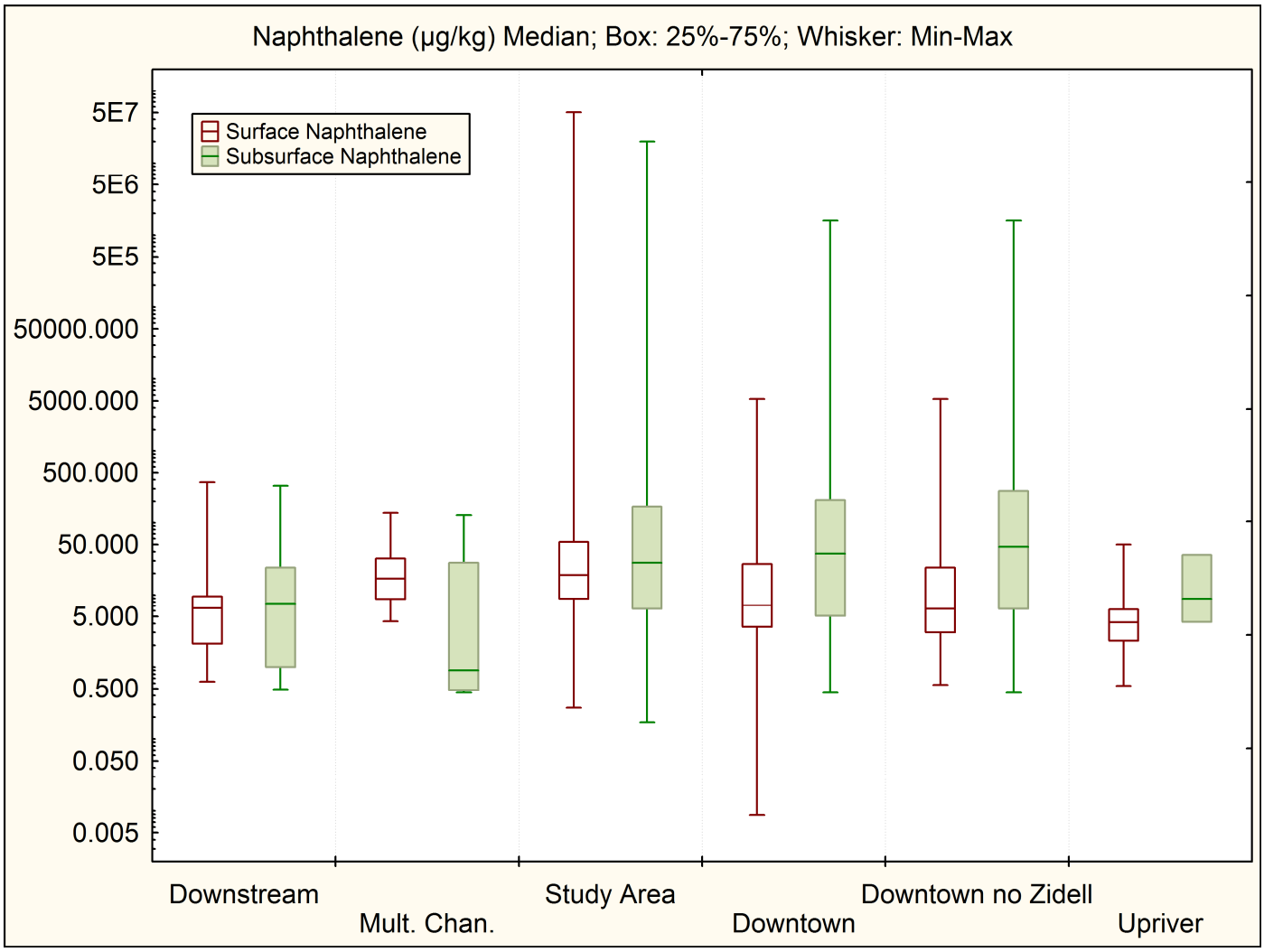



**Figure D1.1-35**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Naphthalene Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-36**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Naphthalene in
Surface and Subsurface Sediment by River Reach

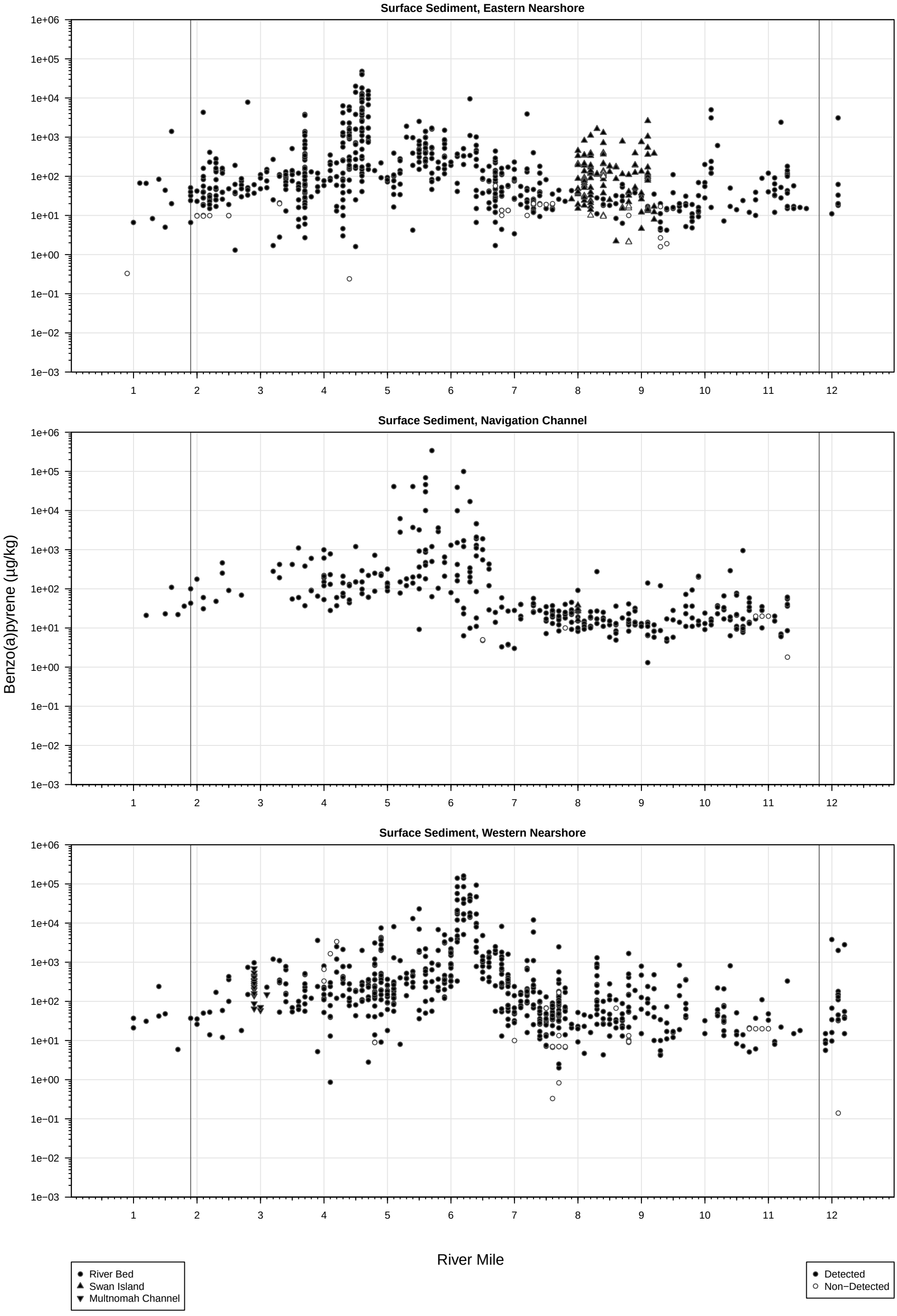



**Figure D1.1−37**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Benzo(a)pyrene
Concentrations in Surface Sediment, RM 0.8−12.2

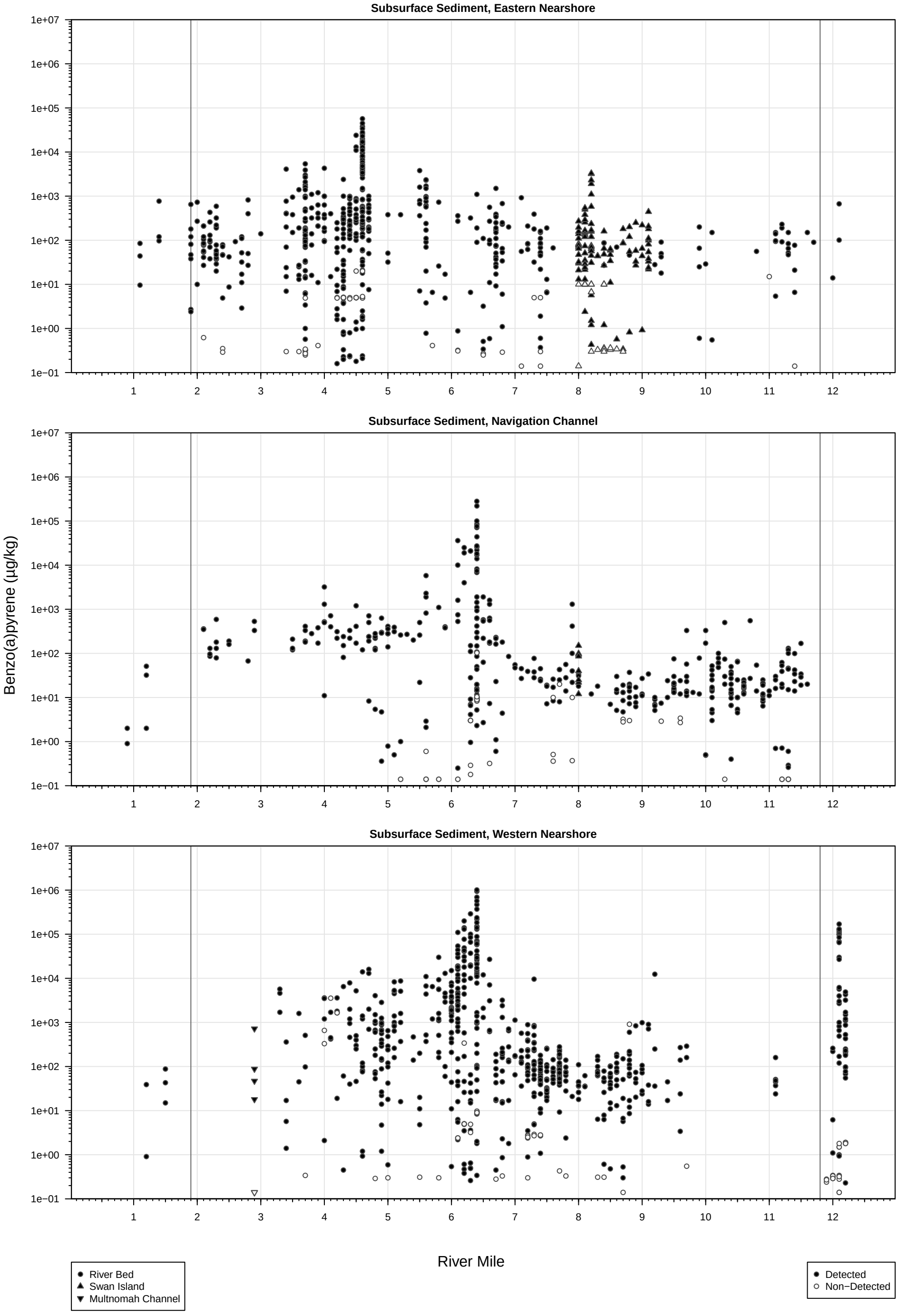



**Figure D1.1−38**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Benzo(a)pyrene
Concentrations in Subsurface Sediment, RM 0.8−12.2

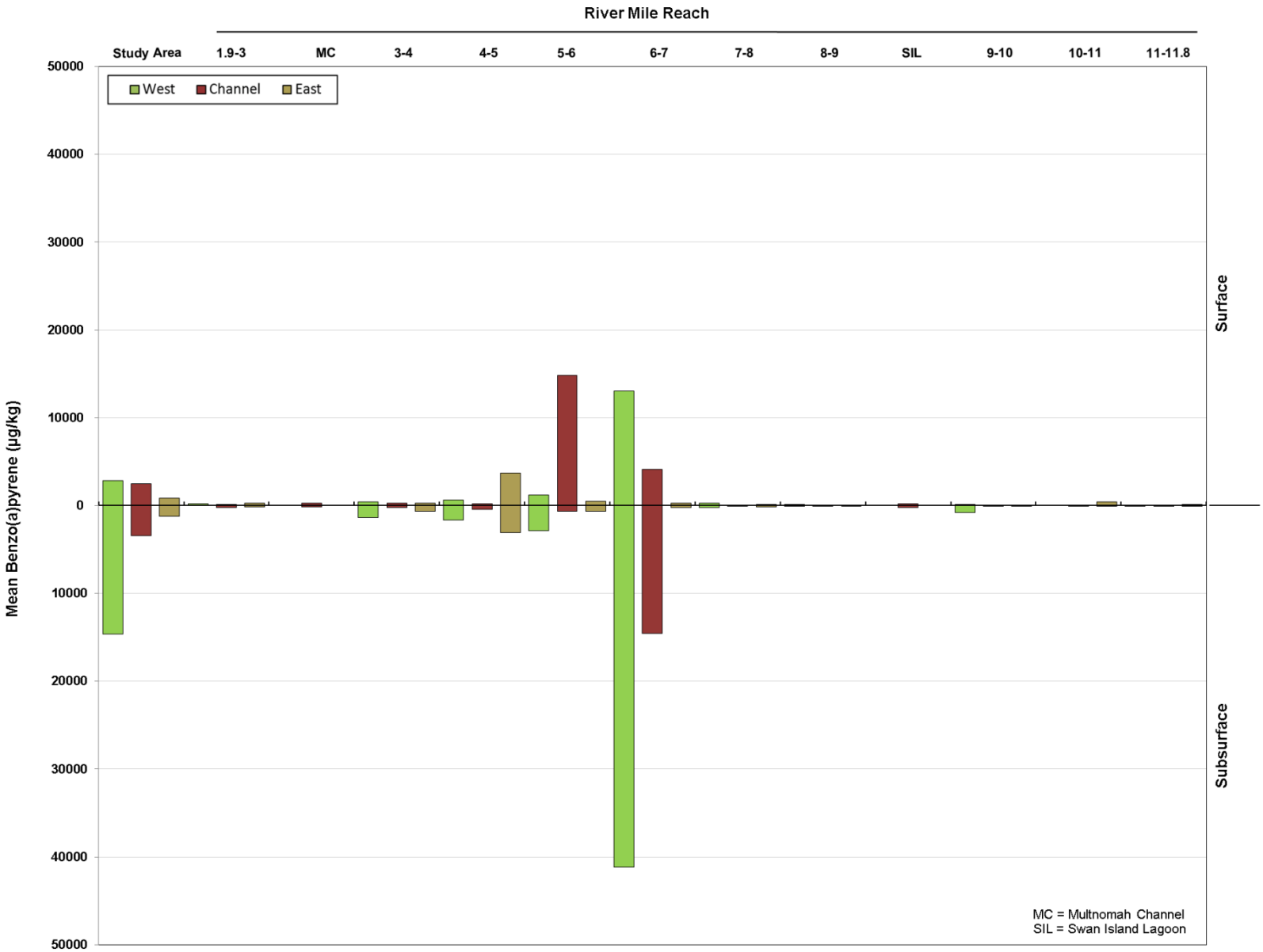
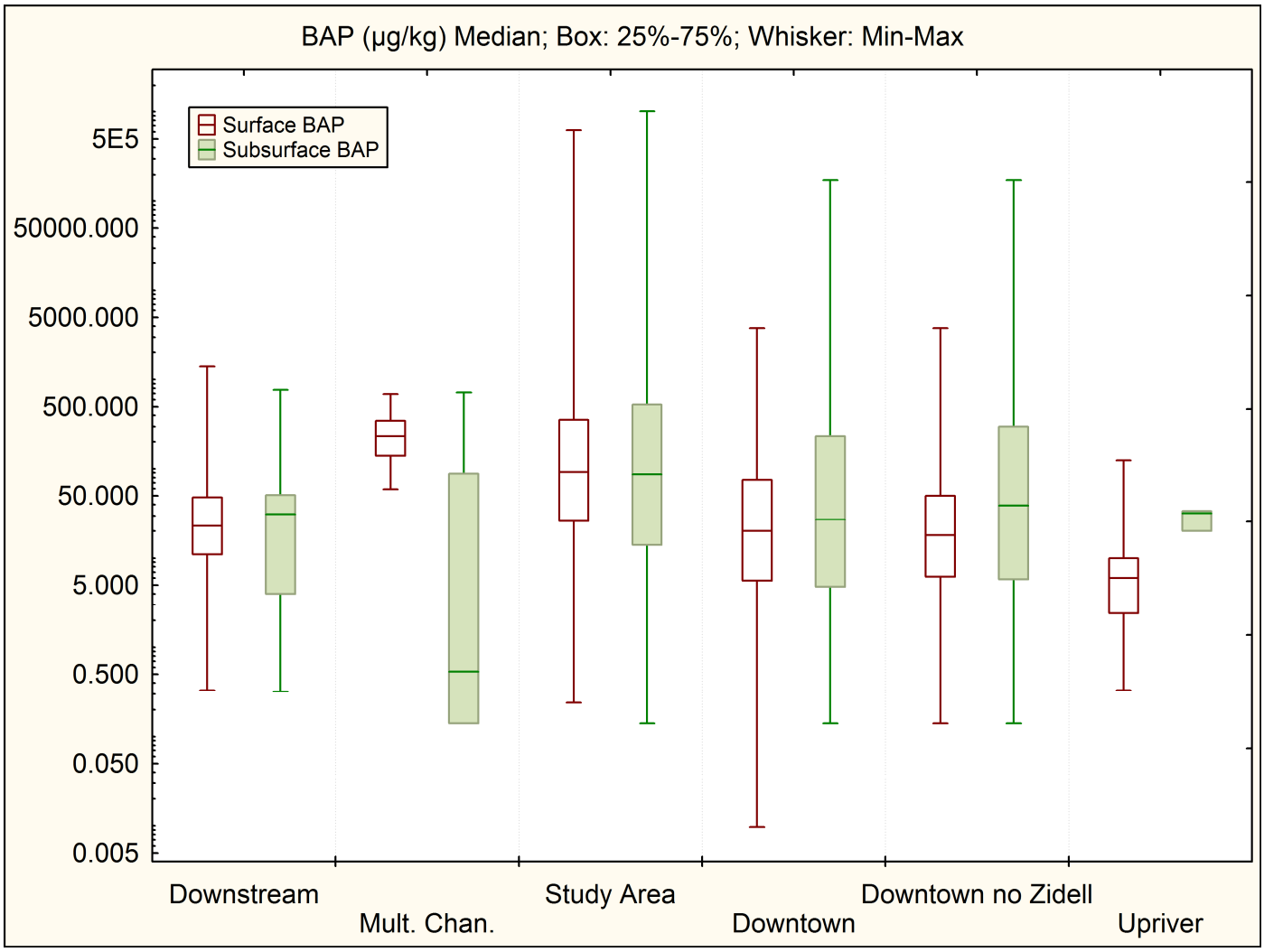



**Figure D1.1-39**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Benzo(a)pyrene Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-40**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Benzo(a)pyrene in
Surface and Subsurface Sediment by River Reach

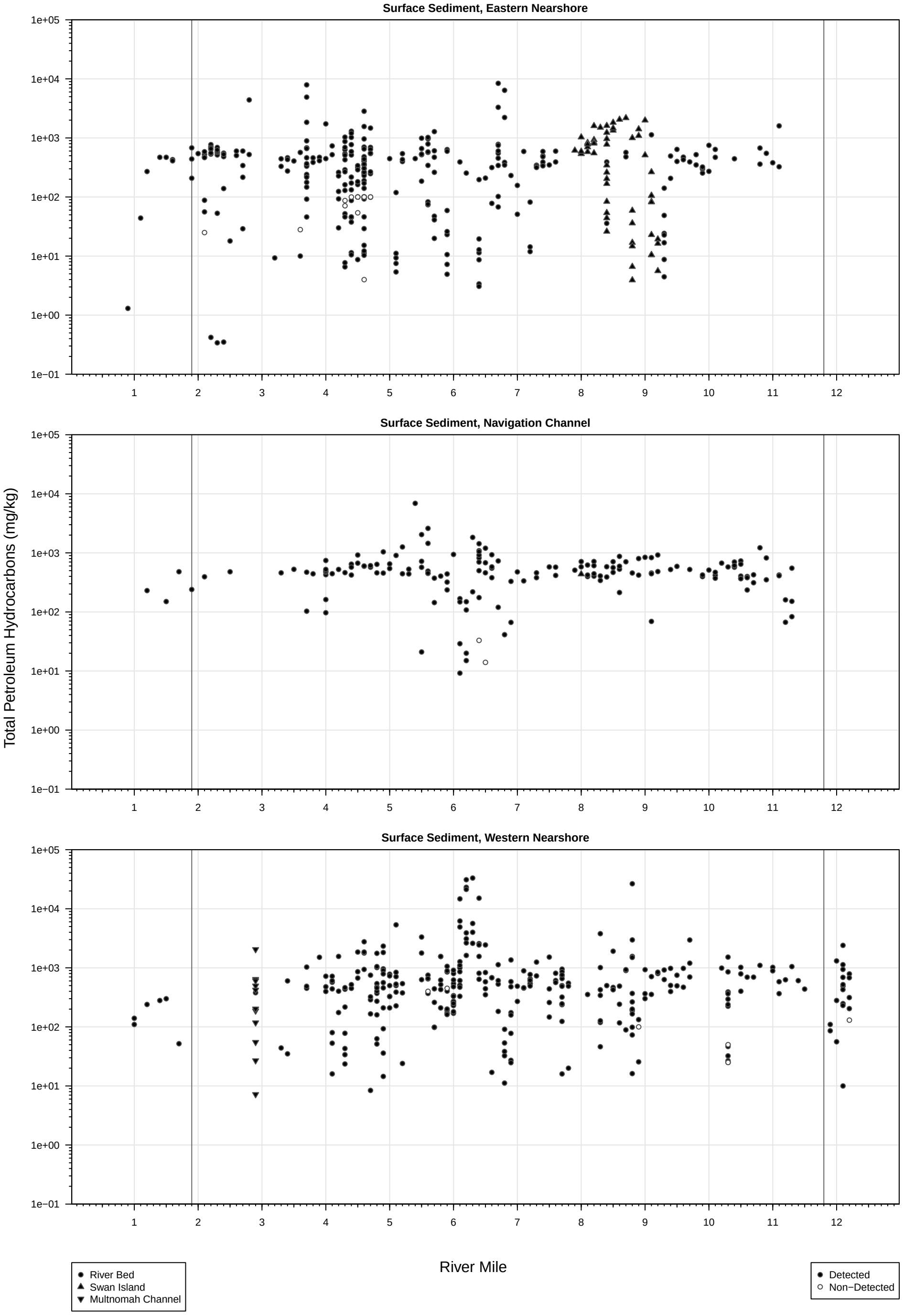



**Figure D1.1−41**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Petroleum Hydrocarbon
Concentrations in Surface Sediment, RM 0.8−12.2

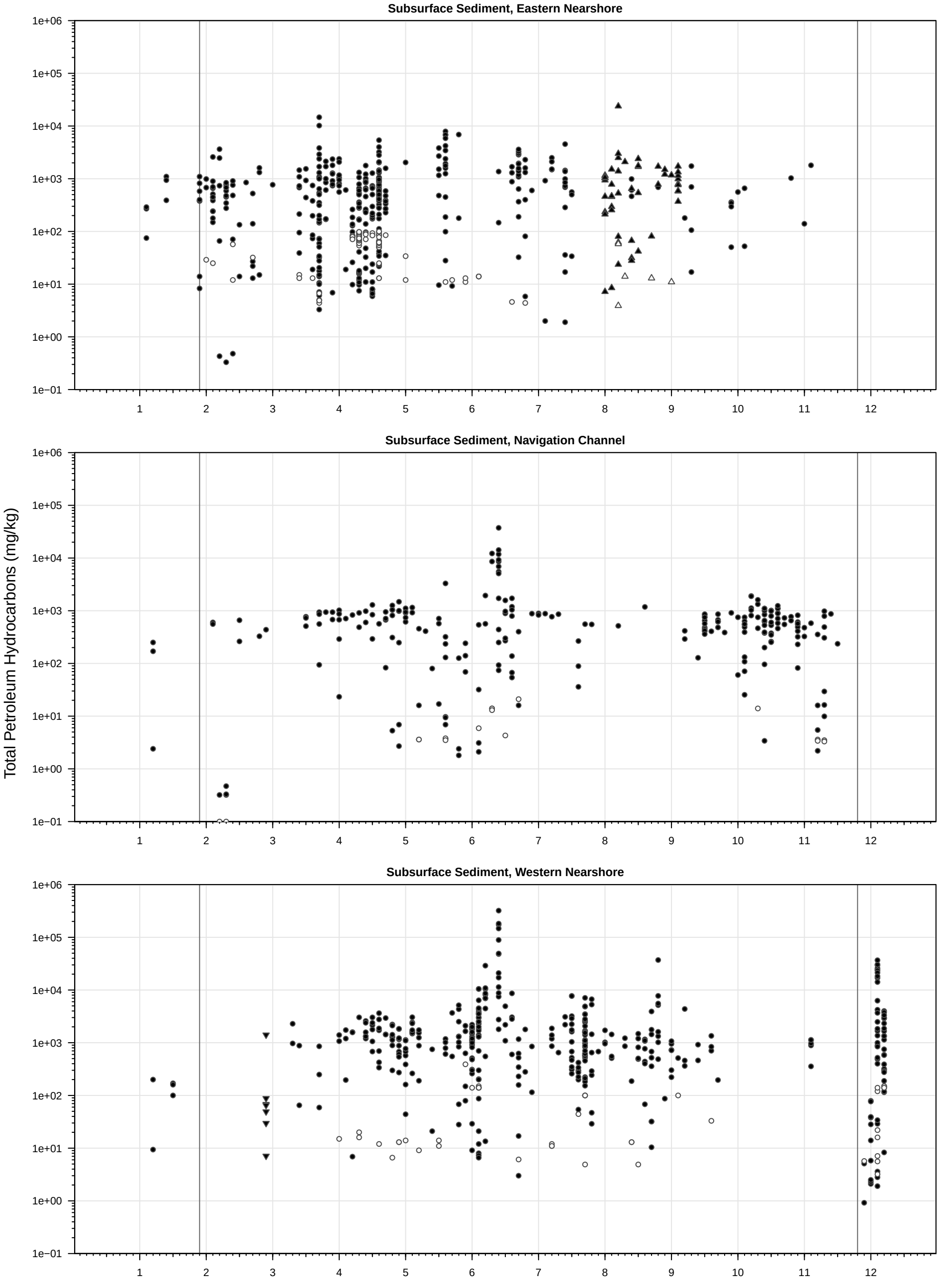



**Figure D1.1−42**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Petroleum Hydrocarbon
Concentrations in Subsurface Sediment, RM 0.8−12.2

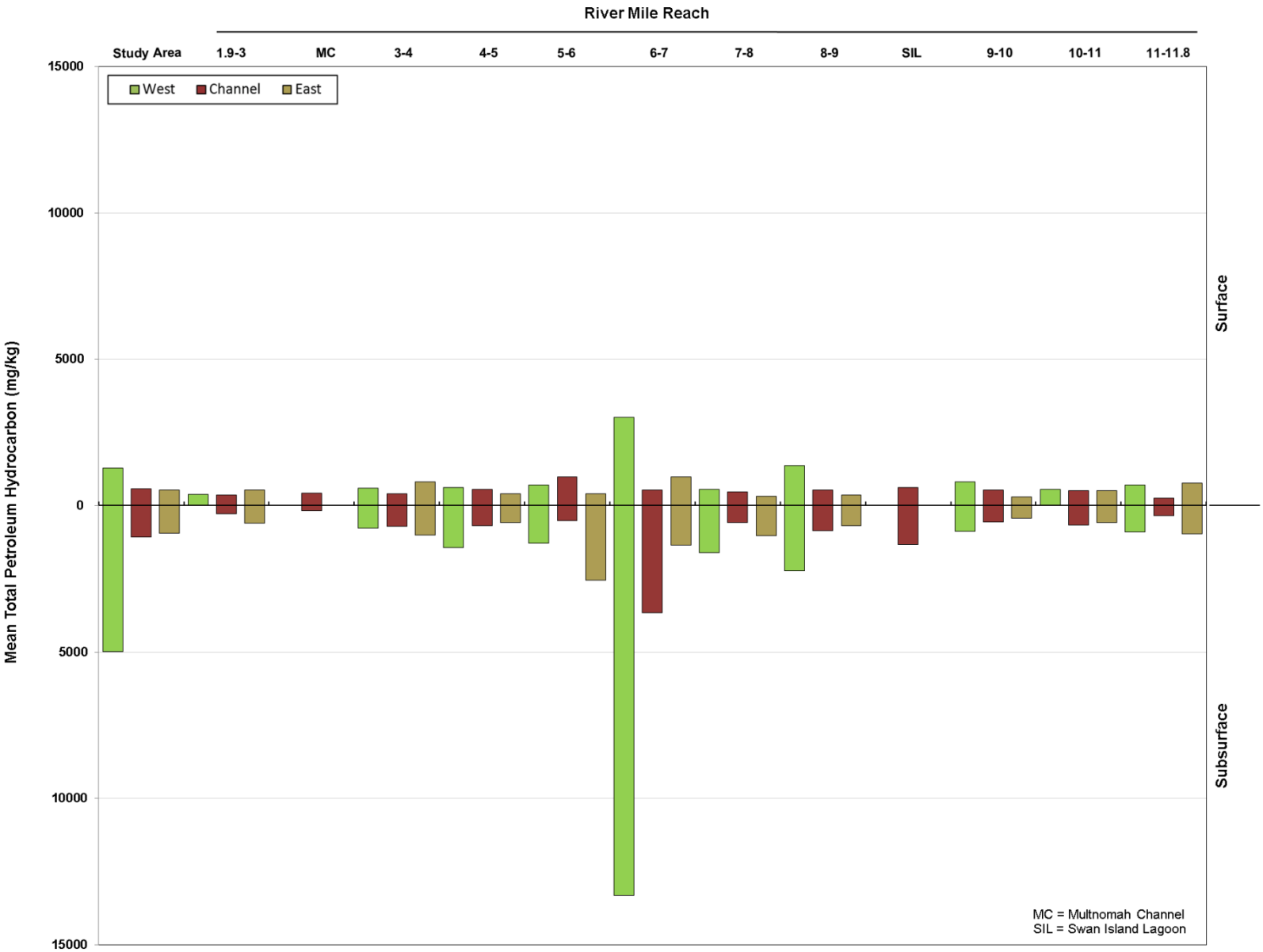
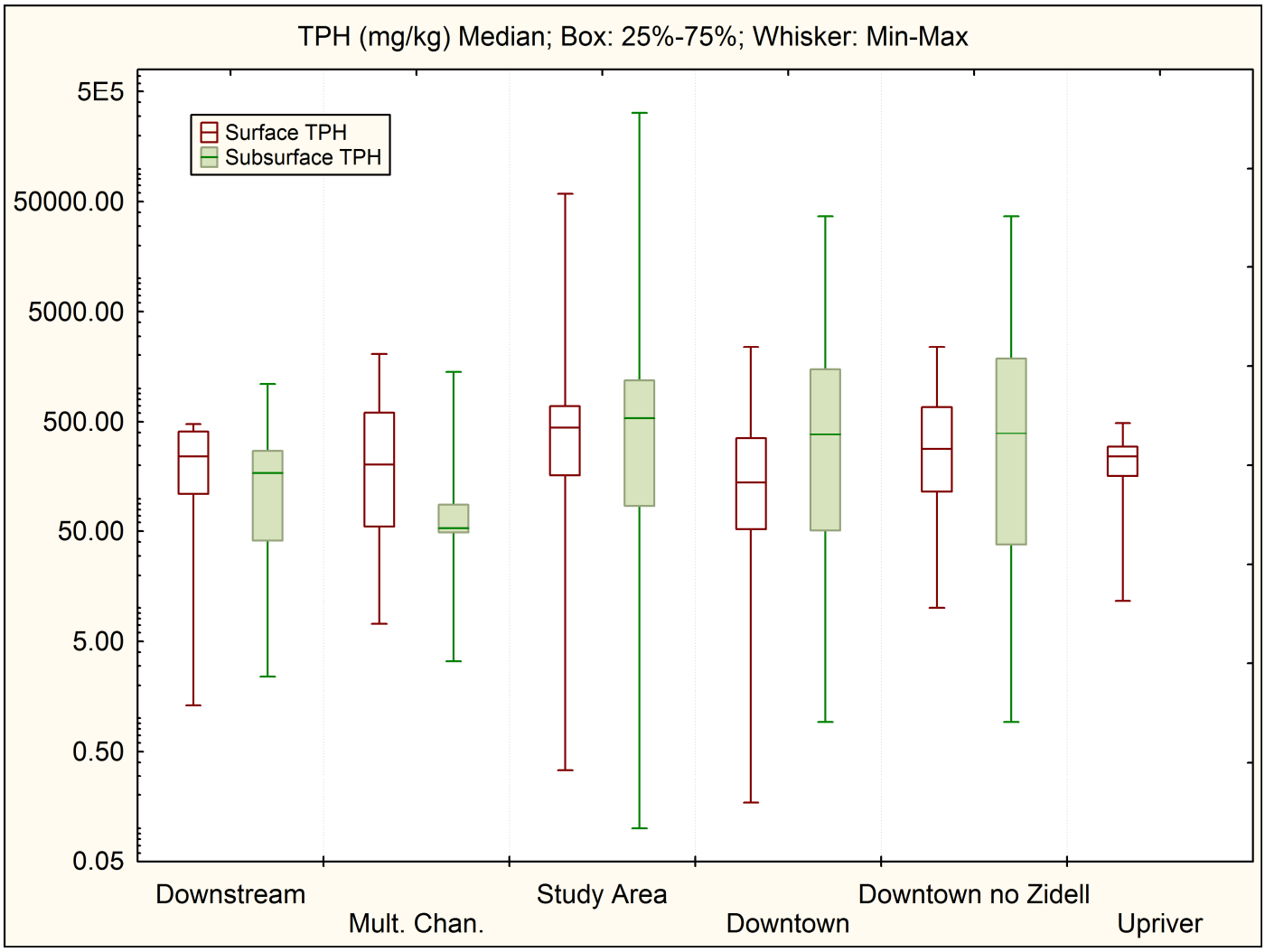



**Figure D1.1-43**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Total Petroleum Hydrocarbon Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-44**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Total Petroleum Hydrocarbons in
Surface and Subsurface Sediment by River Reach

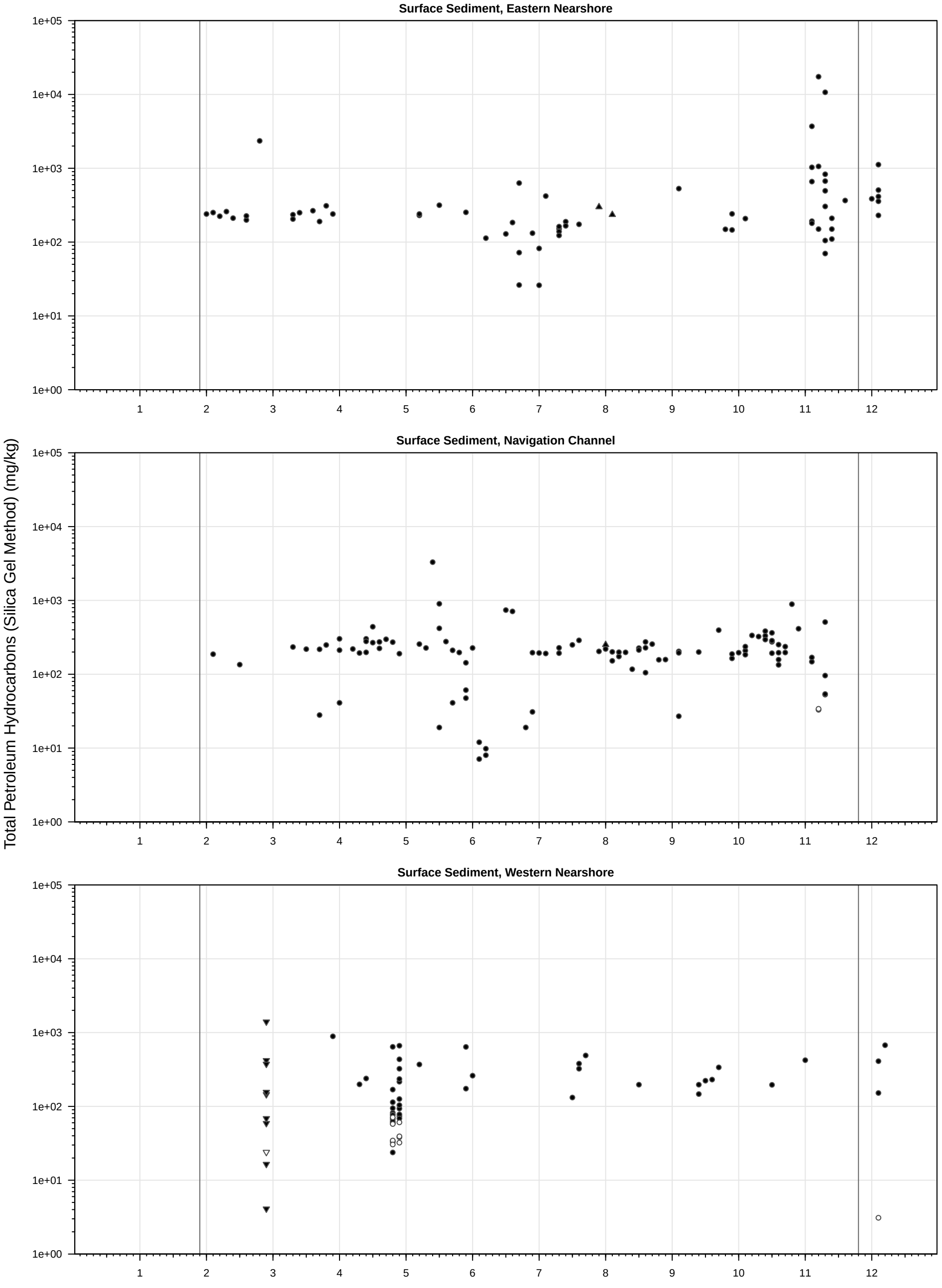



**Figure D1.1−45**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Petroleum Hydrocarbon (Silica Gel Method)
Concentrations in Surface Sediment, RM 0.8−12.2

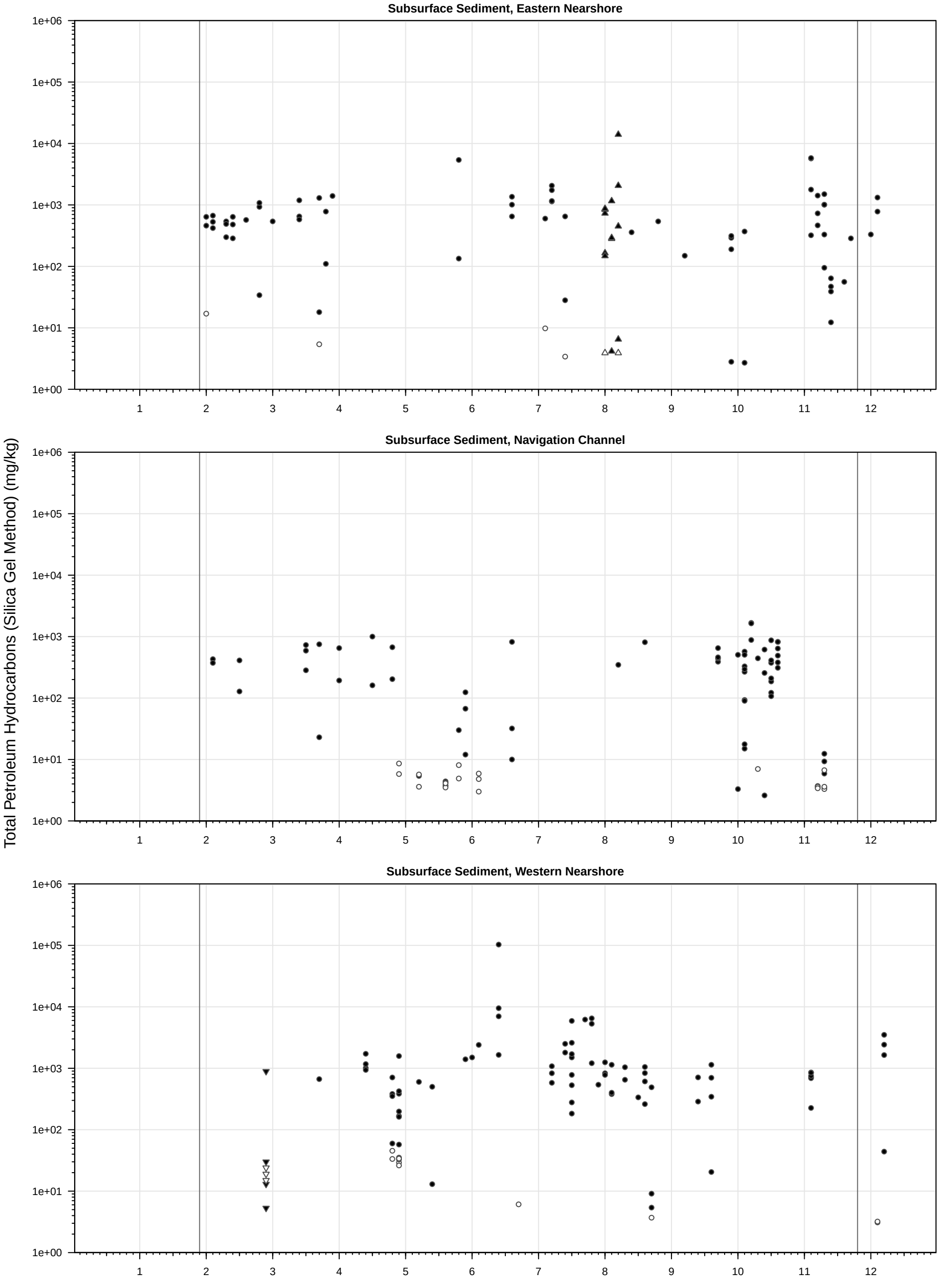



**Figure D1.1−46**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Petroleum Hydrocarbon (Silica Gel Method)
Concentrations in Subsurface Sediment, RM 0.8−12.2

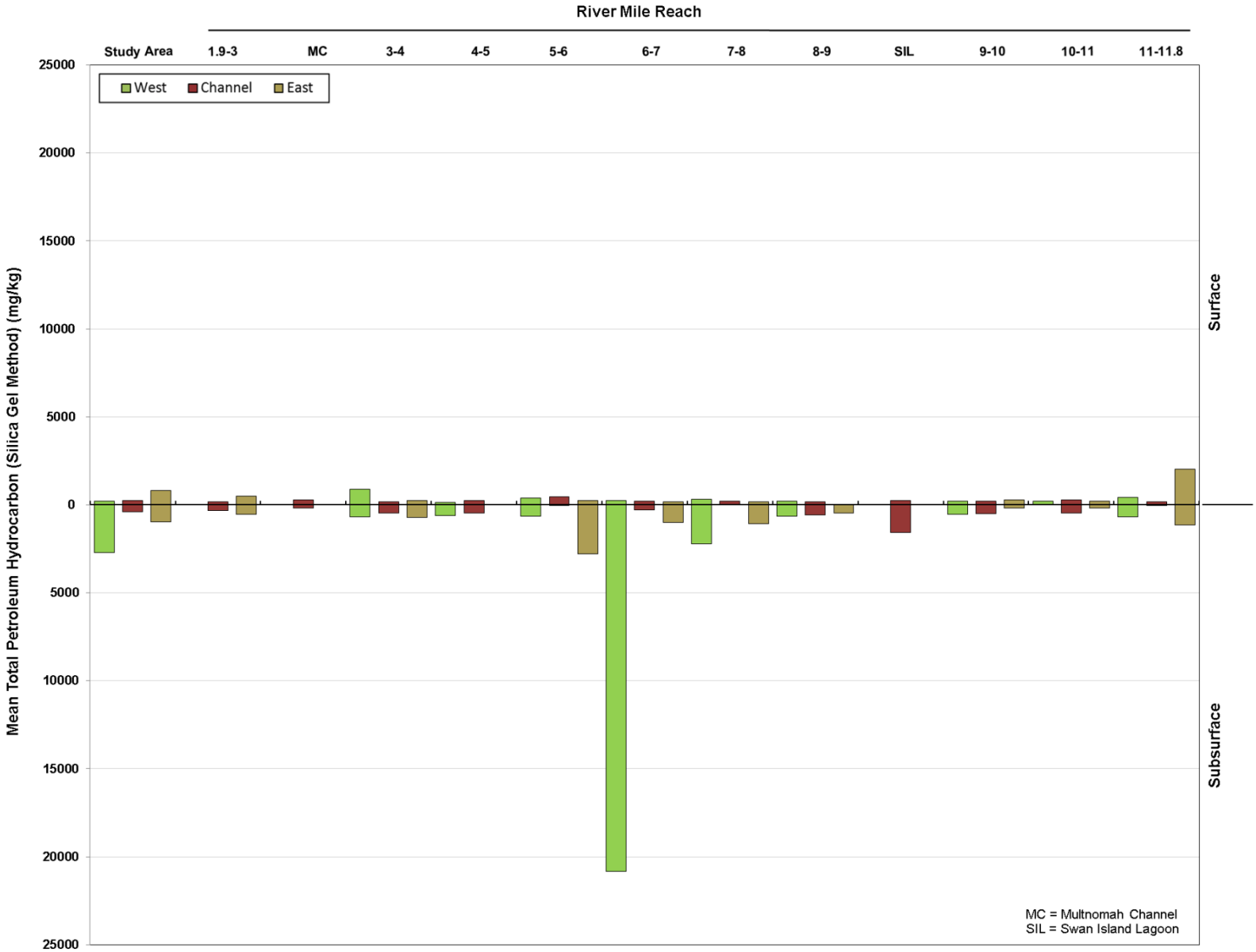
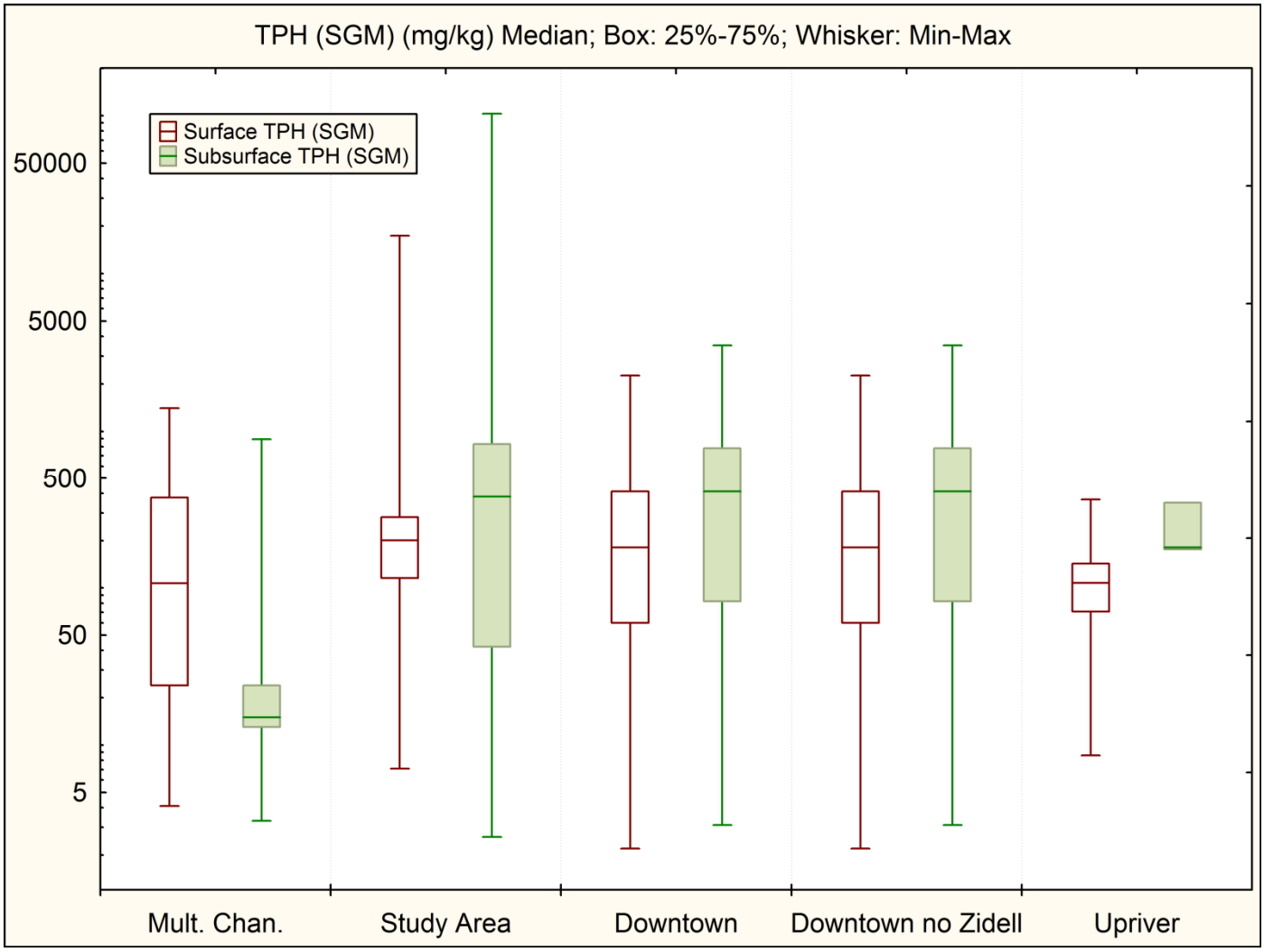



**Figure D1.1-47**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Total Petroleum Hydrocarbon
(Silica Gel Method) Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-48**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of
Total Petroleum Hydrocarbons
(Silica Gel Method) in
Surface and Subsurface Sediment by River Reach

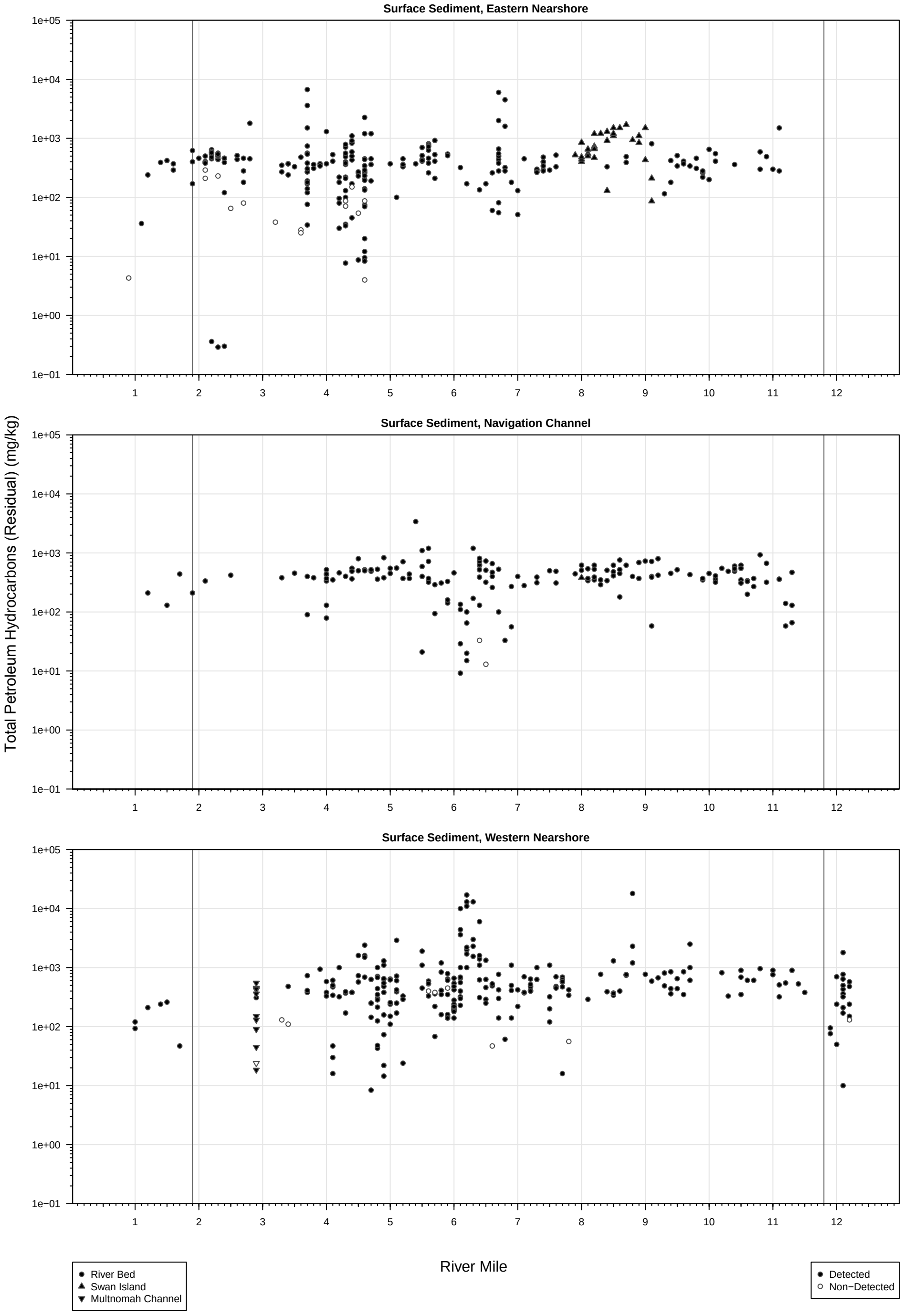



**Figure D1.1−49**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Petroleum Hydrocarbon (Residual)
Concentrations in Surface Sediment, RM 0.8−12.2

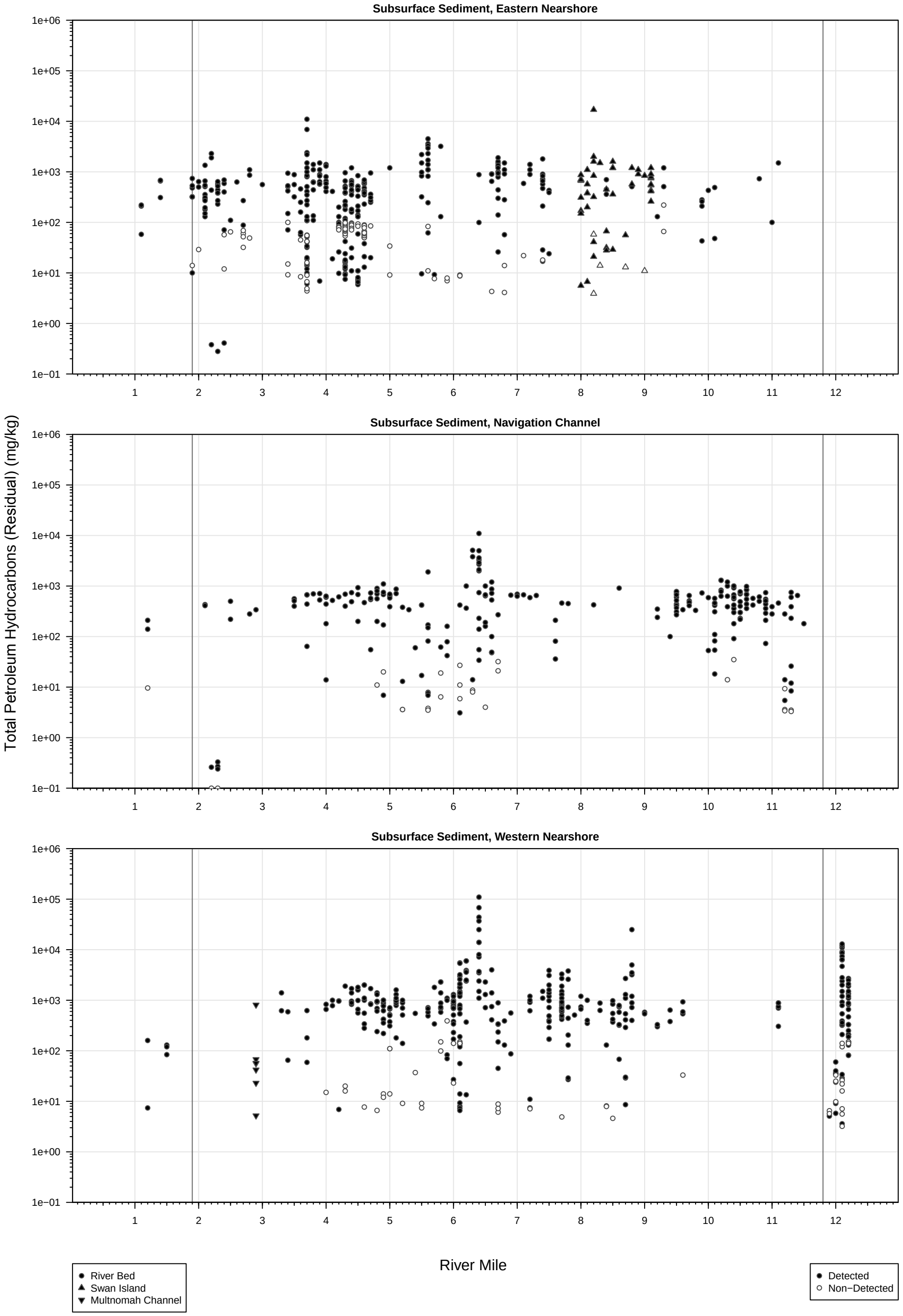



**Figure D1.1−50**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Petroleum Hydrocarbon (Residual)
Concentrations in Subsurface Sediment, RM 0.8−12.2

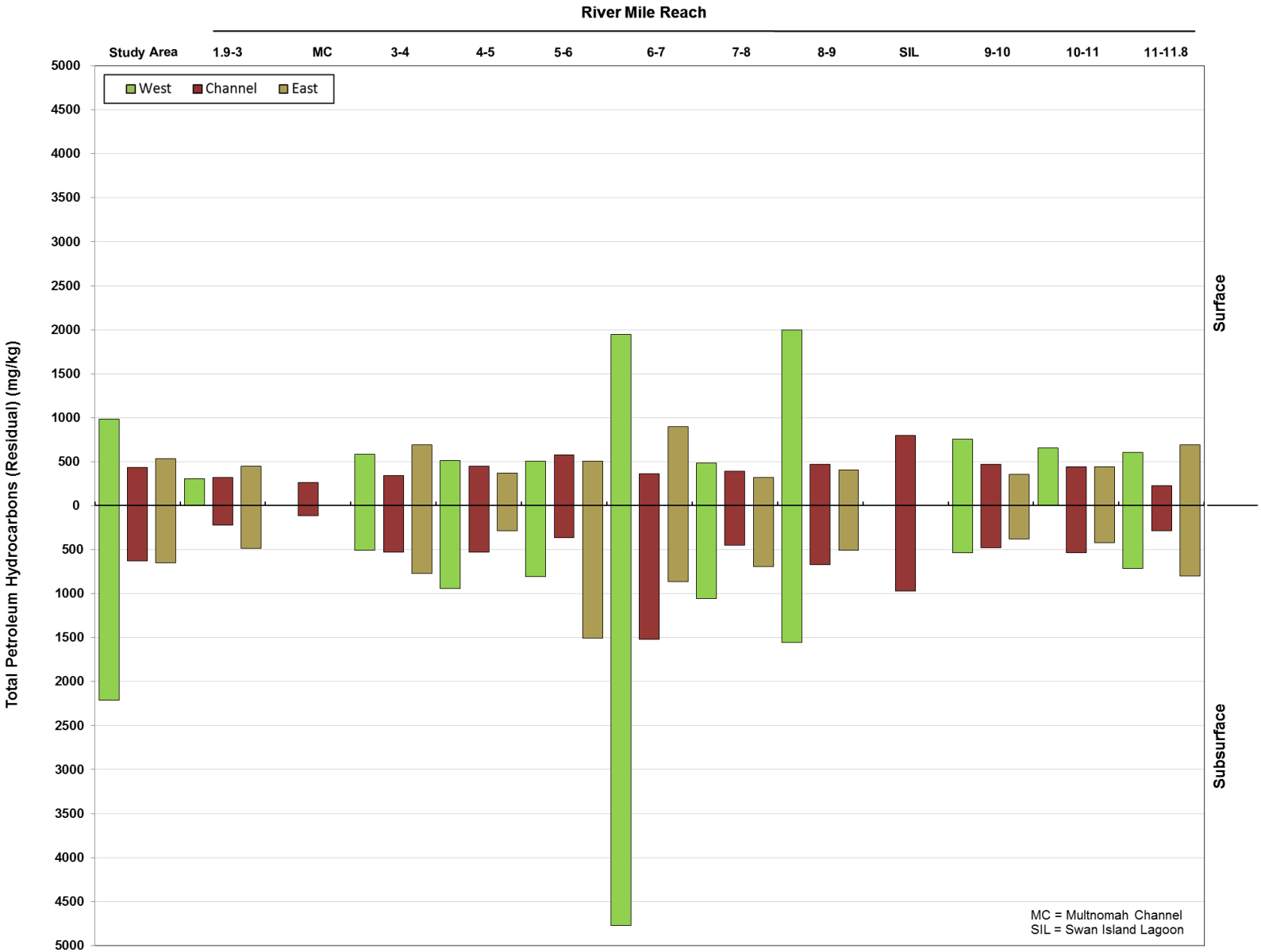
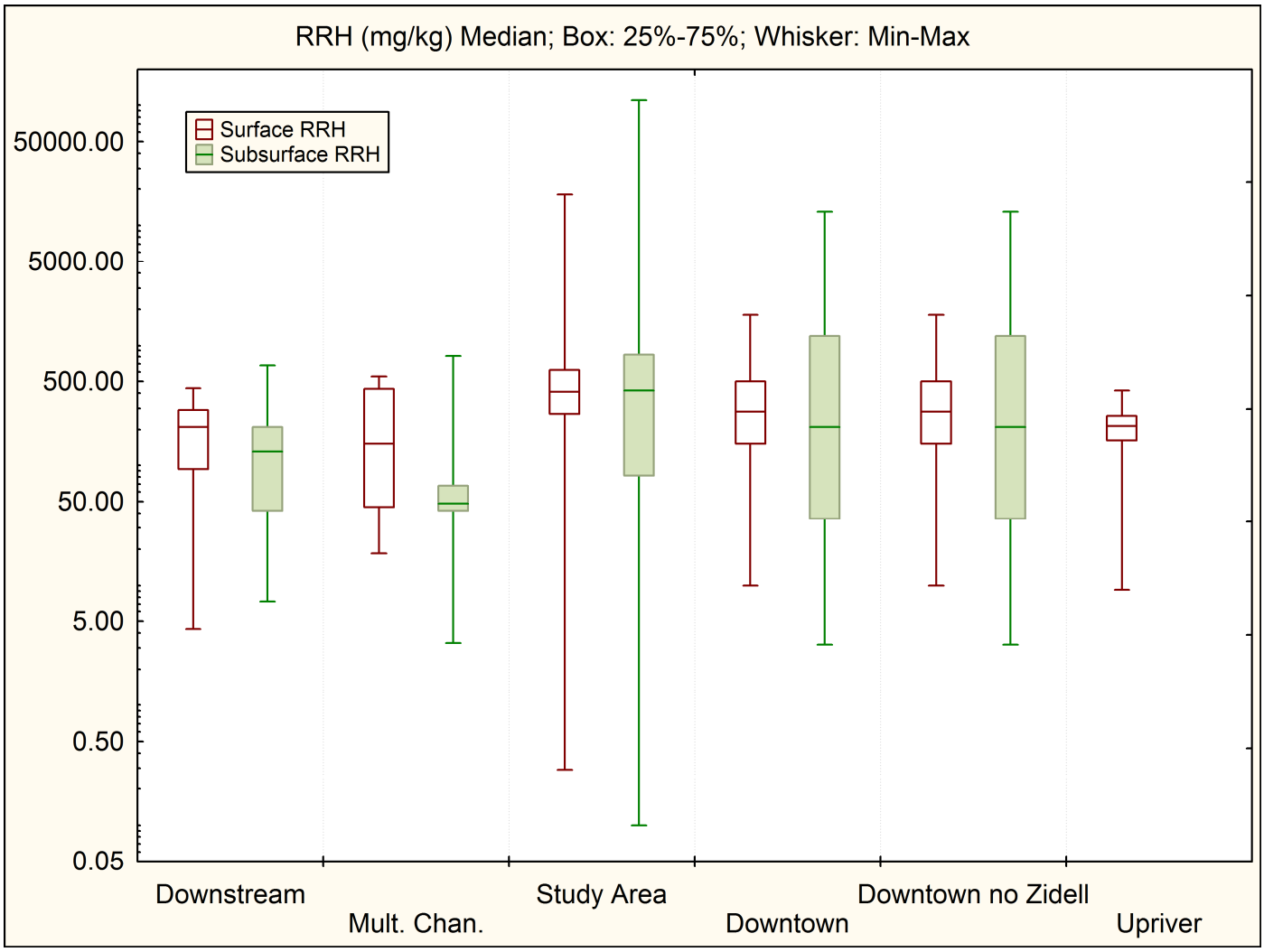



**Figure D1.1-51**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Total Petroleum Hydrocarbon (Residual) Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-52**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Total Petroleum Hydrocarbon (Residual) in
Surface and Subsurface Sediment by River Reach

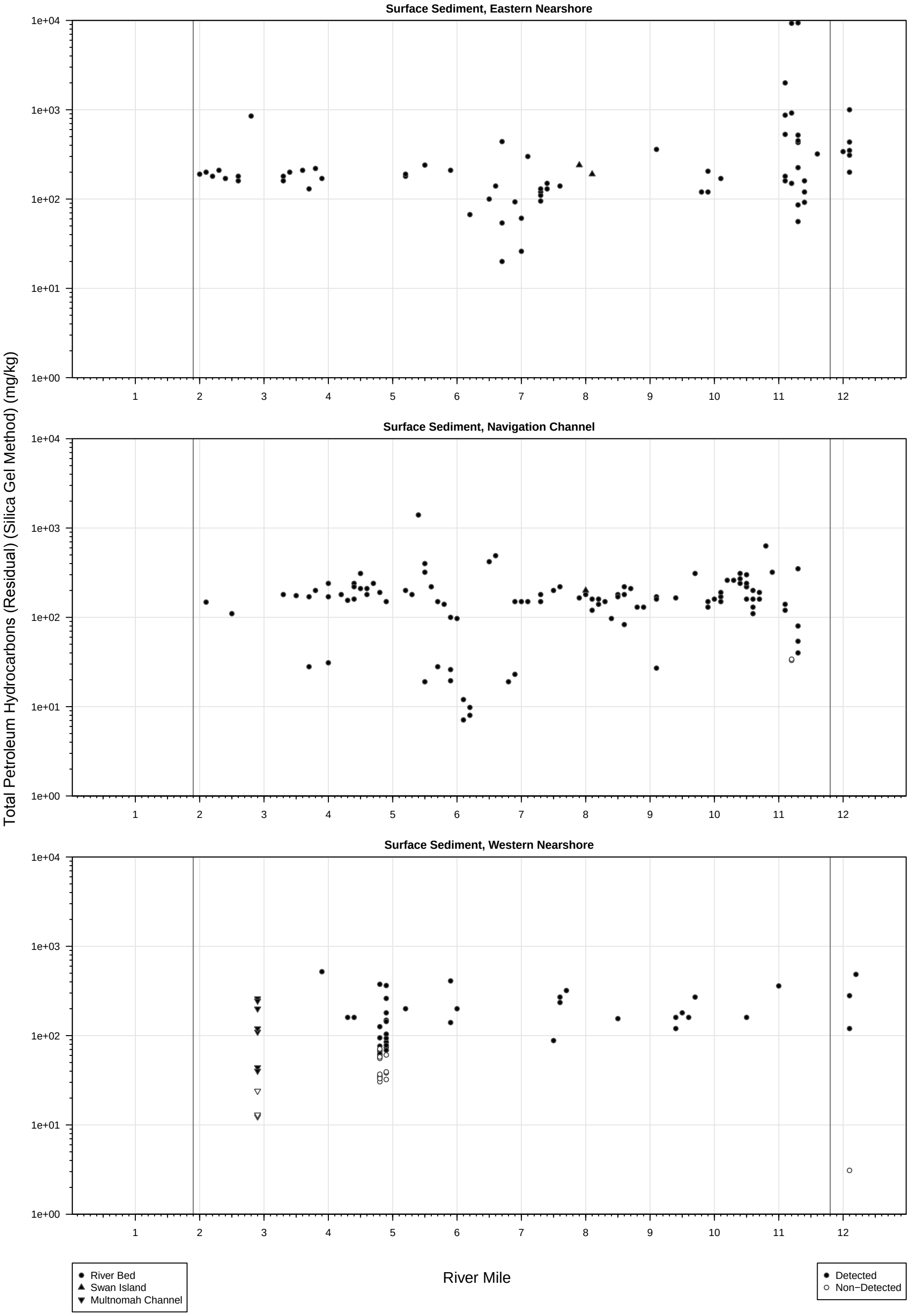



**Figure D1.1−53**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Petroleum Hydrocarbon (Residual) (Silica Gel Method)
Concentrations in Surface Sediment, RM 0.8−12.2

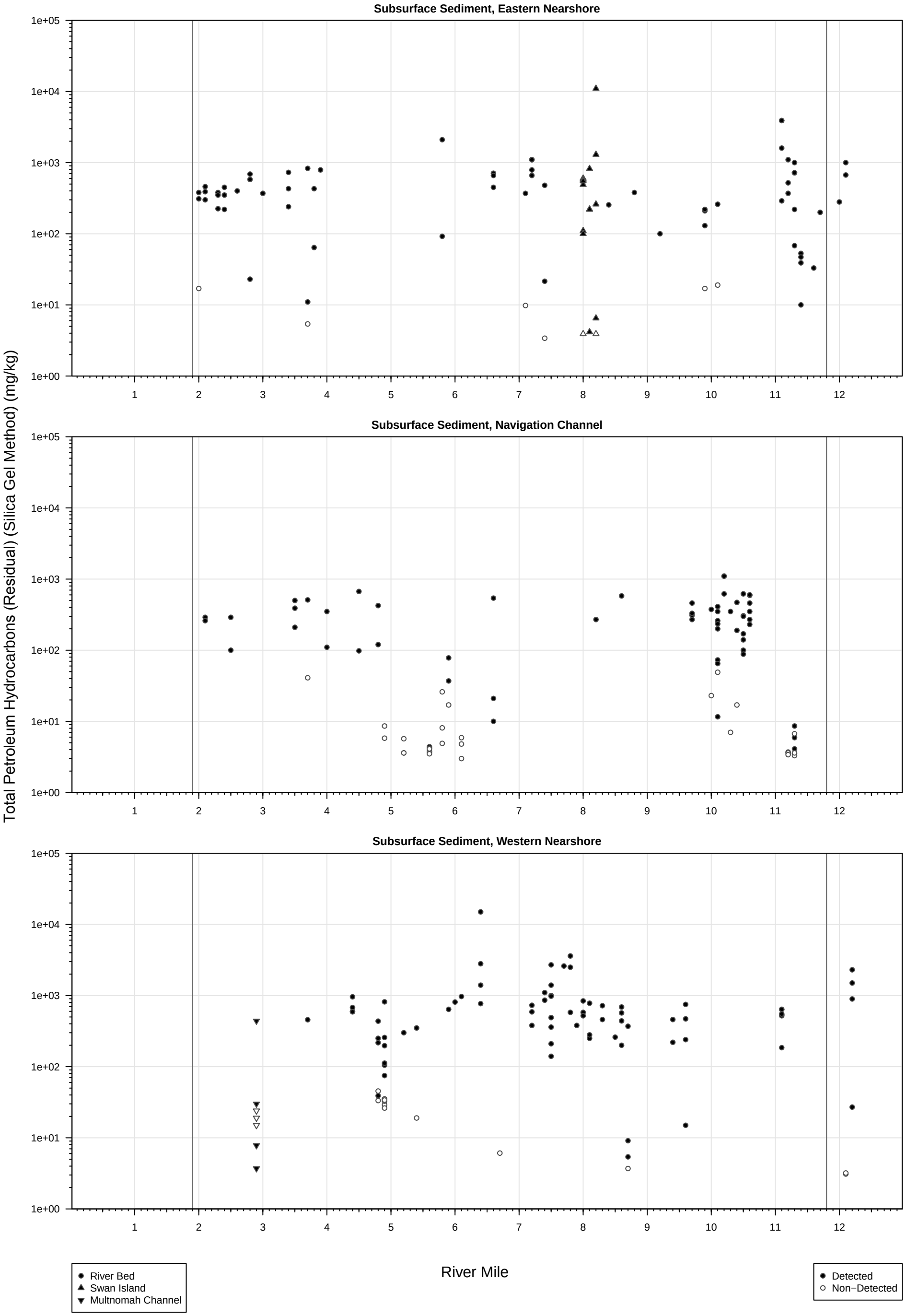



**Figure D1.1−54**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Petroleum Hydrocarbon (Residual) (Silica Gel Method)
Concentrations in Subsurface Sediment, RM 0.8−12.2

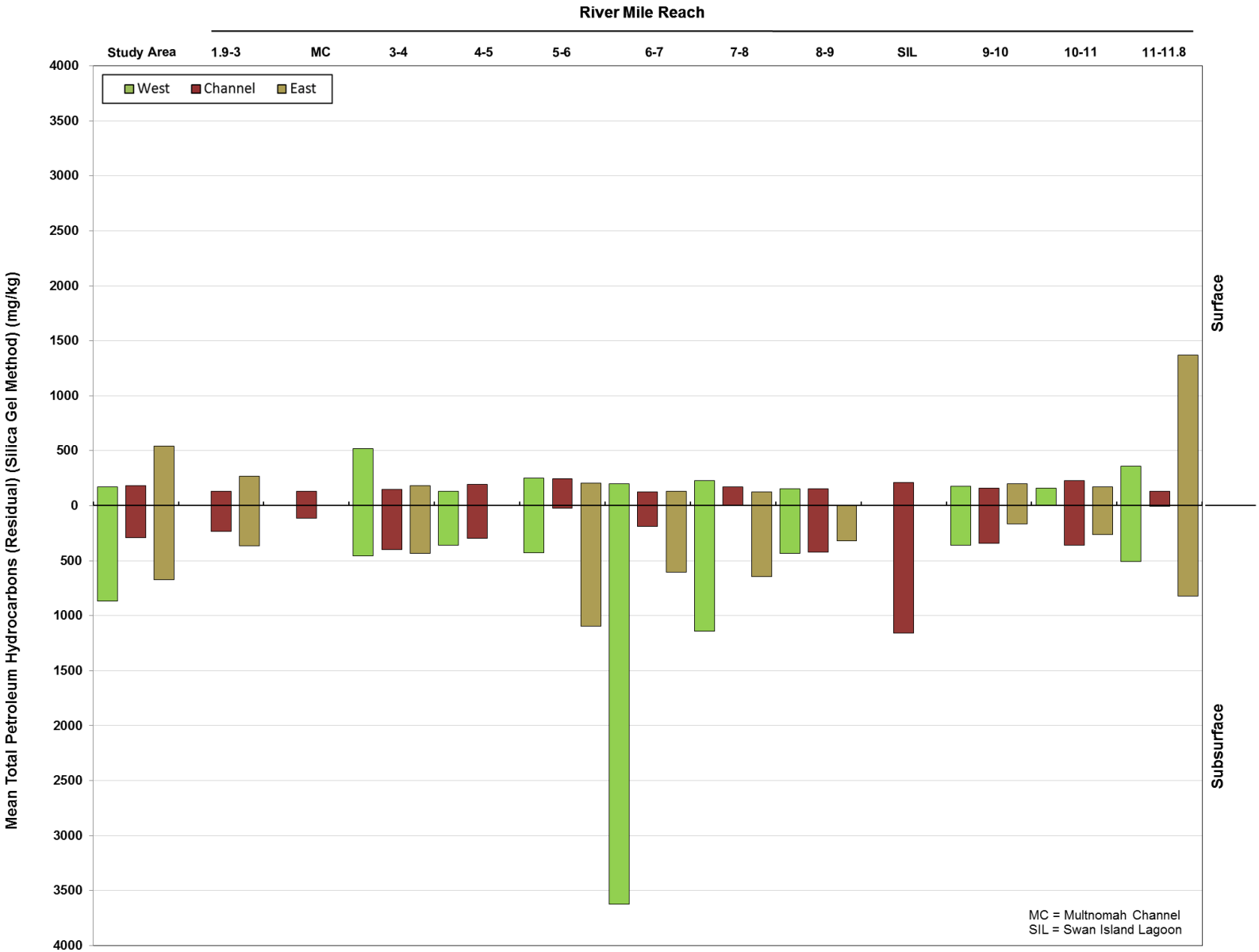
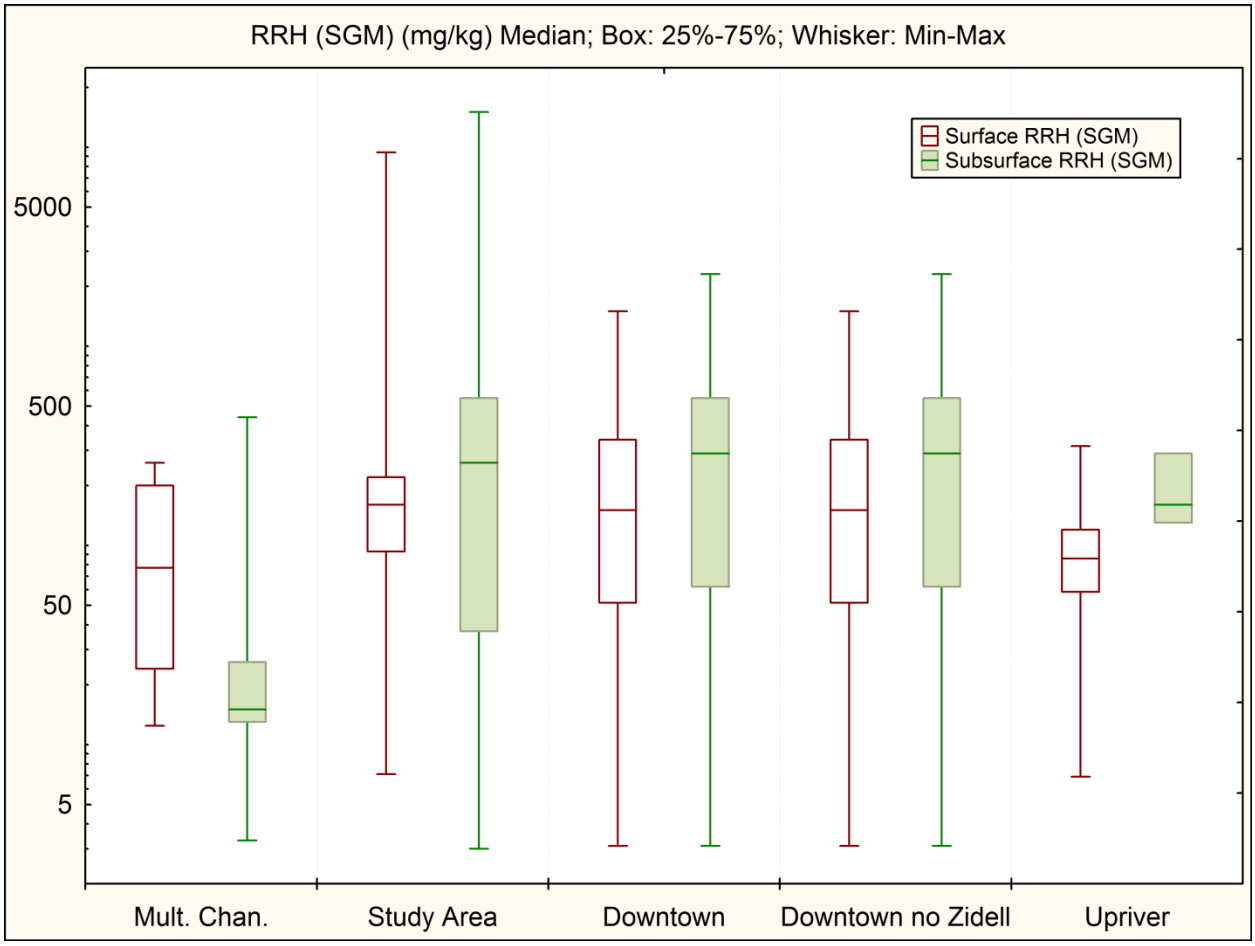



**Figure D1.1-55**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Total Petroleum Hydrocarbon (Residual)
(Silica Gel Method) Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-56**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Total Petroleum Hydrocarbon (Residual)
(Silica Gel Method) in
Surface and Subsurface Sediment by River Reach

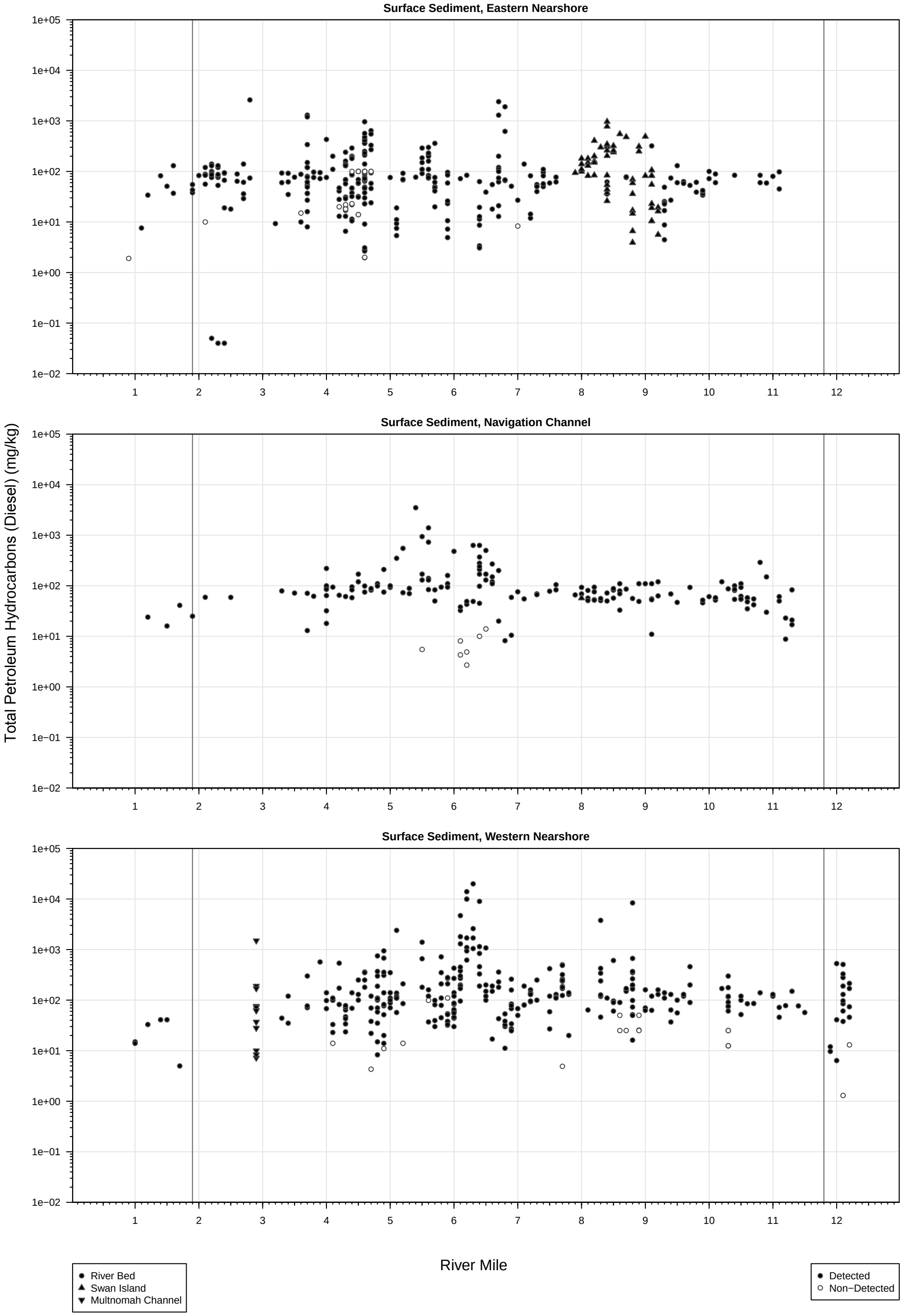



**Figure D1.1−57**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Petroleum Hydrocarbon (Diesel)
Concentrations in Surface Sediment, RM 0.8−12.2

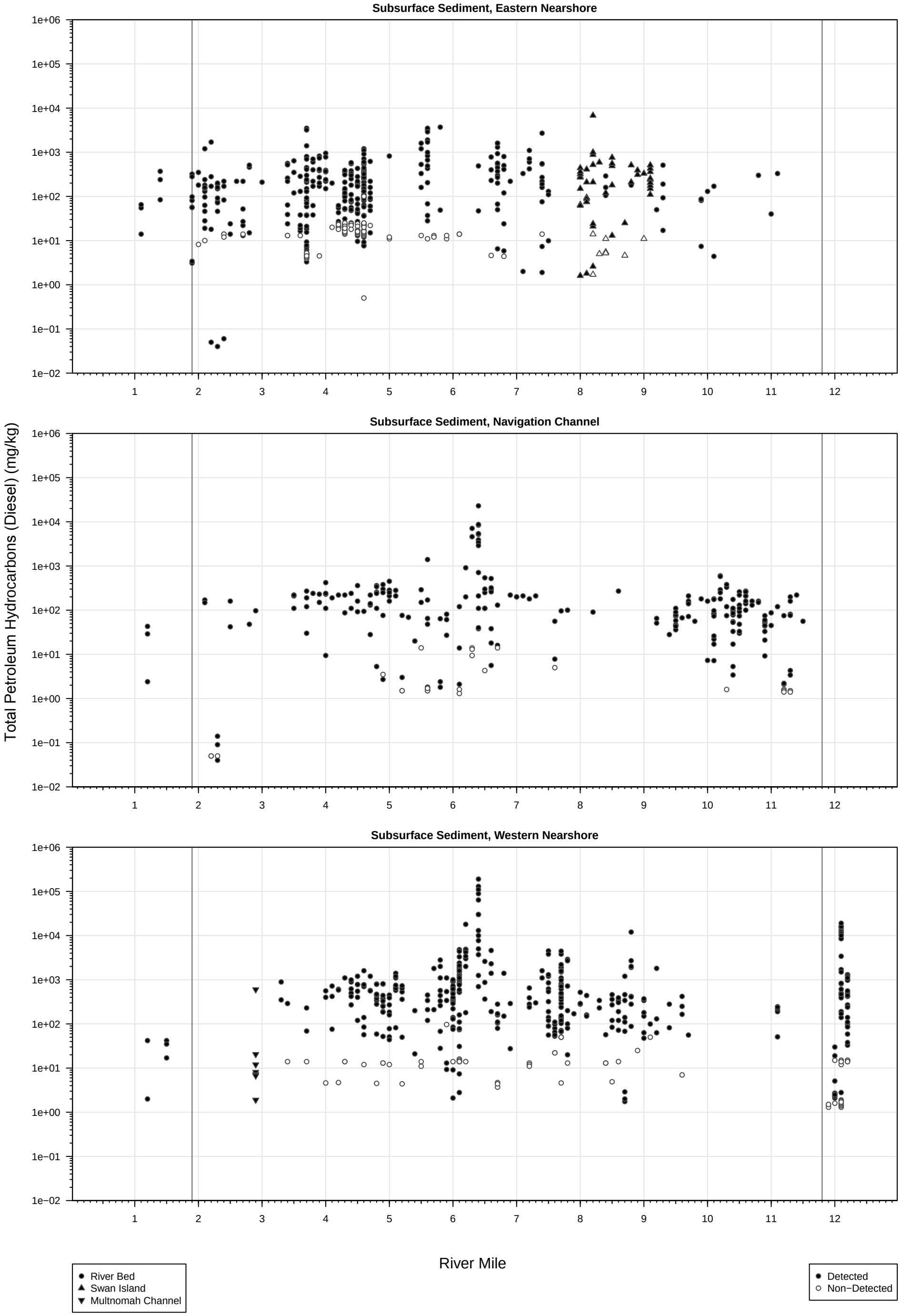



**Figure D1.1−58**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Petroleum Hydrocarbon (Diesel)
Concentrations in Subsurface Sediment, RM 0.8−12.2

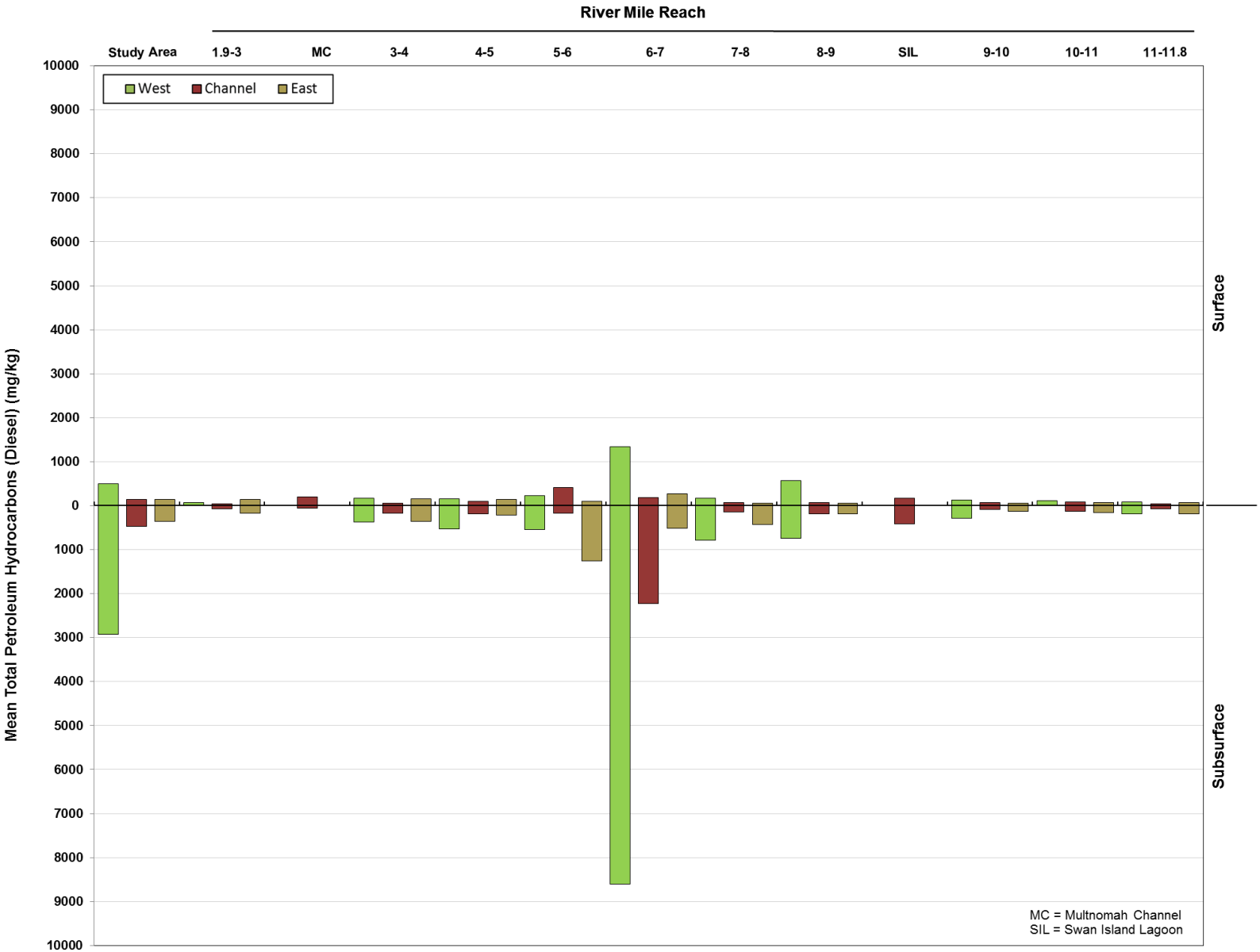
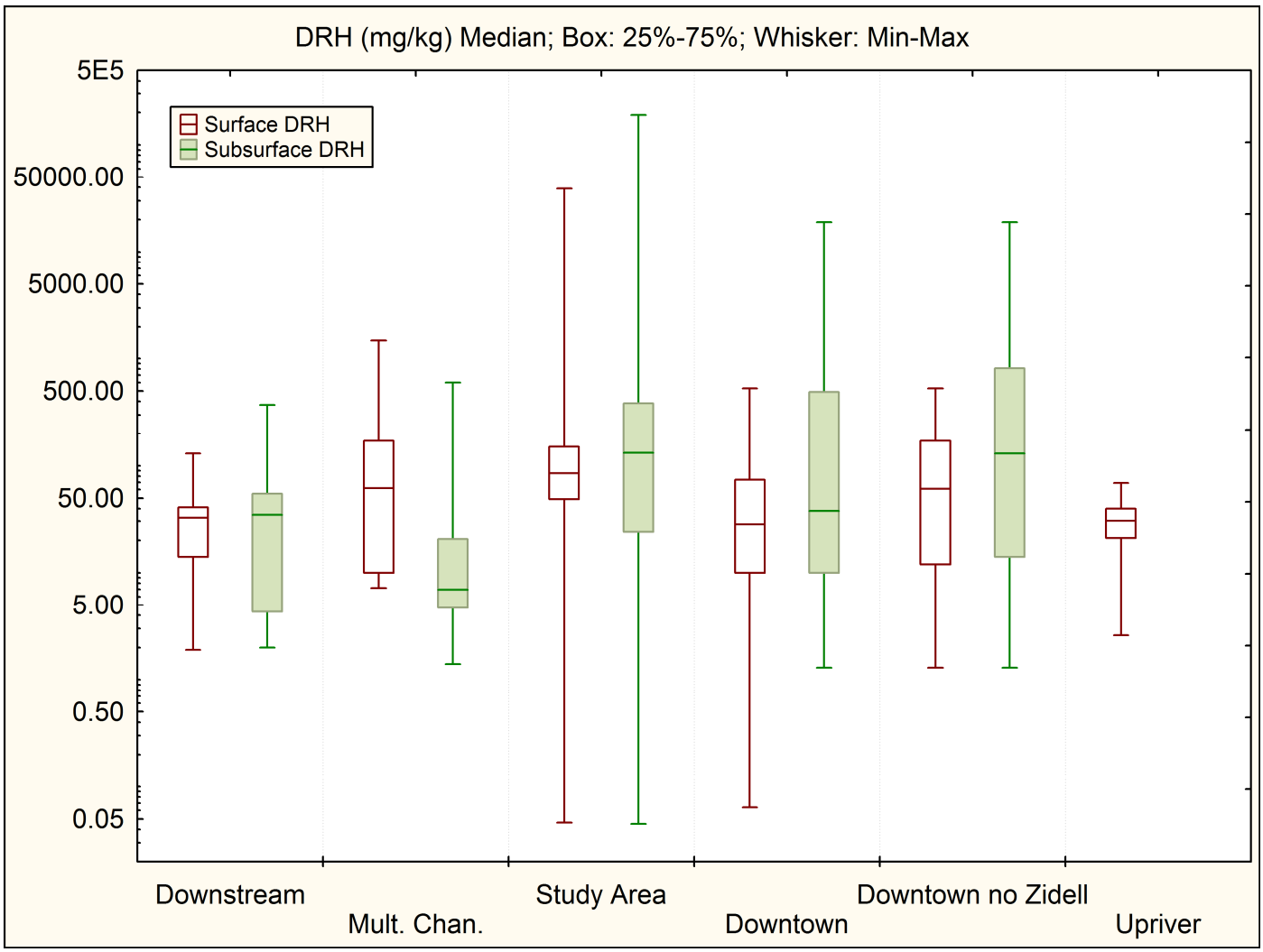



**Figure D1.1-59**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Total Petroleum Hydrocarbon (Diesel) Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-60**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Total Petroleum Hydrocarbon (Diesel) in
Surface and Subsurface Sediment by River Reach

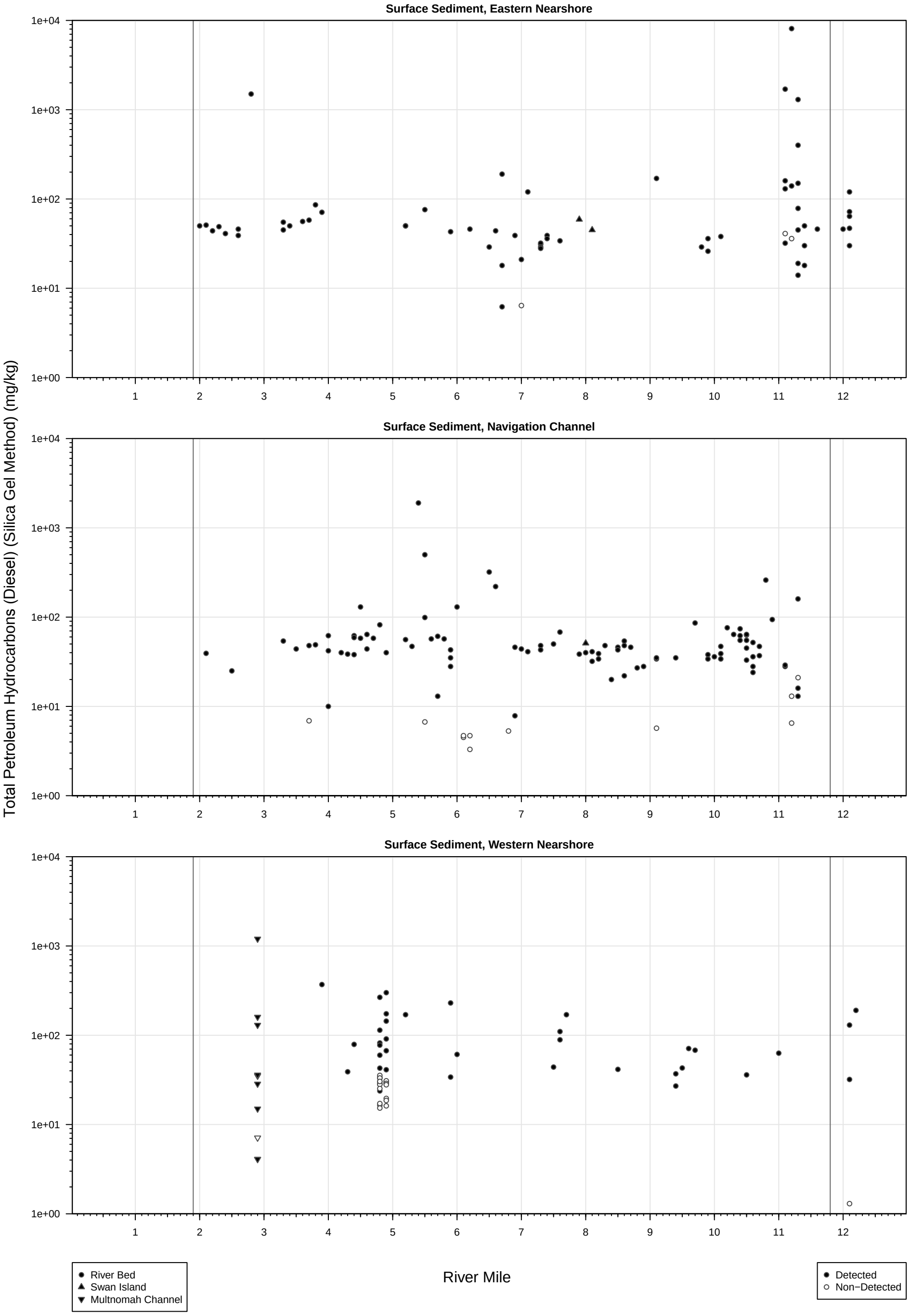



**Figure D1.1−61**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Petroleum Hydrocarbon (Diesel) (Silica Gel Method)
Concentrations in Surface Sediment, RM 0.8−12.2

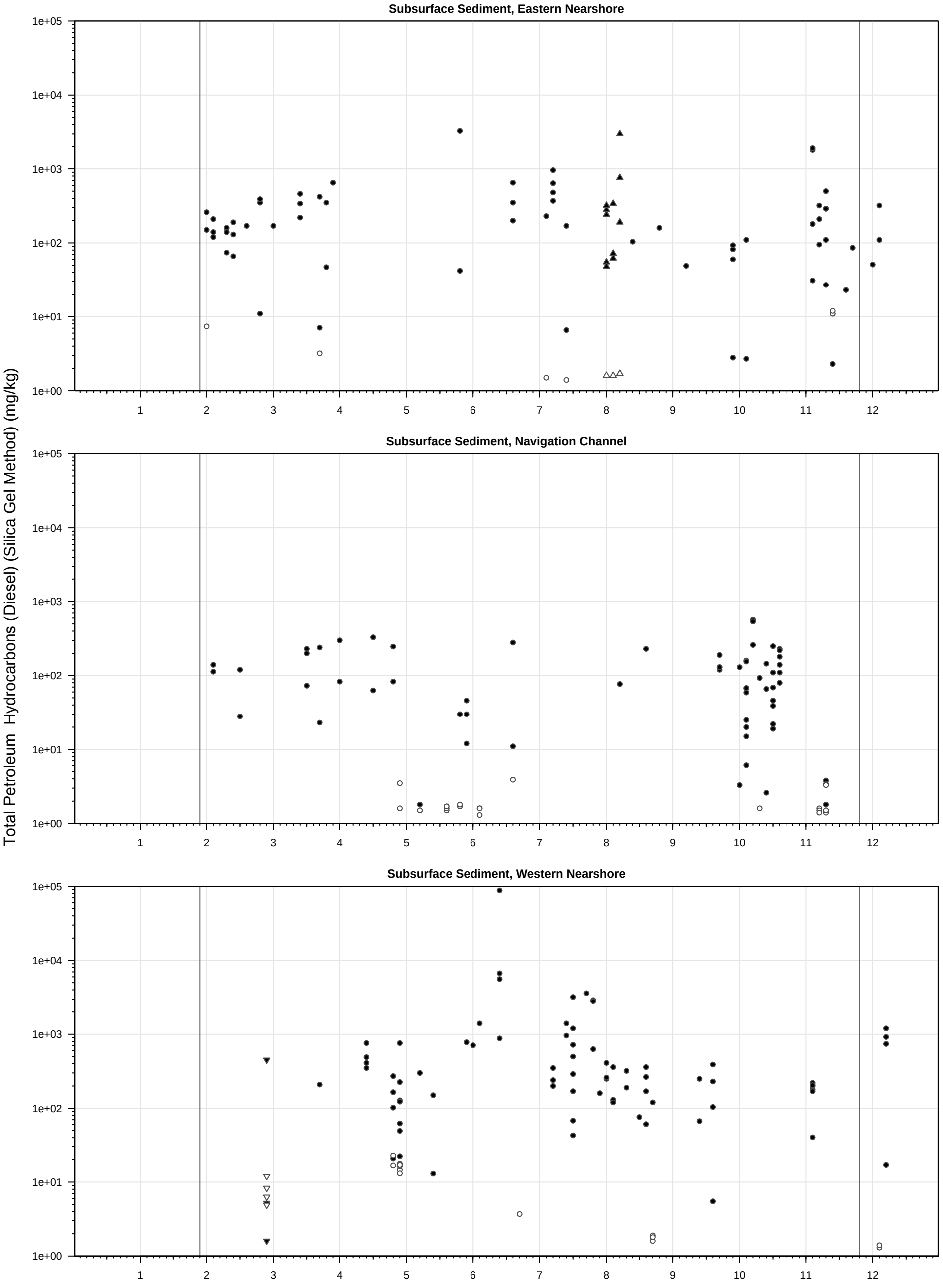



**Figure D1.1−62**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Petroleum Hydrocarbon (Diesel) (Silica Gel Method)
Concentrations in Subsurface Sediment, RM 0.8−12.2

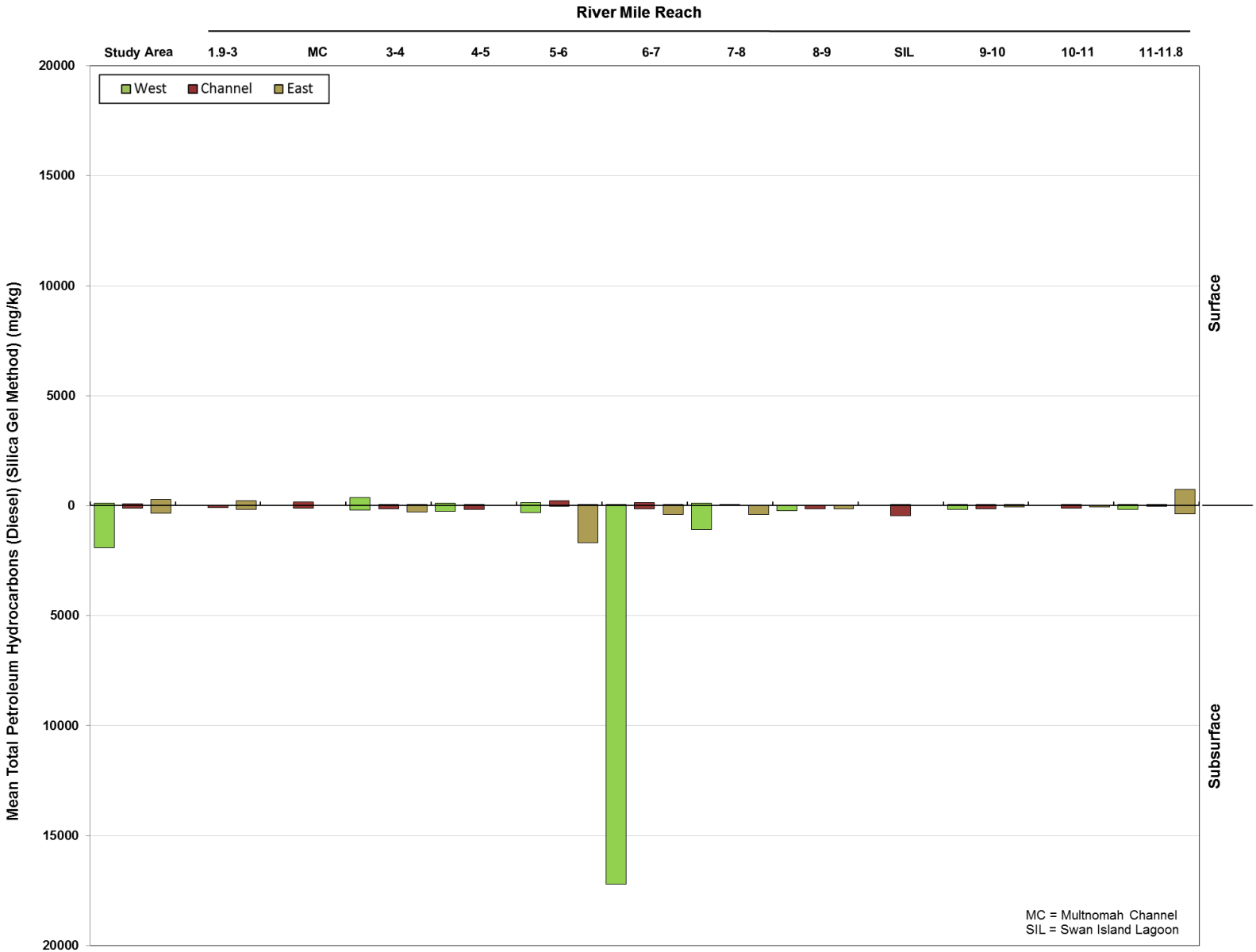
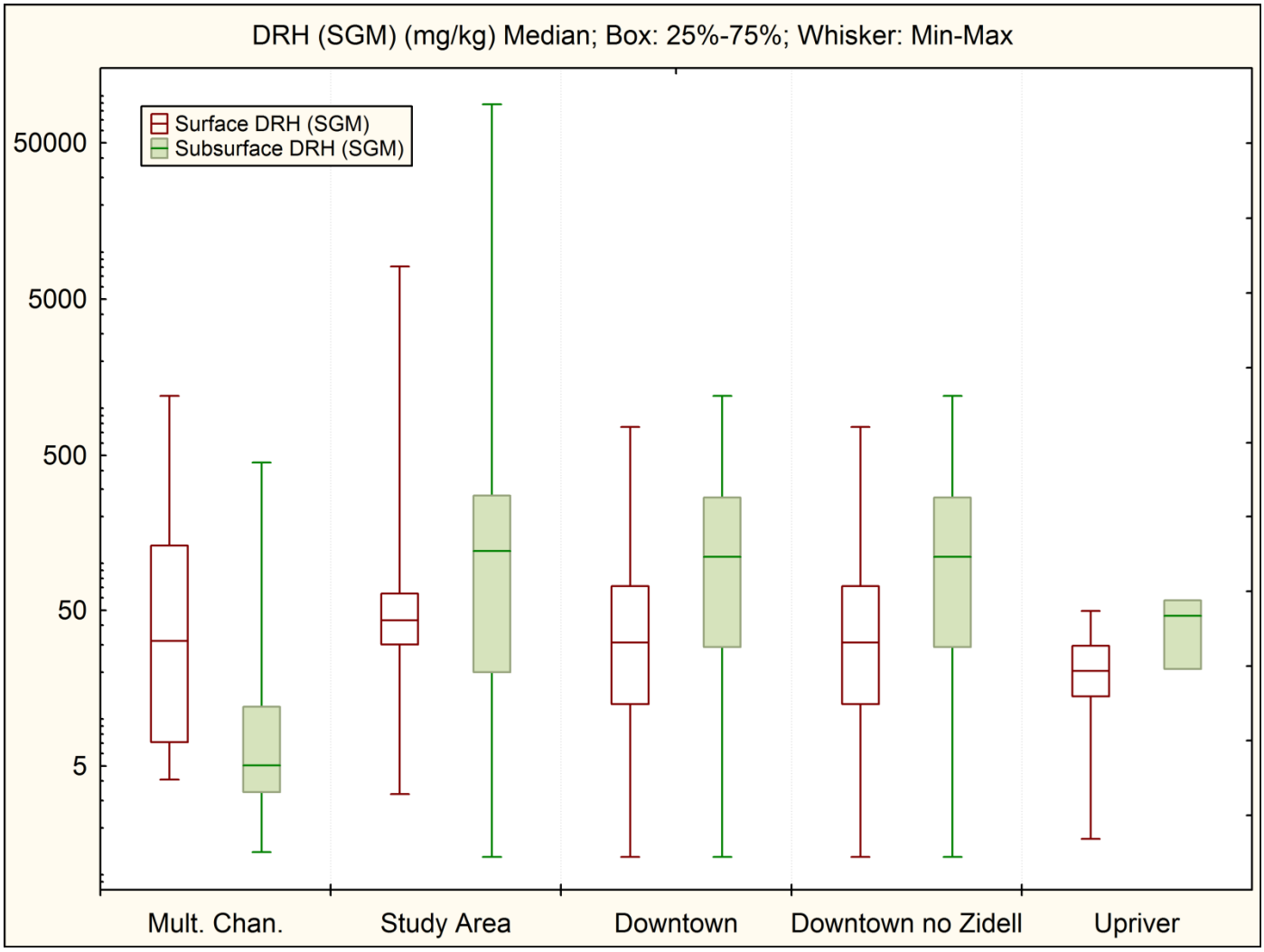



**Figure D1.1-63**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Total Petroleum Hydrocarbon (Diesel)
(Silica Gel Method) Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-64**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Total Petroleum Hydrocarbon (Diesel)
(Silica Gel Method) in
Surface and Subsurface Sediment by River Reach

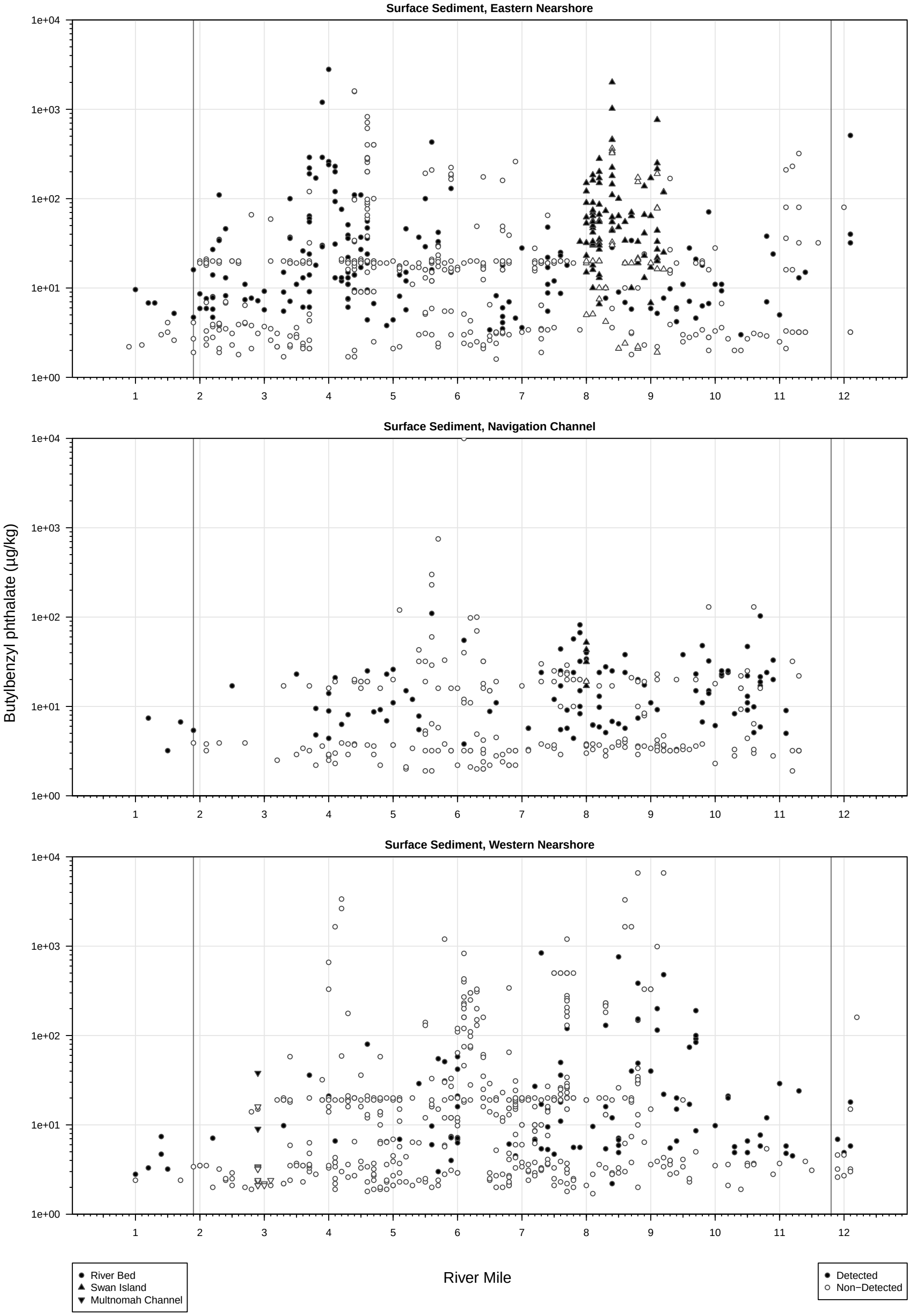



**Figure D1.1−65**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Butylbenzyl phthalate
Concentrations in Surface Sediment, RM 0.8−12.2

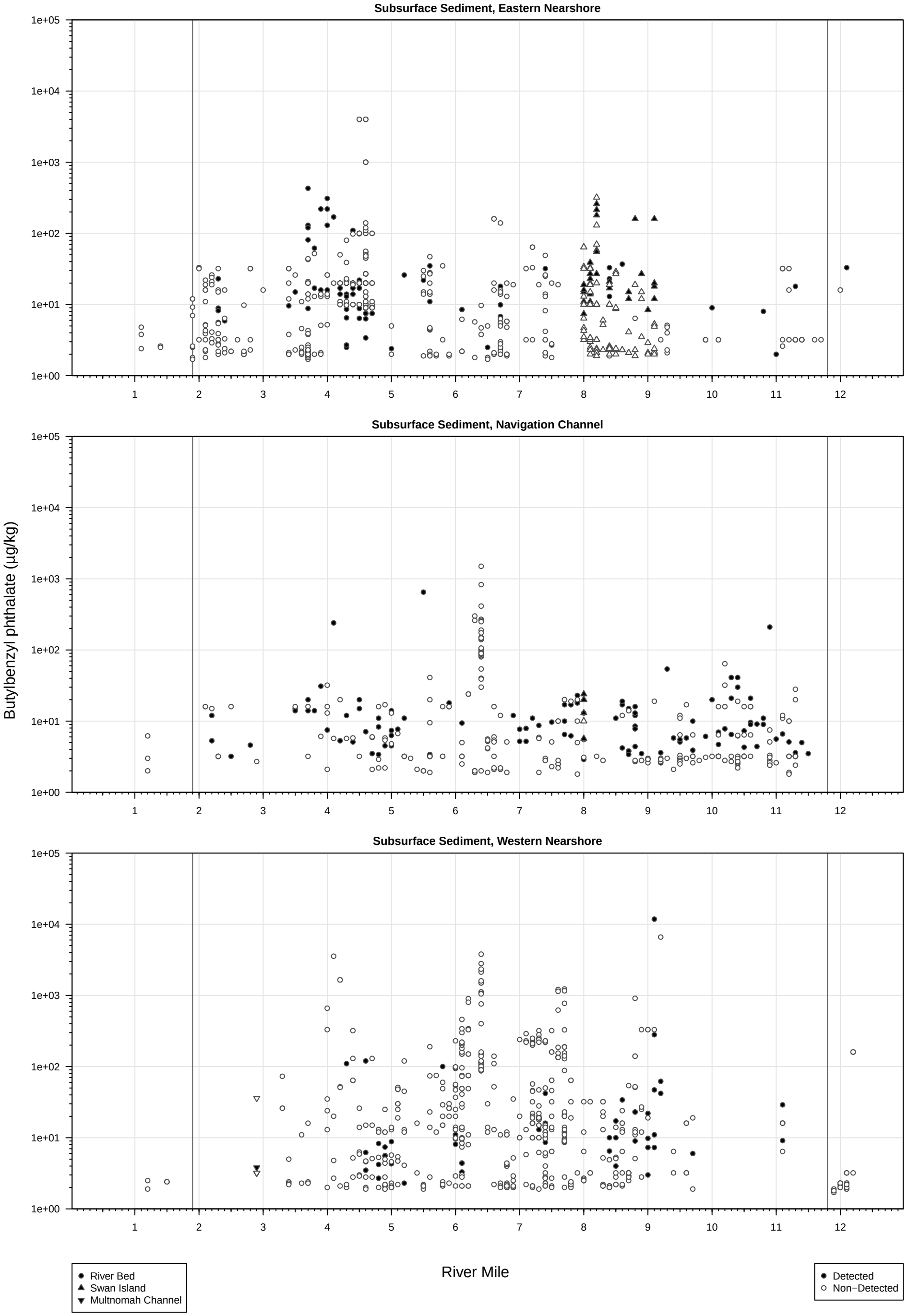



**Figure D1.1−66**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Butylbenzyl phthalate
Concentrations in Subsurface Sediment, RM 0.8−12.2

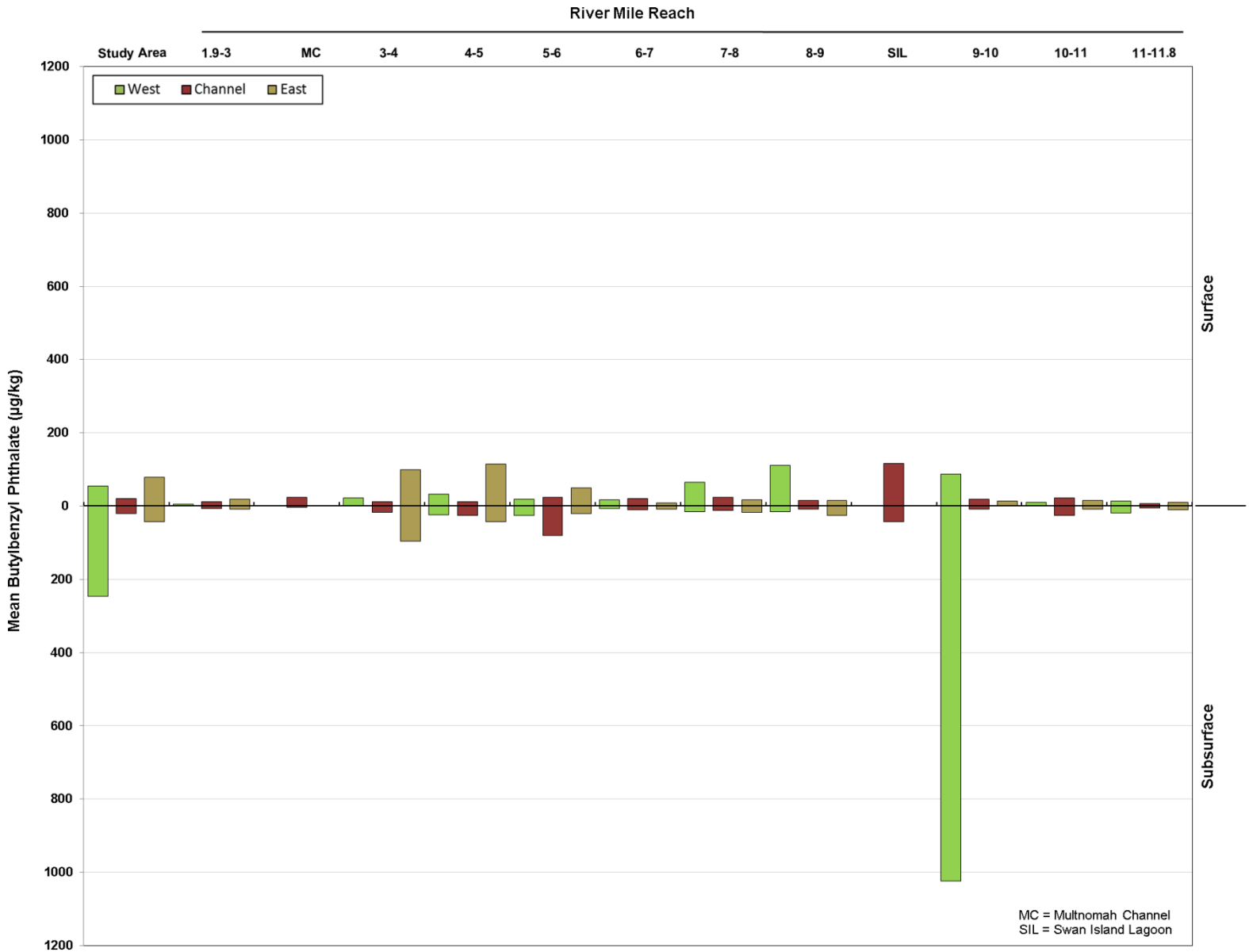
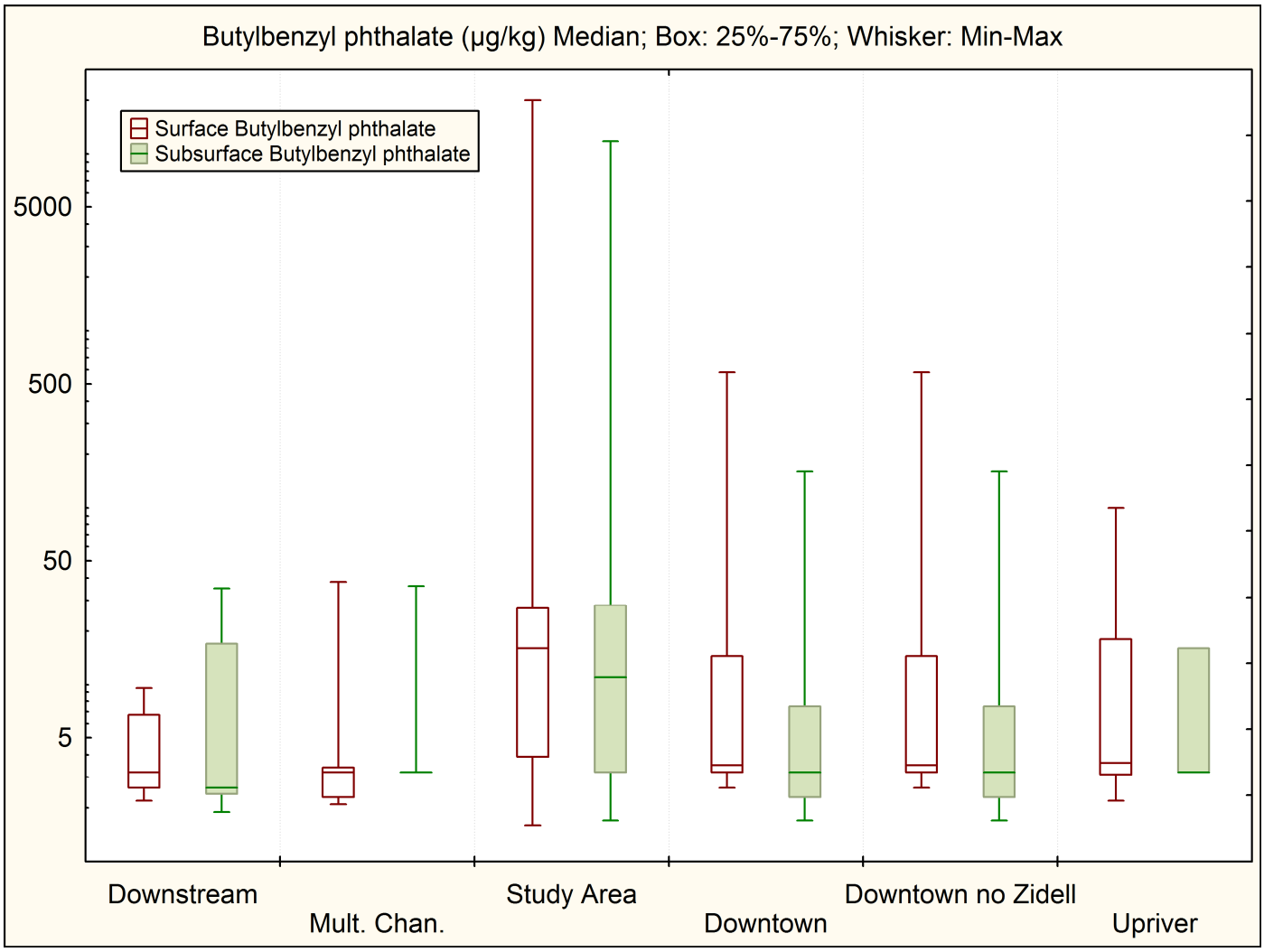



**Figure D1.1-67**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Butylbenzyl phthalate Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-68**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Butylbenzyl phthalate in
Surface and Subsurface Sediment by River Reach

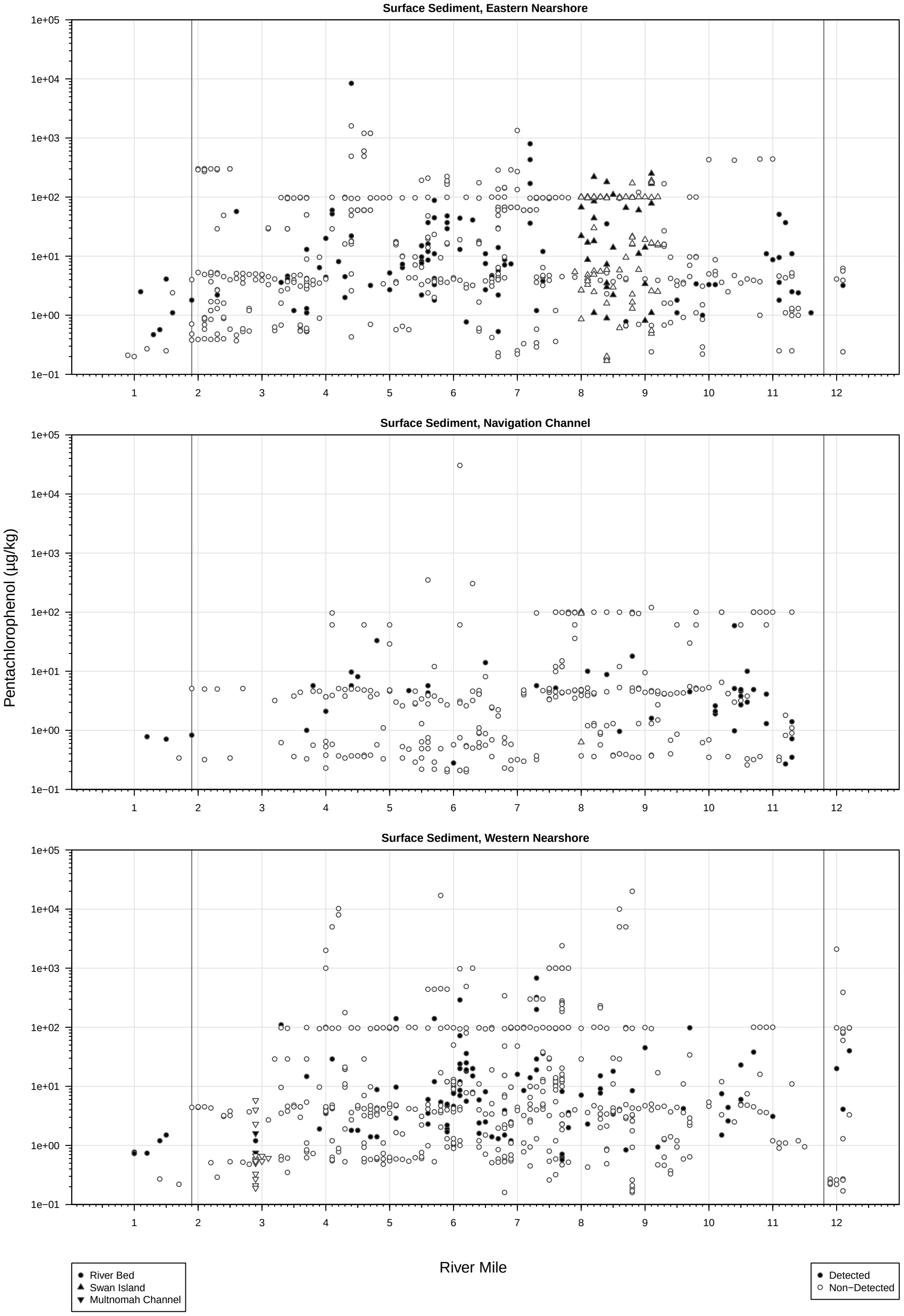



**Figure D1.1−69**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Pentachlorophenol
Concentrations in Surface Sediment, RM 0.8−12.2

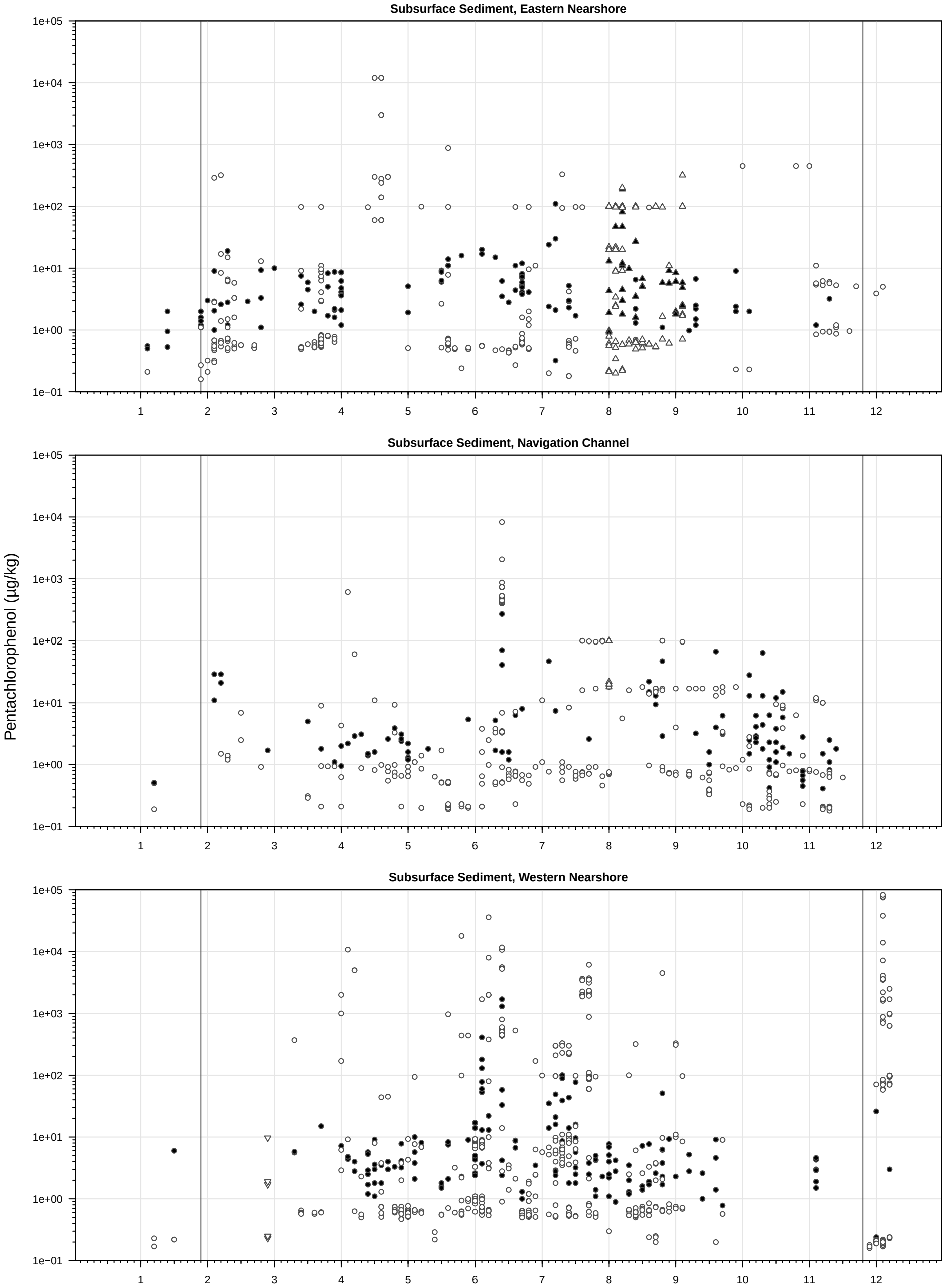



**Figure D1.1−70**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Pentachlorophenol
Concentrations in Subsurface Sediment, RM 0.8−12.2

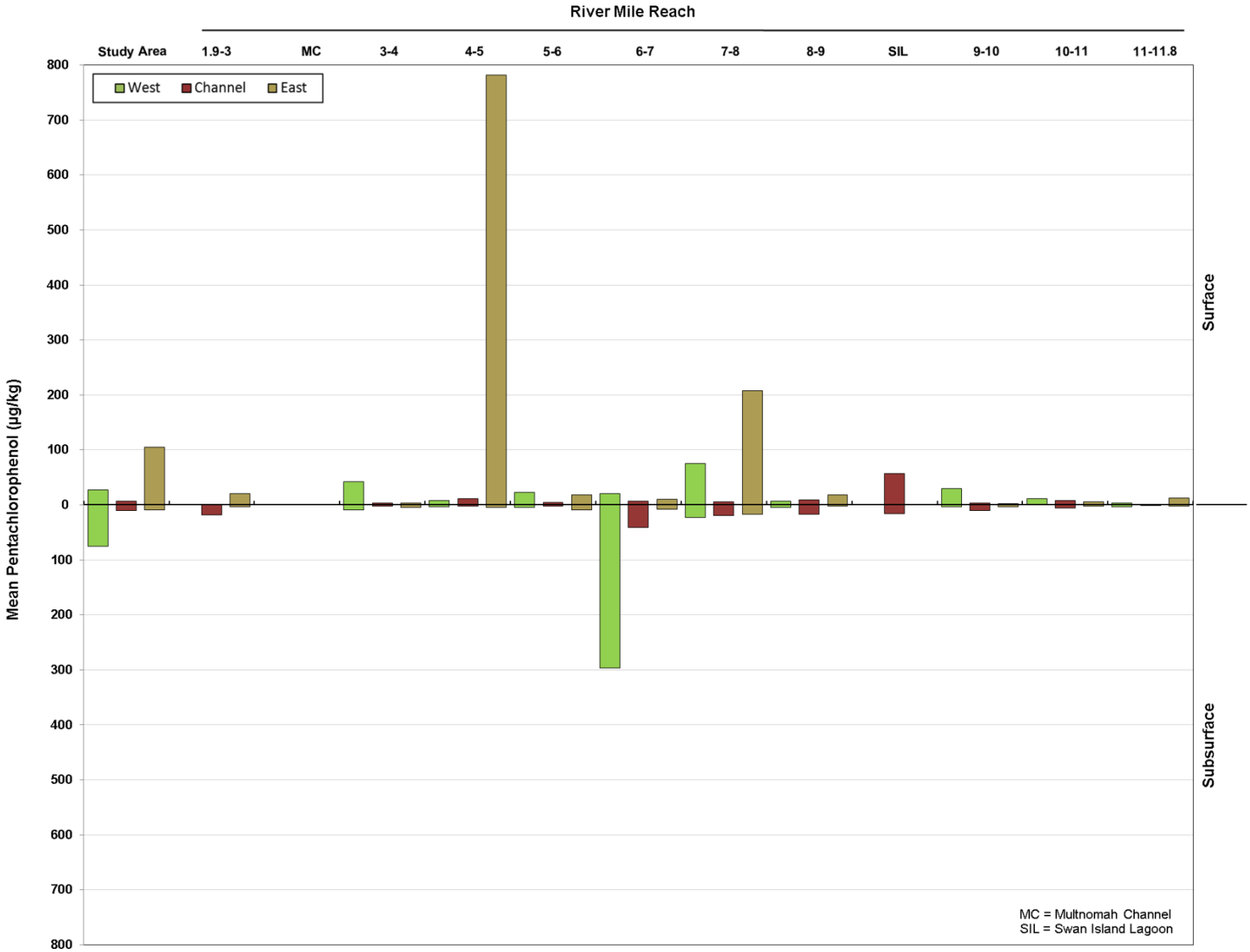
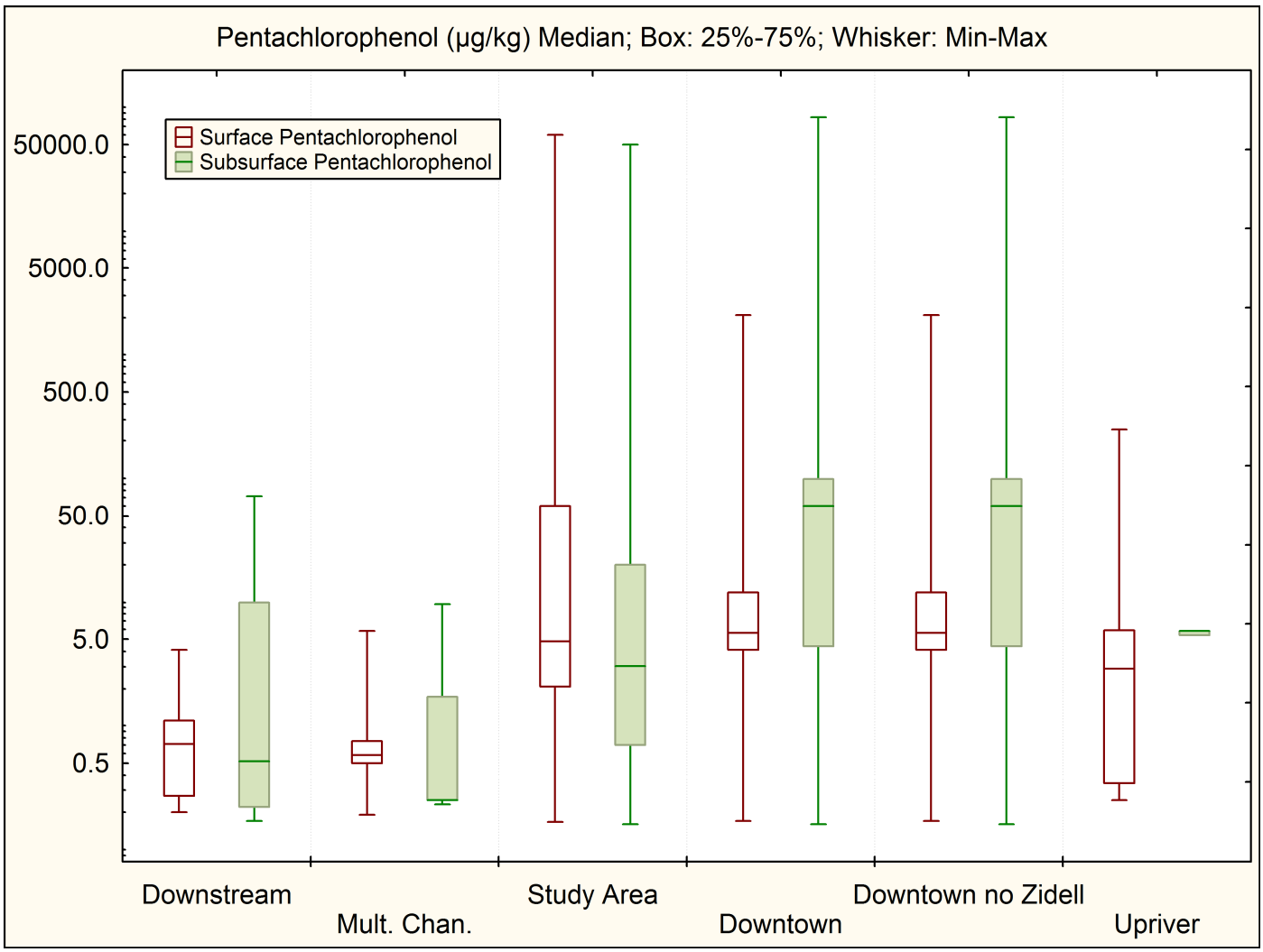



**Figure D1.1-71**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Pentachlorophenol Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-72**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Pentachlorophenol in
Surface and Subsurface Sediment by River Reach

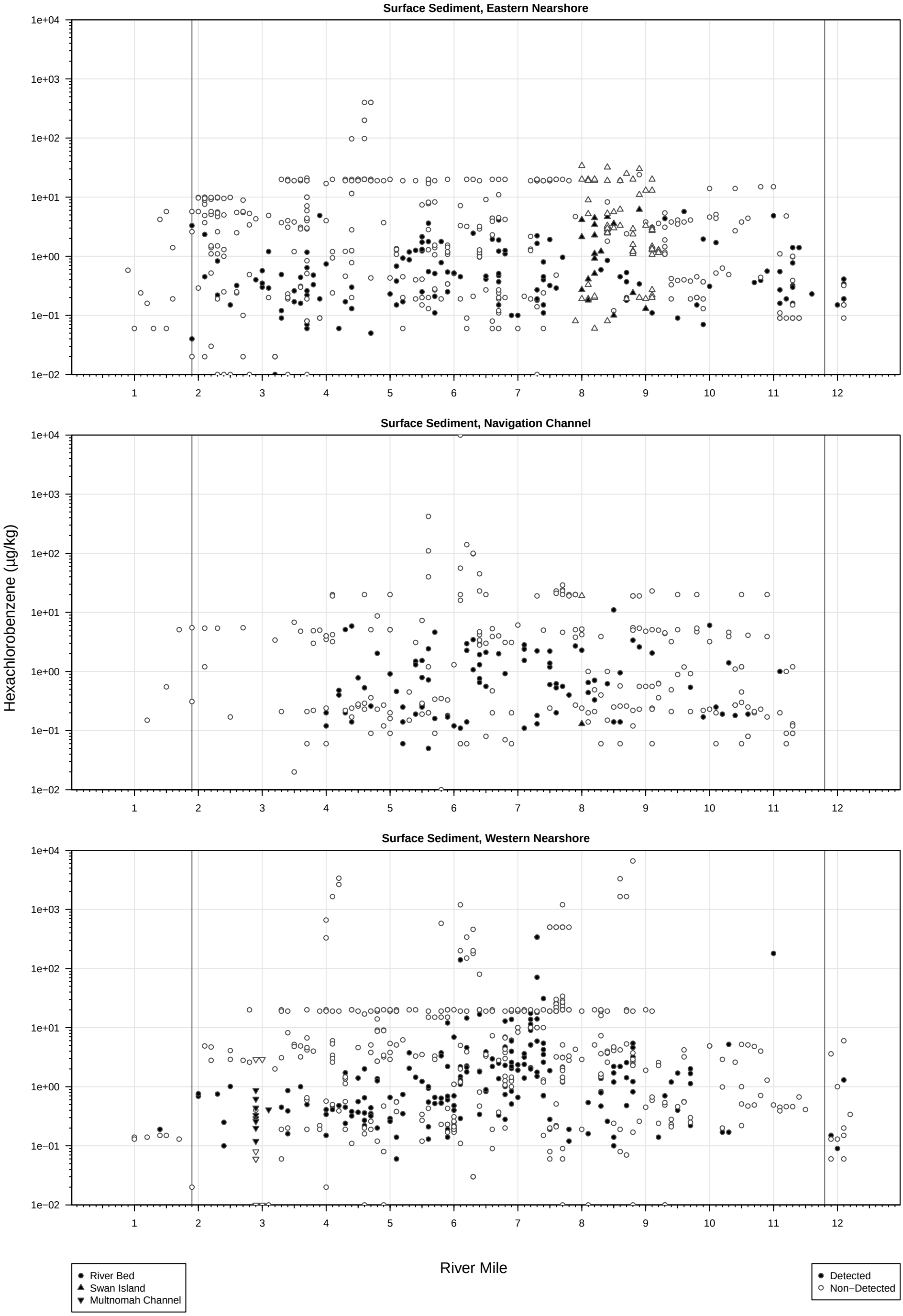



**Figure D1.1−73**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Hexachlorobenzene
Concentrations in Surface Sediment, RM 0.8−12.2

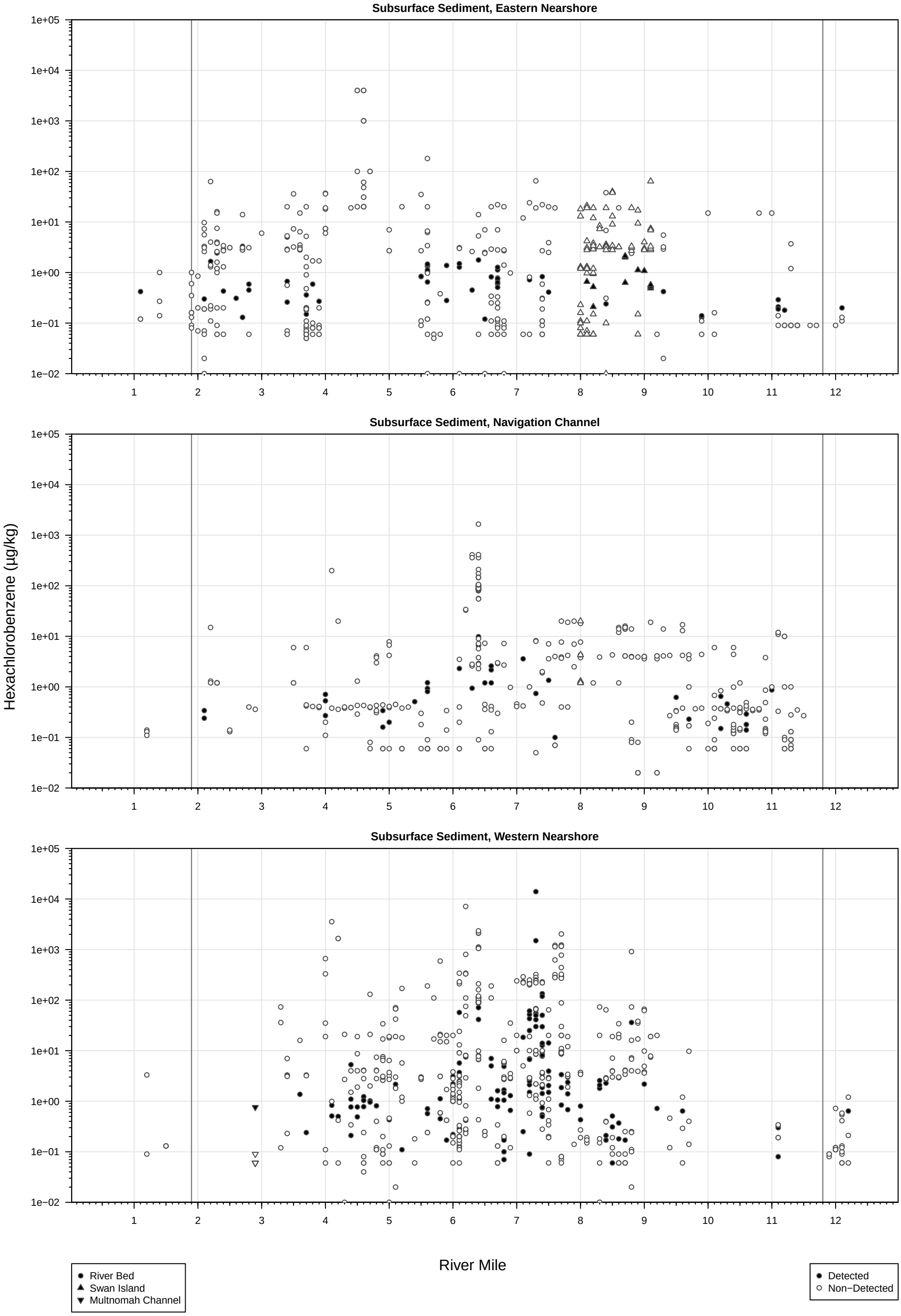



**Figure D1.1−74**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Hexachlorobenzene
Concentrations in Subsurface Sediment, RM 0.8−12.2

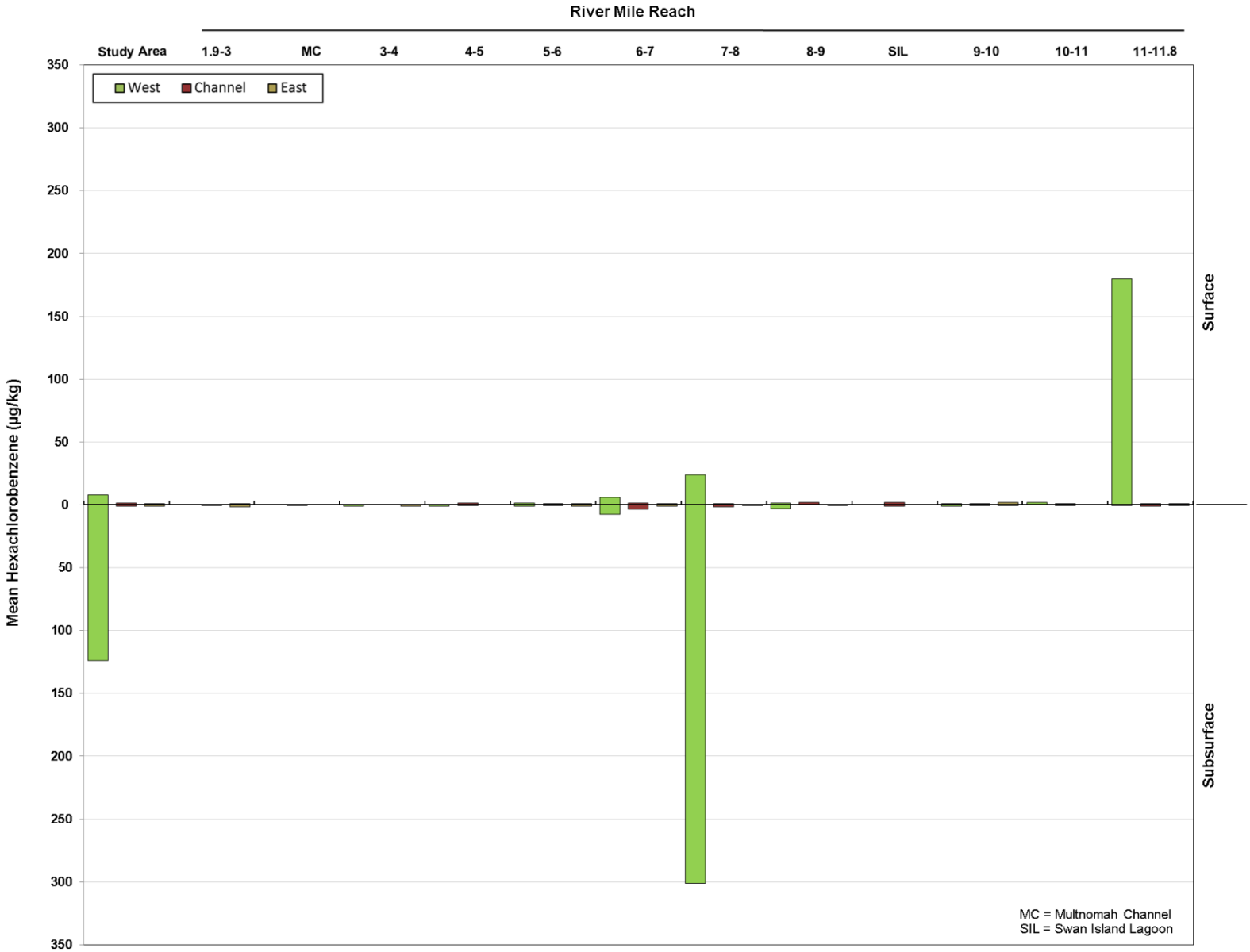
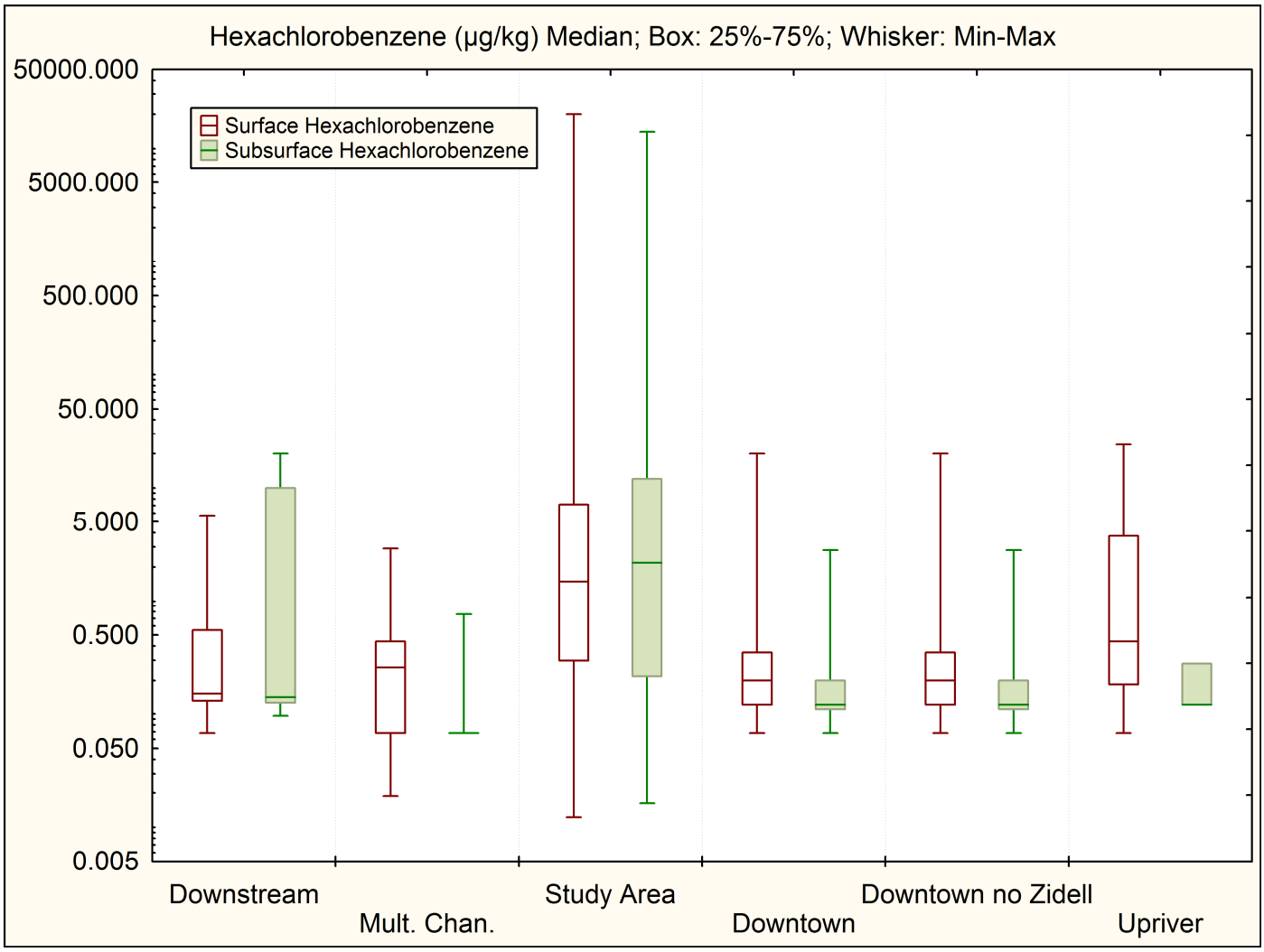



**Figure D1.1-75**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Hexachlorobenzene Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-76**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Hexachlorobenzene in
Surface and Subsurface Sediment by River Reach

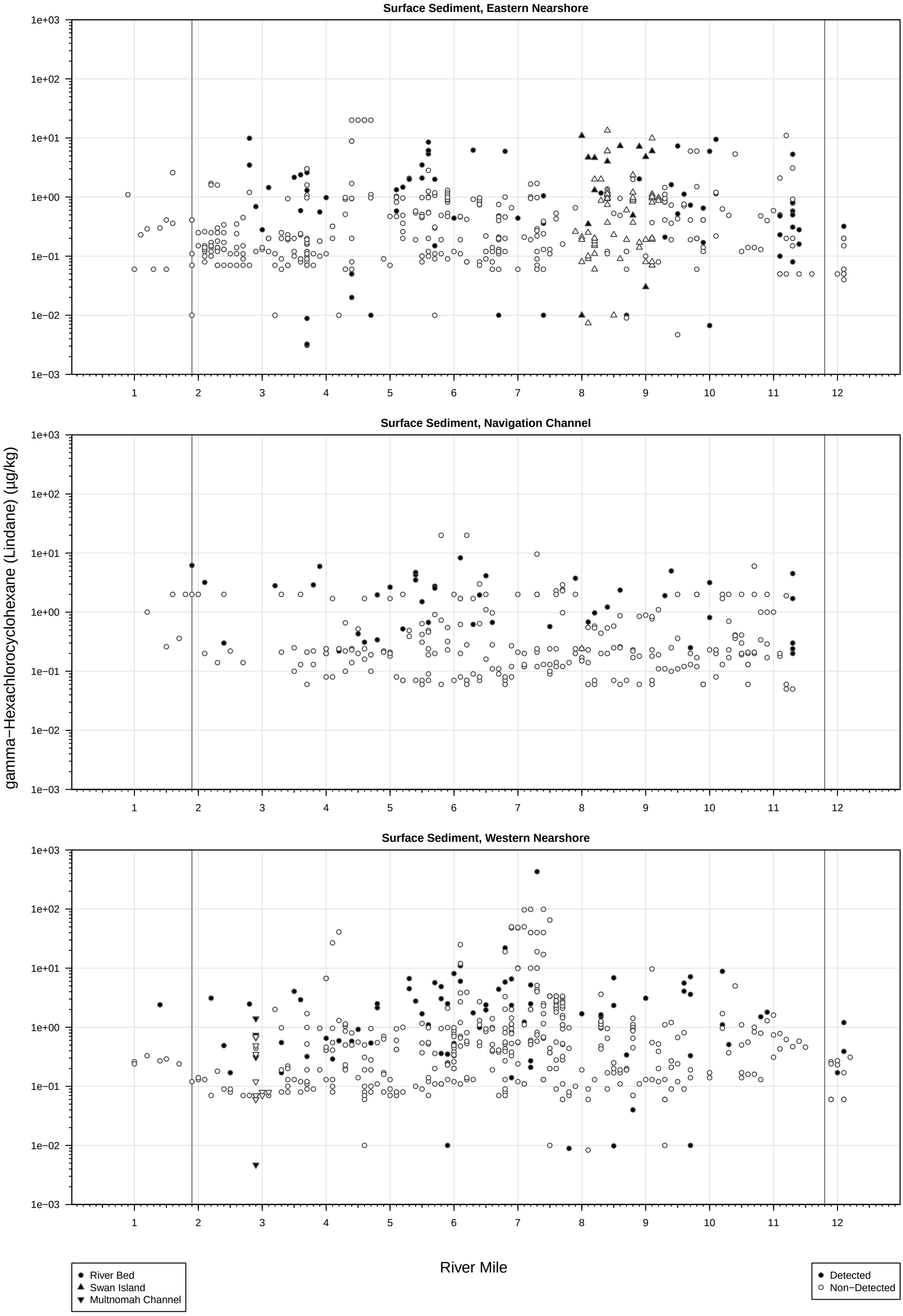



**Figure D1.1−77**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of gamma−Hexachlorocyclohexane (Lindane)
Concentrations in Surface Sediment, RM 0.8−12.2

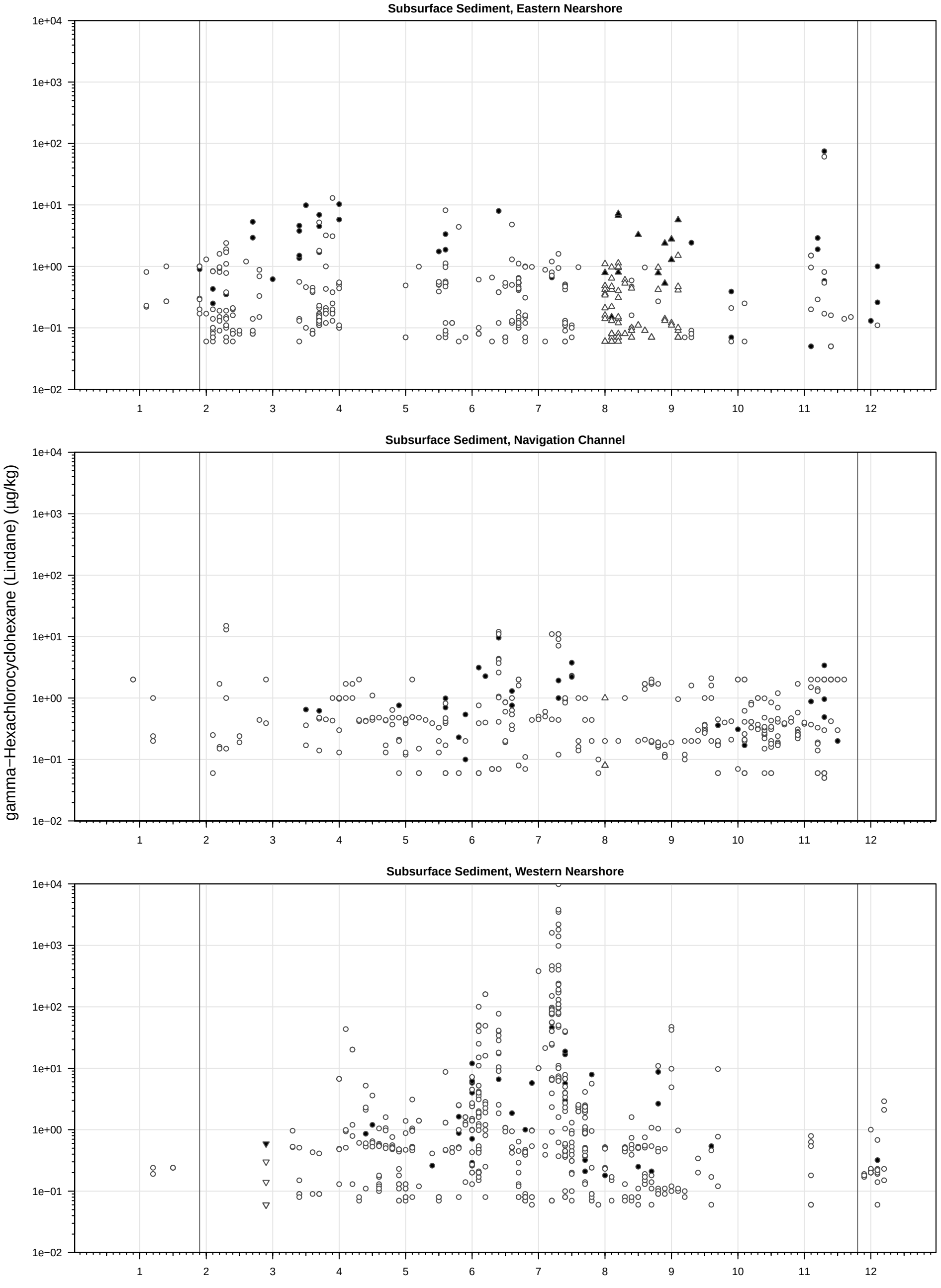



**Figure D1.1−78**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of gamma−Hexachlorocyclohexane (Lindane)
Concentrations in Subsurface Sediment, RM 0.8−12.2

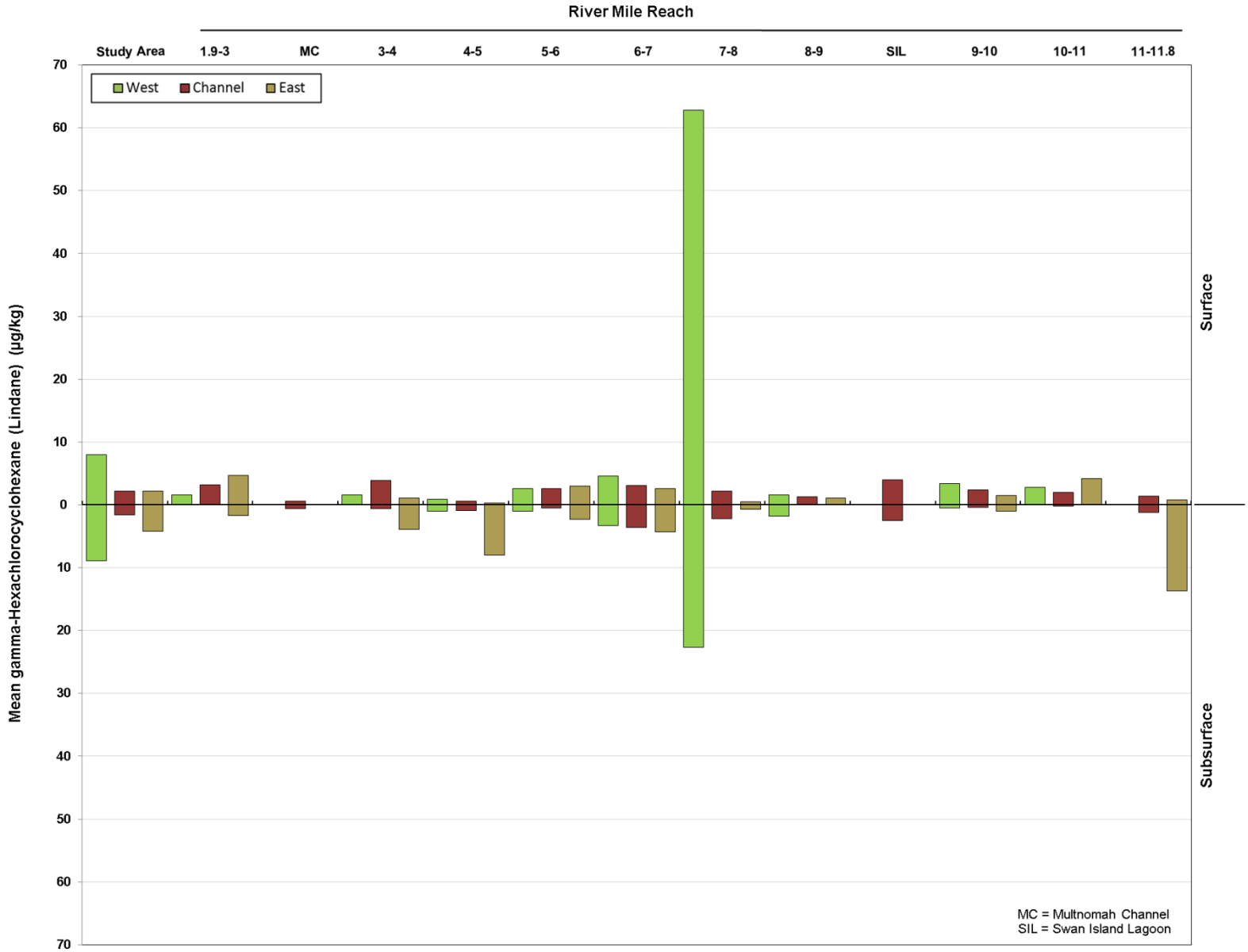
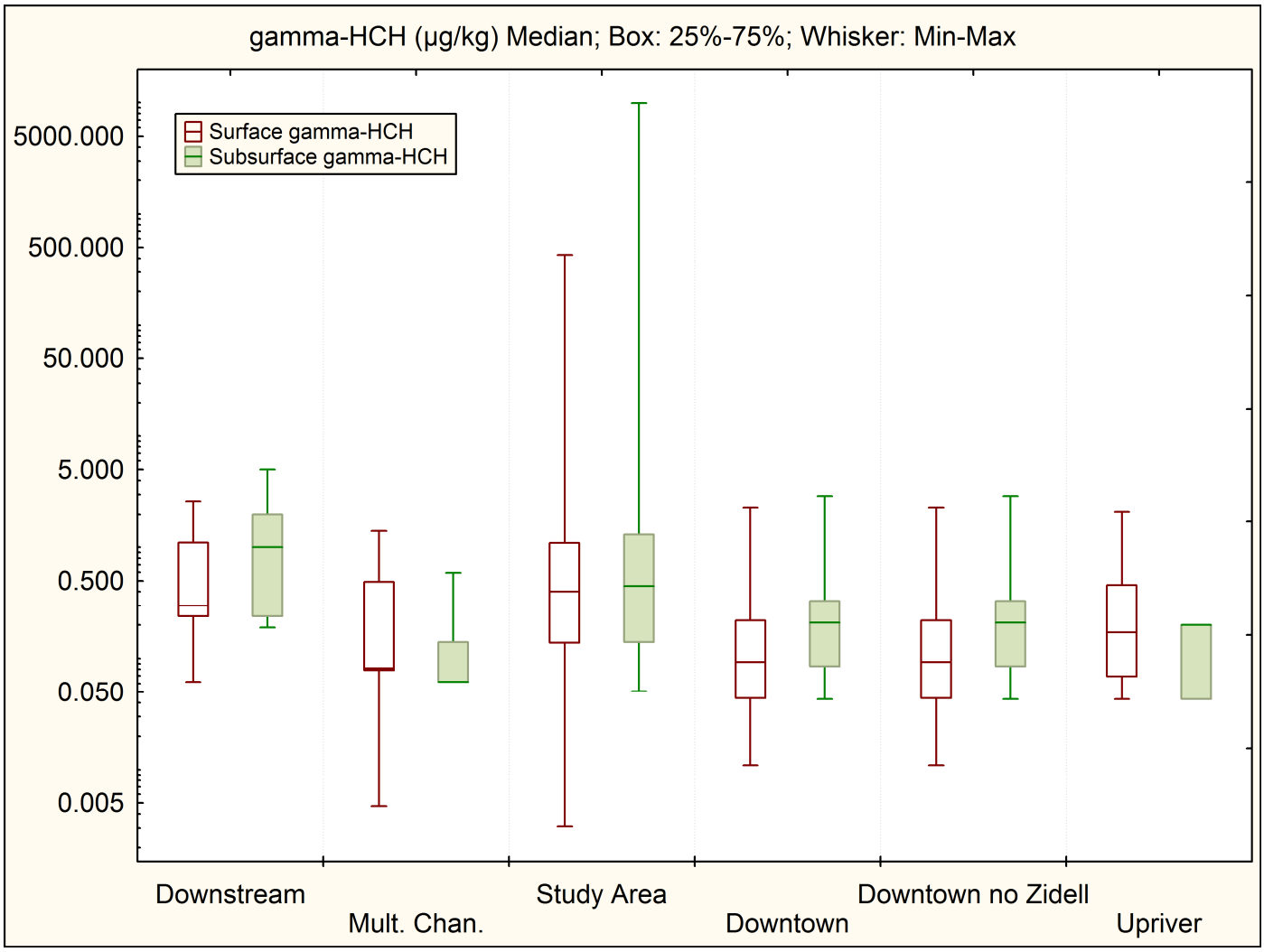



**Figure D1.1-79**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean gamma-Hexachlorocyclohexane (Lindane) Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-80**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of
gamma-Hexachlorocyclohexane (Lindane) in
Surface and Subsurface Sediment by River Reach

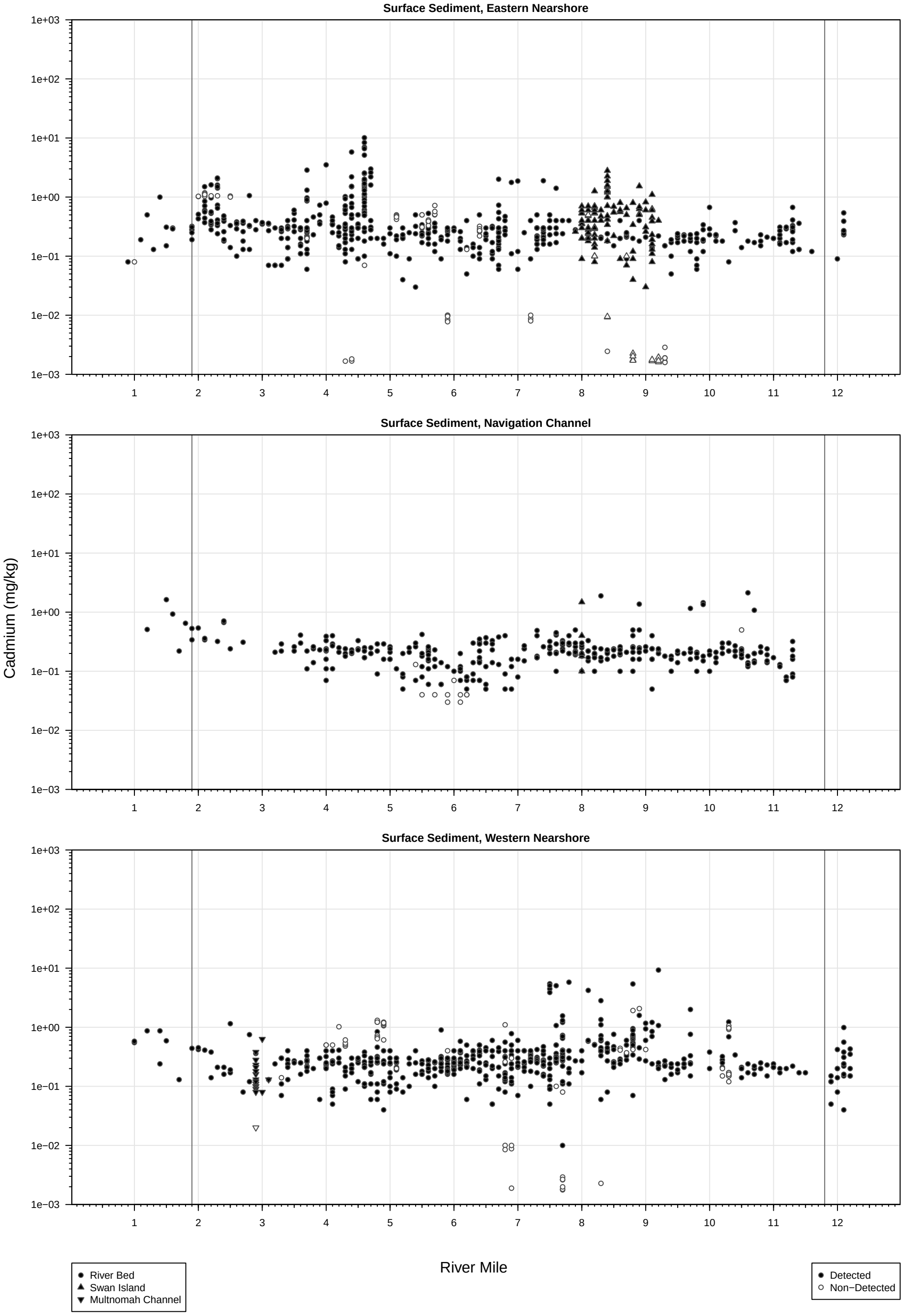



**Figure D1.1−81**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Cadmium
Concentrations in Surface Sediment, RM 0.8−12.2

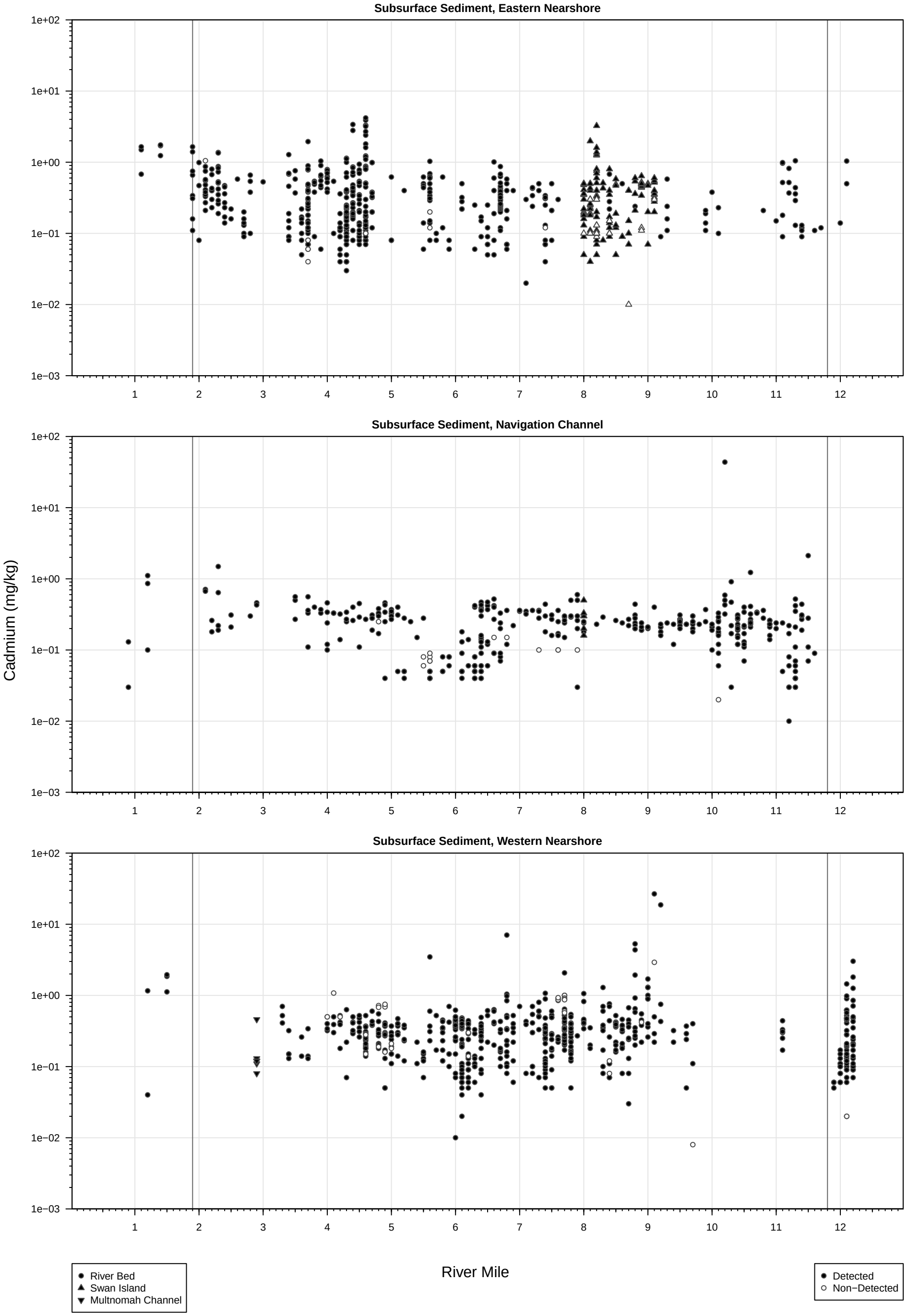



**Figure D1.1−82**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Cadmium
Concentrations in Subsurface Sediment, RM 0.8−12.2

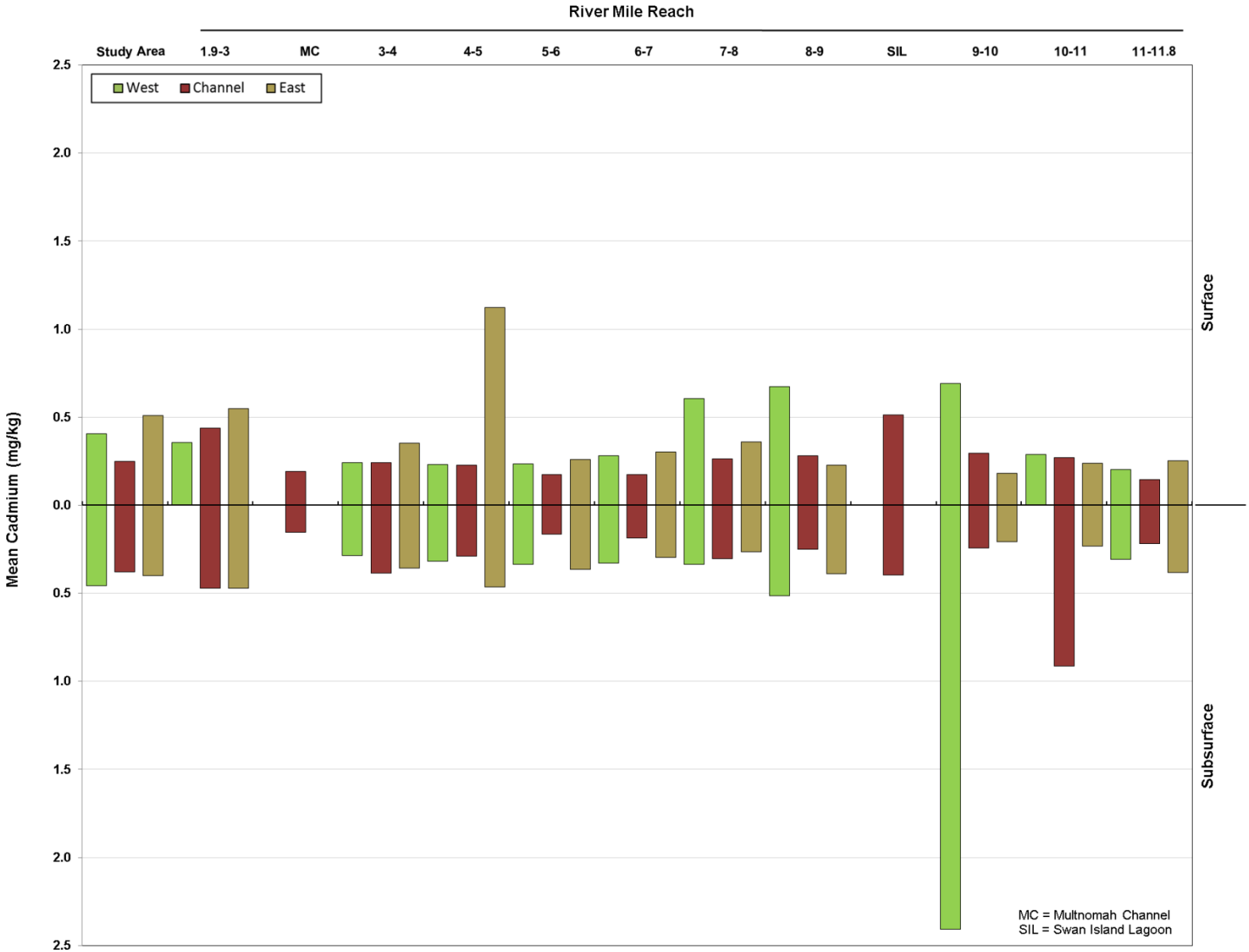
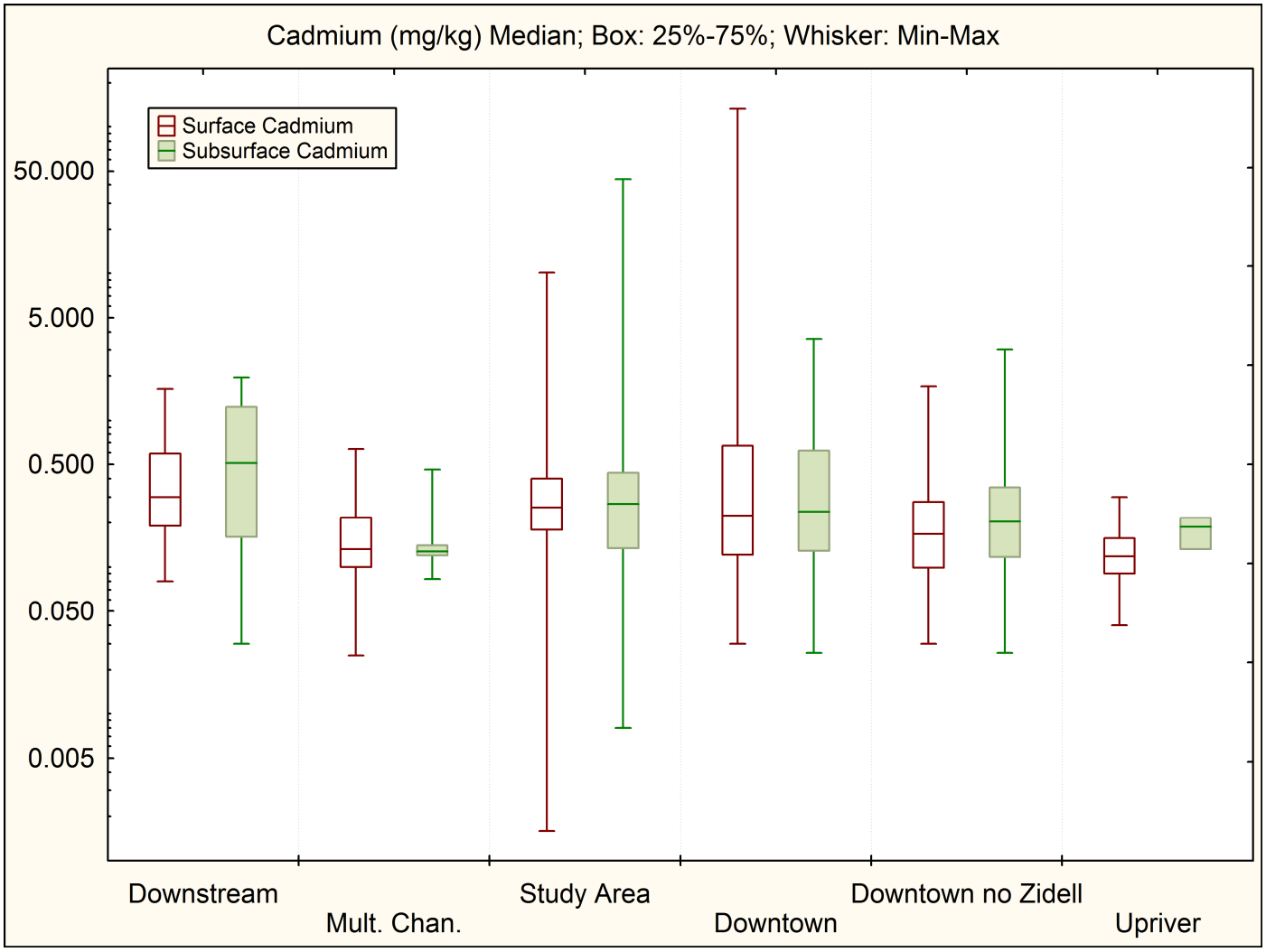



**Figure D1.1-83**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Cadmium Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-84**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Cadmium in
Surface and Subsurface Sediment by River Reach

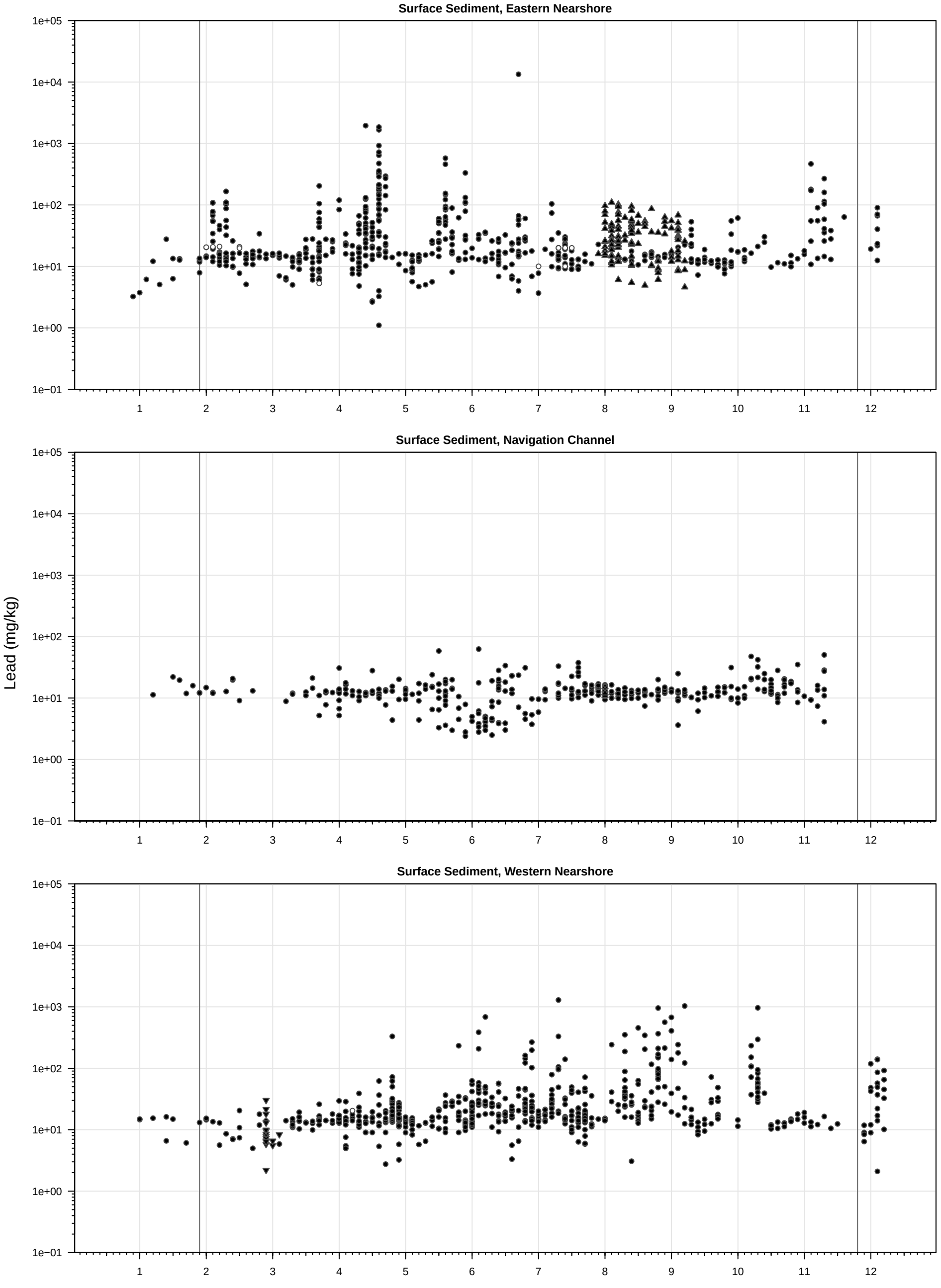



**Figure D1.1−85**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Lead
Concentrations in Surface Sediment, RM 0.8−12.2

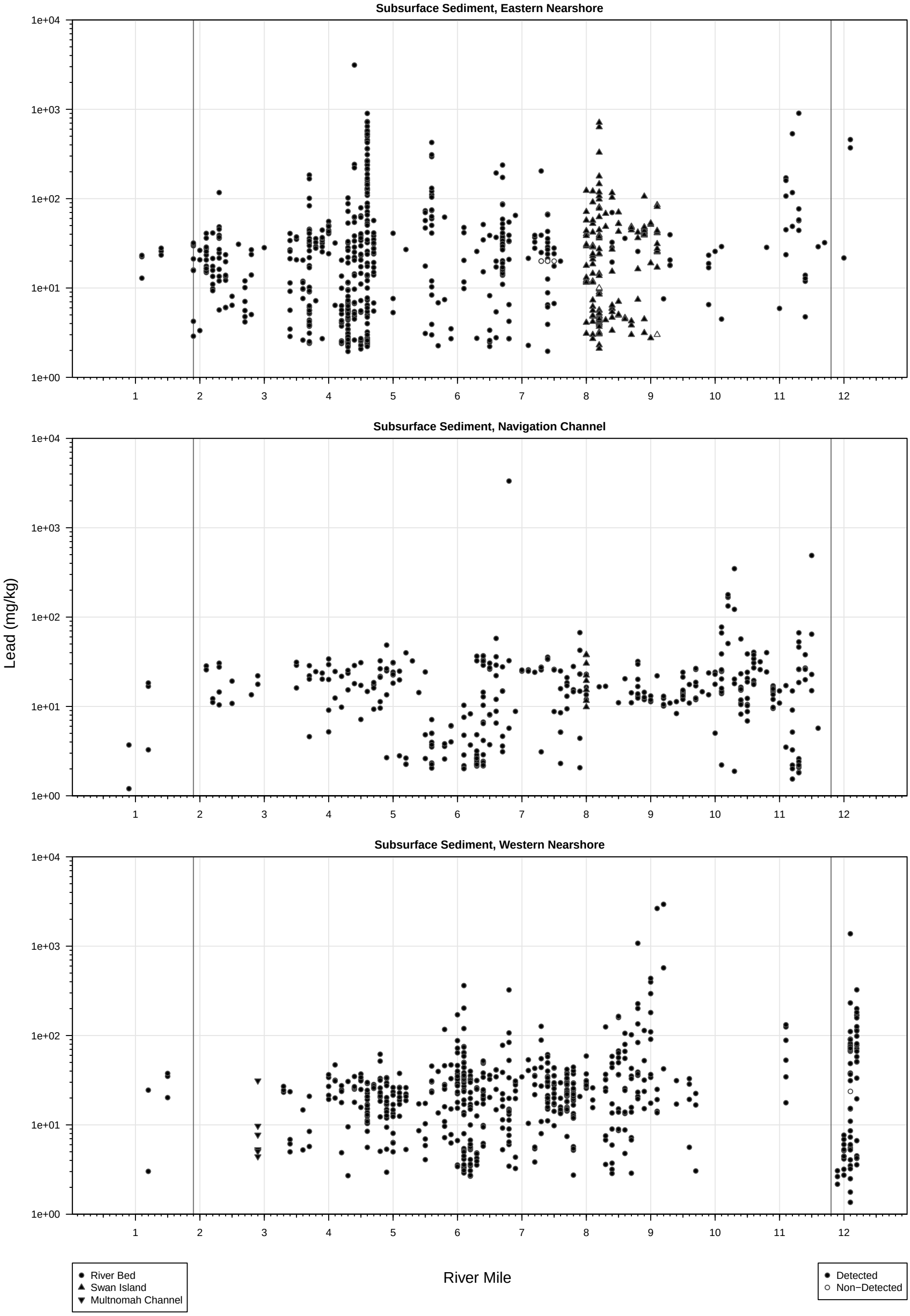
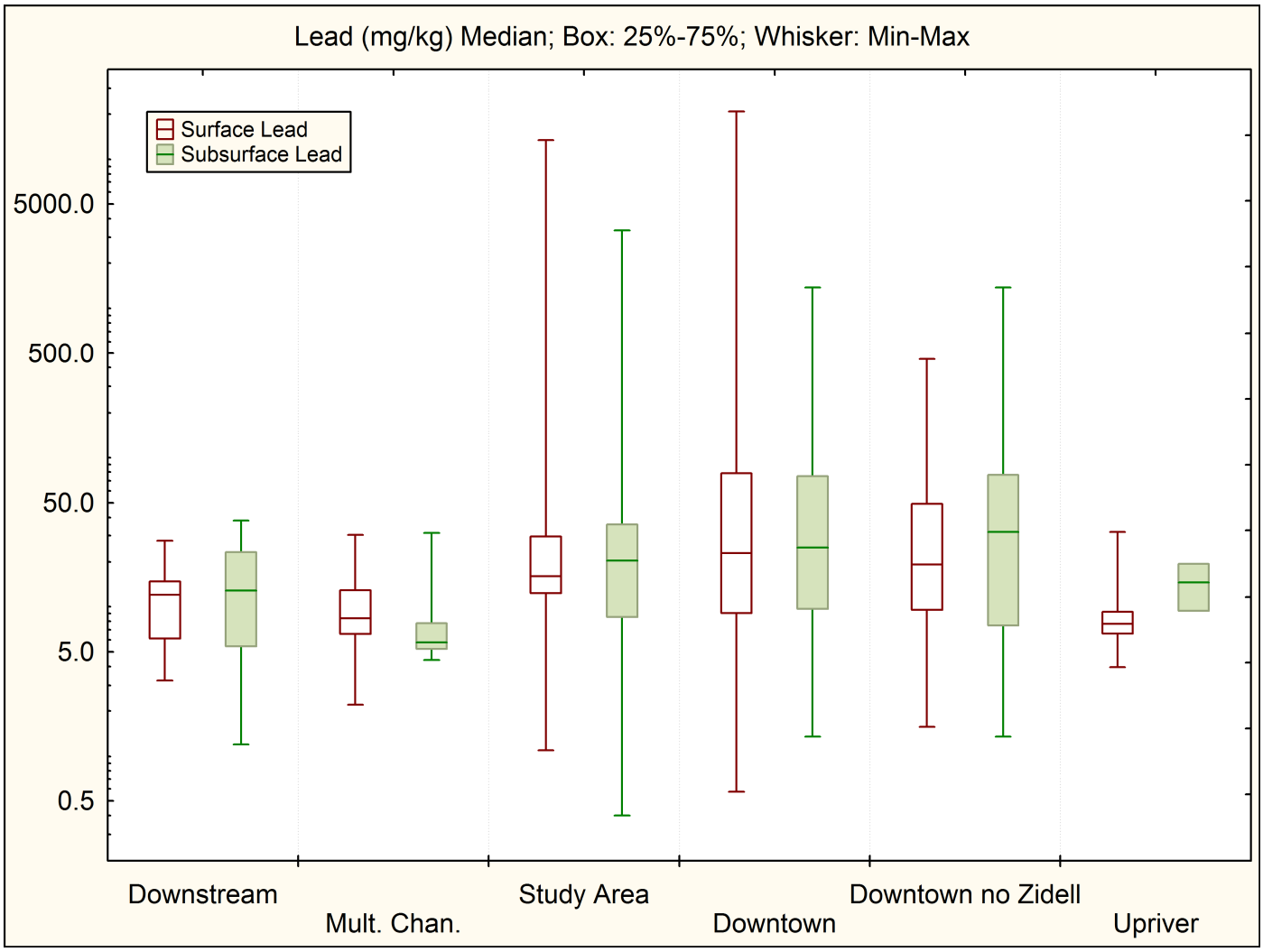



**Figure D1.1−86**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Lead
Concentrations in Subsurface Sediment, RM 0.8−12.2

**Figure D1.1-87**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Lead Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-88**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Lead in
Surface and Subsurface Sediment by River Reach

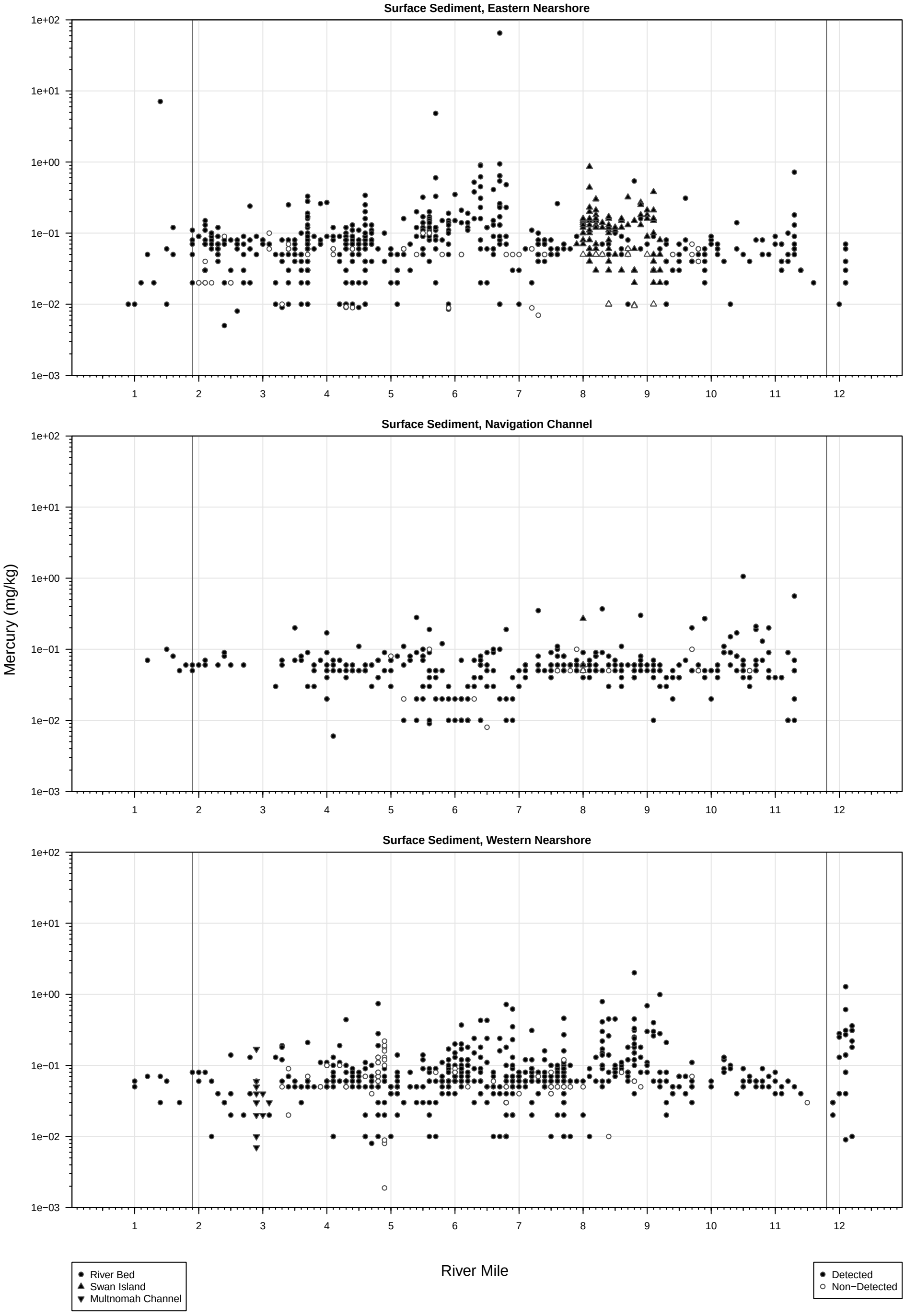



**Figure D1.1−89**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Mercury
Concentrations in Surface Sediment, RM 0.8−12.2

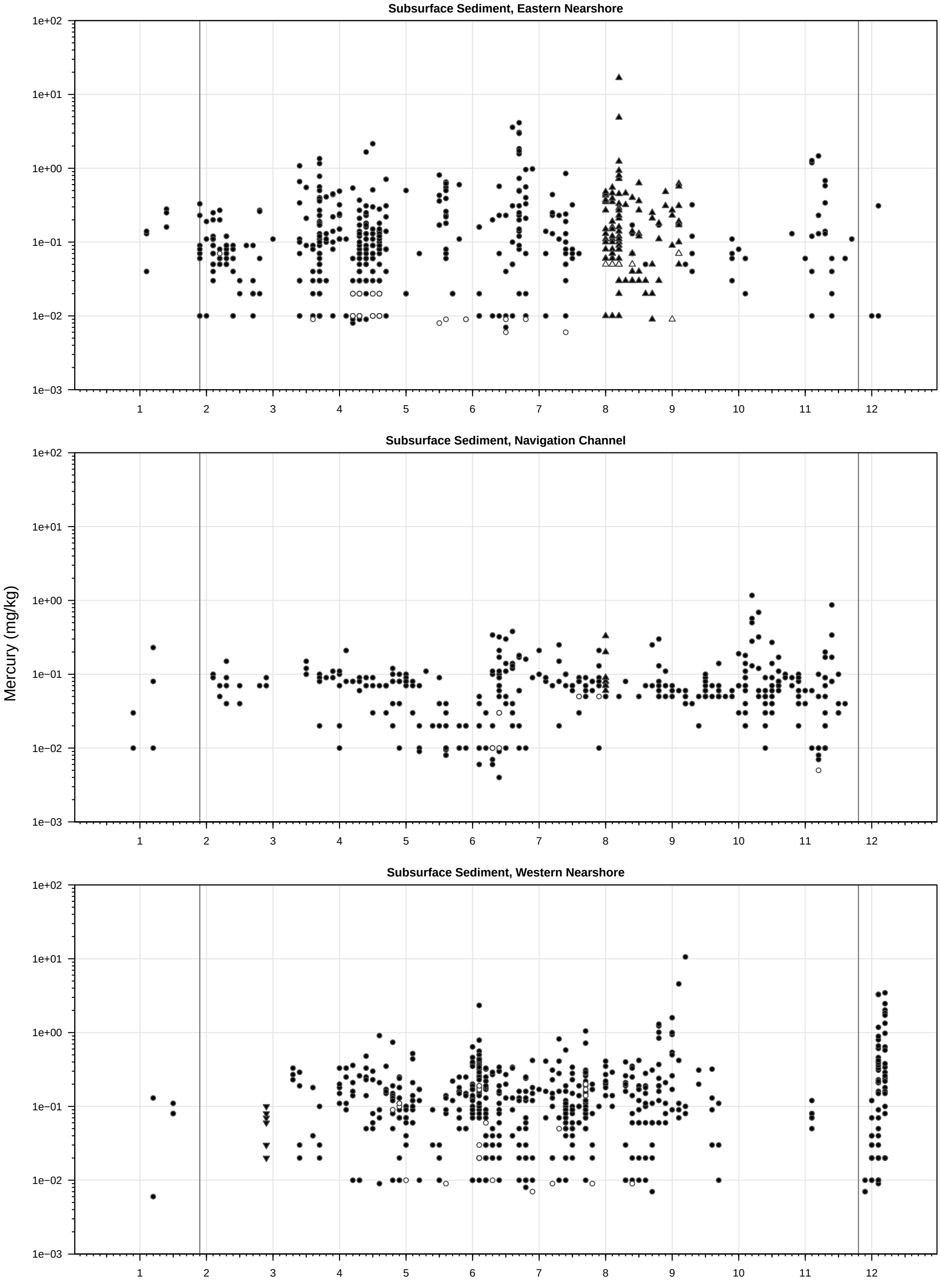



**Figure D1.1−90**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Mercury
Concentrations in Subsurface Sediment, RM 0.8−12.2

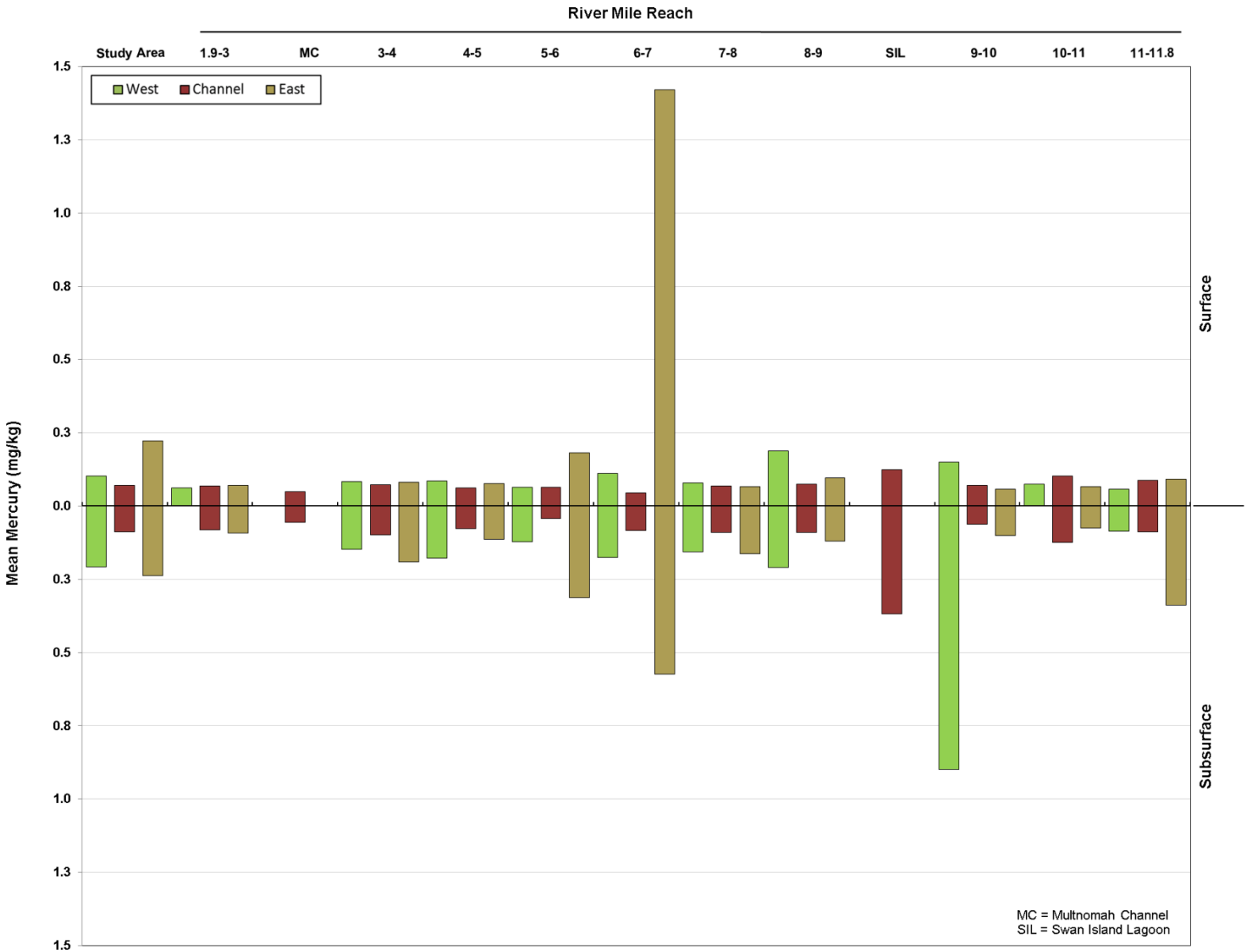



**Figure D1.1-91**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Mercury Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)

Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-92**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Mercury in
Surface and Subsurface Sediment by River Reach

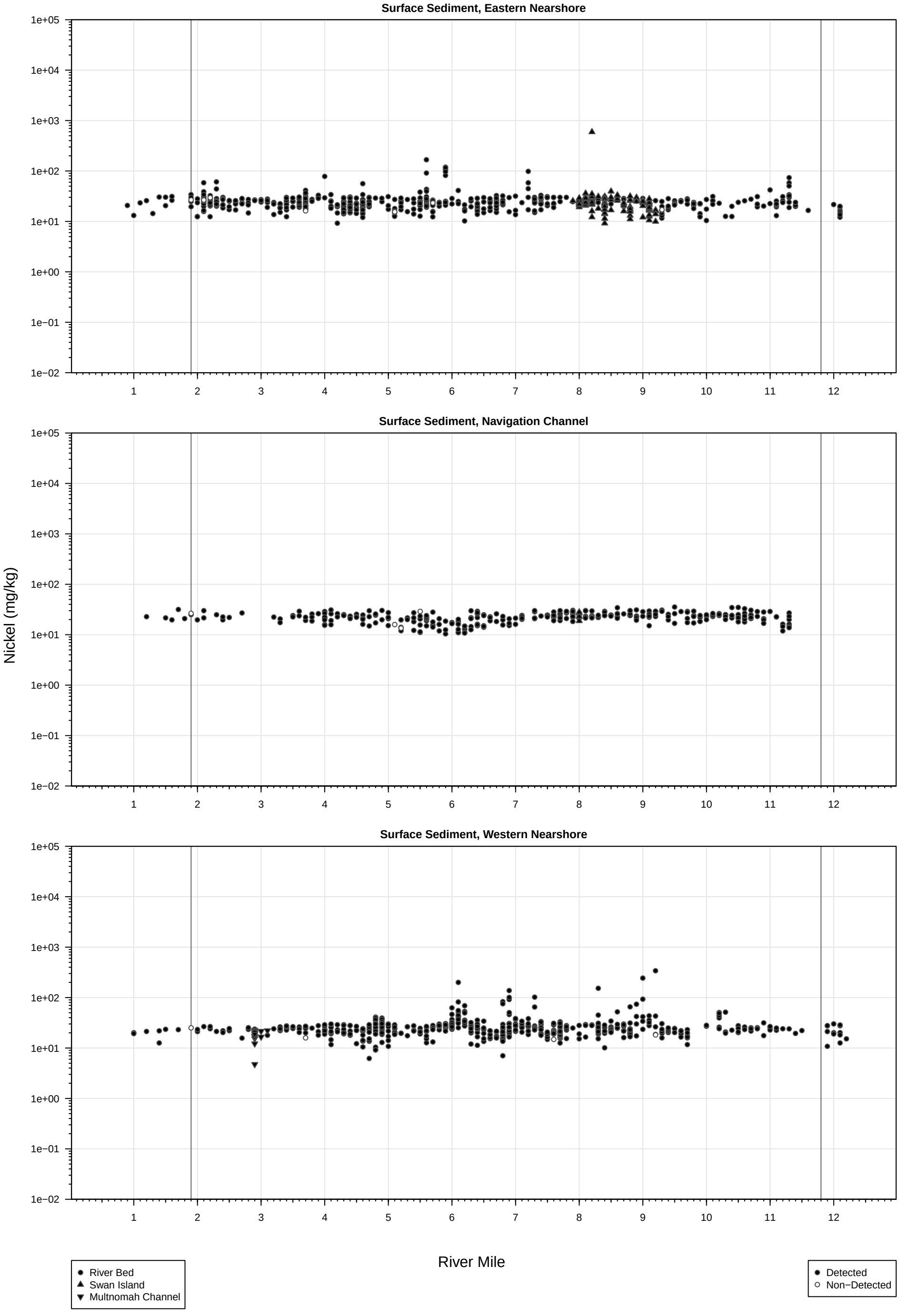



**Figure D1.1−93**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Nickel
Concentrations in Surface Sediment, RM 0.8−12.2

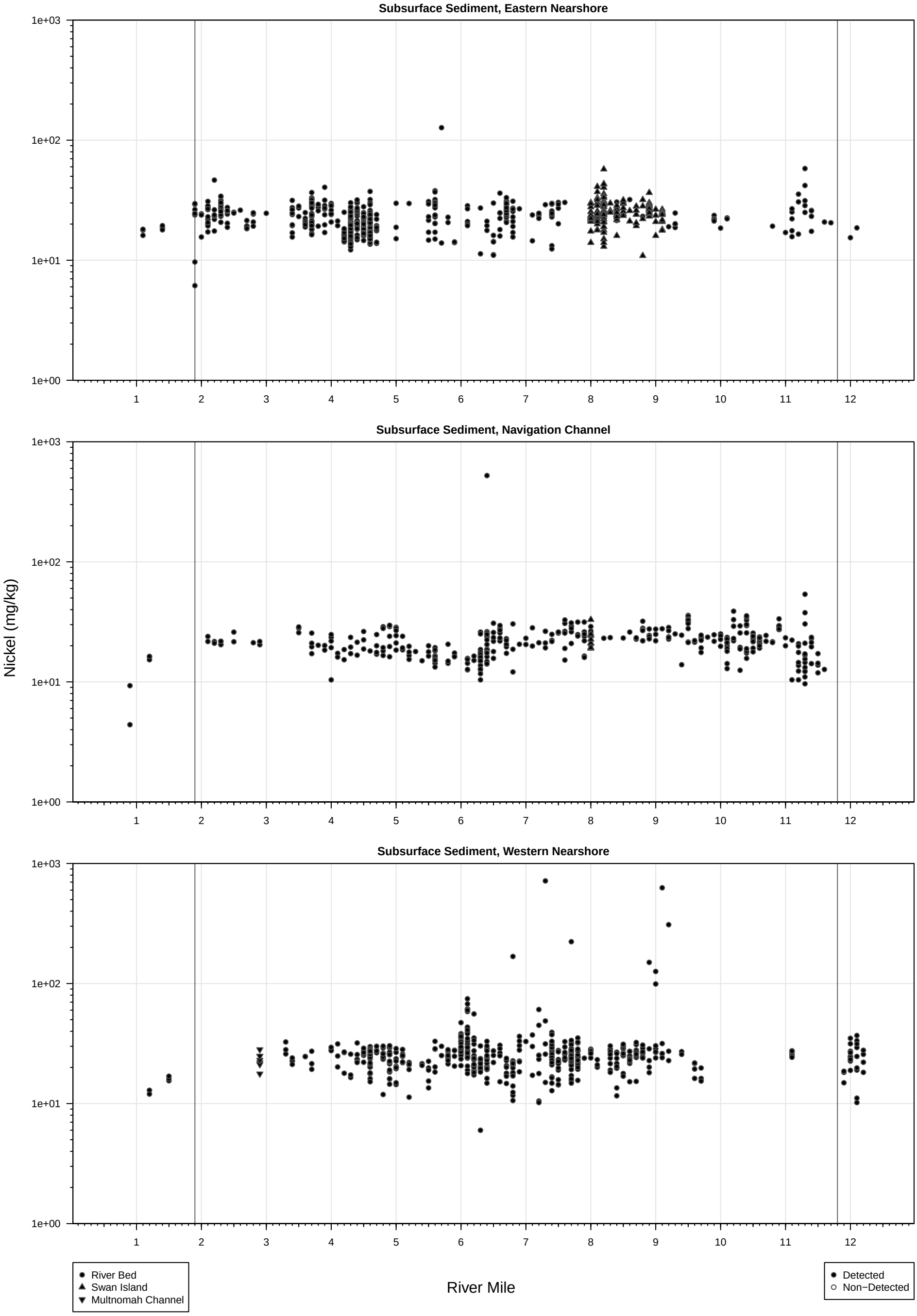
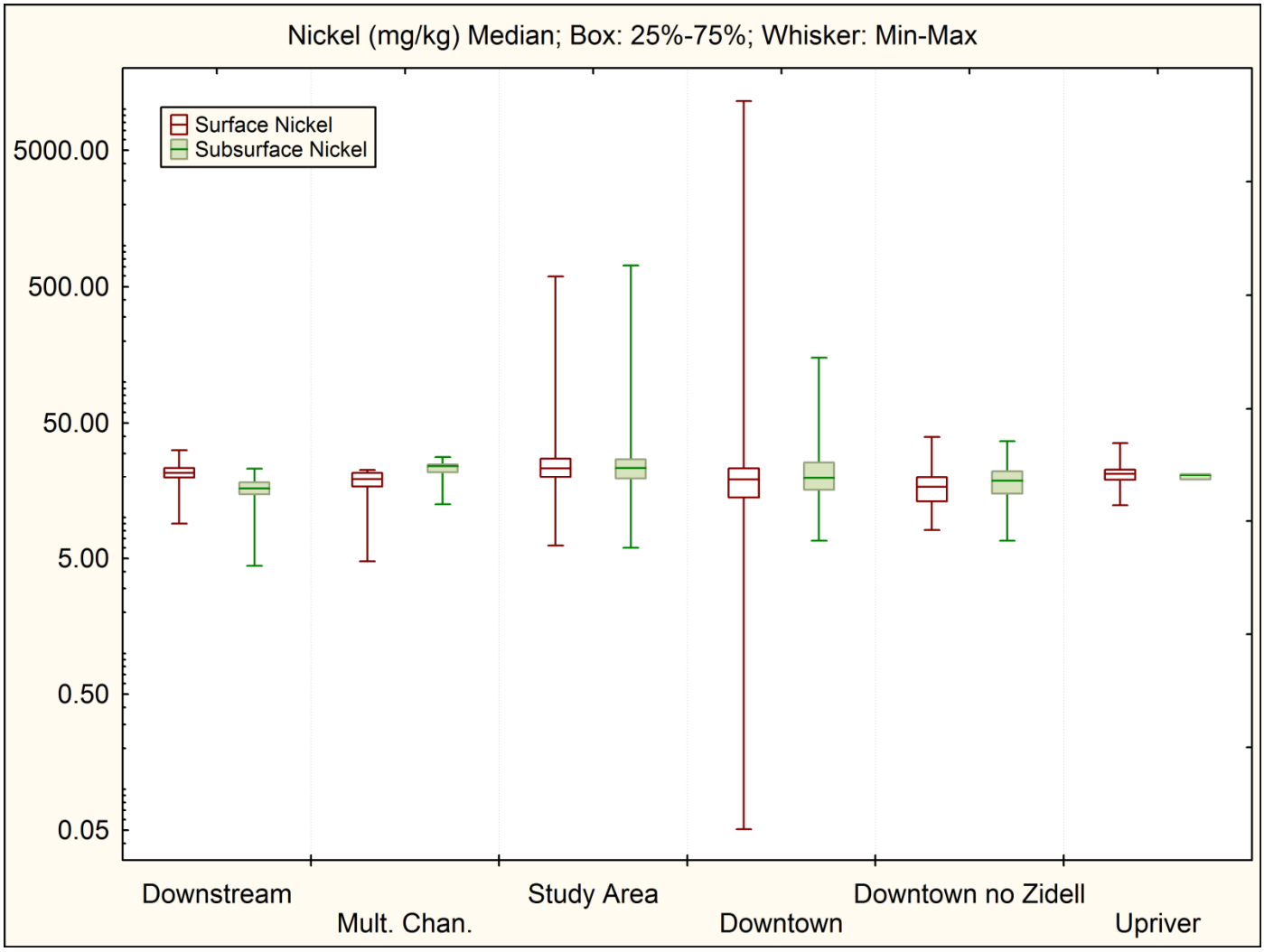



**Figure D1.1−94**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Nickel
Concentrations in Subsurface Sediment, RM 0.8−12.2

**Figure D1.1-95**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Nickel Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-96**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Nickel in
Surface and Subsurface Sediment by River Reach

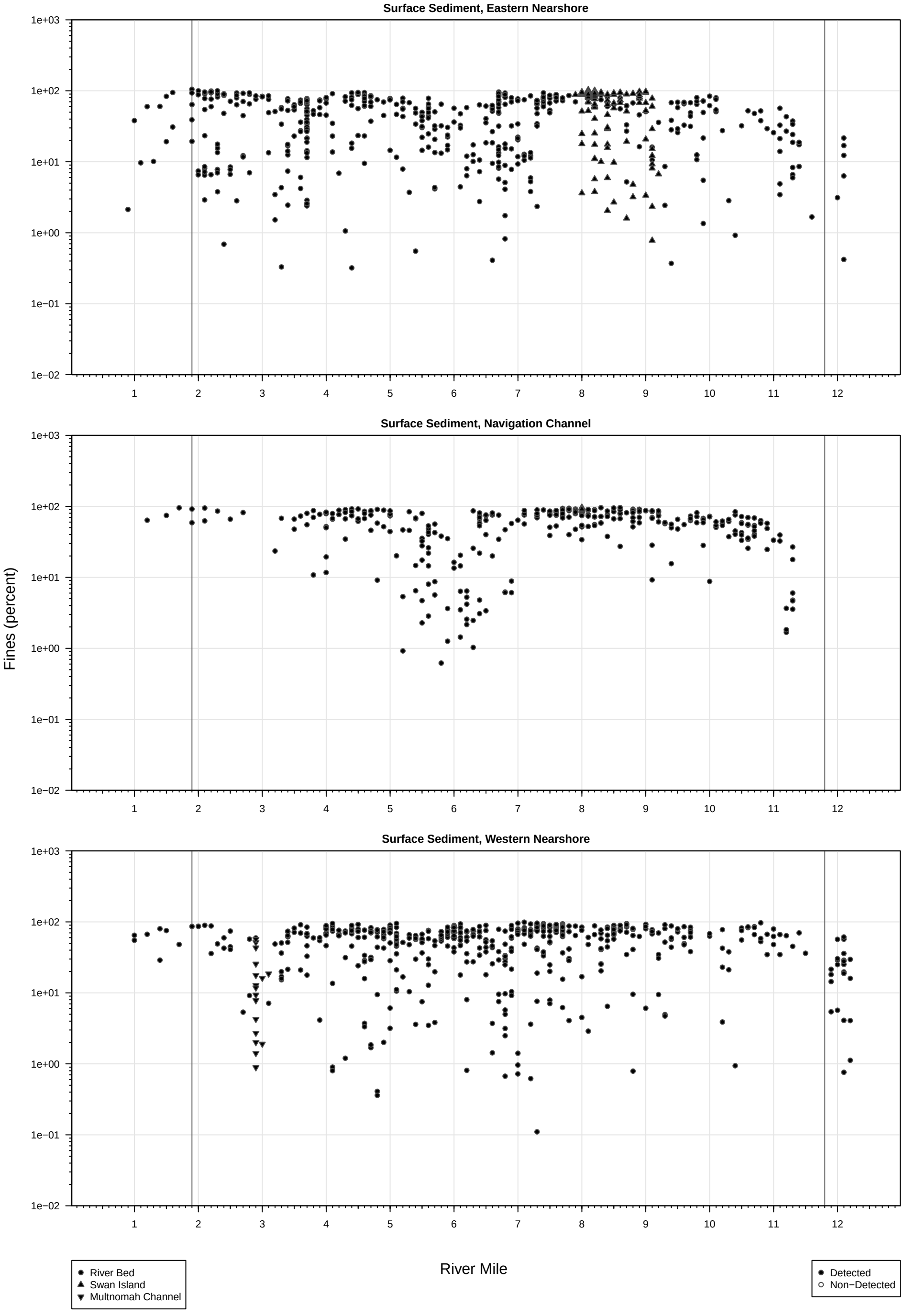



**Figure D1.1−97**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Percent Fines
Concentrations in Surface Sediment, RM 0.8−12.2

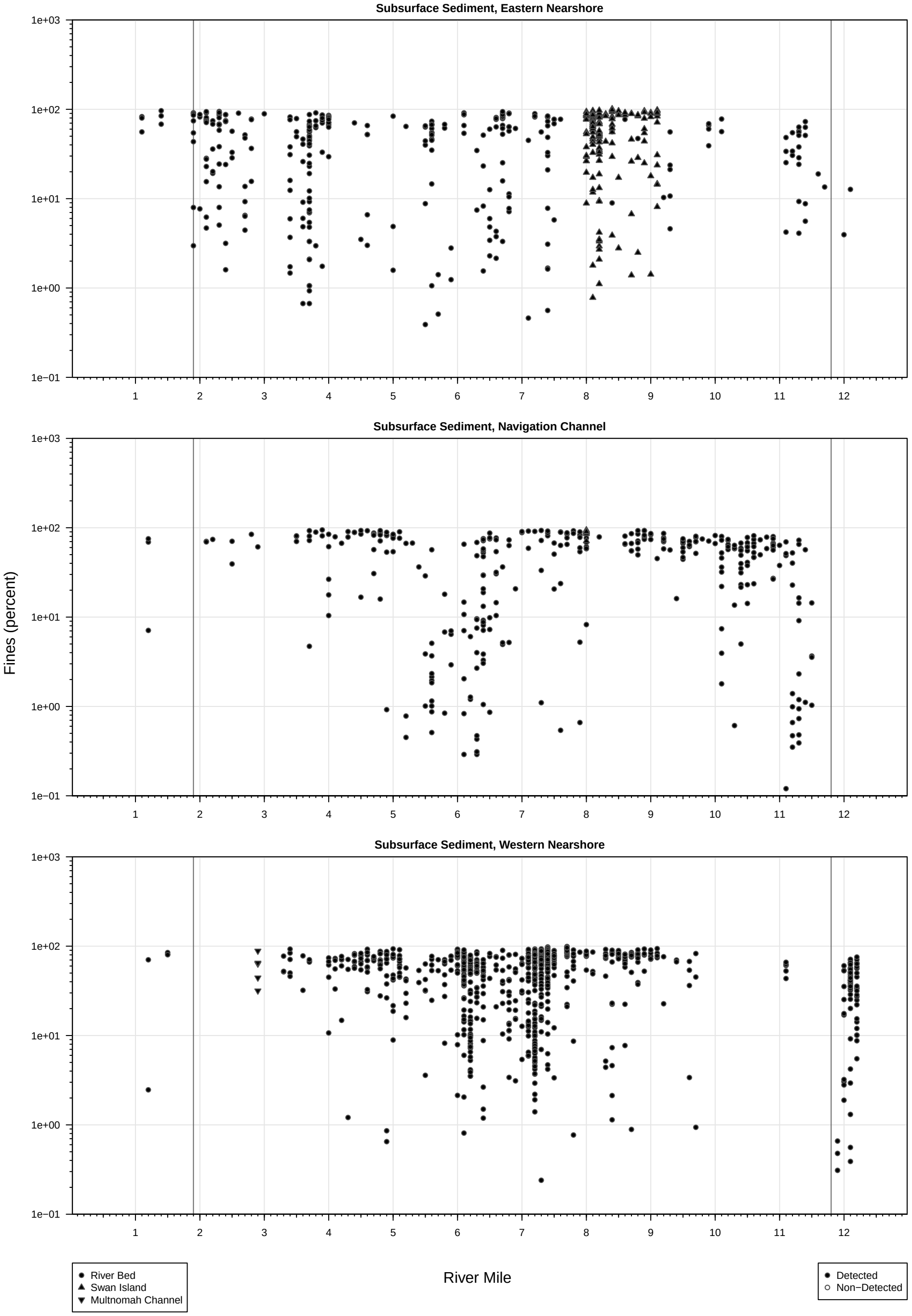



**Figure D1.1−98**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Percent Fines
Concentrations in Subsurface Sediment, RM 0.8−12.2

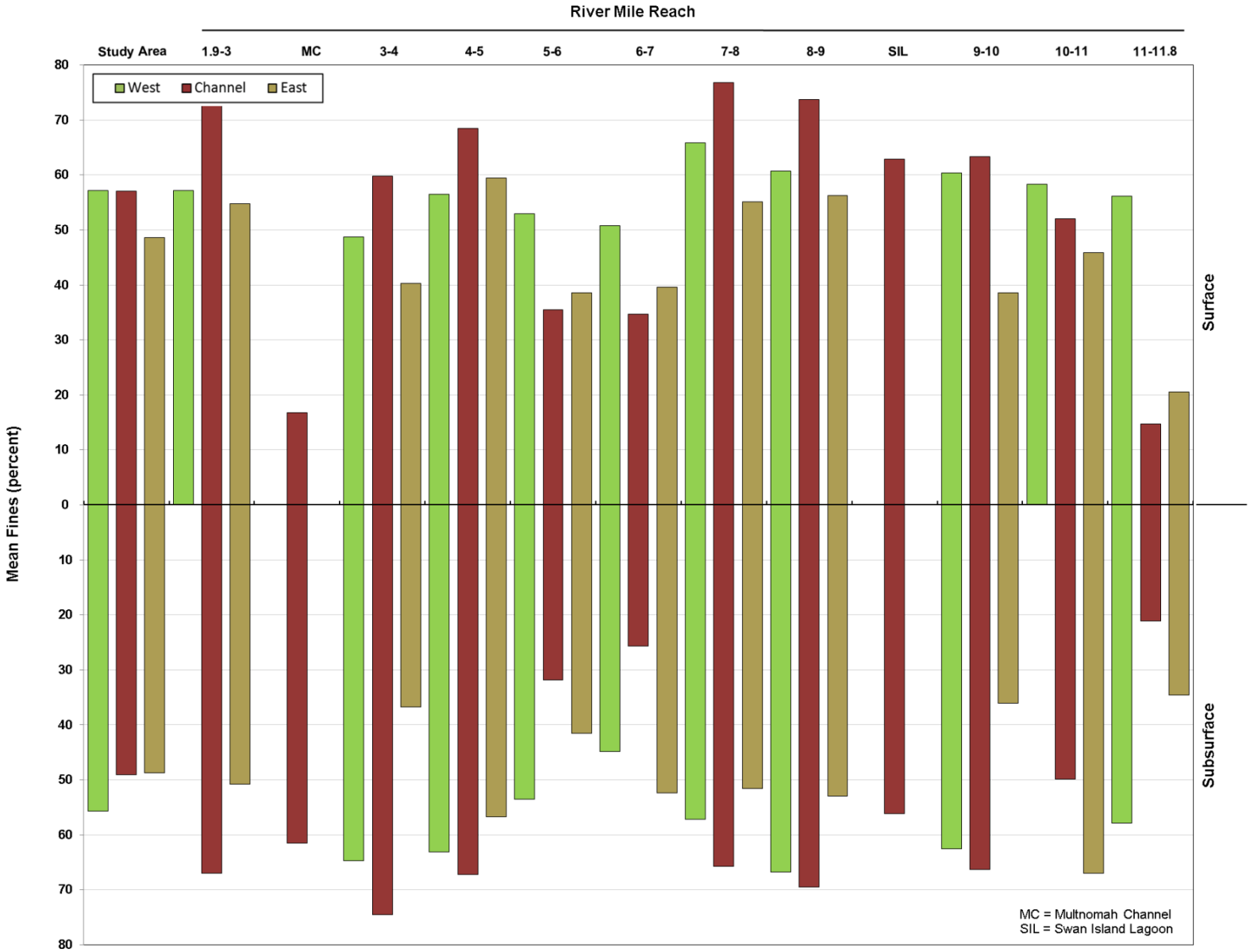



**Figure D1.1-99**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Percent Fines Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)

Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

Surface fines subset contains five "0%" values that were replaced with "0.06%" (minimum non-zero value observed) so that the minimum-value whisker is made visible in log space.

**Figure D1.1-100**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Percent Fines in
Surface and Subsurface Sediment by River Reach

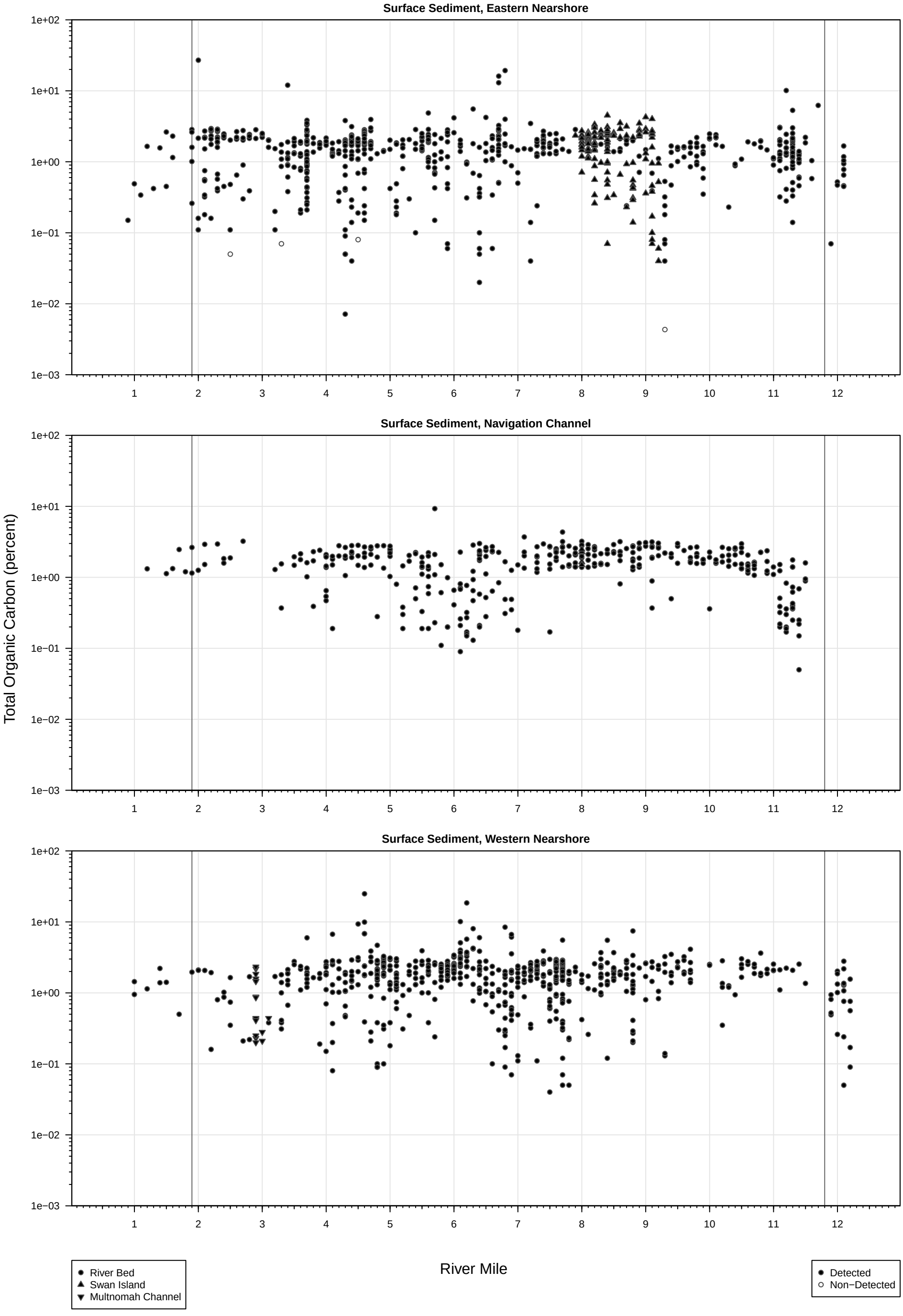



**Figure D1.1−101**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Organic Carbon
Concentrations in Surface Sediment, RM 0.8−12.2

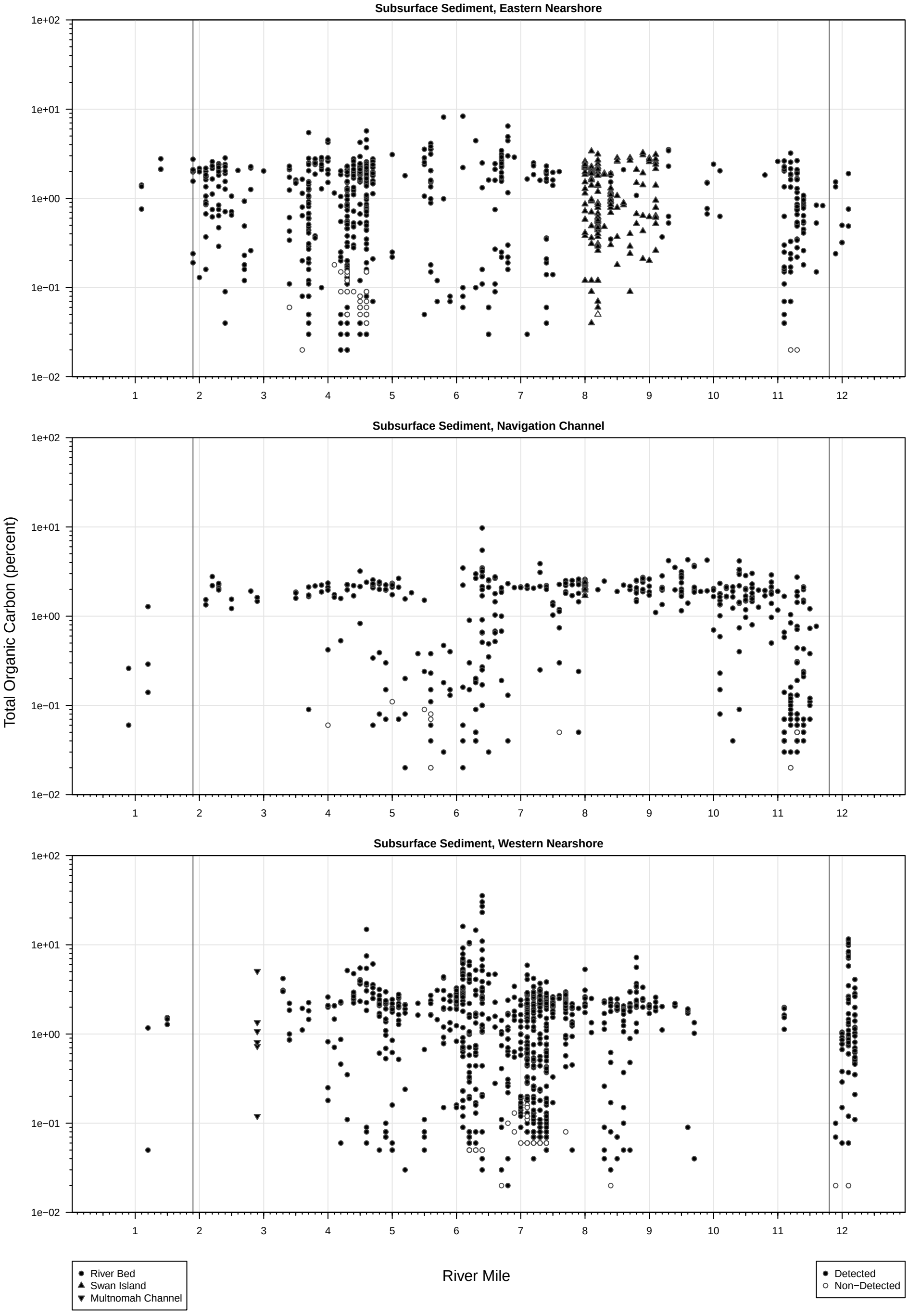



**Figure D1.1−102**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total Organic Carbon
Concentrations in Subsurface Sediment, RM 0.8−12.2

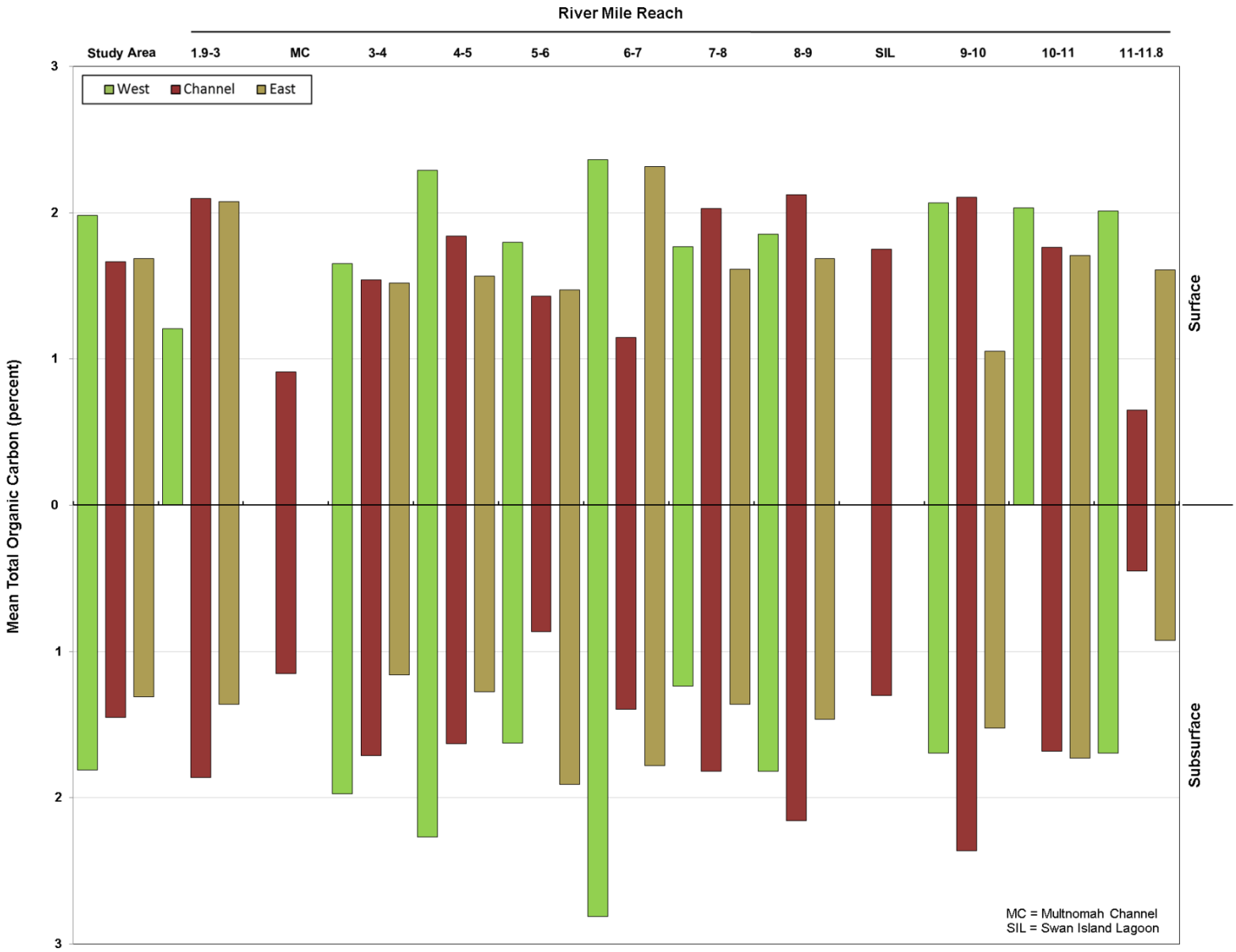
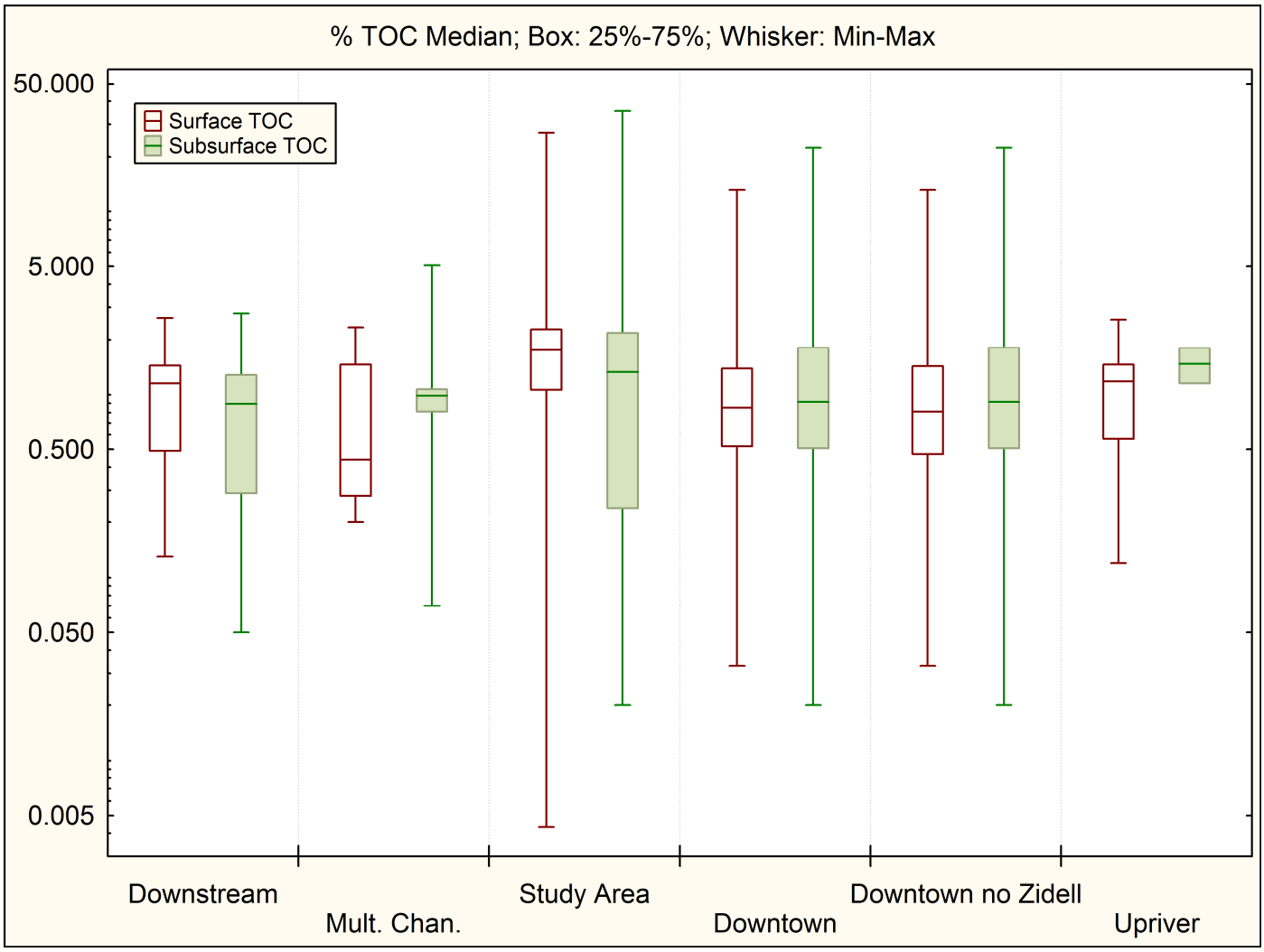



**Figure D1.1-103**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mean Total Organic Carbon Concentration
in Surface and Subsurface Sediment (RM 1.9–11.8)




Note:
Occasionally, small sample sizes (e.g., N<3) or data sets with multiple duplicate values can result in min/max whiskers that coincide with the upper/lower boundaries of the box plot (i.e., 25th and 75th percentiles). In these cases, no whiskers will be visible on the box plot.

**Figure D1.1-104**
Portland Harbor RI/FS
Remedial Investigation Report
Box-Whisker Plot of Total Organic Carbon in
Surface and Subsurface Sediment by River Reach

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D1.2
# CONTAMINANT AND PHYSICAL PARAMETERS IN BEDDED SEDIMENT—MAPS

**FINAL**

February 8, 2016

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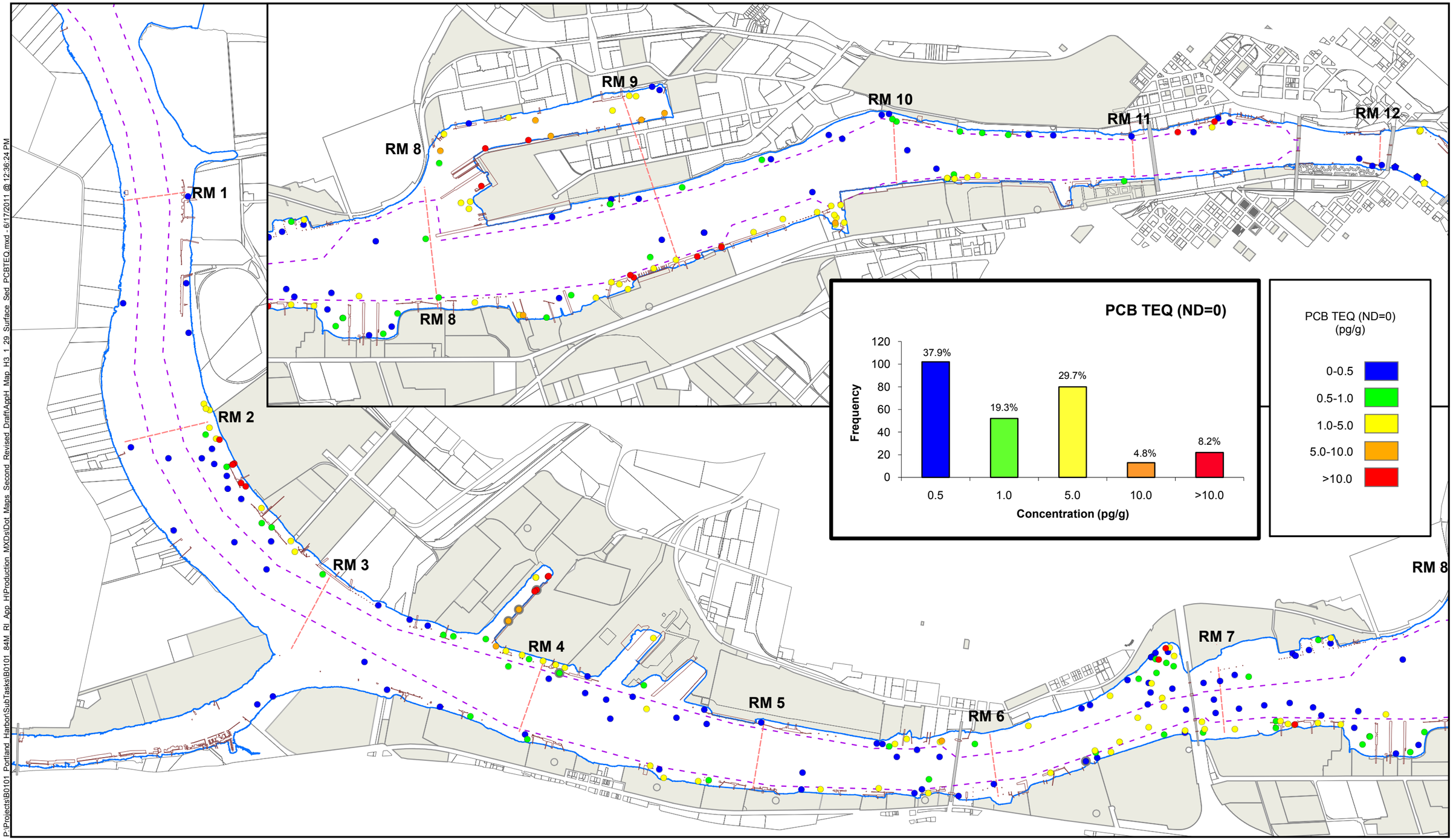


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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

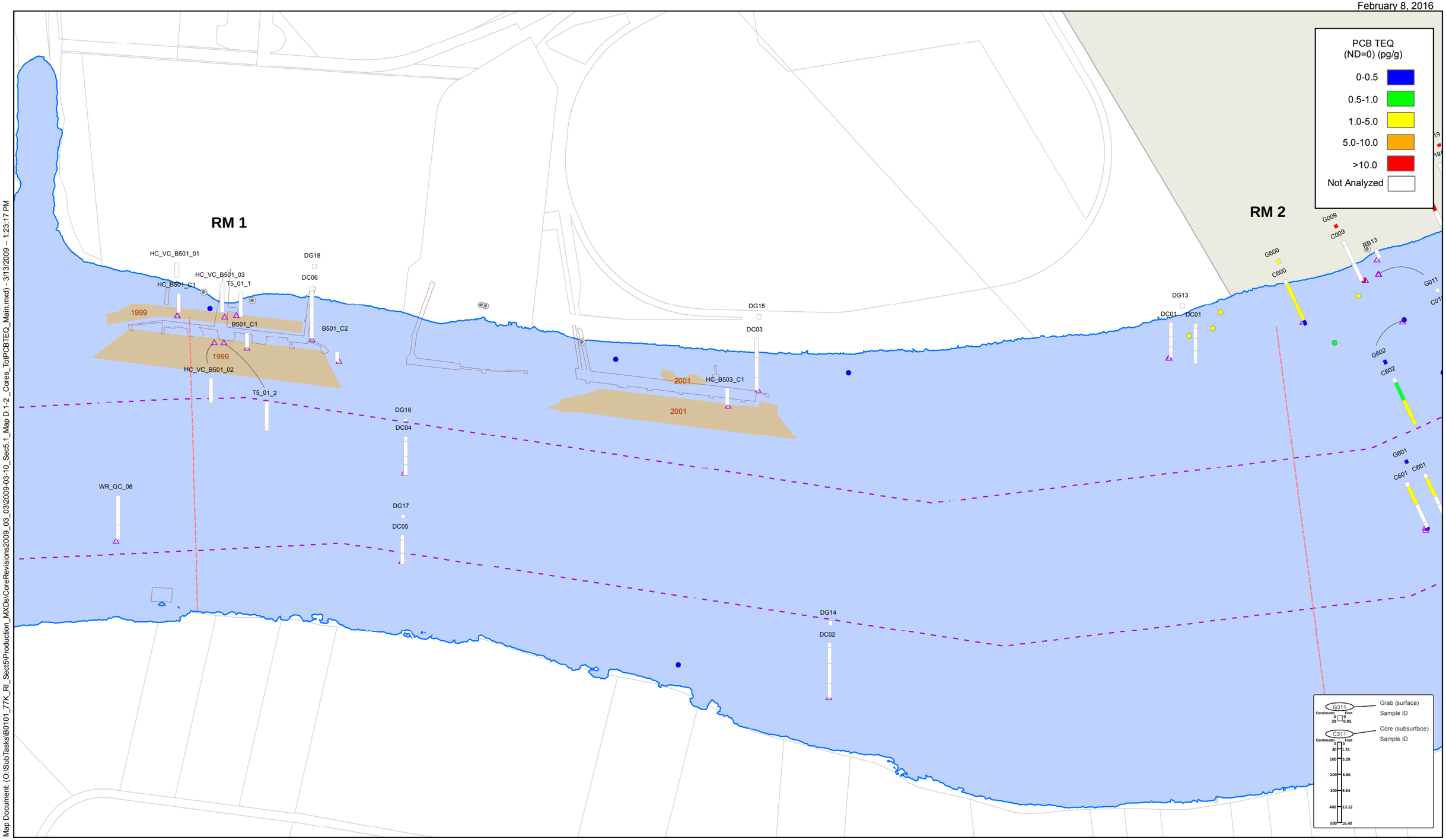
0 1,000 2,000 3,000 4,000 5,000 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-1**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
PCB TEQ (ND=0) (pg/g)

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-2_Cores_TotPCBTEQ_Main.mxd) - 3/13/2009 -- 1:23:17 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

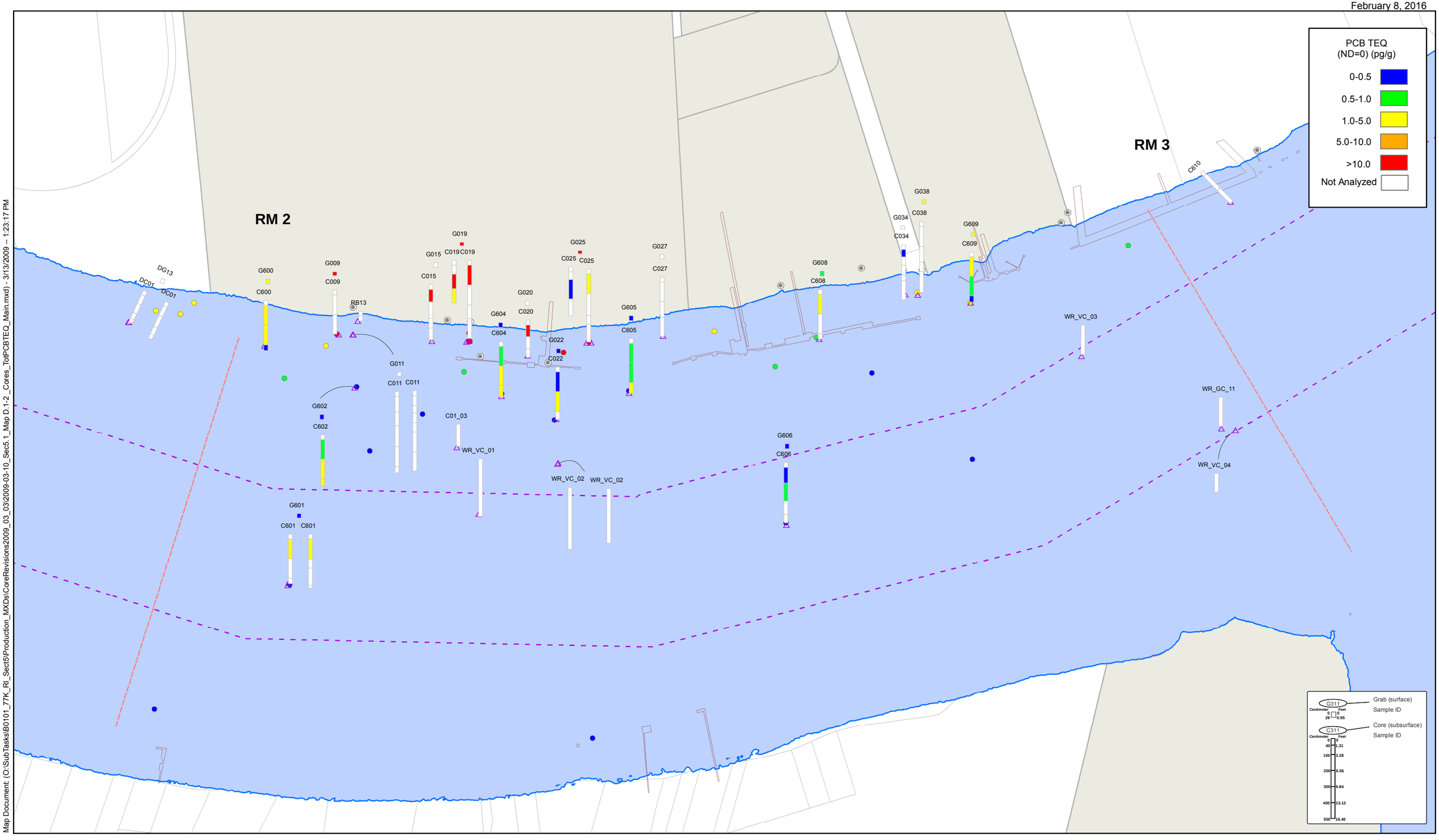
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-2a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
PCB TEQ (ND=0) (pg/g)

River Mile 01 to 02

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

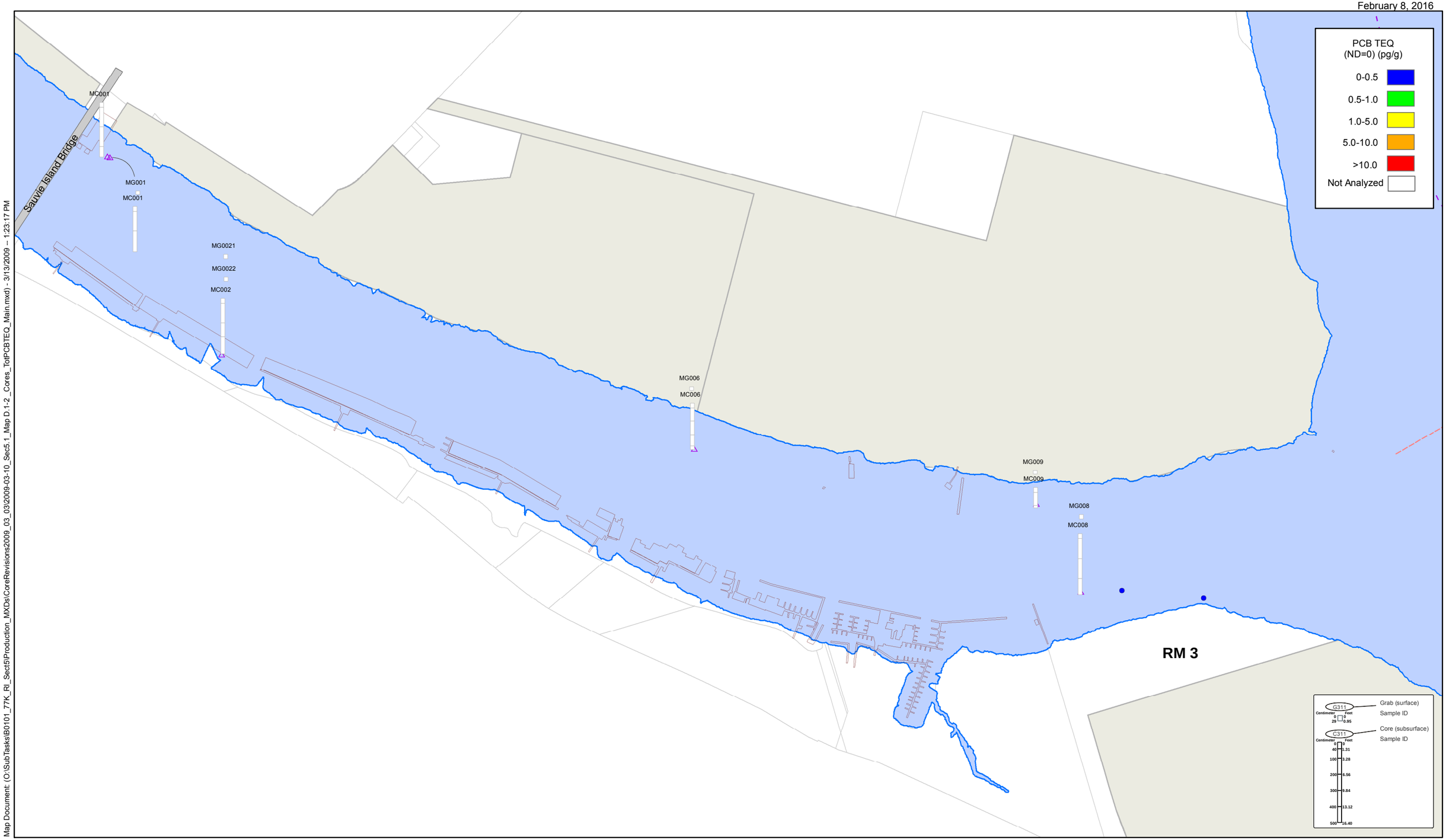
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-2b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
PCB TEQ (ND=0) (pg/g)

River Mile 02 to 03

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

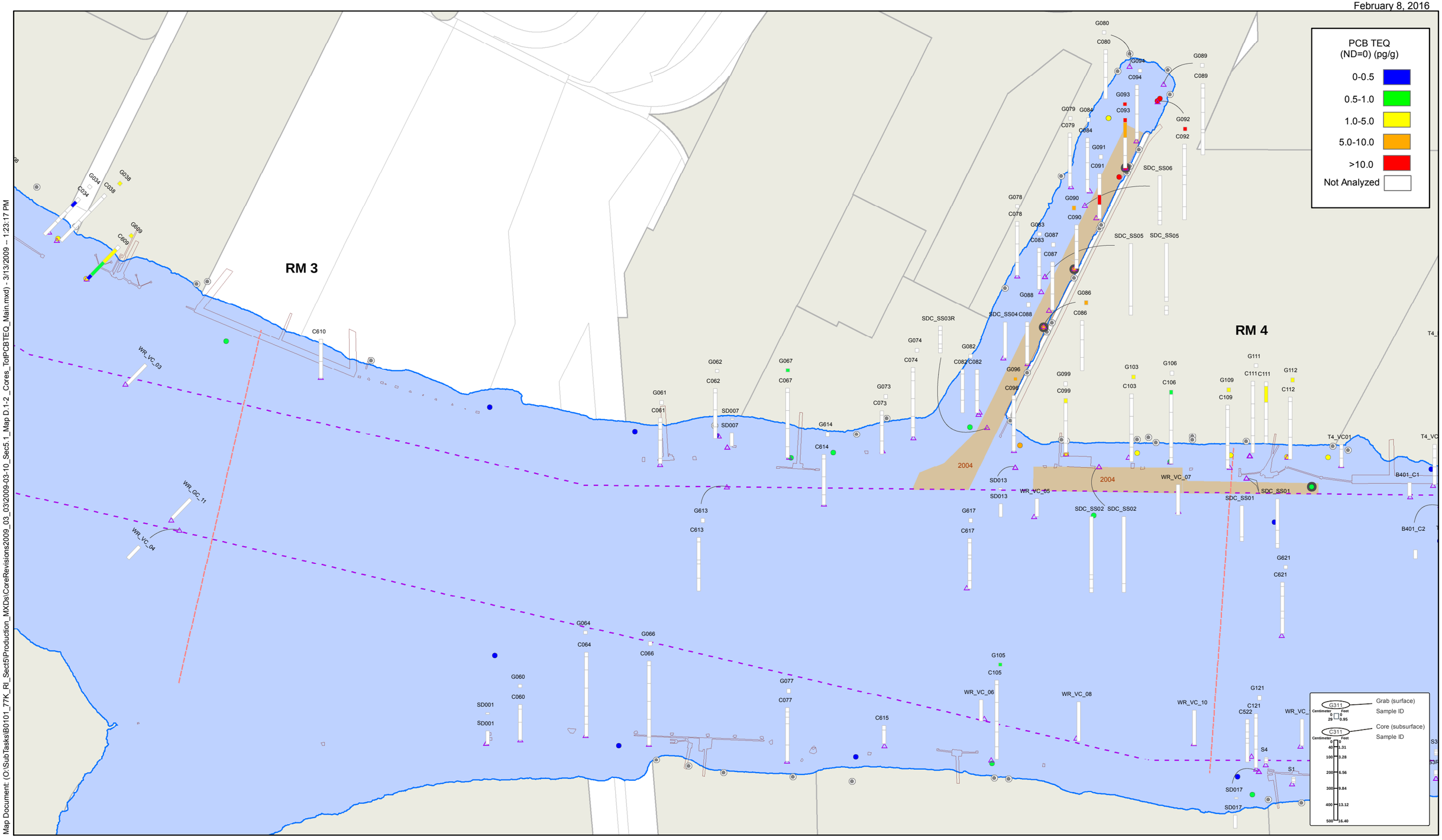
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-2c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
PCB TEQ (ND=0) (pg/g)

River Mile 03 - Multnomah Channel

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_032009-03-10_Sec5.1_Map D.1-2_Cores_TotPCBTEQ_Main.mxd) - 3/13/2009 -- 1:23:17 PM




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

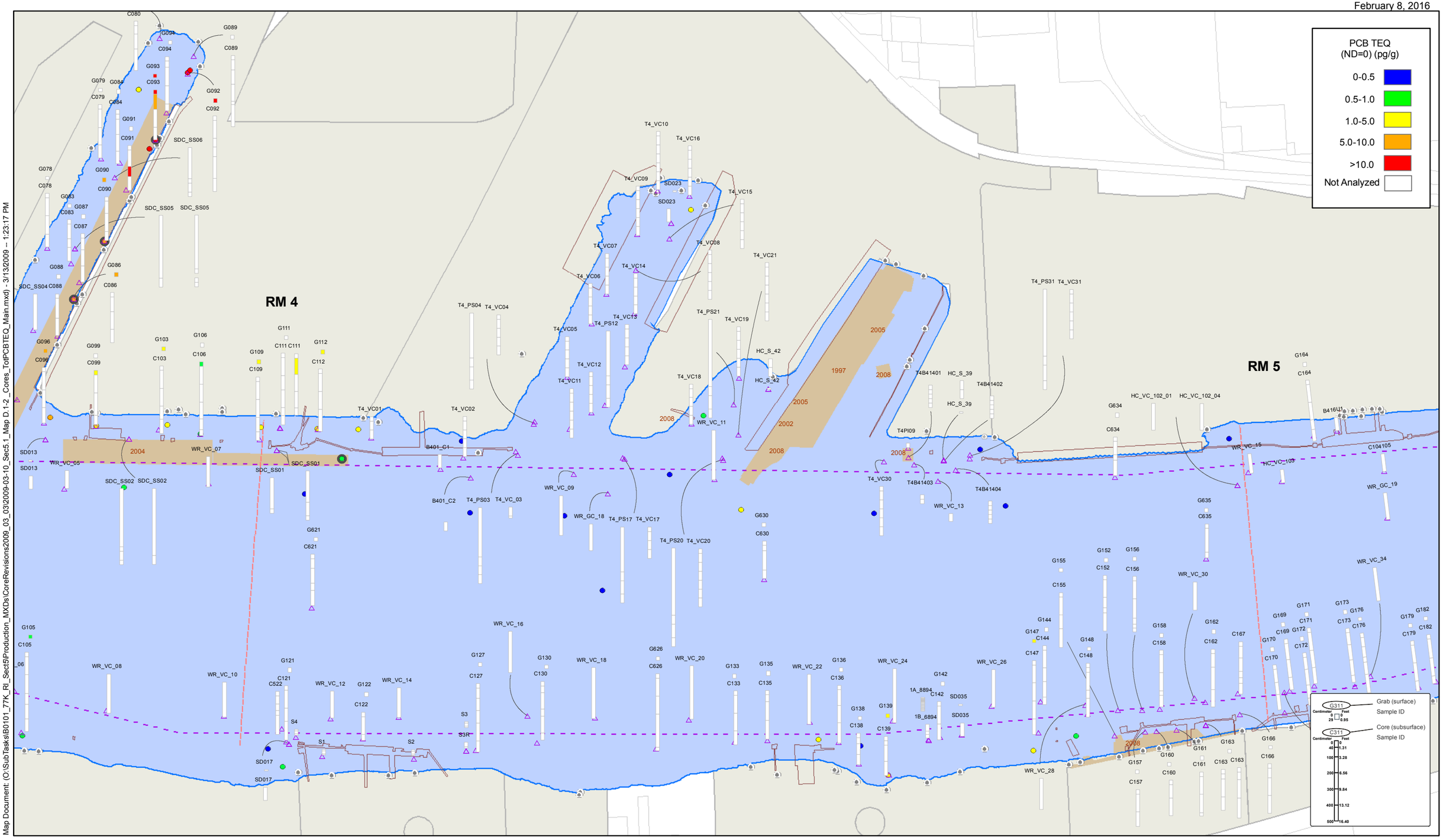
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-2 d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
PCB TEQ (ND=0) (pg/g)

River Mile 03 to 04

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

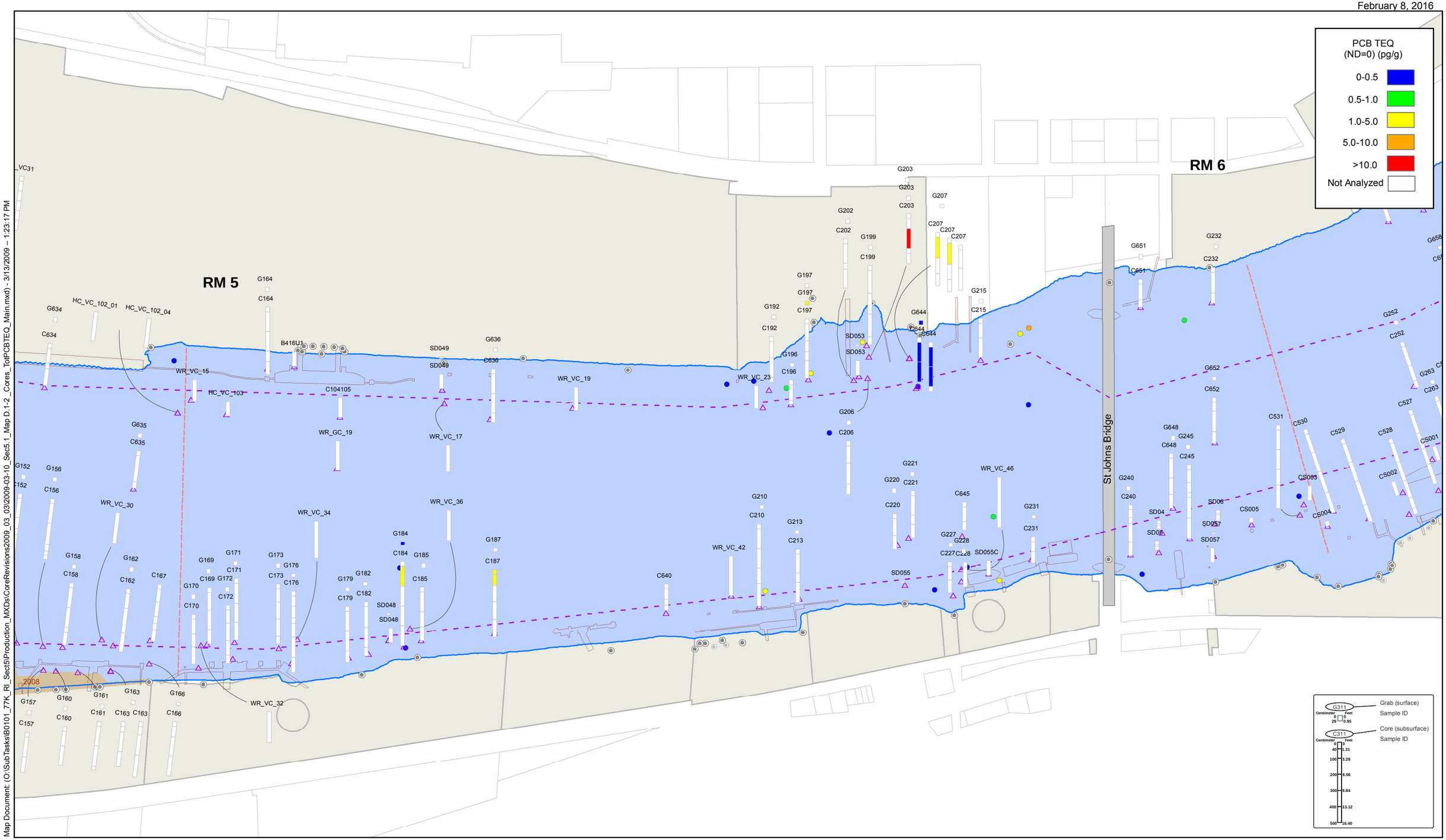
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-2e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
PCB TEQ (ND=0) (pg/g)

River Mile 04 to 05 - Slips

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-2f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
PCB TEQ (ND=0) (pg/g)

River Mile 05 to 06

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_032009-03-10_Sec5.1_Map D.1-2_Cores_TotPCBTEQ_Main.mxd) - 3/13/2009 -- 1:23:17 PM

PCB TEQ
(ND=0) (pg/g)

- 0-0.5
- 0.5-1.0
- 1.0-5.0
- 5.0-10.0
- >10.0
- Not Analyzed

RM 6

RM 7

Railroad Bridge

Grab (surface) Sample ID

Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

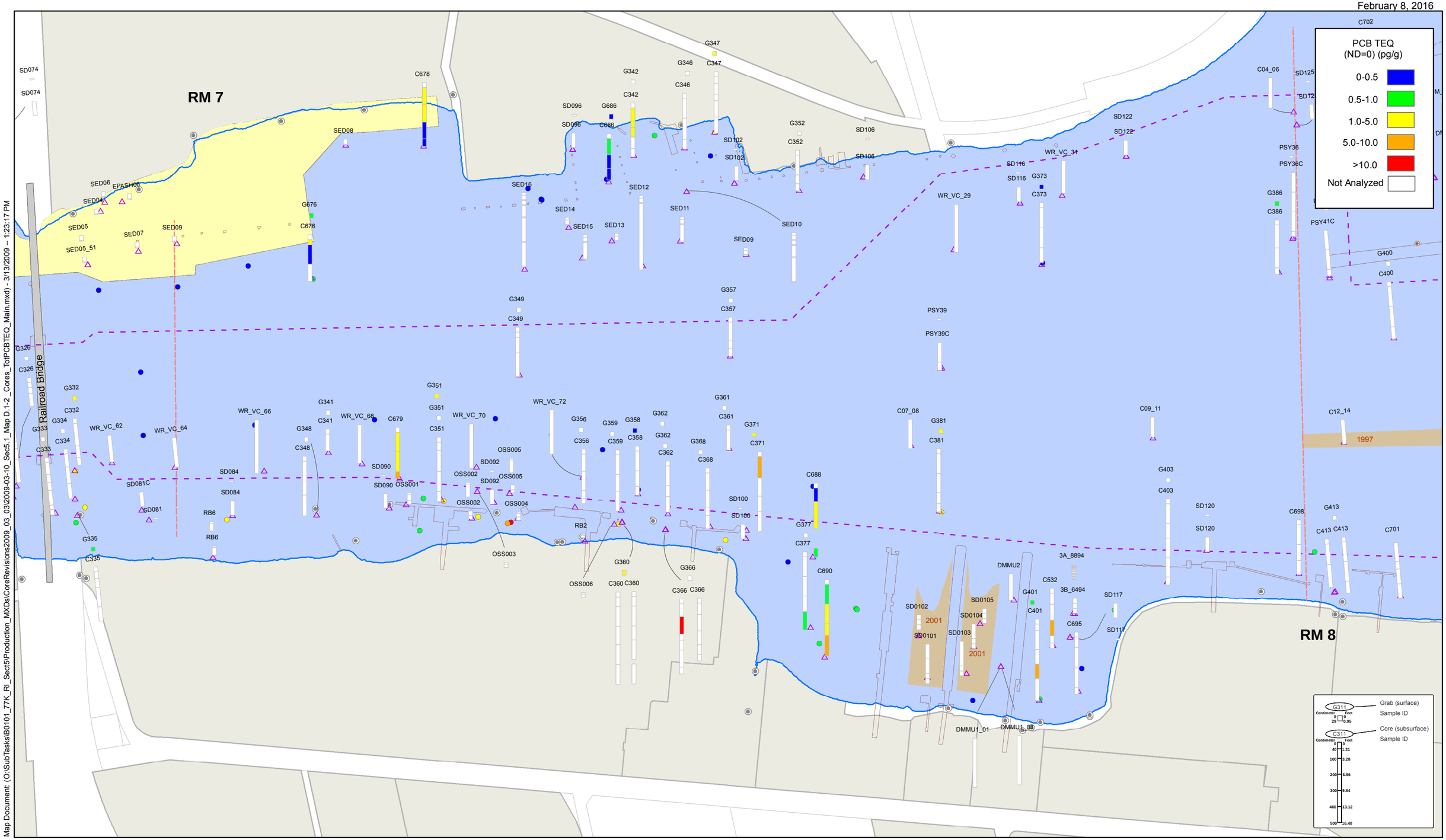
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-2g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
PCB TEQ (ND=0) (pg/g)

River Mile 06 to 07

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-2h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
PCB TEQ (ND=0) (pg/g)

River Mile 07 to 08

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-2_Cores_TotPCBTEQ_Main.mxd) - 3/13/2009 -- 1:23:17 PM

RM 8

RM 9

PCB TEQ
(ND=0) (pg/g)

- 0-0.5
- 0.5-1.0
- 1.0-5.0
- 5.0-10.0
- >10.0
- Not Analyzed

G380 C380 SD136 G383 C383 G388 C388 PSY11 PSY11C G396 C396 G379 C379 G397 C397 G405 C405 SD141 PSY07 PSY07C G415 C415 SD141 4A_8894 G421 C421 4B_5094 G417 C417 PSY01 PSY01C G425 C425 G426 C426 G430 C430 G364 C364 PSY18 PSY18C PSY16 PSY16C G382 C382 G372 C372 PSY20 PSY20C DM_24 C708 PSY23 PSY23C PSY24 PSY24C C703 C702 G384 C384 PSY27 PSY27C PSY27C_2 SD133 C04_06 SD125 PSY34 PSY34C PSY33 DM_20 G706 C706 G392 C392 SD127 PSY33C PSY30 PSY30C PSY30C_2 PSY36 PSY36C G386 C386 PSY41 PSY41C PSY43 PSY43C G409 C409 G420 C420 SD138 C714 G400 C400 G720 C720 C727 PSY50 PSY50C

Grab (surface) Sample ID

Core (subsurface) Sample ID

C36_36

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

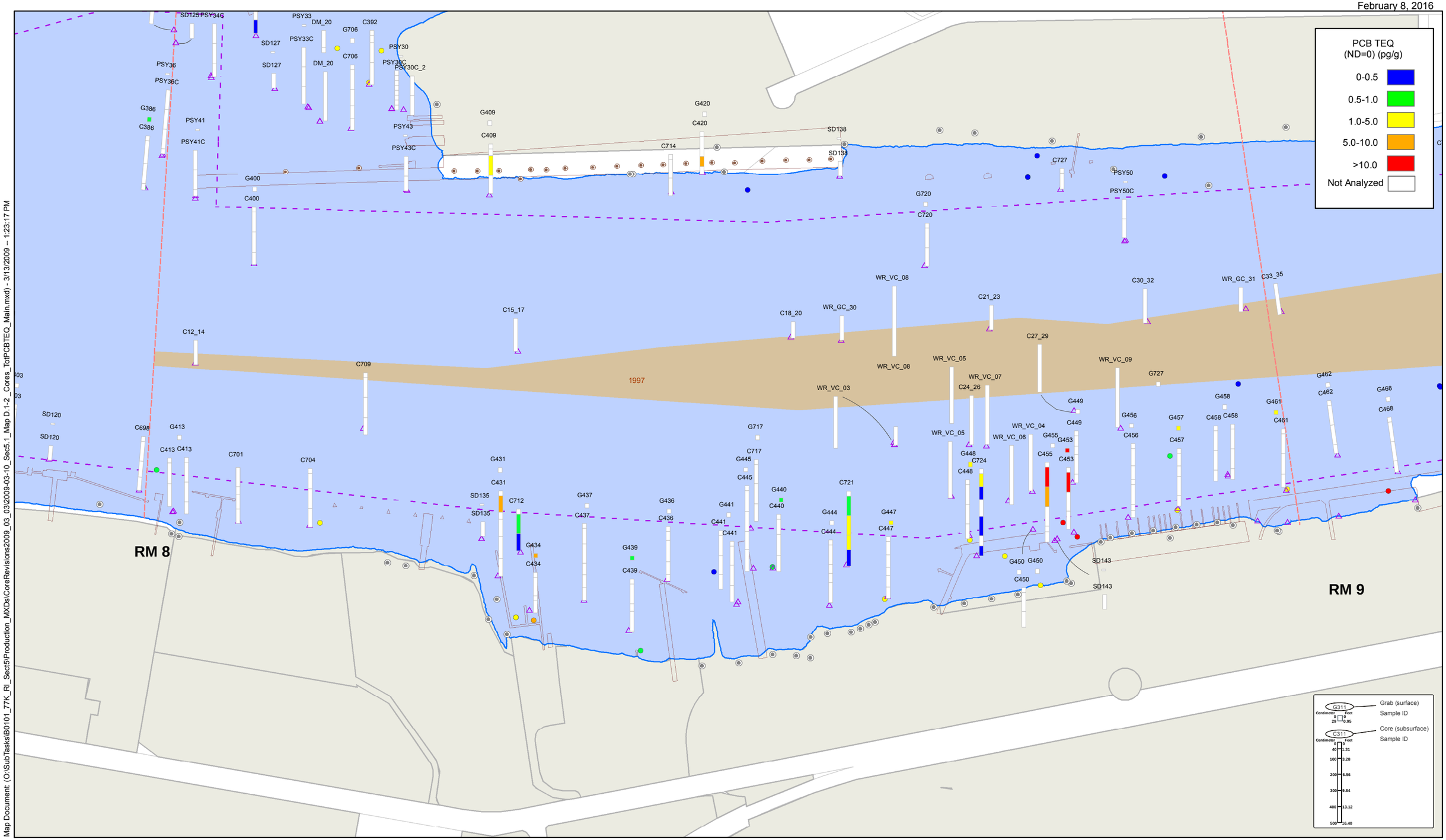
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-2i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
PCB TEQ (ND=0) (pg/g)

River Mile 08 to 09 - Swan Is. East

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

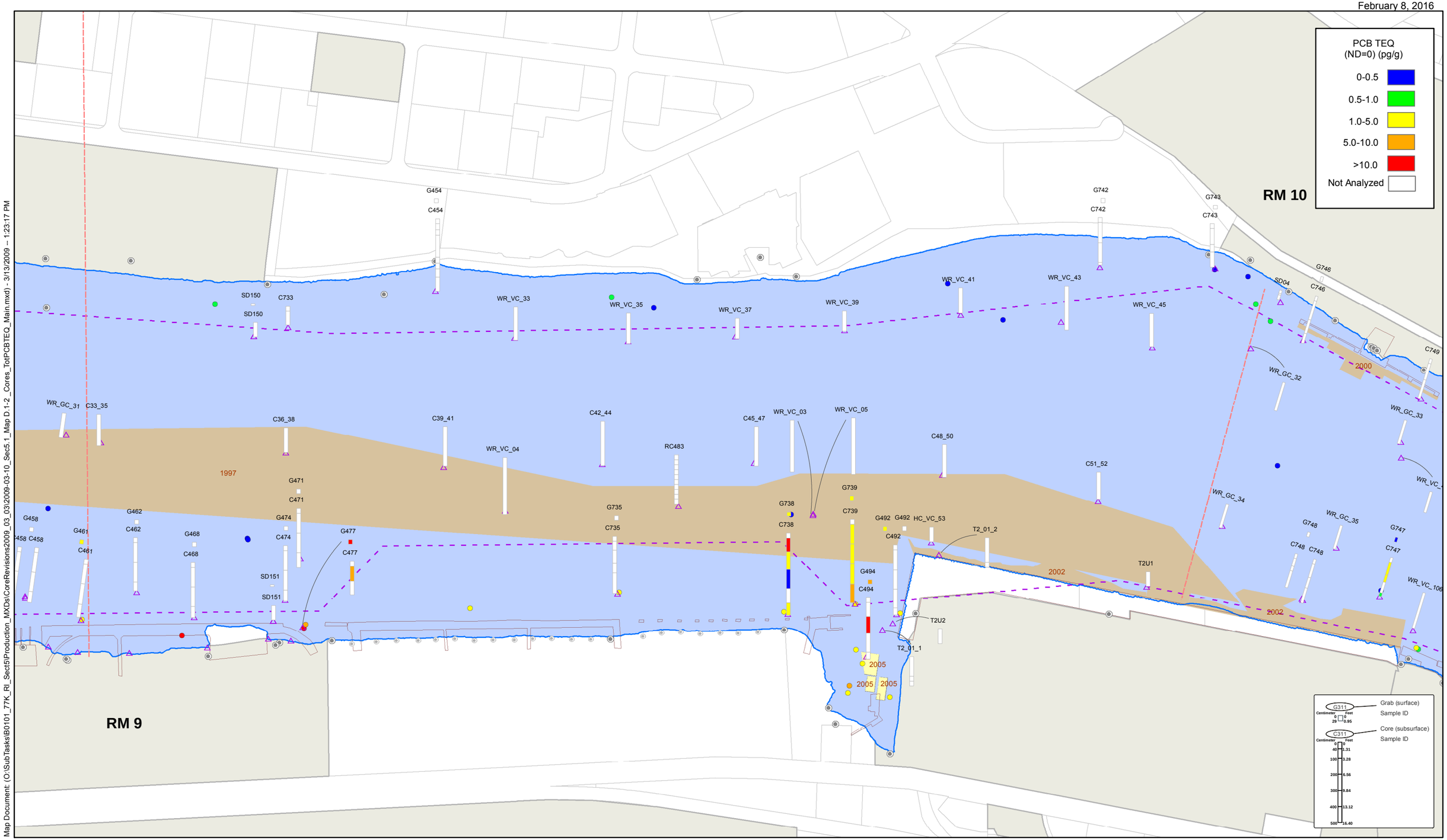
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-2j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
PCB TEQ (ND=0) (pg/g)

River Mile 08 to 09 - Swan Is. West

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

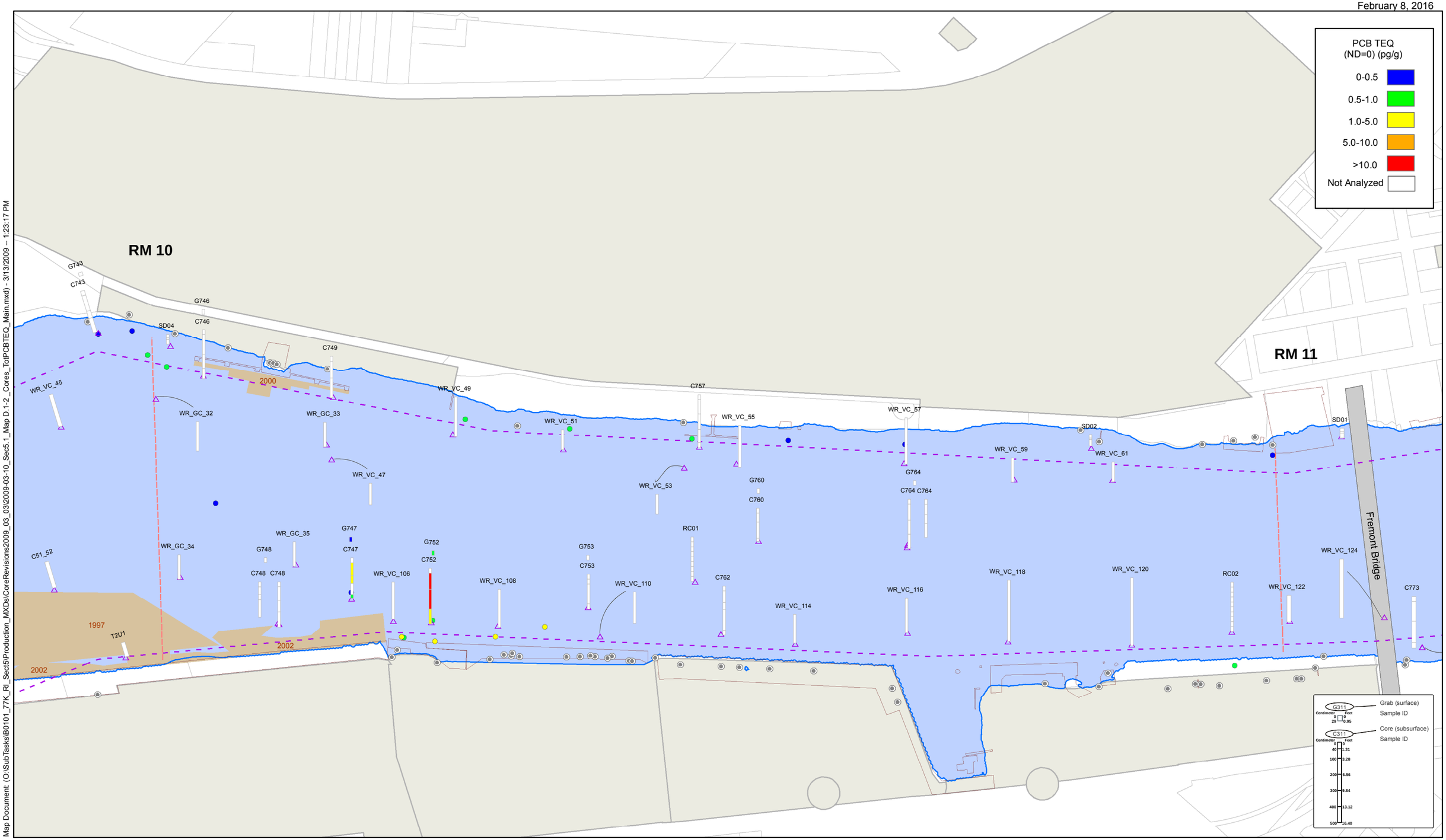
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-2k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
PCB TEQ (ND=0) (pg/g)

River Mile 09 to 10

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-2_Cores_TotPCBTEQ_Main.mxd) - 3/13/2009 -- 1:23:17 PM




N

0 150 300 450 600 750 Feet

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-2l**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
PCB TEQ (ND=0) (pg/g)

River Mile 10 to 11

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-2_Cores_TotPCBTEQ_Main.mxd) - 3/13/2009 -- 1:23:17 PM

PCB TEQ
(ND=0) (pg/g)

- 0-0.5
- 0.5-1.0
- 1.0-5.0
- 5.0-10.0
- >10.0
- Not Analyzed

RM 11

RM 12

Fremont Bridge

Broadway Bridge

Steel Bridge

2001

SD01 UC01 UG01 G777 C777 UC02 UG02 G778 C778 UG03 UC03 G779 C779 IS_C2 T01 T02 T03 T04 C01020304 IS_C1 WR_CD_43Dup WR_CD_43 WR_CD_40 WR_CD_42 WR_GC_39 WR_VC_132 WR_VC_134 WR_GC_37 WR_GC_38 WR_VC_128 WR_CD_41 WR_VC_124 WR_VC_06 WR_VC_126 WR_VC_07 WR_VC_130 WR_VC_122 C773 C773 UG04 UG04 UC04 UG05 UC05 UC05 UG06 UC06 UG07 UC07 UG08 UC08 C782 G783 C783

Grab (surface)
Sample ID

Core (subsurface)
Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

## Map Features

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

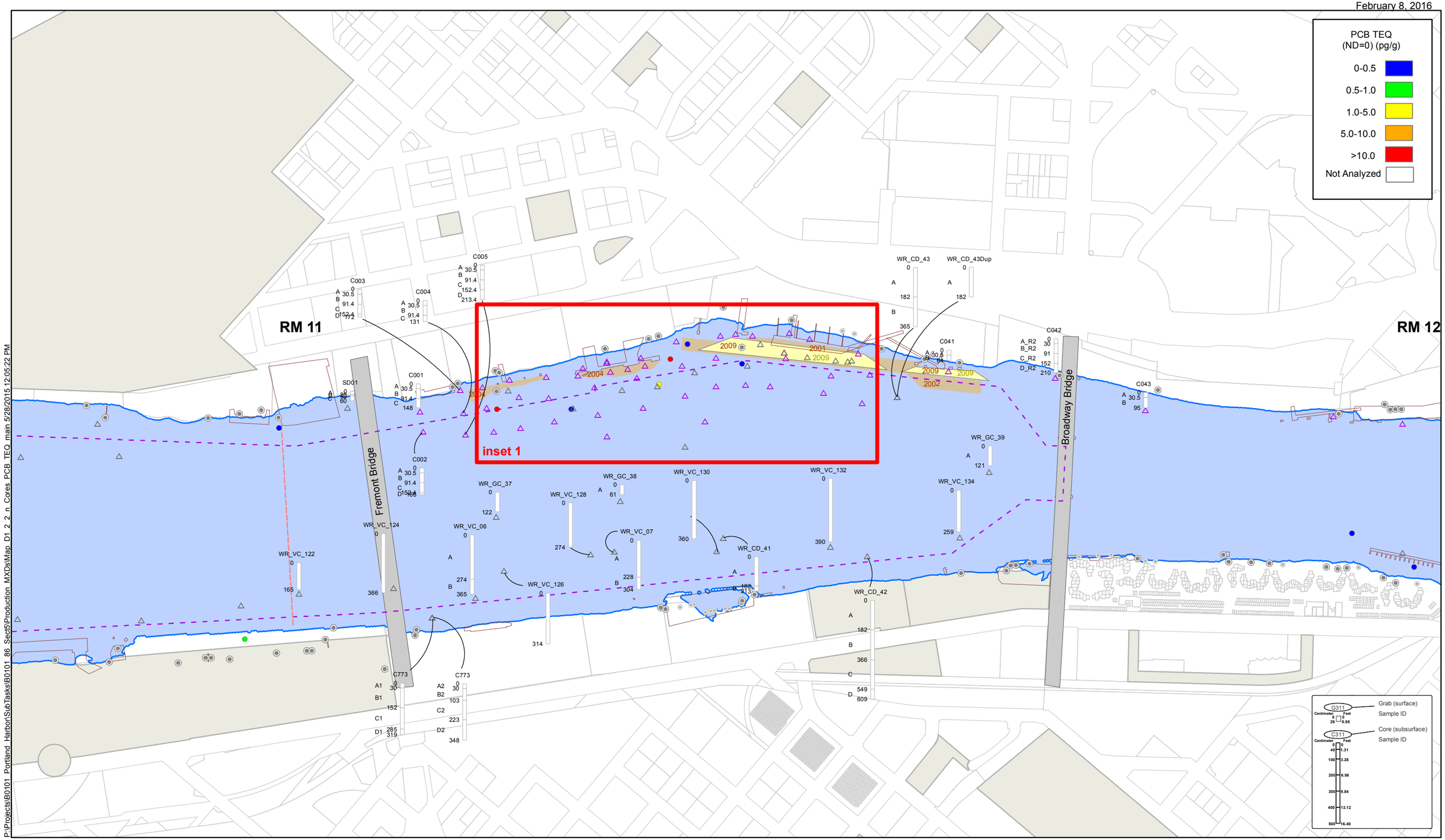
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-2m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
PCB TEQ (ND=0) (pg/g)

River Mile 11 to 12

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

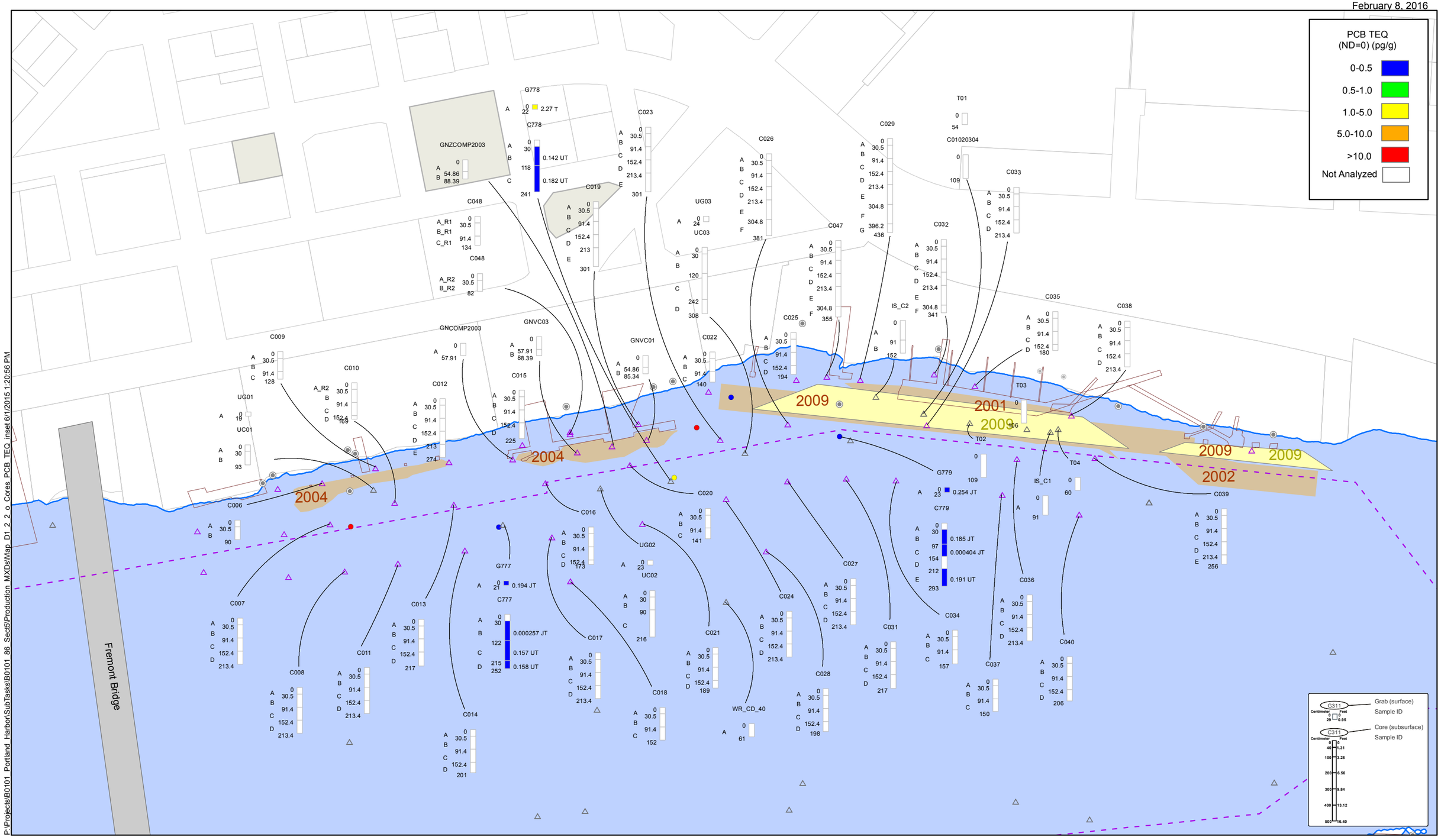
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-2n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
PCB TEQ (ND=0) (pg/g)

River Mile 11.0 - 11.8

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

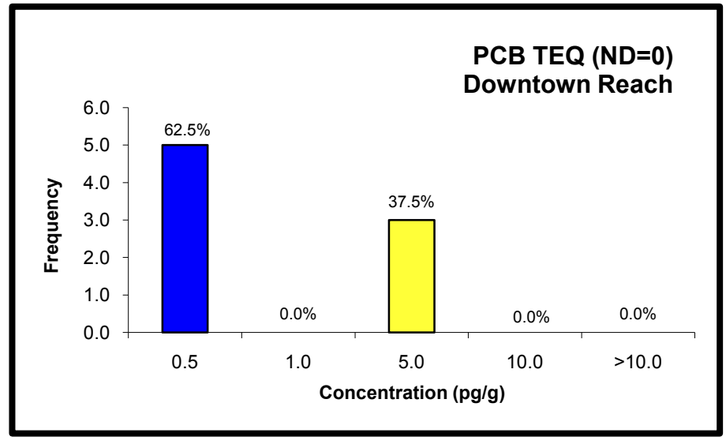
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

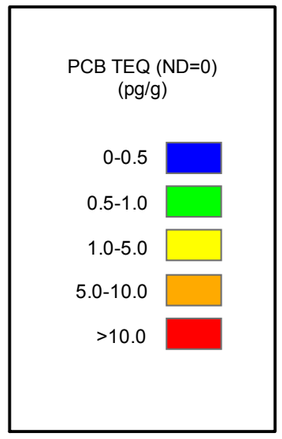
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

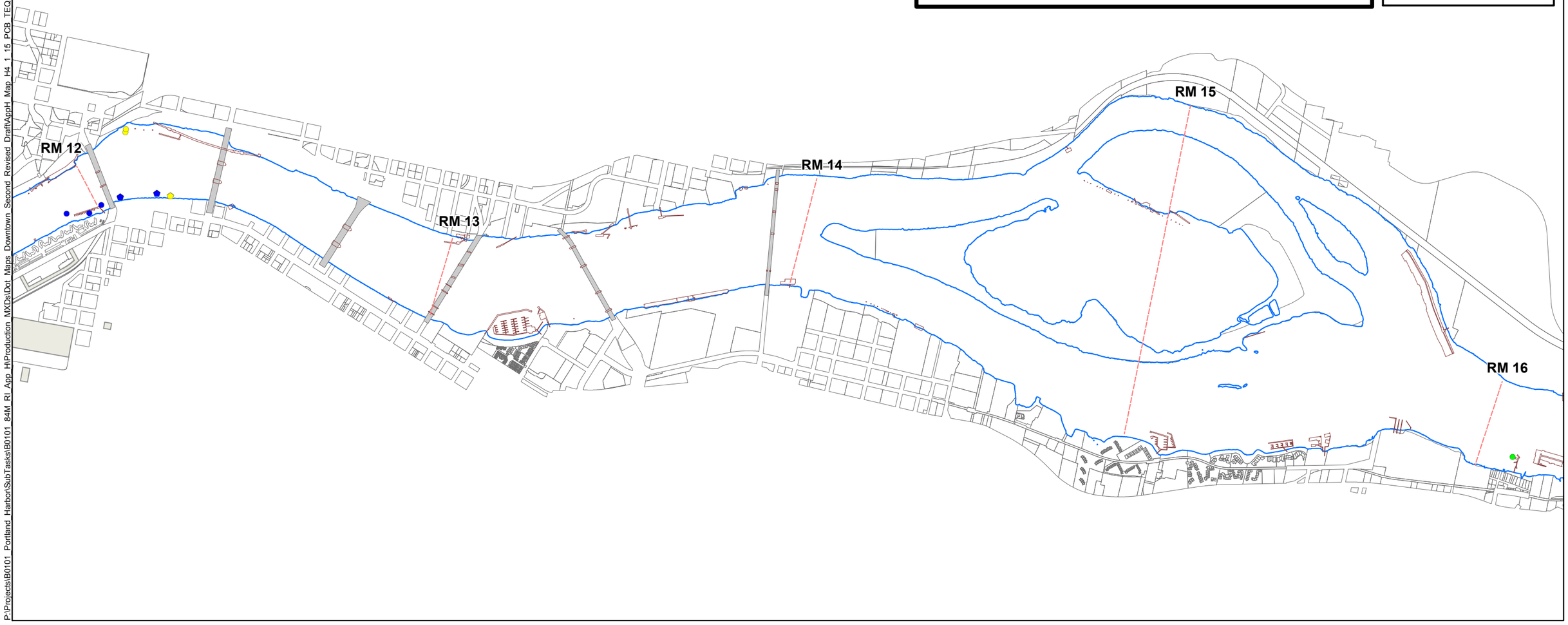
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-2o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
PCB TEQ (ND=0) (pg/g)

River Mile 11.0 - 11.8 - Inset 1

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

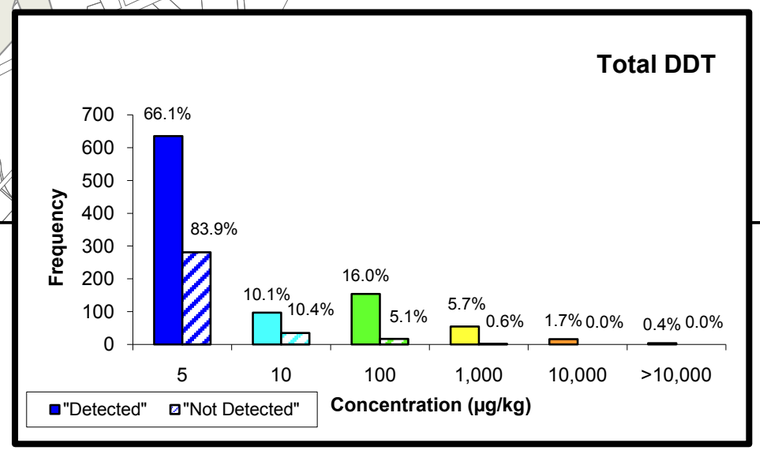
**Map Features**

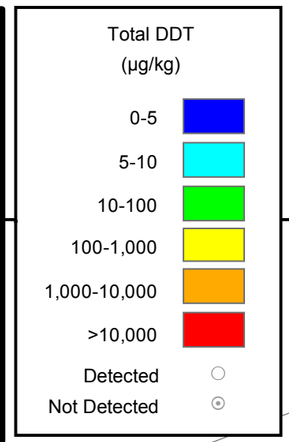
- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-3**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
PCB TEQ (ND=0) (pg/g)
Downtown Reach

P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_84M_RI_App_HIProduction_MXDs\Dot_Maps_Second_Revised_Draft\AppH_Map_H3_1_31_Surface_Sed_DDT.mxd - 6/17/2011 @ 12:41:26 PM

RM 1
RM 2
RM 3
RM 4
RM 5
RM 6
RM 7
RM 8
RM 8
RM 9
RM 10
RM 11
RM 12




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

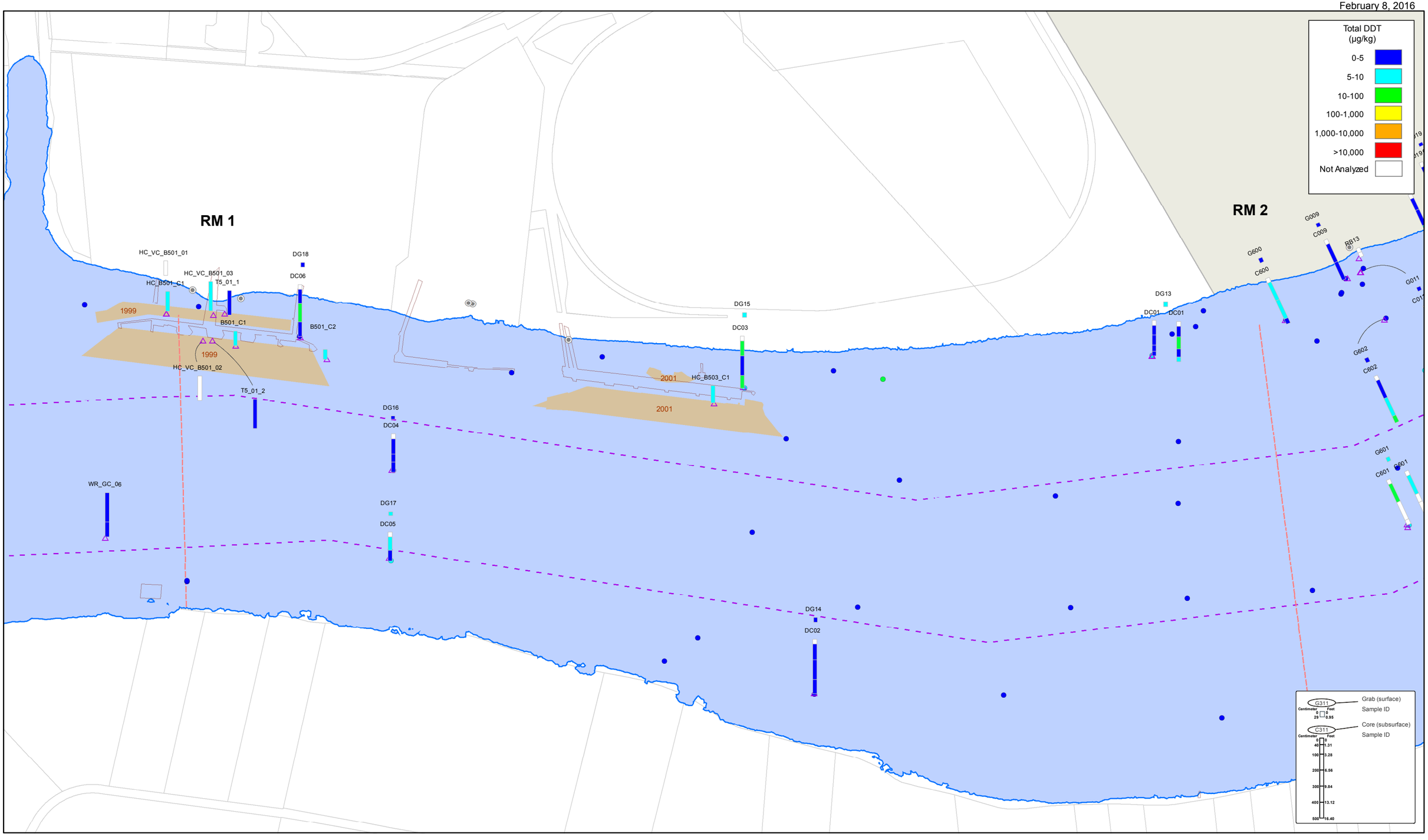
0 1,000 2,000 3,000 4,000 5,000 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-4**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Total DDT (µg/kg)

Map Document: (O:\SubTask\st\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-4_Cores_SumDDT_Main.mxd) - 3/9/2009 -- 3:55:25 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-5a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDT (µg/kg)
River Mile 01 to 02

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-4_Cores_SumDDT_Main.mxd) - 3/9/2009 -- 3:55:25 PM

RM 2

RM 3

Total DDT (µg/kg)
- 0-5
- 5-10
- 10-100
- 100-1,000
- 1,000-10,000
- >10,000
- Not Analyzed

DG13, DC01, DC01, G600, C600, G009, C009, RB13, G019, G015, C019, C019, C015, G020, C020, G604, C604, G025, C025, C025, G022, C022, G027, C027, G605, C605, G608, C608, G034, C034, G038, C038, G609, C609, C610, G011, C011, C011, G602, C602, C01_03, WR_VC_01, WR_VC_02, WR_VC_02, G606, C606, WR_VC_03, WR_GC_11, WR_VC_04, G601, C601, C601

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

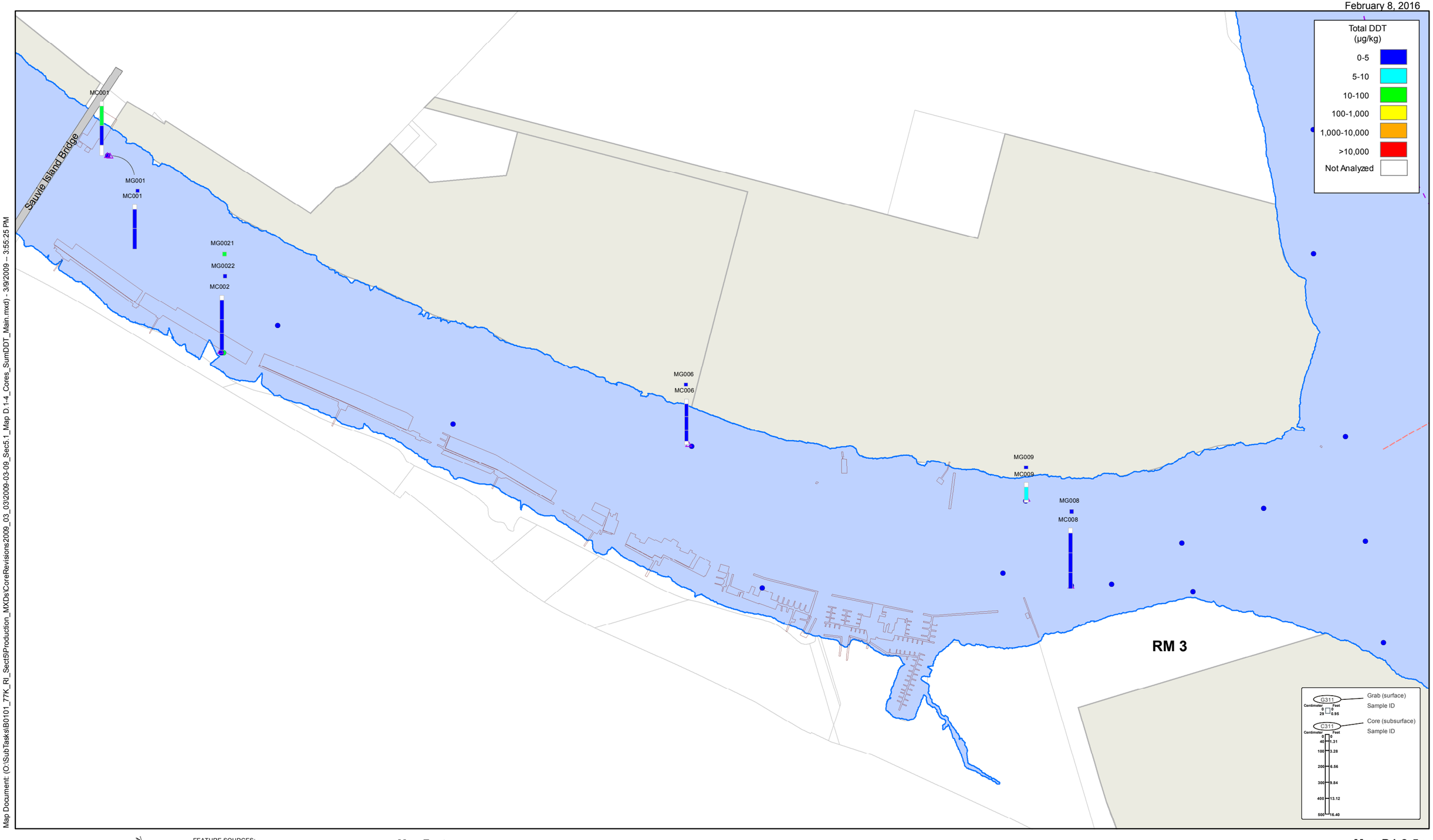
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-5b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDT (µg/kg)
River Mile 02 to 03

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-5c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDT (µg/kg)
River Mile 03 - Multnomah Channel

Map Document: (O:\Sub\Tasks\B0101_7TK_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-4_Cores_SumDDT_Main.mxd) - 3/9/2009 -- 3:55:25 PM

RM 3

RM 4

Total DDT (µg/kg)
- 0-5
- 5-10
- 10-100
- 100-1,000
- 1,000-10,000
- >10,000
- Not Analyzed

2004

Grab (surface) Sample ID

Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

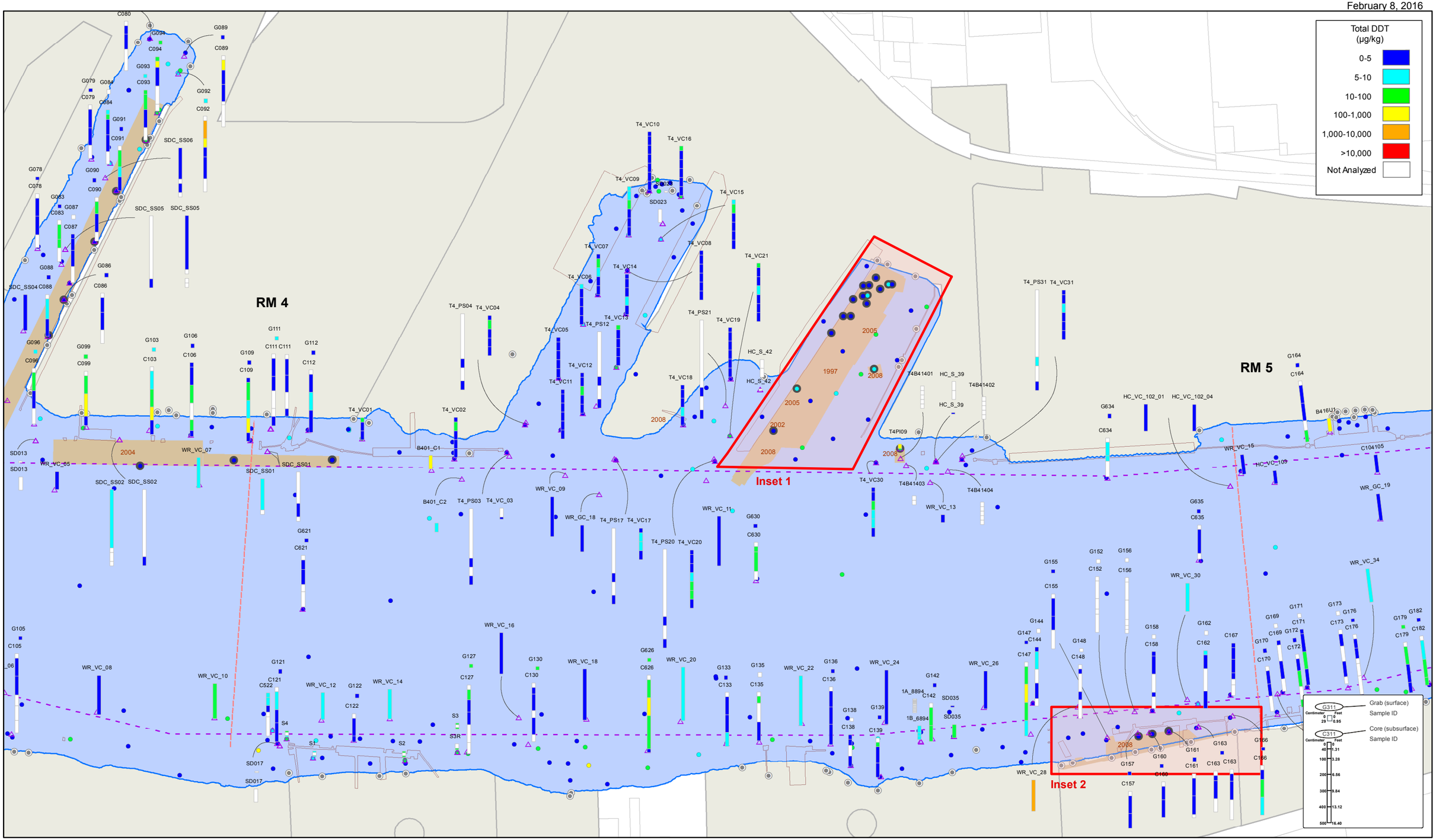
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-5d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDT (µg/kg)
River Mile 03 to 04

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-4_Cores_SumDDT_Main.mxd) - 3/9/2009 -- 3:55:25 PM




N

0 150 300 450 600 750 Feet

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-5e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDT (µg/kg)
River Mile 04 to 05 - Slips

Total DDT (µg/kg)
0-5
5-10
10-100
100-1,000
1,000-10,000
>10,000
Not Analyzed

T4_VC24 T4PI02 HC_S_11 HC_S_11 T4B41106 T4PI042 T4PI032 T4S301 T4PI01 T4B41104 T4B41103 T4PI03 T4PI04 T4_VC29 HC_S_07 HC_S_07 T4S302 T4_PS33 HC_S_18 HC_S_18 T4PI07 HC_S_13 HC_S_13 T4B41102 T4S303 T4B41101 T4S304 2005 SD031 SD031 HC_S_22 HC_S_22 T4S308 T4S305 T4_VC03 T4PI08 T4_PS28 T4_VC28 T4_VC23 HC_S_32 HC_S_32 T4_3 T4S306 1997 2008 T4_VC32 T4_PS32 T4MD01 T4COMP T4S307 T4_VC27 T4_VC_02 T4_2 2005 T4_VC22 HC_S_27 HC_S_27 T4_UP10 T4_VC25 T4_UP09 T4_1 2008 T4MD02 T4_PS22 T4_VC26 T4_VC26 2008 2002 T4_VC_01

G311 Grab (surface) Sample ID
C311 Core (subsurface) Sample ID

| Centimeter | Feet |
|---|---|
| 0 | 0 |
| 40 | 1.31 |
| 100 | 3.28 |
| 200 | 6.56 |
| 300 | 9.84 |
| 400 | 13.12 |
| 500 | 16.40 |

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-4_Cores_SumDDT_Insets.mxd) - 3/9/2009 -- 4:17:02 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 115 230 460 Feet

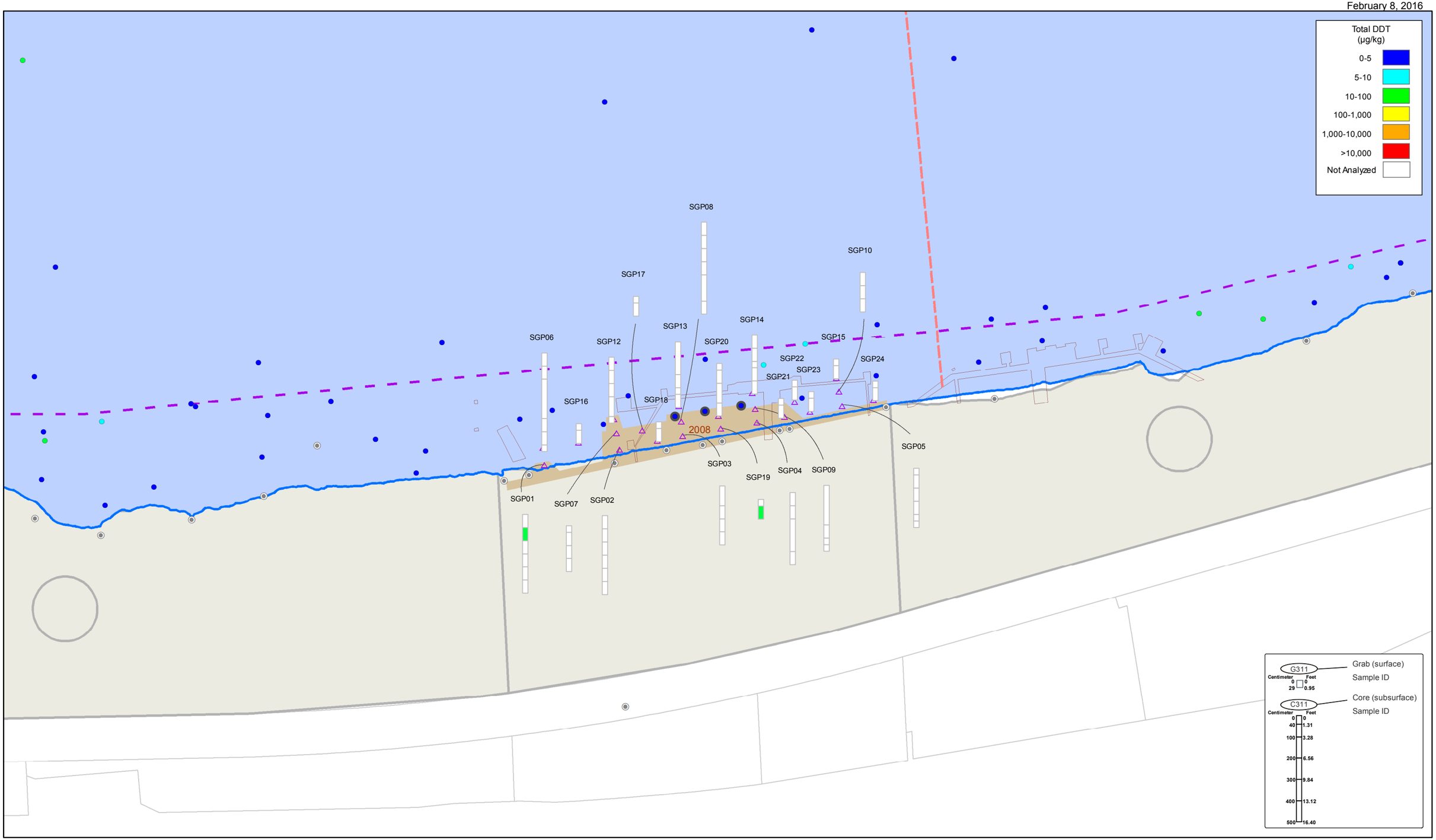
Map Features
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

Outfalls
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-5e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDT (µg/kg)
River Mile 04 to 05 - Slips - Inset 1




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-4_Cores_SumDDT_Insets.mxd) - 3/9/2009 -- 4:17:02 PM

N

0 115 230 460 Feet

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

Map Features

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

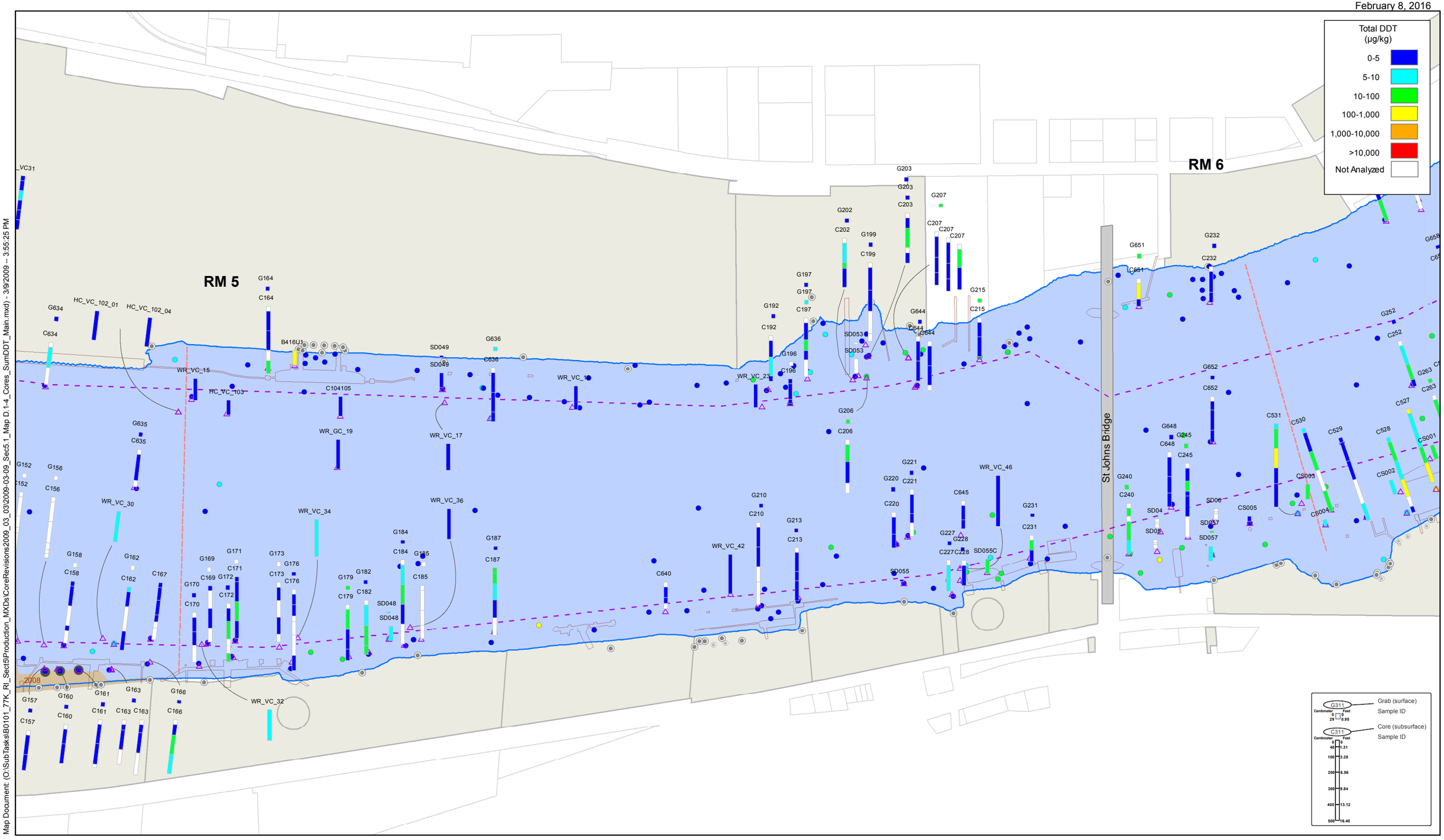
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-5e2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDT (µg/kg)
River Mile 04 to 05 - Slips - Inset 2

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-5f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDT (µg/kg)
River Mile 05 to 06

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-4_Cores_SumDDT_Main.mxd) - 3/9/2009 -- 3:55:25 PM

Total DDT (µg/kg)
- 0-5
- 5-10
- 10-100
- 100-1,000
- 1,000-10,000
- >10,000
- Not Analyzed

RM 6

RM 7

Railroad Bridge

Grab (surface) Sample ID

Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

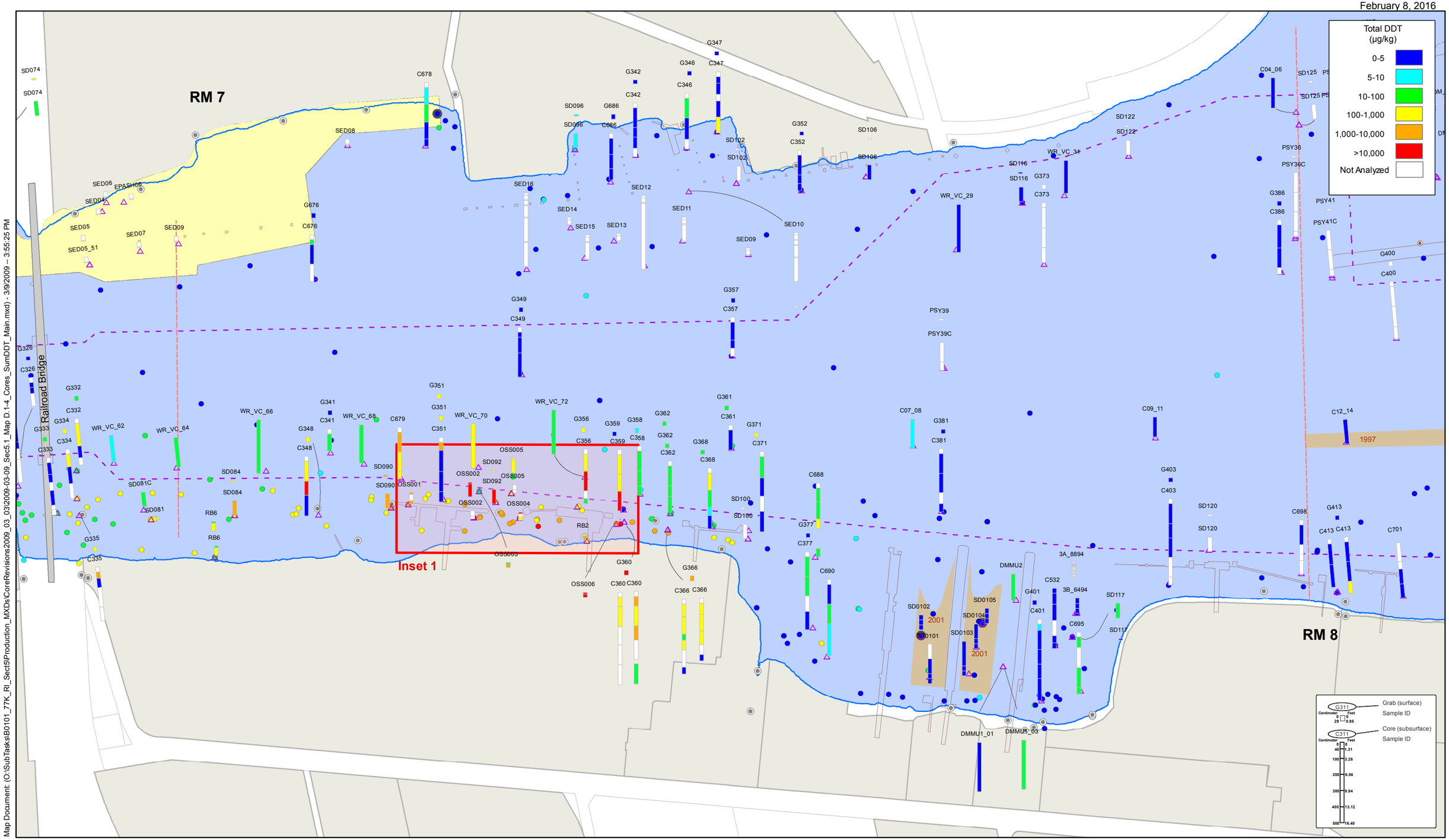
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-5g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDT (µg/kg)
River Mile 06 to 07

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

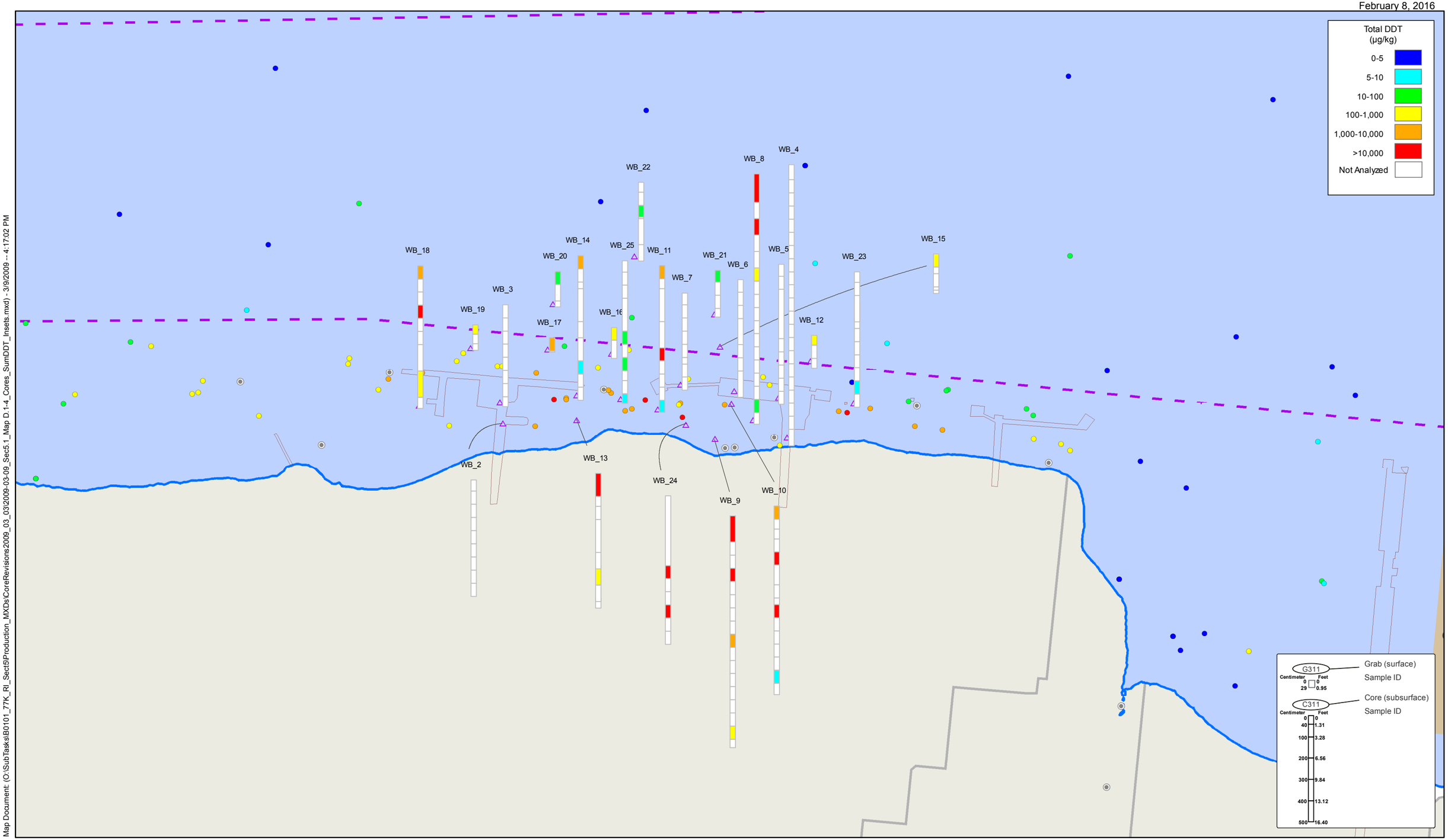
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-5h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDT (µg/kg)
River Mile 07 to 08




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-4_Cores_SumDDT_Insets.mxd) - 3/9/2009 -- 4:17:02 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 115 230 460 Feet

Map Features

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-5h1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDT (µg/kg)
River Mile 07 to 08 - Inset 1

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-4_Cores_SumDDT_Main.mxd) - 3/9/2009 -- 3:55:25 PM

RM 8

RM 9

Total DDT (µg/kg)
- 0-5
- 5-10
- 10-100
- 100-1,000
- 1,000-10,000
- >10,000
- Not Analyzed

G380 C380 SD136 G383 C383 G388 C388 PSY11 PSY11C G396 C396 G405 C405 G417 C417 PSY01 PSY01C G425 C425
PSY18 PSY18C G364 C364 PSY16 PSY16C G379 C379 G382 C382 G393 C393 G397 C397 G402 C402 PSY07 PSY07C G415 C415 SD141 4A_8894 G421 C421 4B_5094 G426 C426 G430 C430
G372 C372 PSY20 PSY20C DM_24 C708 PSY23 PSY23C PSY24 PSY24C C703 G384 C384 PSY27 PSY27C PSY27C_2 SD133 C702
C04_06 SD125 PSY34 PSY34C PSY33 DM_20 G706 C706 G392 C392 SD127 PSY33C PSY30 PSY30C PSY30C_2 PSY36 PSY36C G386 C386 PSY41 PSY41C PSY43 PSY43C G400 C400 G409 C409 G420 C420 SD138 C714 G720 C720 C727 PSY50 PSY50C

Grab (surface) Sample ID
Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

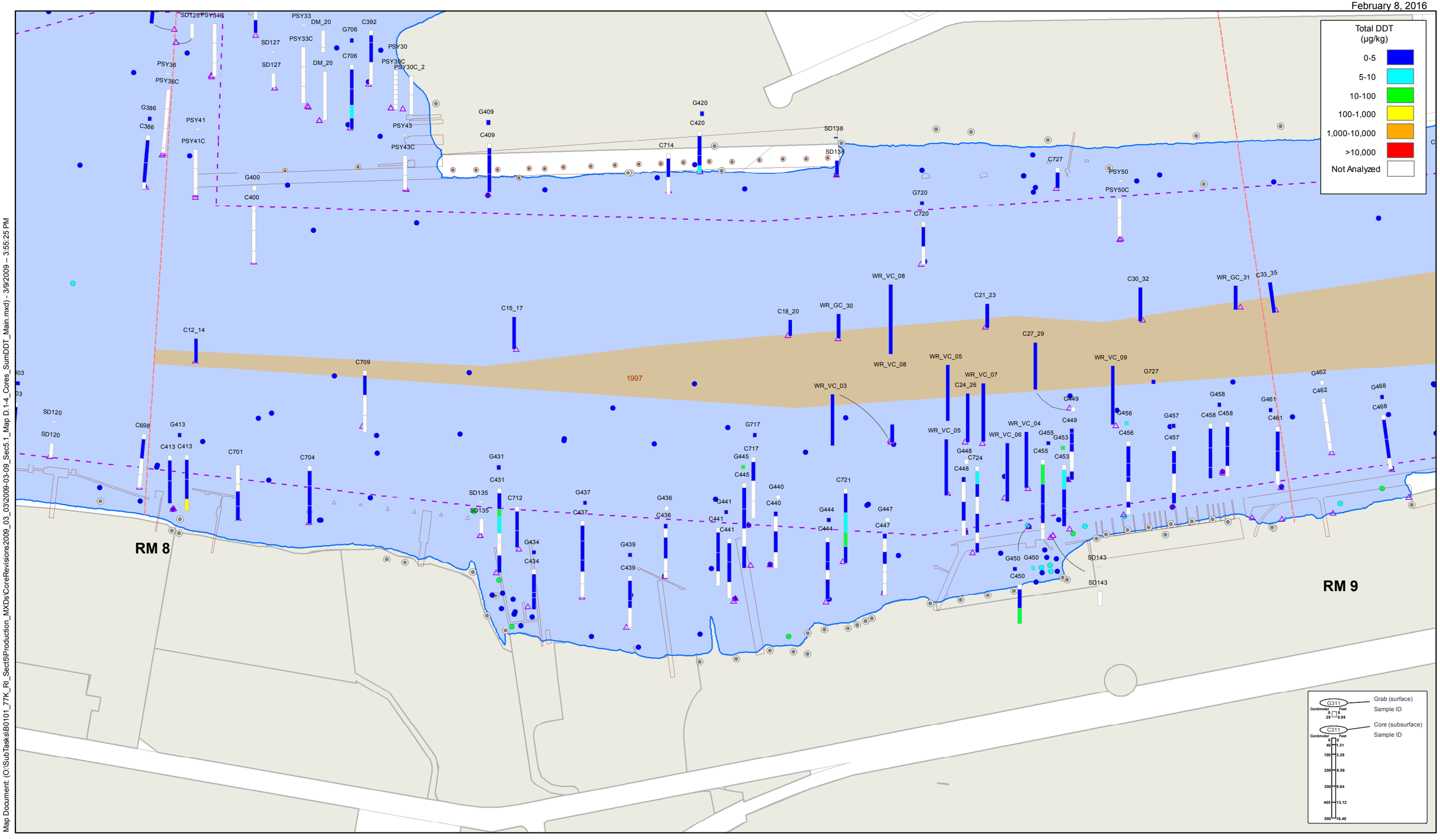
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-5i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDT (µg/kg)
River Mile 08 to 09 - Swan Is. East

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

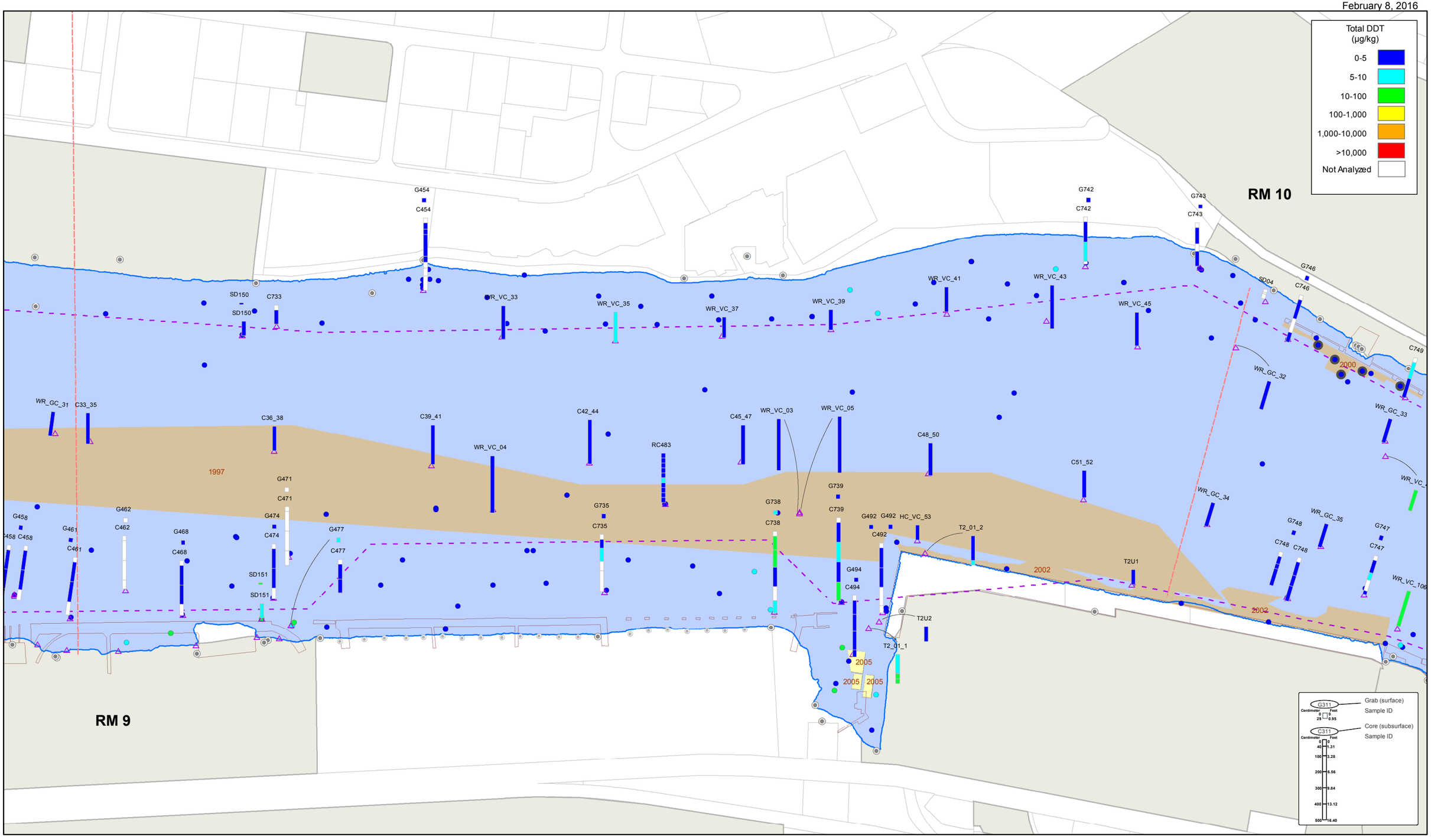
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-5j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDT (µg/kg)
River Mile 08 to 09 - Swan Is. West

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-4_Cores_SumDDT_Main.mxd) - 3/9/2009 -- 3:55:25 PM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

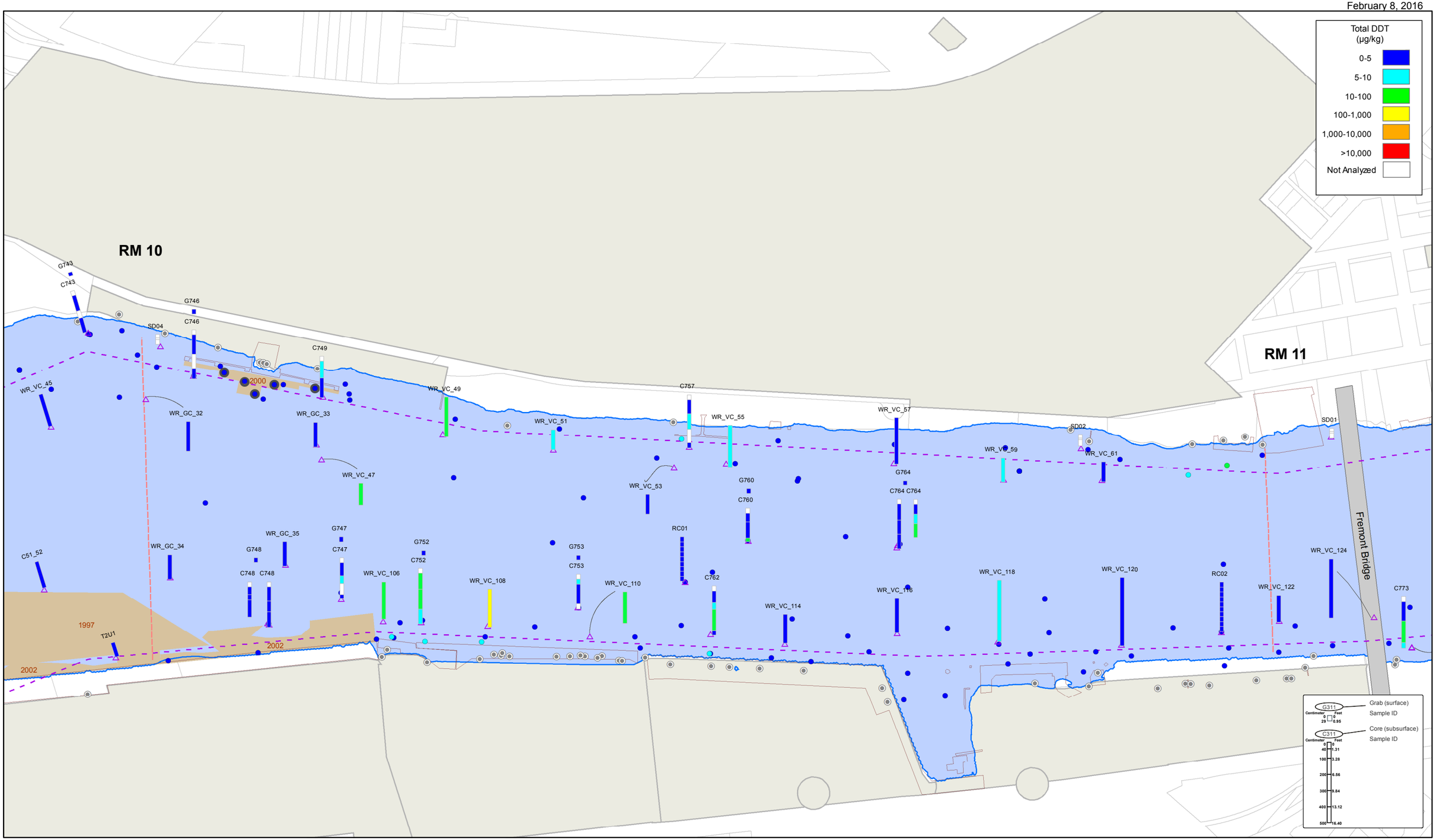
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-5k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDT (µg/kg)
River Mile 09 to 10

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

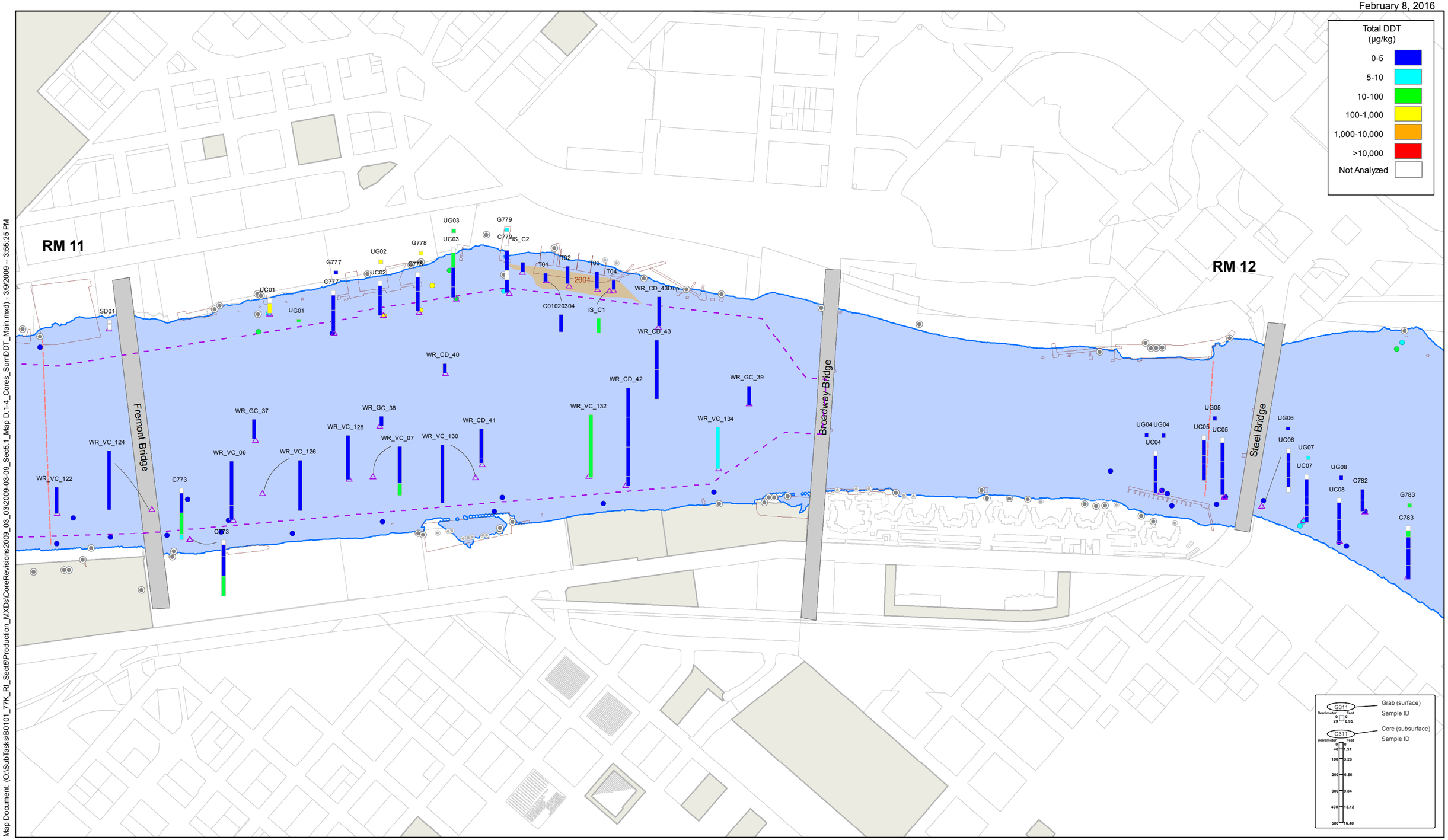
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-5I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDT (µg/kg)
River Mile 10 to 11

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-4_Cores_SumDDT_Main.mxd) - 3/9/2009 -- 3:55:25 PM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

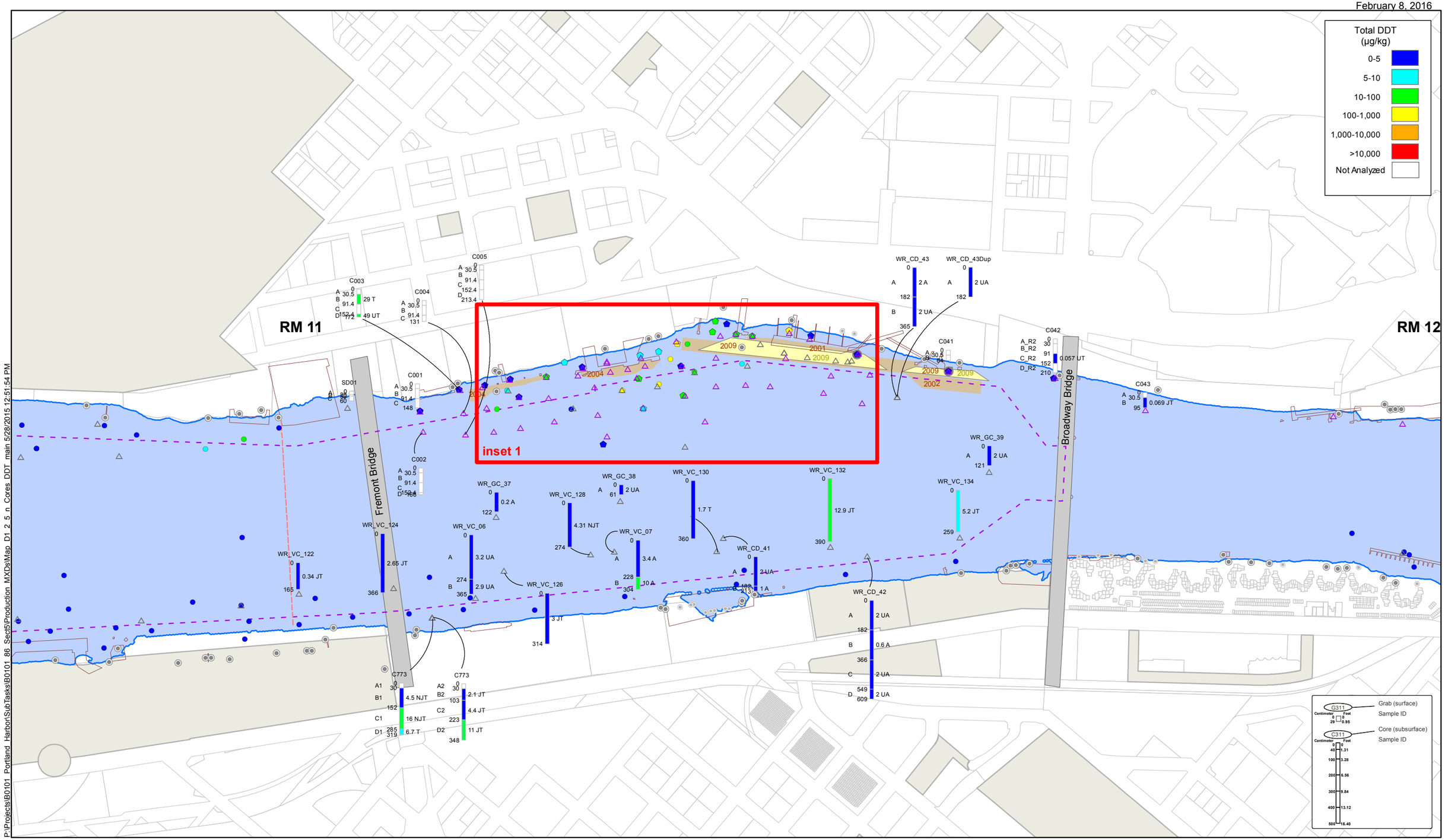
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-5m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDT (µg/kg)
River Mile 11 to 12

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

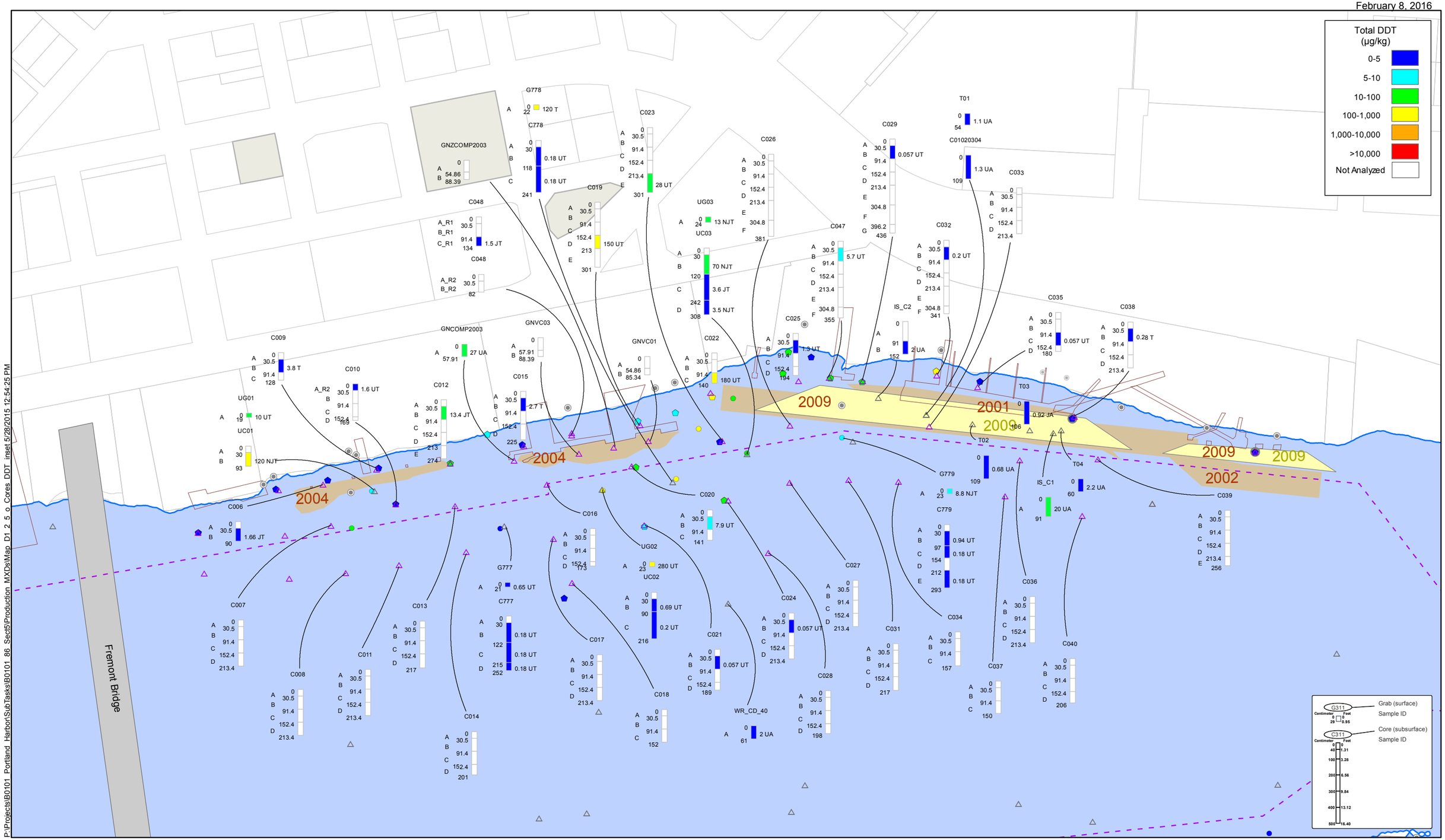
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-5n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDT (µg/kg)

River Mile 11.0 - 11.8




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

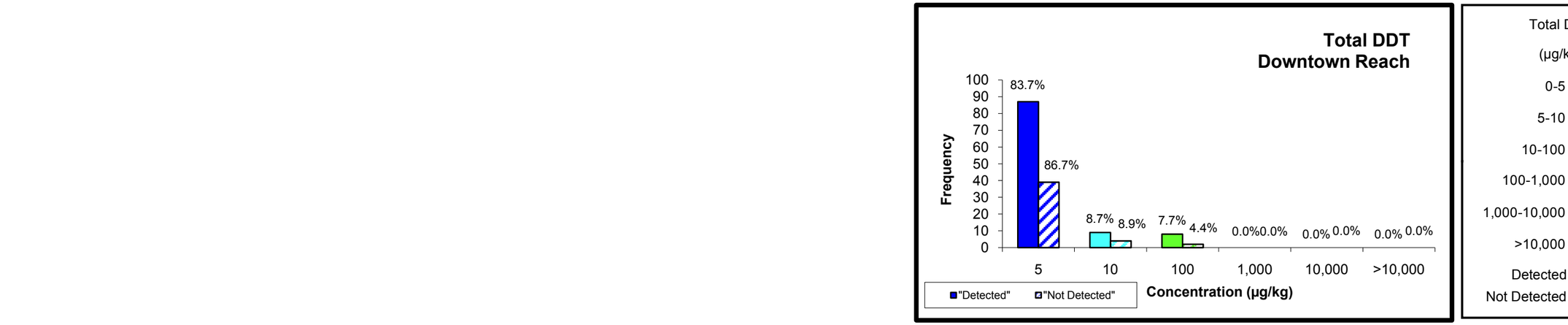
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-5o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDT (µg/kg)

River Mile 11.0 - 11.8 - Inset 1



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N

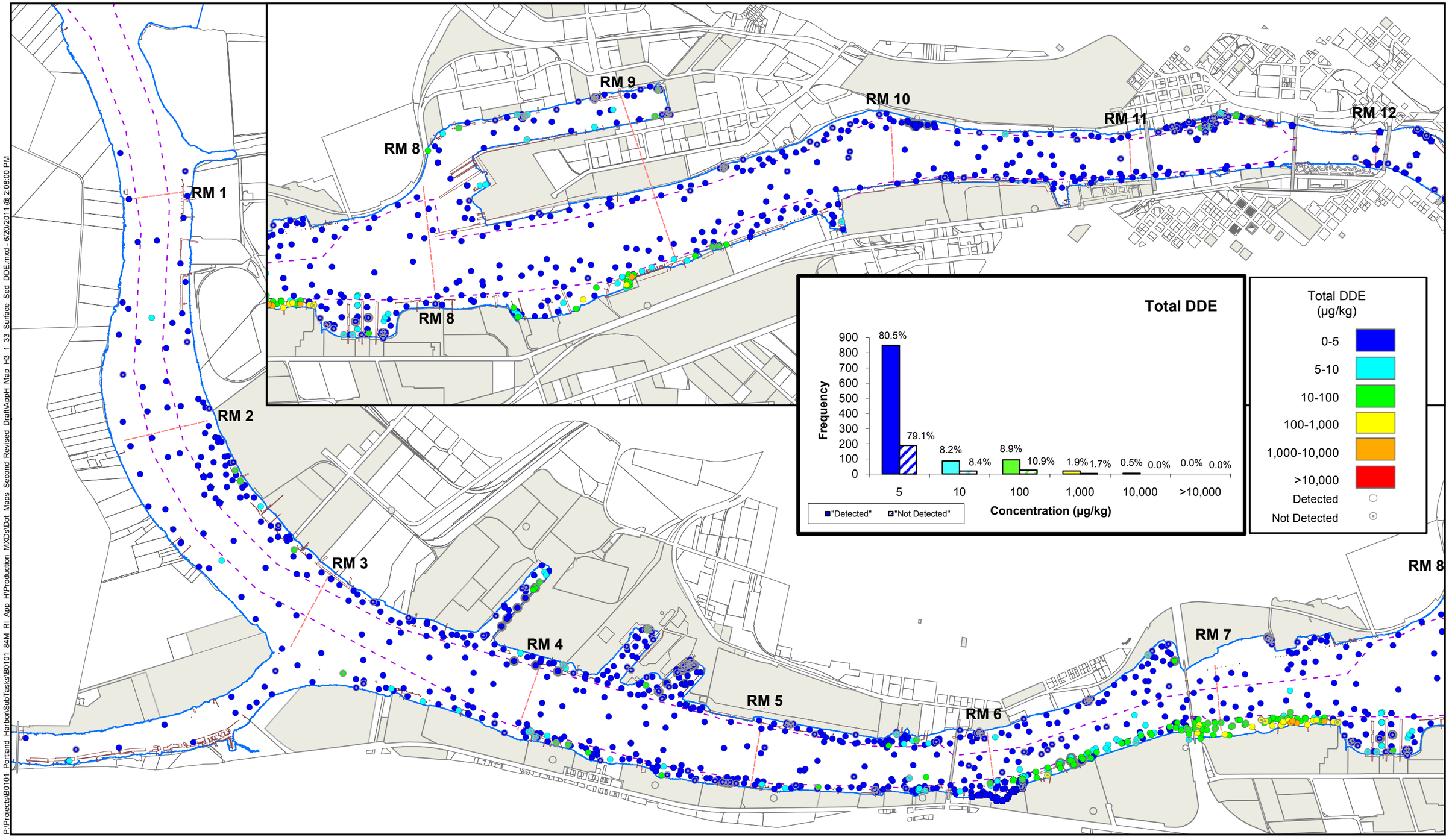
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-6**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Total DDT (µg/kg)
Downtown Reach

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

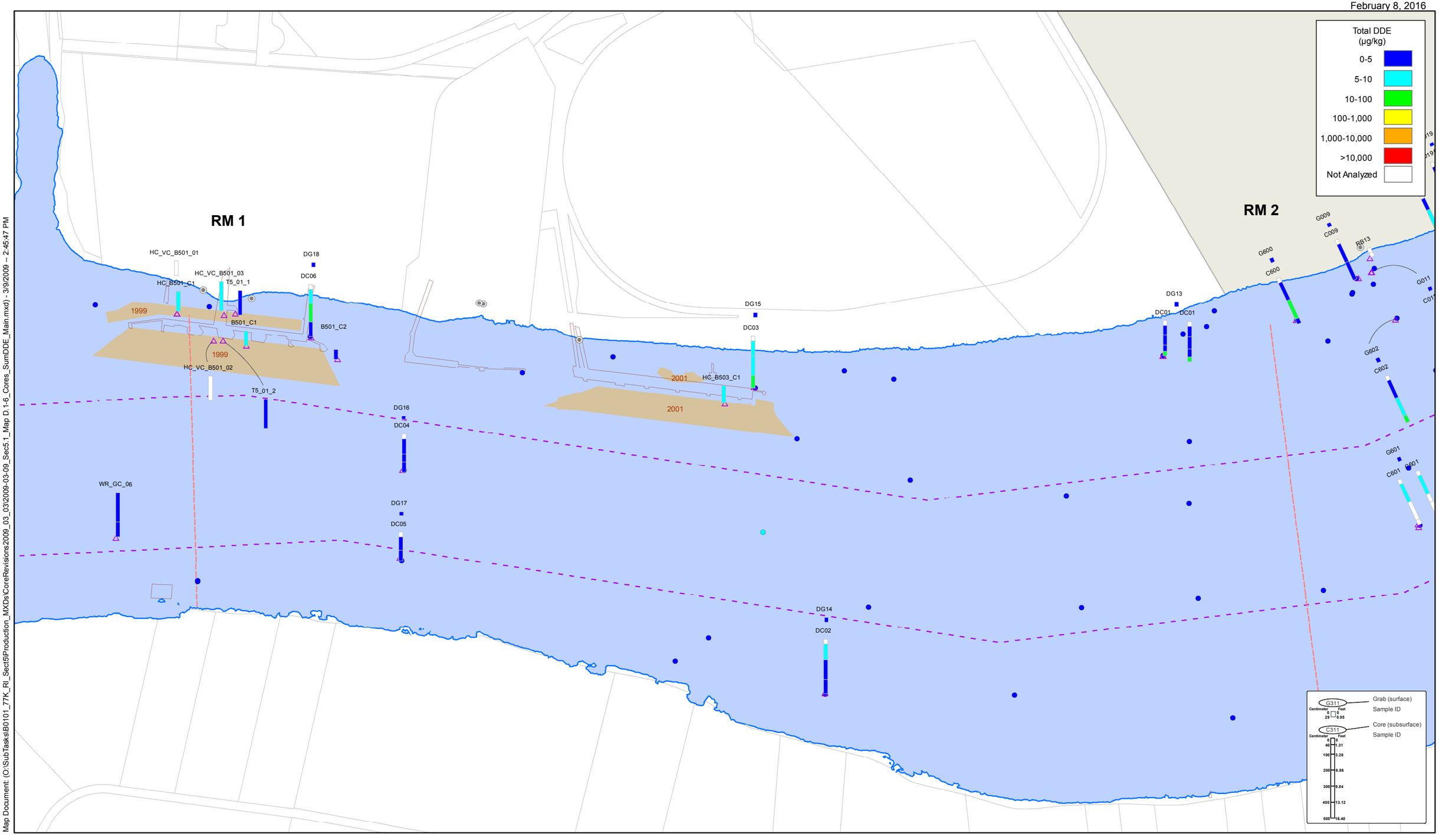
0 1,000 2,000 3,000 4,000 5,000 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-7**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Total DDE (µg/kg)

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-6_Cores_SumDDE_Main.mxd) - 3/9/2009 -- 2:45:47 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

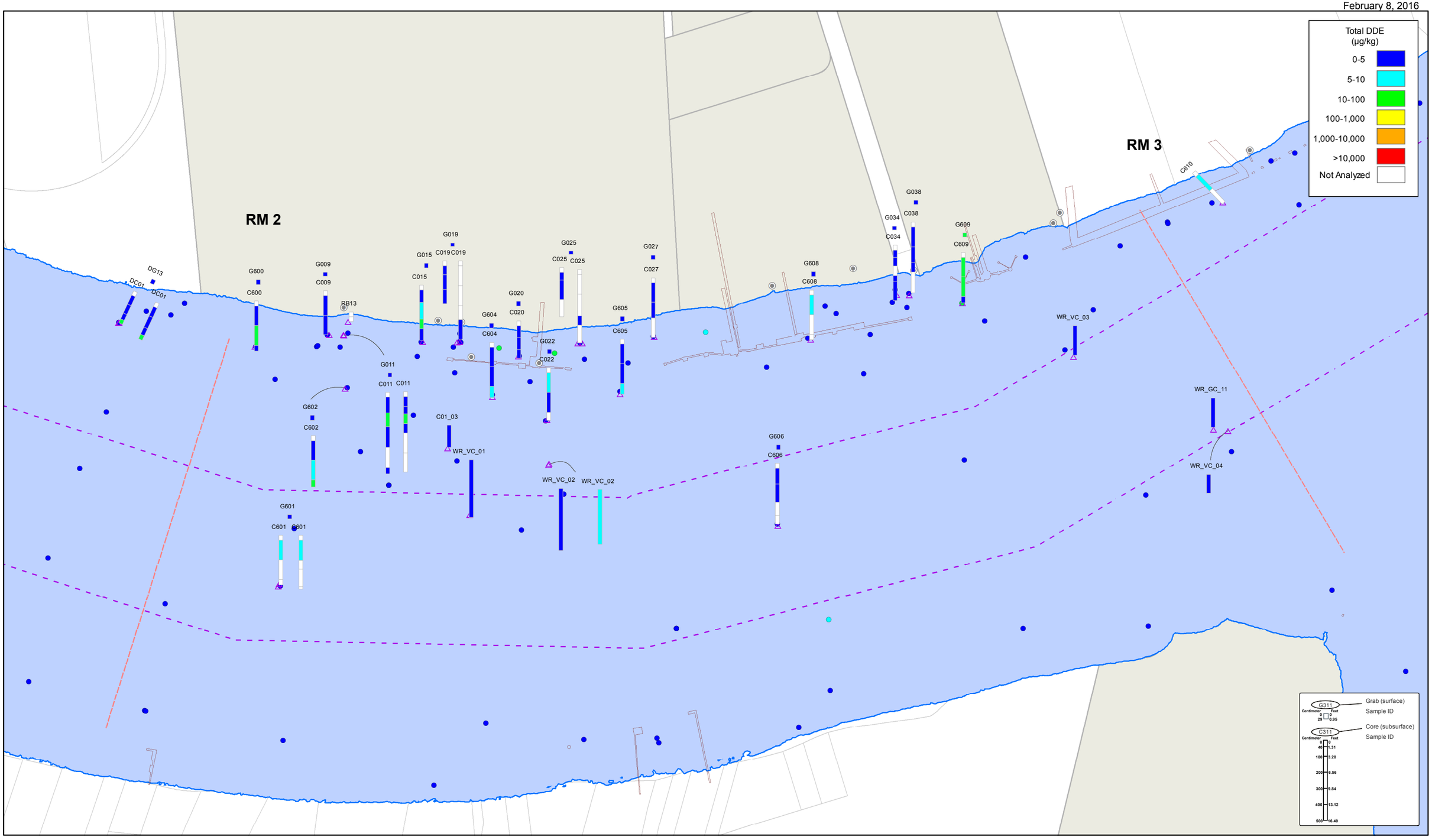
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-8a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDE (µg/kg)
River Mile 01 to 02

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

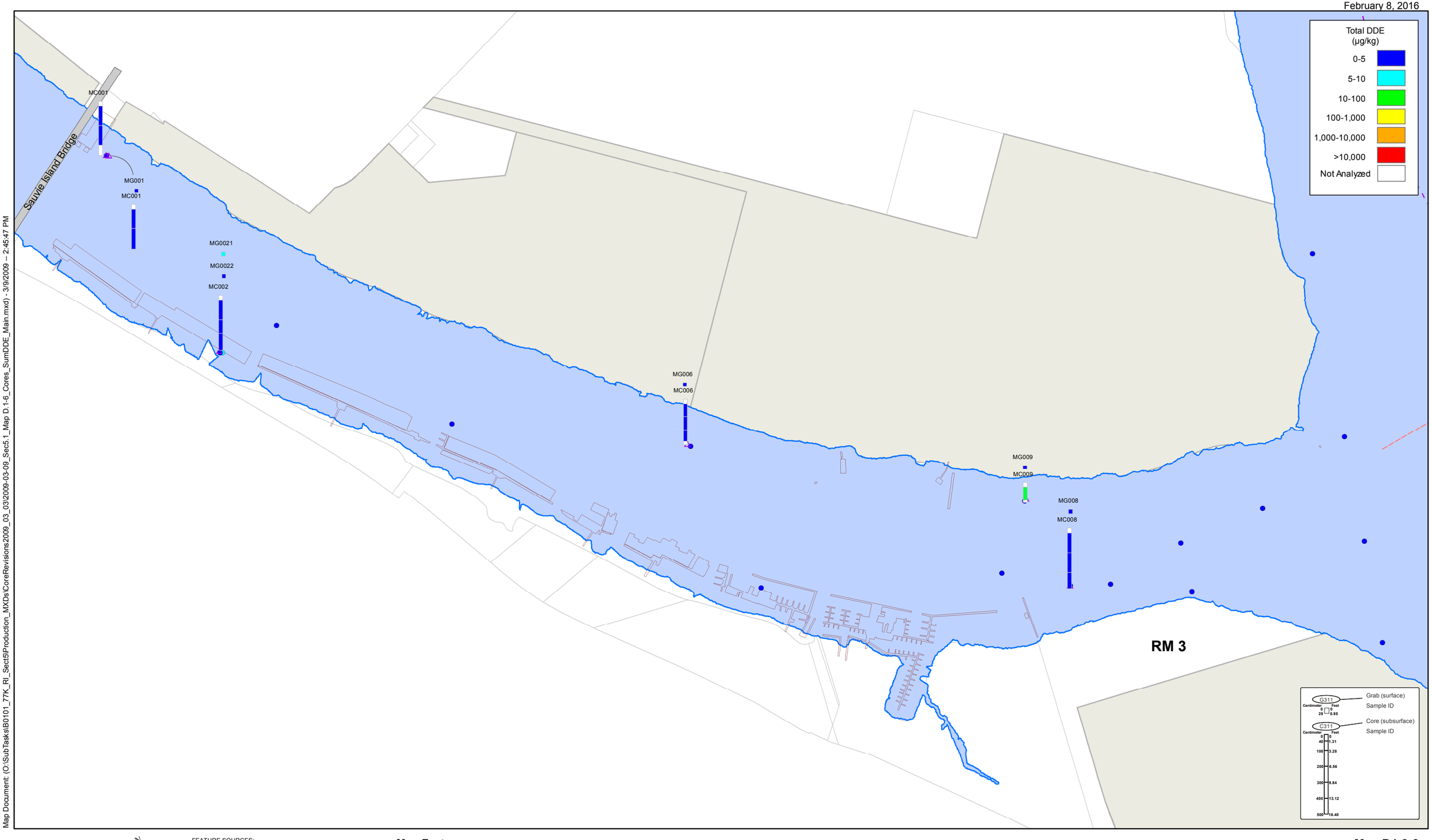
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-8b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDE (µg/kg)
River Mile 02 to 03




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-6_Cores_SumDDE_Main.mxd) - 3/9/2009 -- 2:45:47 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-8c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDE (µg/kg)
River Mile 03 - Multnomah Channel

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-6_Cores_SumDDE_Main.mxd) - 3/9/2009 -- 2:45:47 PM

RM 3

RM 4

Total DDE (µg/kg)
- 0-5
- 5-10
- 10-100
- 100-1,000
- 1,000-10,000
- >10,000
- Not Analyzed

2004

2004

Grab (surface) Sample ID

Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

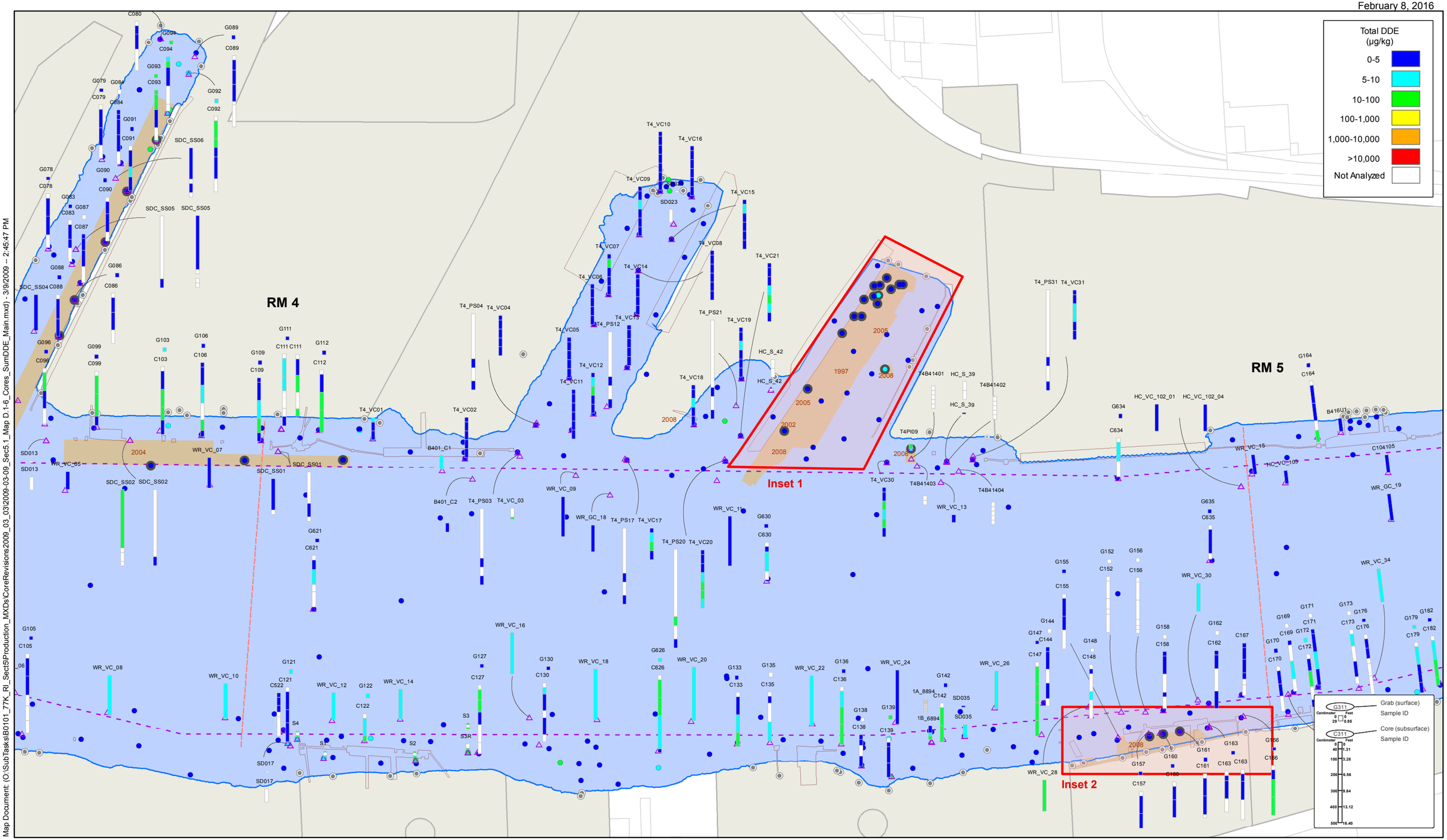
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-8d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDE (µg/kg)
River Mile 03 to 04

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-6_Cores_SumDDE_Main.mxd) - 3/9/2009 -- 2:45:47 PM




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-8e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDE (µg/kg)
River Mile 04 to 05 - Slips

Total DDE (µg/kg)
0-5
5-10
10-100
100-1,000
1,000-10,000
>10,000
Not Analyzed

T4_VC24 T4PI02 HC_S_11 HC_S_11 T4B41106 T4PI042 T4PI032 T4S301 T4PI01 T4B41104 T4B41103 T4PI03 T4PI04 T4_VC29 HC_S_07 HC_S_07 T4S302 T4_PS33 HC_S_18 HC_S_18 T4PI07 HC_S_13 HC_S_13 T4B41102 T4S303 T4B41101 T4S304 SD031 SD031 2005 HC_S_22 HC_S_22 T4S308 T4S305 T4_VC03 T4PI08 T4_PS28 T4_VC28 T4_VC23 HC_S_32 HC_S_32 T4_3 T4S306 1997 2008 T4MD01 T4_VC32 T4_PS32 T4COMP T4S307 T4_VC27 T4_VC_02 T4_2 2005 T4_VC22 HC_S_27 HC_S_27 T4_UP10 T4_VC25 2008 T4_VC26 T4_VC26 T4_UP09 T4_1 T4MD02 T4_PS22 2008 2002 T4_VC_01

G311 Grab (surface) Sample ID
Centimeter 0 29 Feet 0 0.95
C311 Core (subsurface) Sample ID
Centimeter 0 40 100 200 300 400 500 Feet 0 1.31 3.28 6.56 9.84 13.12 16.40

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-6_Cores_SumDDE_Insets.mxd) - 3/9/2009 -- 3:11:56 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-8 e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDE (µg/kg)
River Mile 04 to 05 - Slips - Inset 1

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-6_Cores_SumDDE_Insets.mxd) - 3/9/2009 -- 3:11:56 PM

Total DDE (µg/kg)
- 0-5
- 5-10
- 10-100
- 100-1,000
- 1,000-10,000
- >10,000
- Not Analyzed

SGP08
SGP17
SGP10
SGP06
SGP12
SGP13
SGP14
SGP20
SGP15
SGP22
SGP24
SGP23
SGP21
SGP16
SGP18
2008
SGP05
SGP03
SGP19
SGP04
SGP09
SGP01
SGP07
SGP02

G311 Grab (surface) Sample ID
Centimeter 0 29 Feet 0 0.95

C311 Core (subsurface) Sample ID
Centimeter 0 40 100 200 300 400 500 Feet 0 1.31 3.28 6.56 9.84 13.12 16.40

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

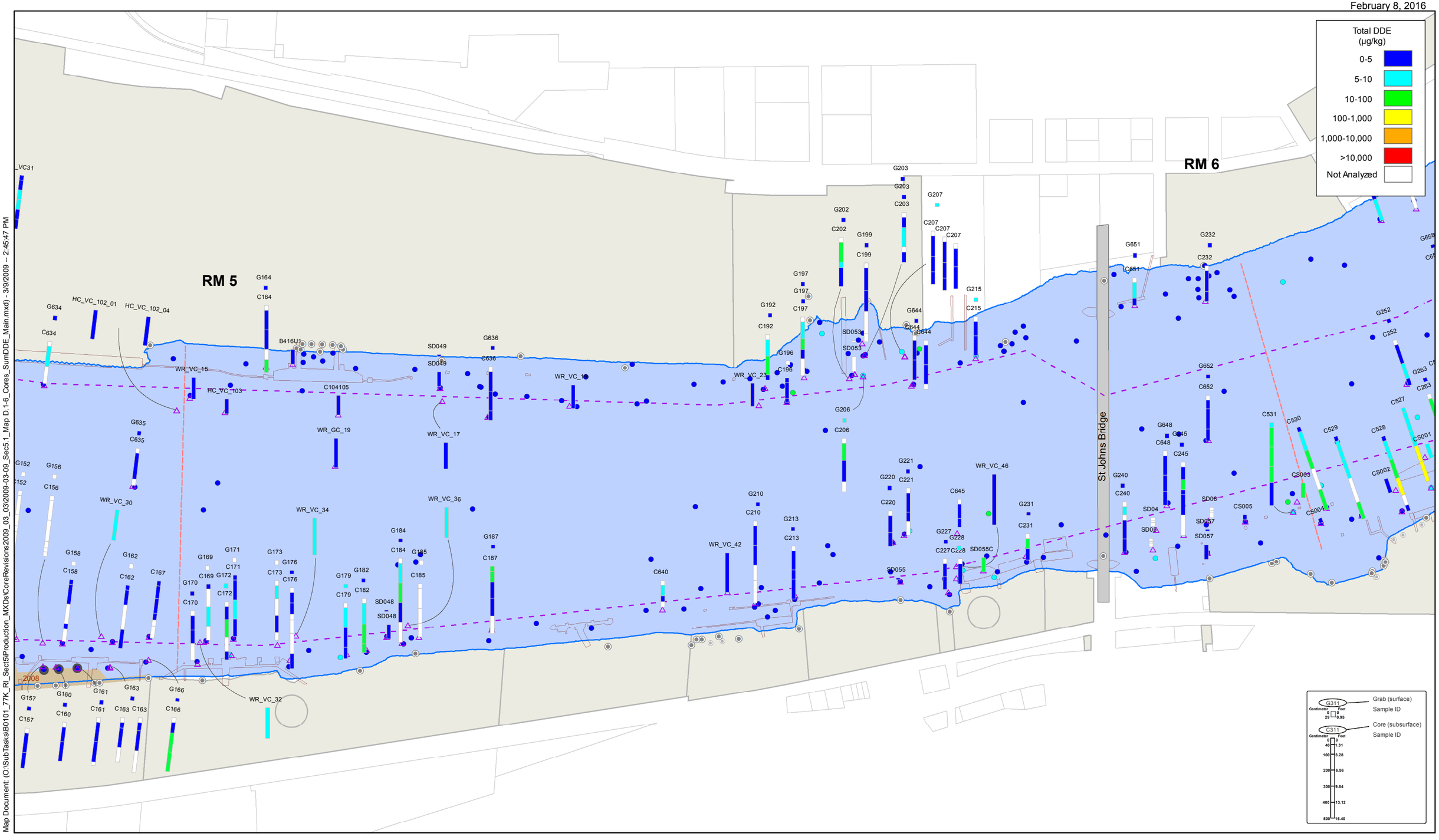
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-8 e2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDE (µg/kg)
River Mile 04 to 05 - Slips - Inset 2




Map Document: (O:\SubTasks\B0101_7TK_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-6_Cores_SumDDE_Main.mxd) - 3/9/2009 -- 2:45:47 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-8f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDE (µg/kg)
River Mile 05 to 06

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-6_Cores_SumDDE_Main.mxd) - 3/9/2009 -- 2:45:47 PM

Total DDE (µg/kg)
- 0-5
- 5-10
- 10-100
- 100-1,000
- 1,000-10,000
- >10,000
- Not Analyzed

RM 6

RM 7

Railroad Bridge

WR_VC_50 WR_VC_52 WR_VC_54 WR_VC_56 WR_VC_58 WR_VC_60 WR_VC_62 WR_VC_64 WR_VC_66 WR_GC_24 WR_GC_25

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-8g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDE (µg/kg)
River Mile 06 to 07

RM 7

RM 8

Railroad Bridge

Inset 1

Total DDE (µg/kg)
- 0-5
- 5-10
- 10-100
- 100-1,000
- 1,000-10,000
- >10,000
- Not Analyzed

1997

2001

2001

Grab (surface) Sample ID

Core (subsurface) Sample ID

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-6_Cores_SumDDE_Main.mxd) - 3/9/2009 -- 2:45:47 PM

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

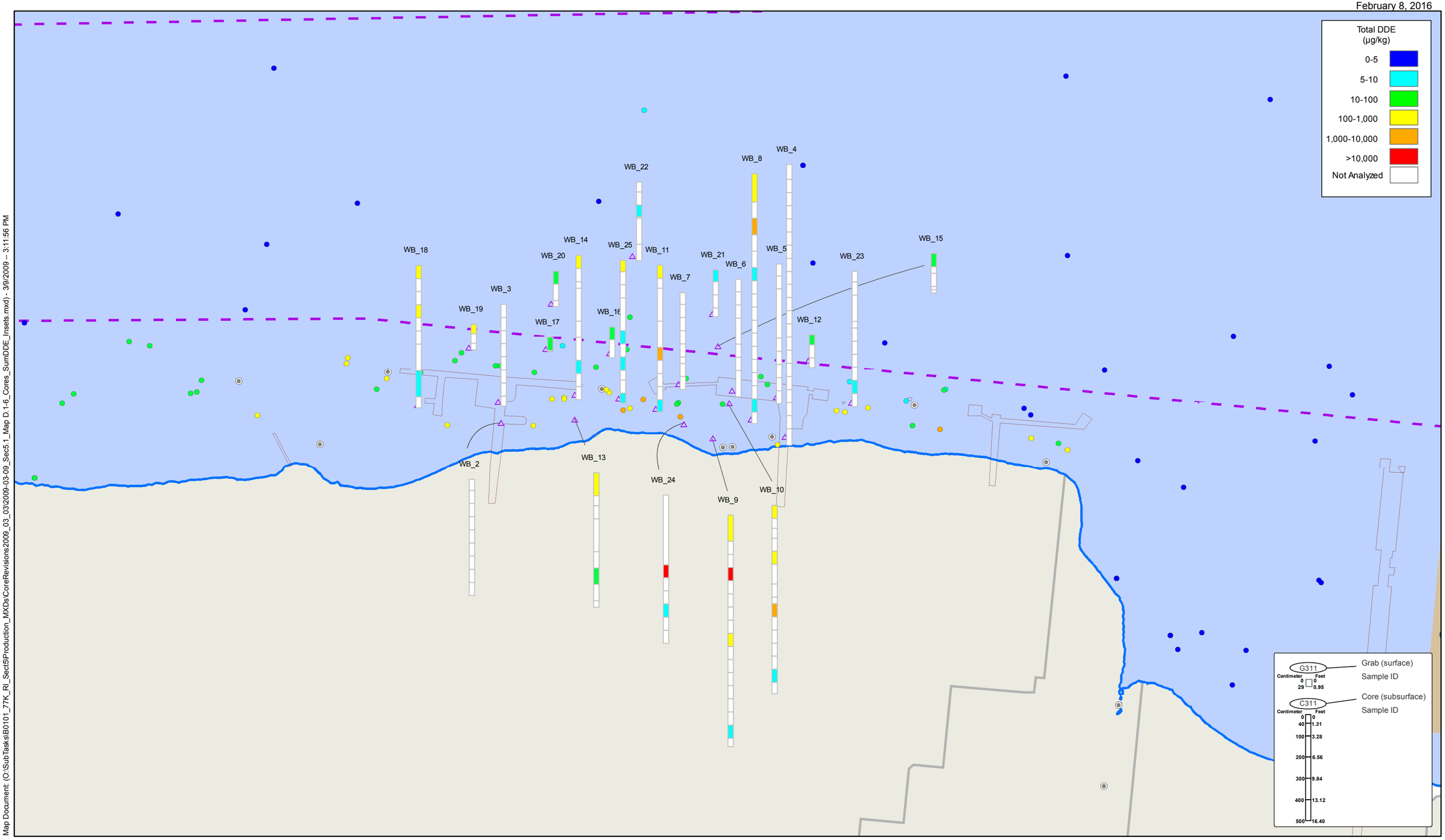
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-8h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDE (µg/kg)
River Mile 07 to 08

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

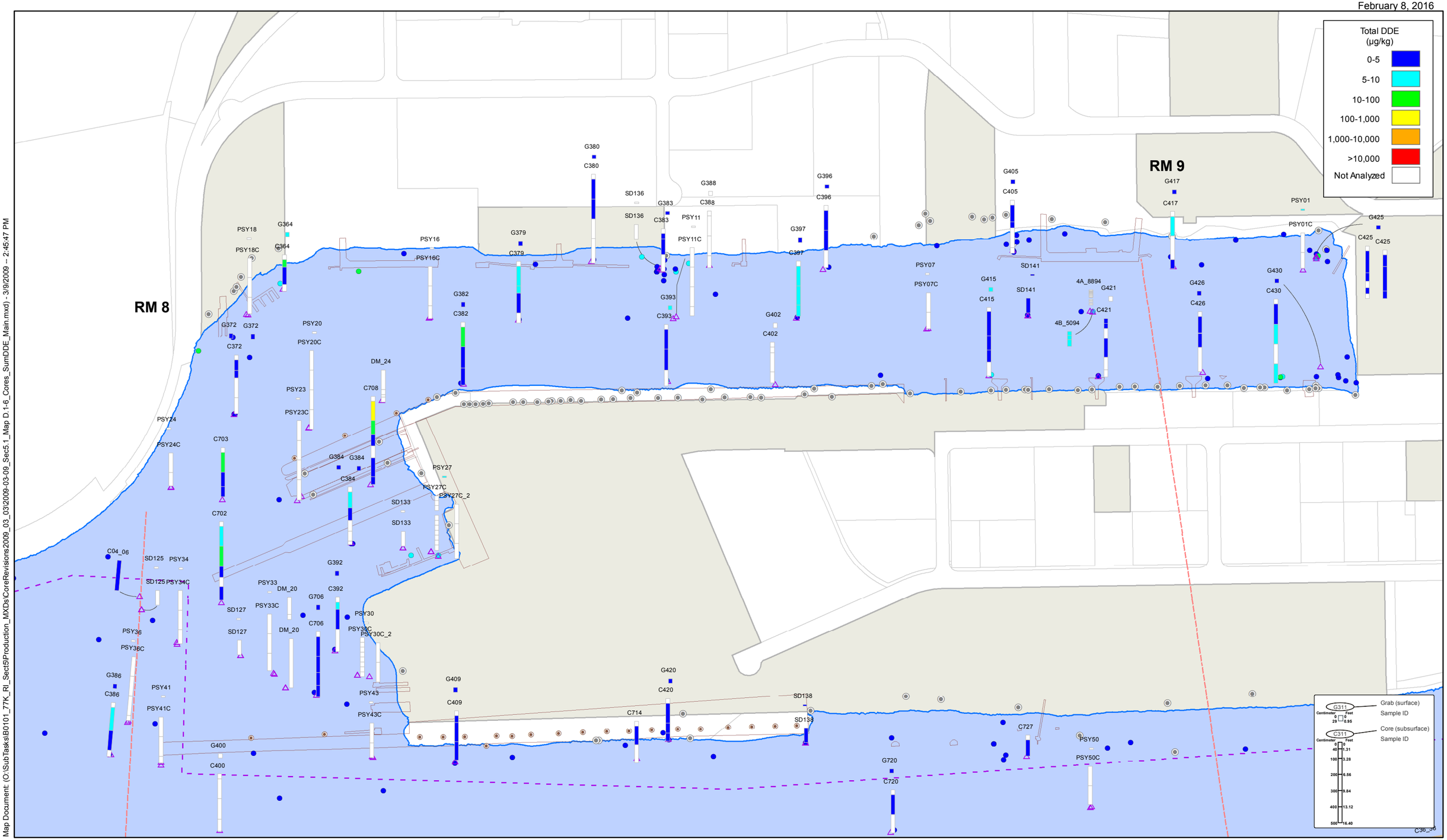
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-8 h1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDE (µg/kg)
River Mile 07 to 08 - Inset 1

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-6_Cores_SumDDE_Main.mxd) - 3/9/2009 -- 2:45:47 PM




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

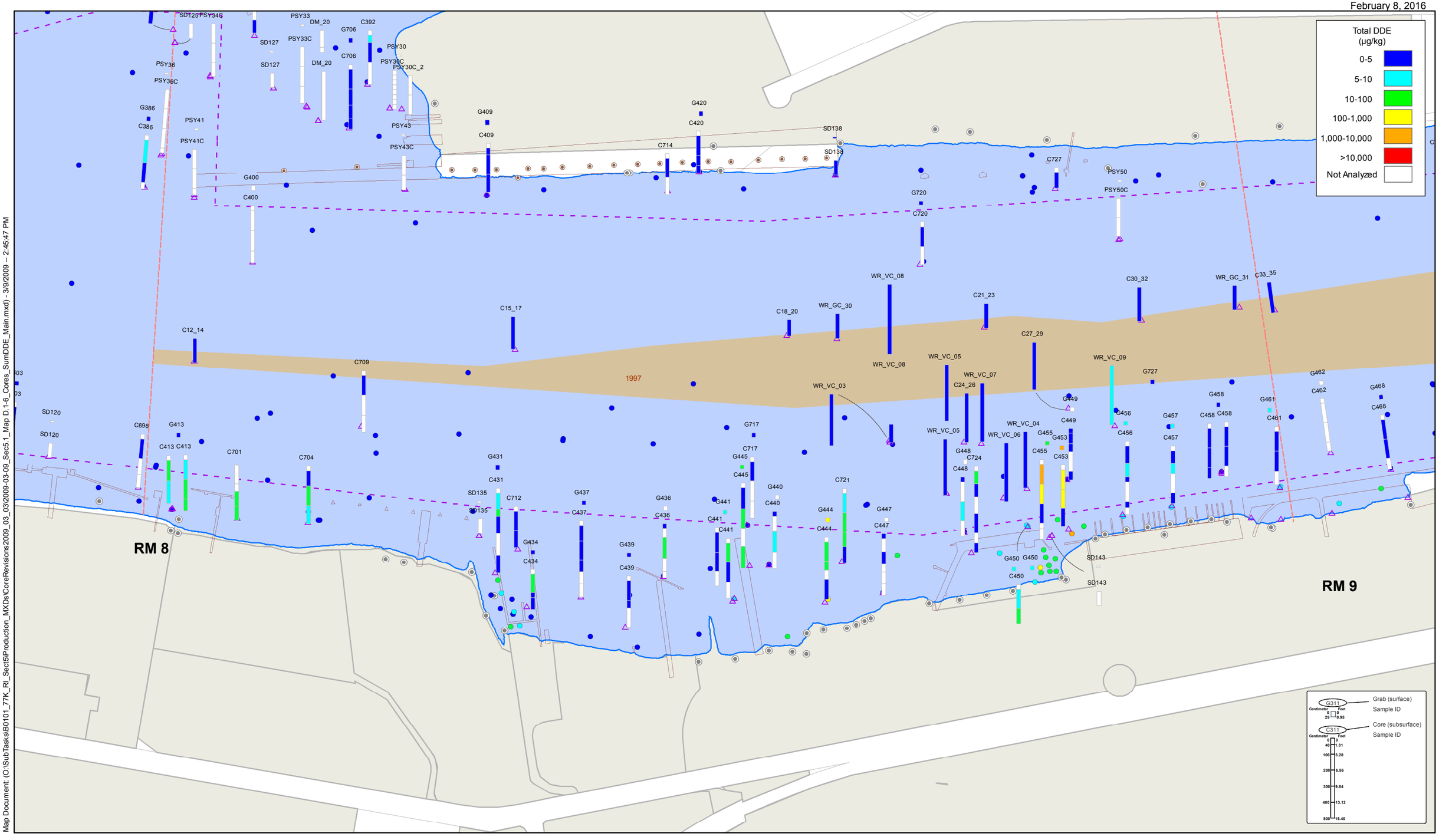
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-8i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDE (µg/kg)
River Mile 08 to 09 - Swan Is. East

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

Grab (surface) Sample ID

Core (subsurface) Sample ID

**Map D1.2-8j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDE (µg/kg)
River Mile 08 to 09 - Swan Is. West

Total DDE (µg/kg)
- 0-5
- 5-10
- 10-100
- 100-1,000
- 1,000-10,000
- >10,000
- Not Analyzed

**RM 10**

**RM 9**

G454 C454 G742 C742 G743 C743 G746 C746 SD04 C749 SD150 C733 WR_VC_33 WR_VC_35 WR_VC_37 WR_VC_39 WR_VC_41 WR_VC_43 WR_VC_45 WR_GC_31 C33_35 C36_38 C39_41 WR_VC_04 C42_44 RC483 C45_47 WR_VC_03 WR_VC_05 C48_50 C51_52 WR_GC_32 WR_GC_33 WR_GC_34 WR_GC_35 G458 C458 G461 C461 G462 C462 G468 C468 G471 C471 G474 C474 G477 C477 SD151 G735 C735 G738 C738 G739 C739 G492 C492 HC_VC_53 T2_01_2 T2U1 T2U2 T2_01_1 G494 C494 G748 C748 G747 C747 WR_VC_106

1997 2000 2002 2005

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-8k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDE (µg/kg)
River Mile 09 to 10

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-6_Cores_SumDDE_Main.mxd) - 3/9/2009 -- 2:45:47 PM

Total DDE (µg/kg)
- 0-5
- 5-10
- 10-100
- 100-1,000
- 1,000-10,000
- >10,000
- Not Analyzed

RM 10

RM 11

G743 C743 G746 C746 SD04 C749 WR_VC_45 WR_GC_32 WR_GC_33 WR_VC_49 WR_VC_51 C757 WR_VC_55 WR_VC_57 G764 C764 C764 WR_VC_59 SD02 WR_VC_61 SD01 WR_VC_47 WR_VC_53 G760 C760 RC01 C762 WR_VC_114 WR_VC_116 WR_VC_118 WR_VC_120 RC02 WR_VC_122 WR_VC_124 C773 Fremont Bridge C51_52 WR_GC_34 WR_GC_35 G748 C748 C748 G747 C747 WR_VC_106 G752 C752 WR_VC_108 G753 C753 WR_VC_110 T2U1 1997 2002 2002 2000

Grab (surface) Sample ID

Core (subsurface) Sample ID

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-6_Cores_SumDDE_Main.mxd) - 3/9/2009 -- 2:45:47 PM

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

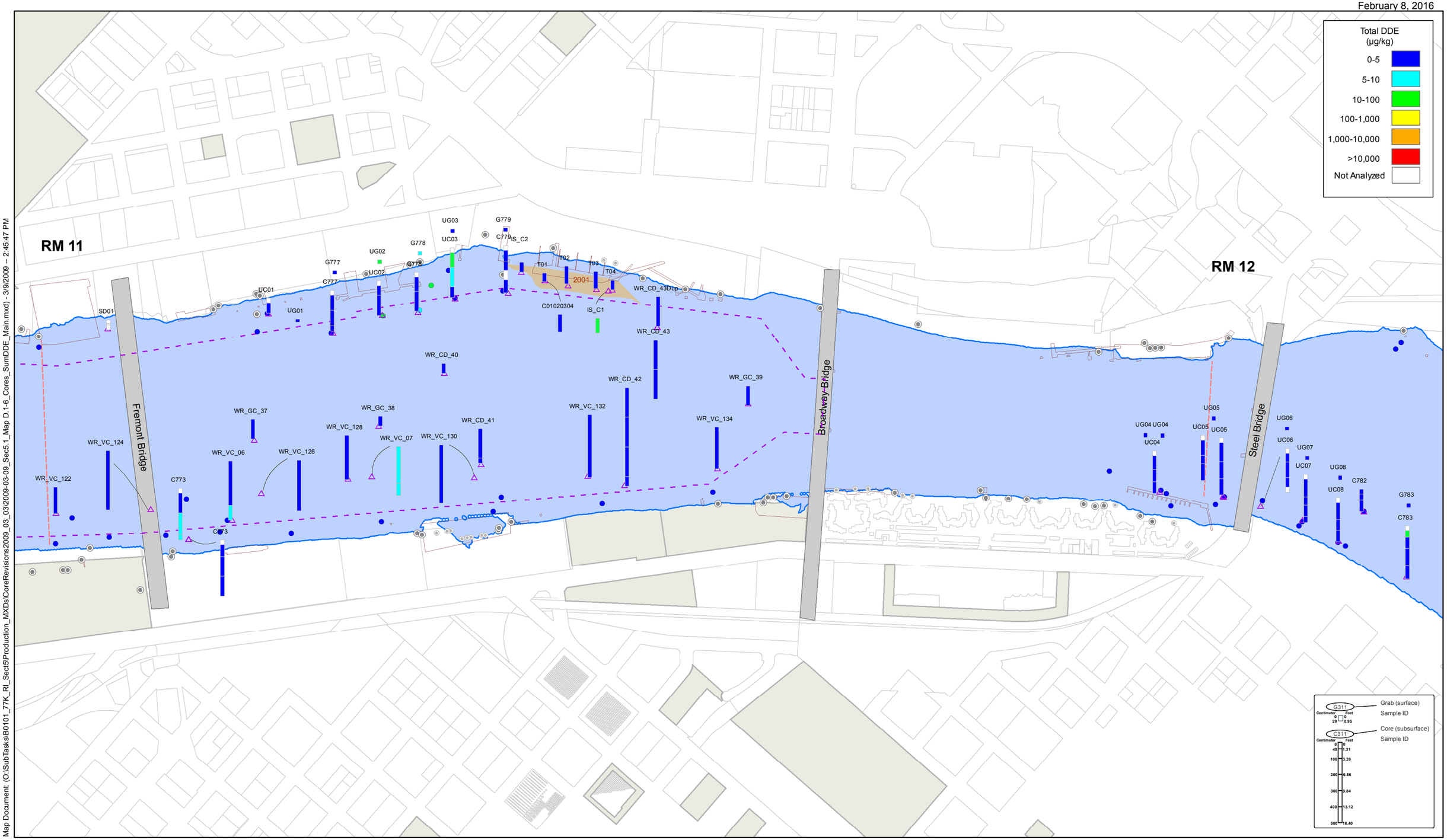
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-8I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDE (µg/kg)
River Mile 10 to 11

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

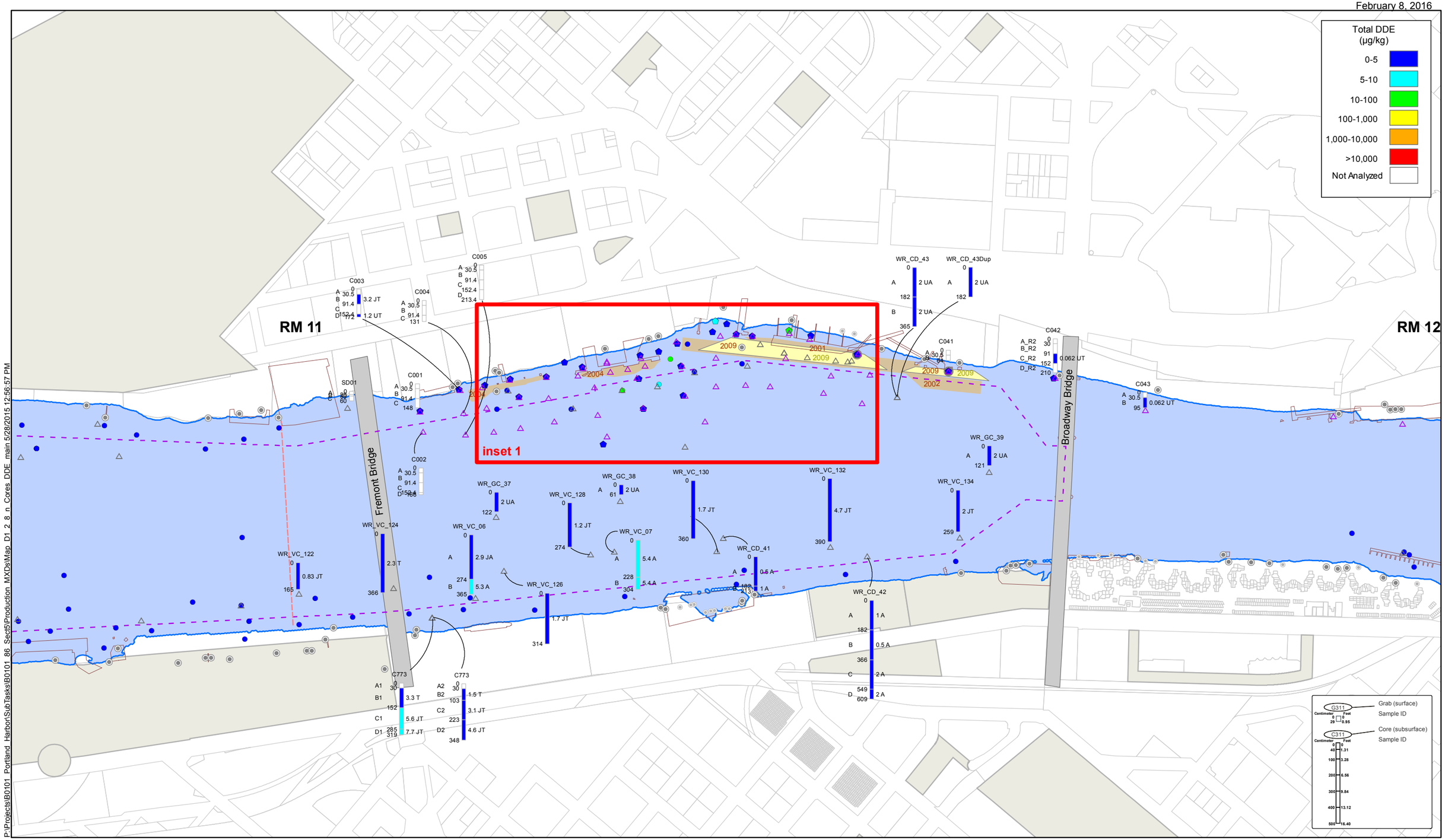
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-8m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDE (µg/kg)
River Mile 11 to 12

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

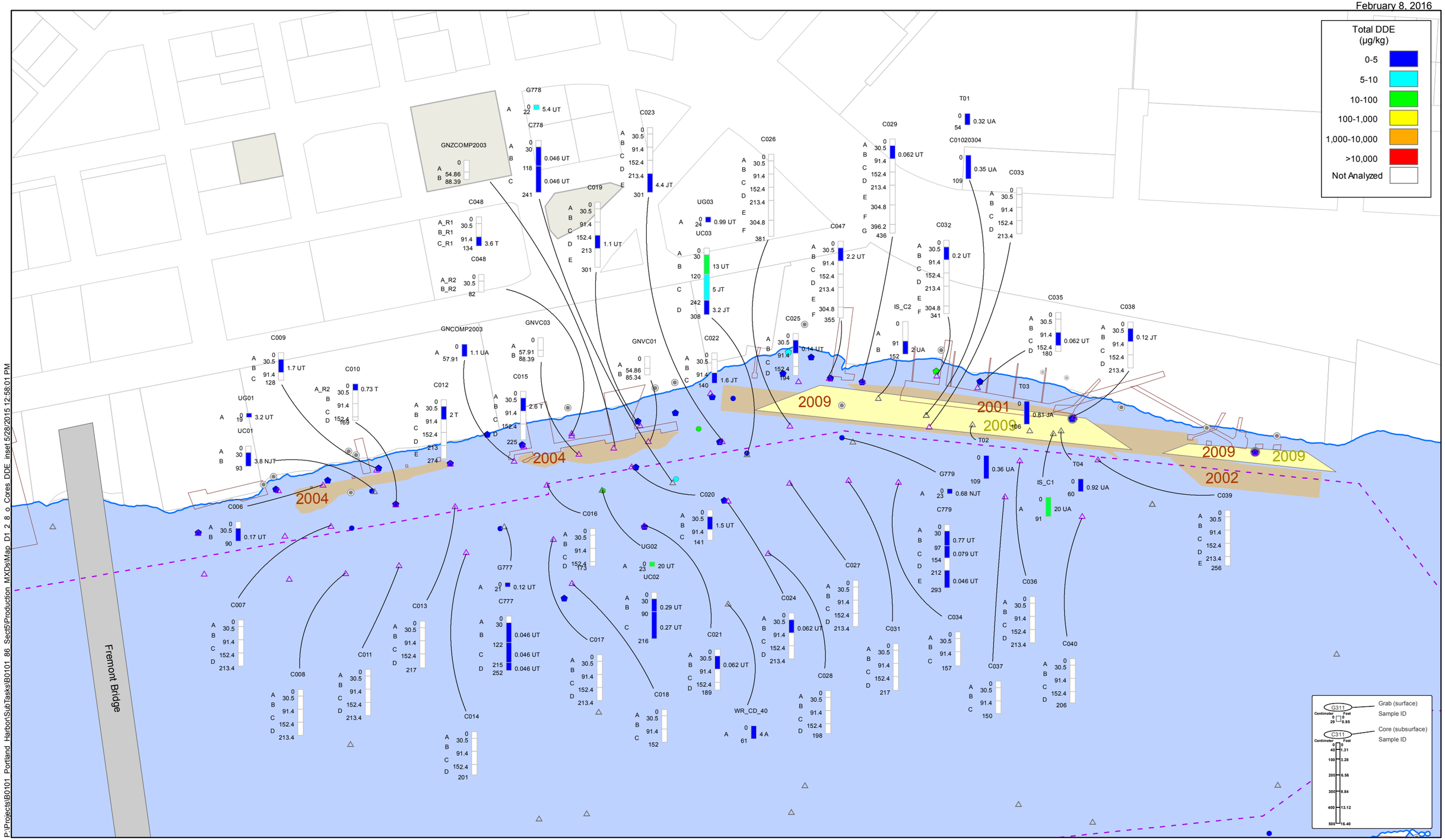
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-8n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDE (µg/kg)

River Mile 11.0 - 11.8




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

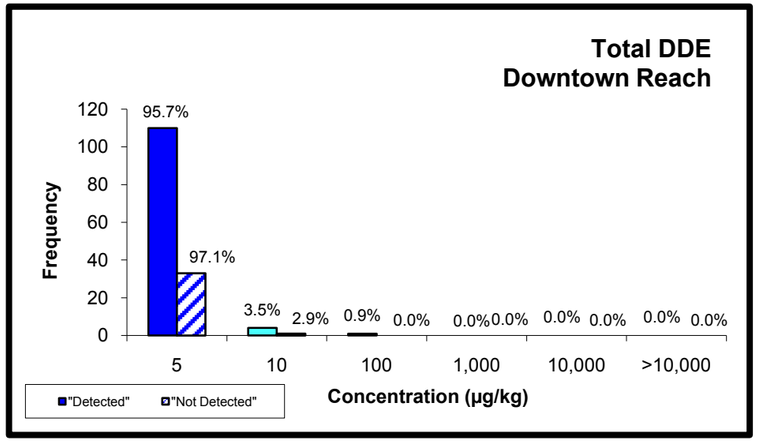
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

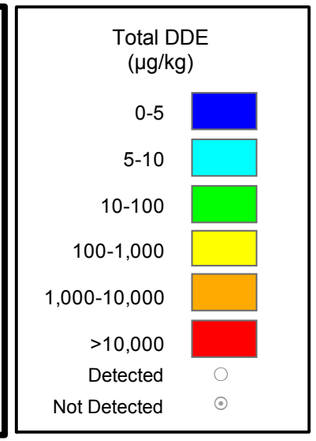
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

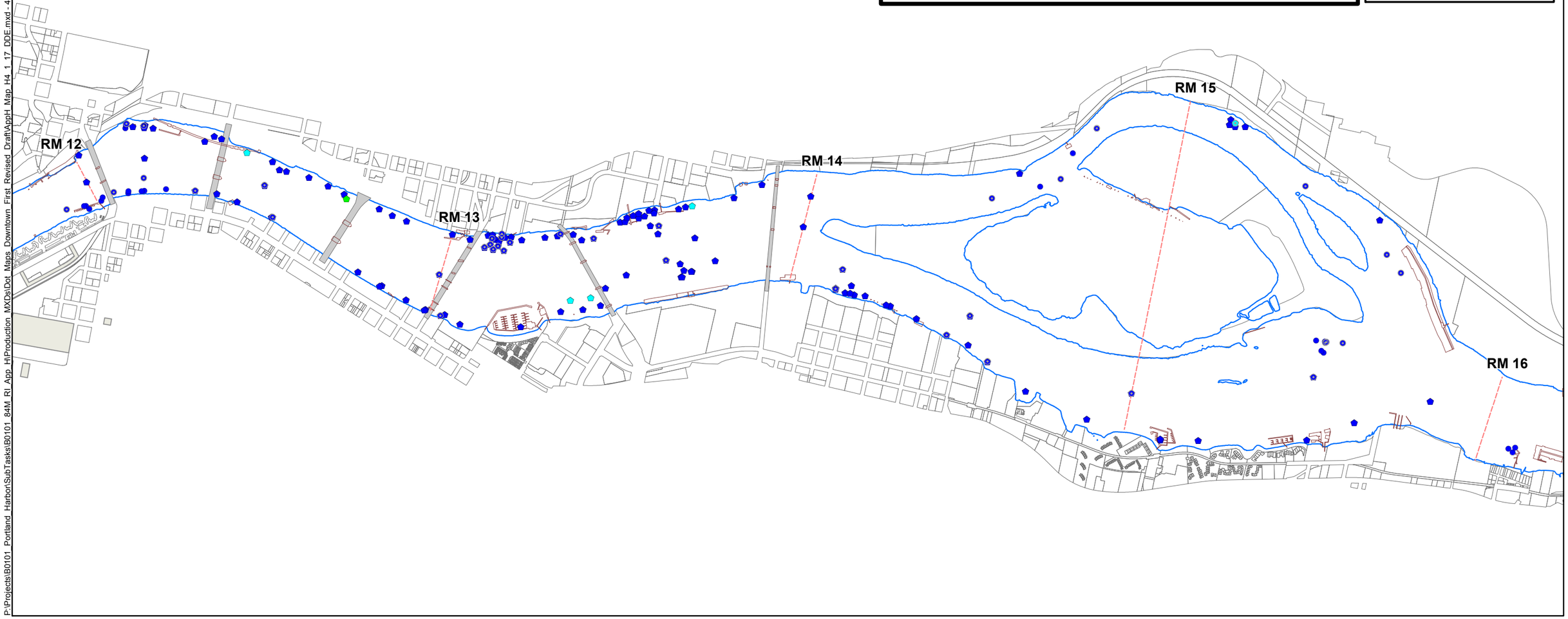
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-8o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDE (µg/kg)

River Mile 11.0 - 11.8 - Inset 1

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N

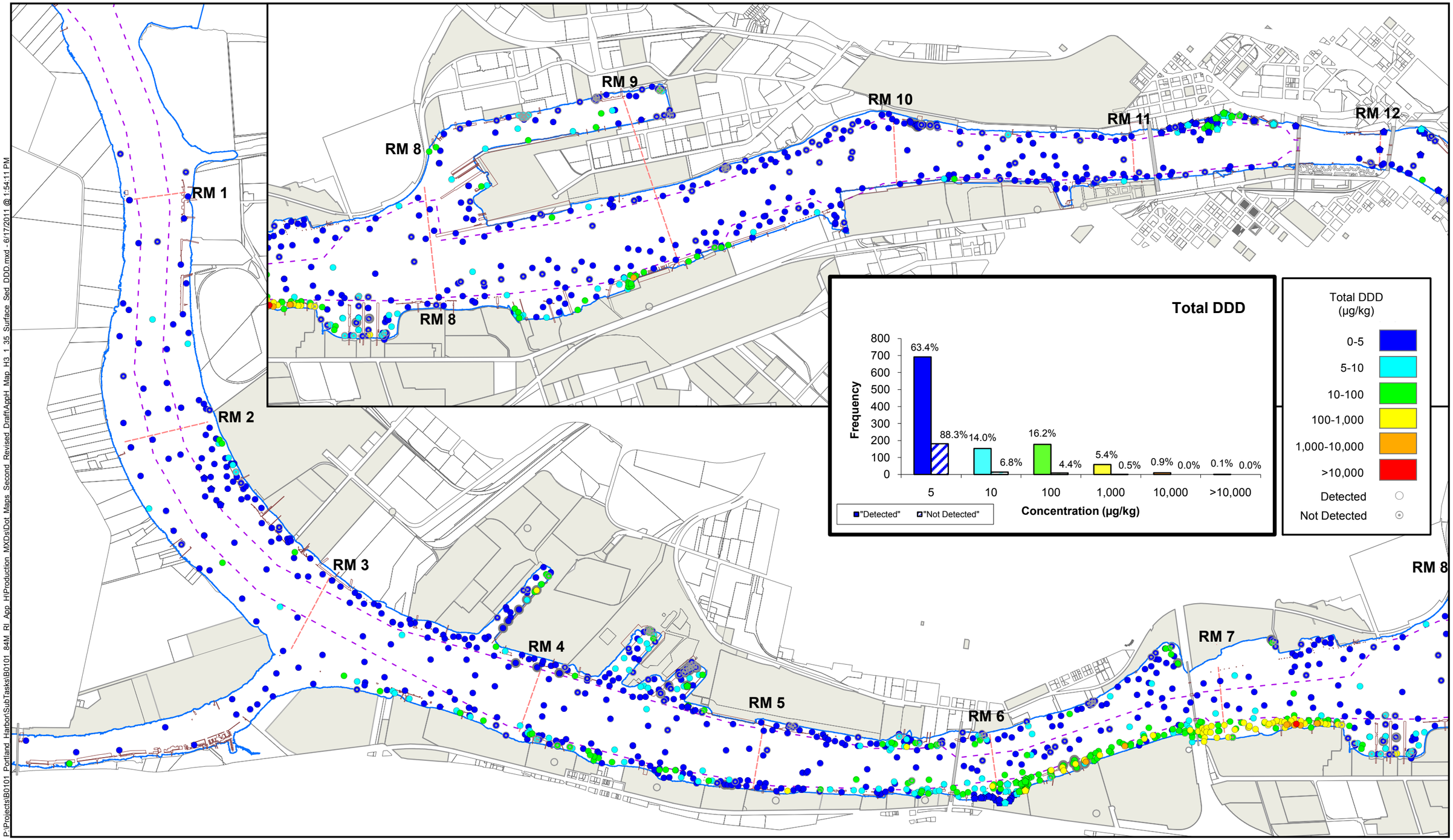
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-9**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Total DDE (µg/kg)
Downtown Reach

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N

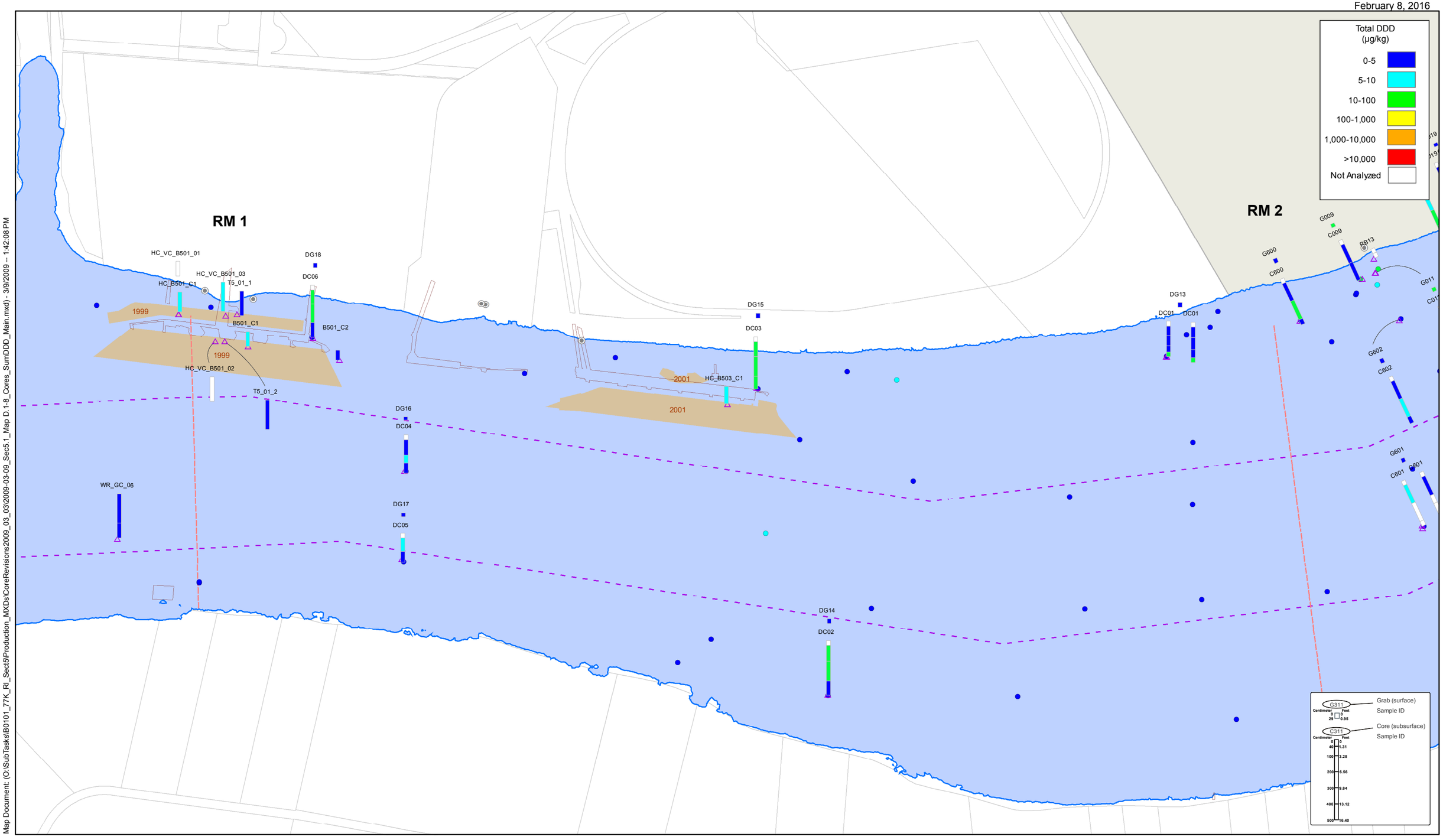
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

0 1,000 2,000 3,000 4,000 5,000 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-10**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Total DDD (µg/kg)

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

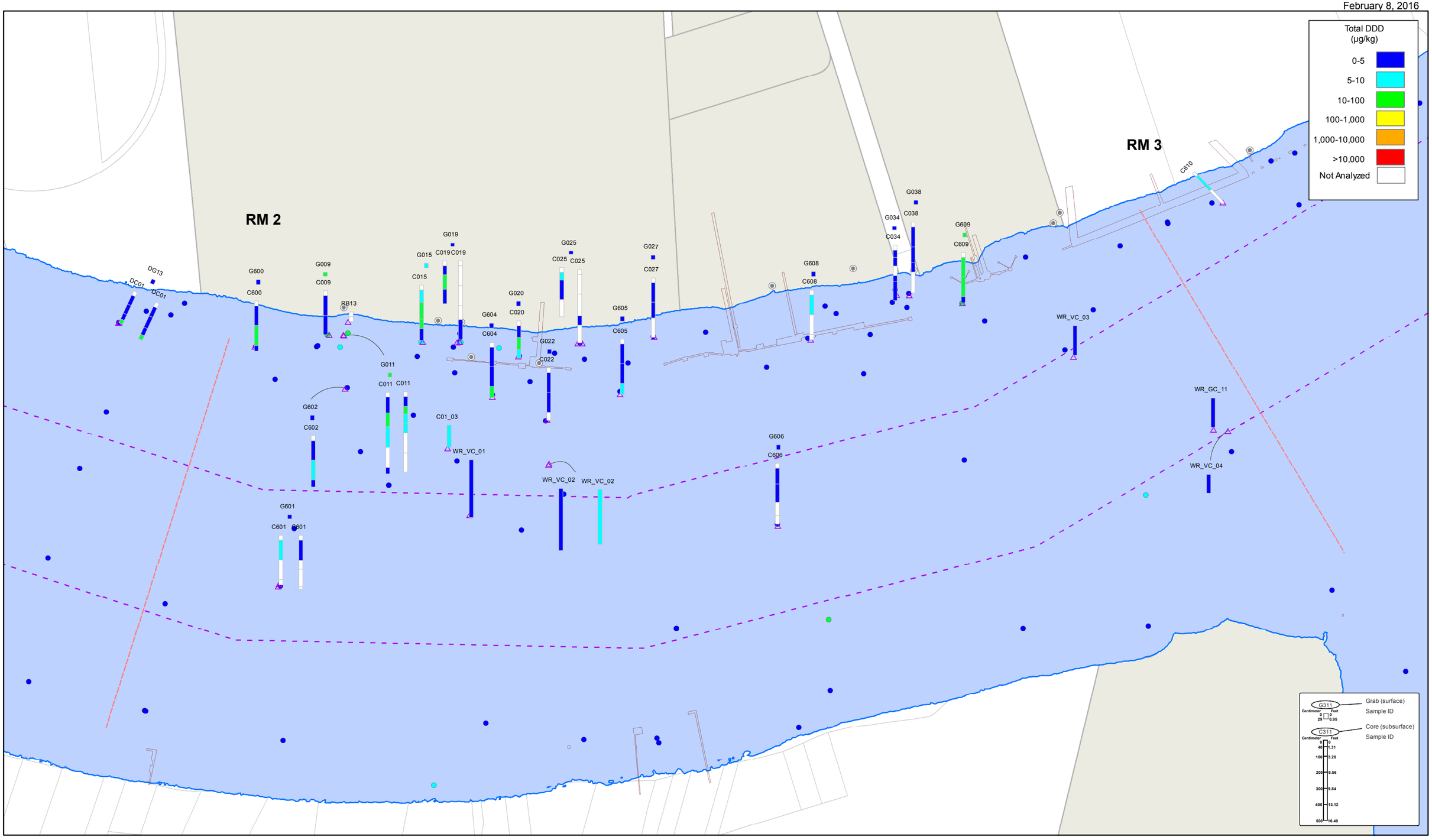
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-11a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDD (µg/kg)
River Mile 01 to 02

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-8_Cores_SumDDD_Main.mxd) - 3/9/2009 -- 1:42:08 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

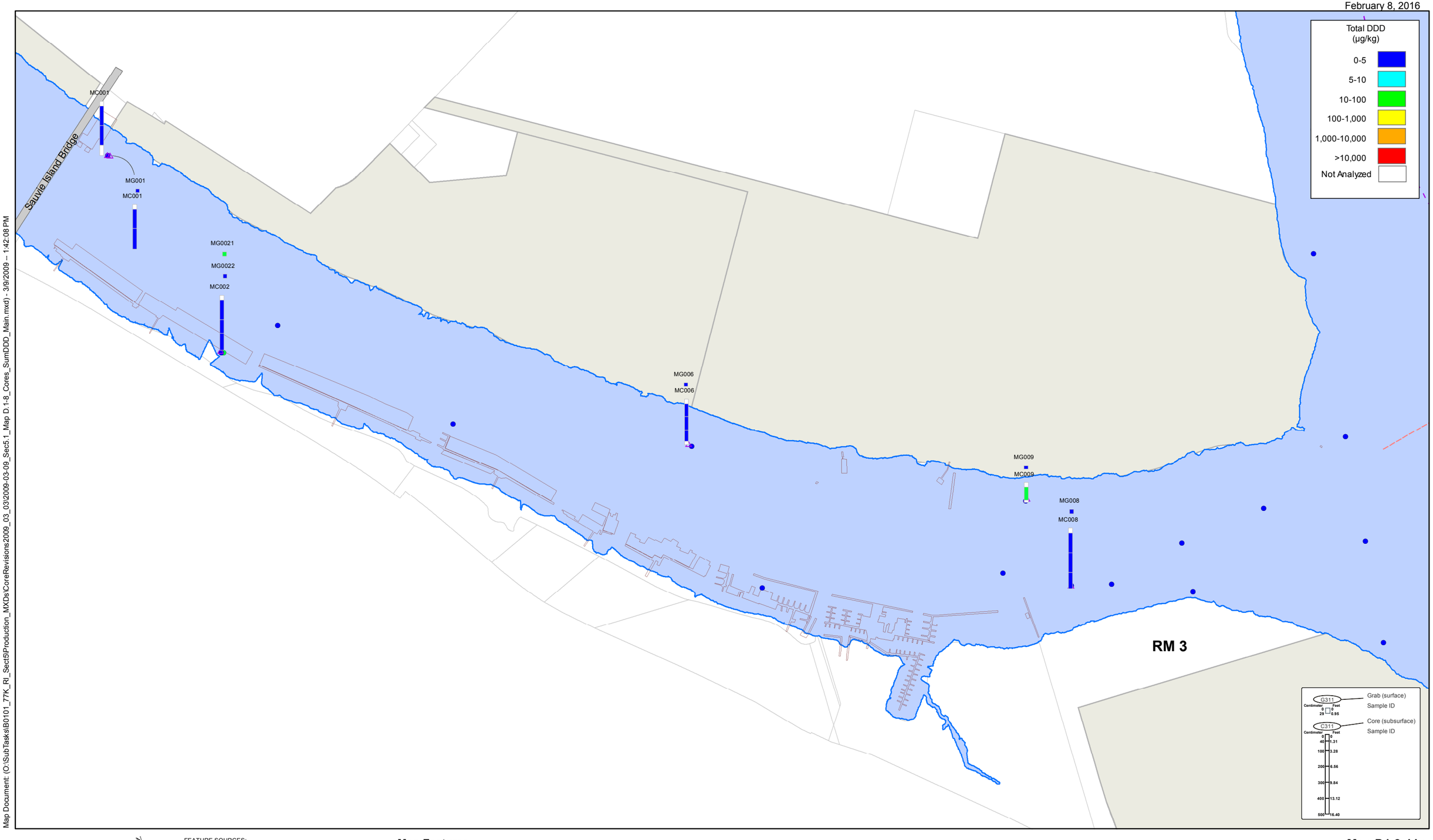
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-11b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDD (µg/kg)
River Mile 02 to 03

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

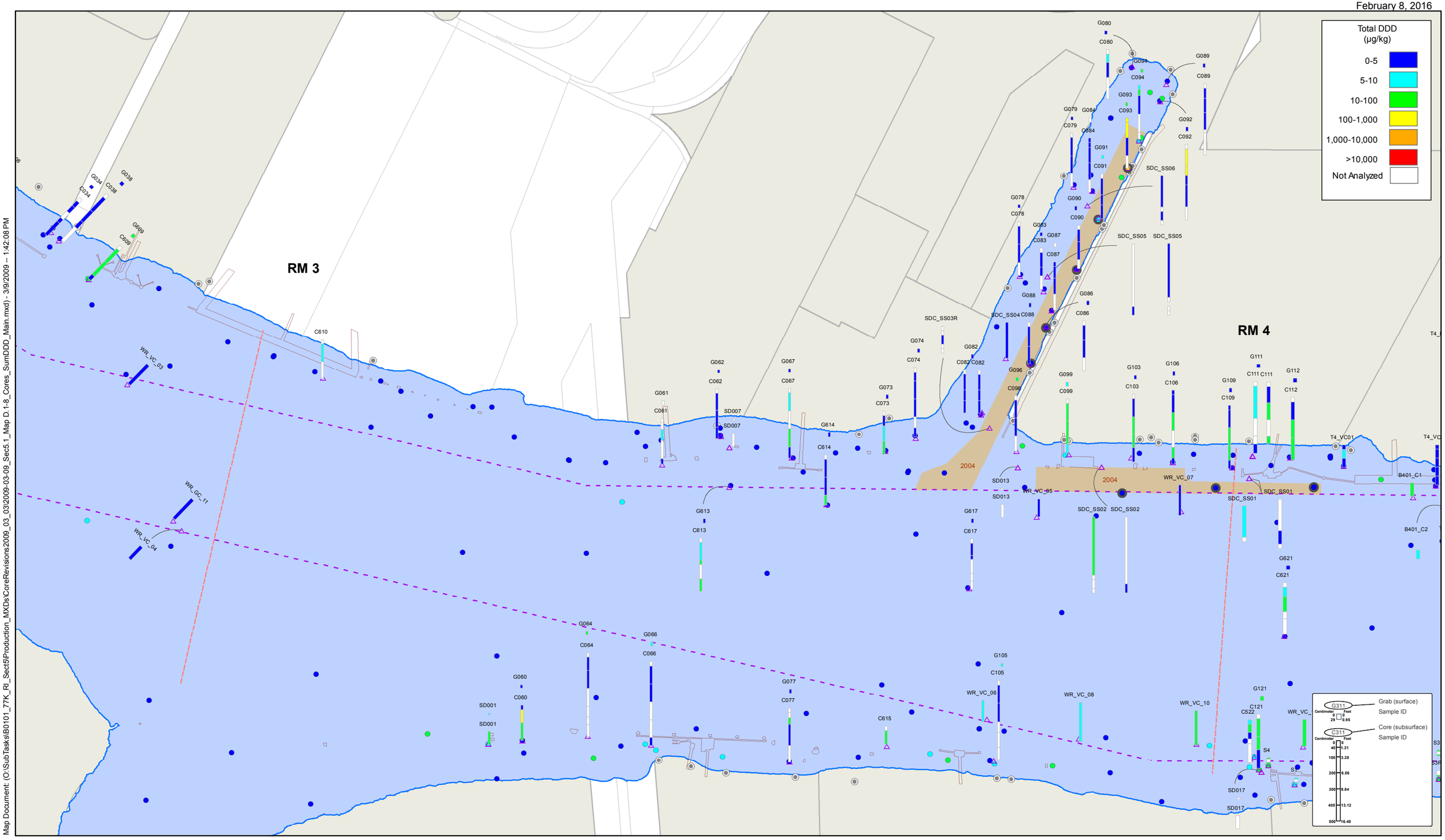
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-11c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDD (µg/kg)
River Mile 03 - Multnomah Channel

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

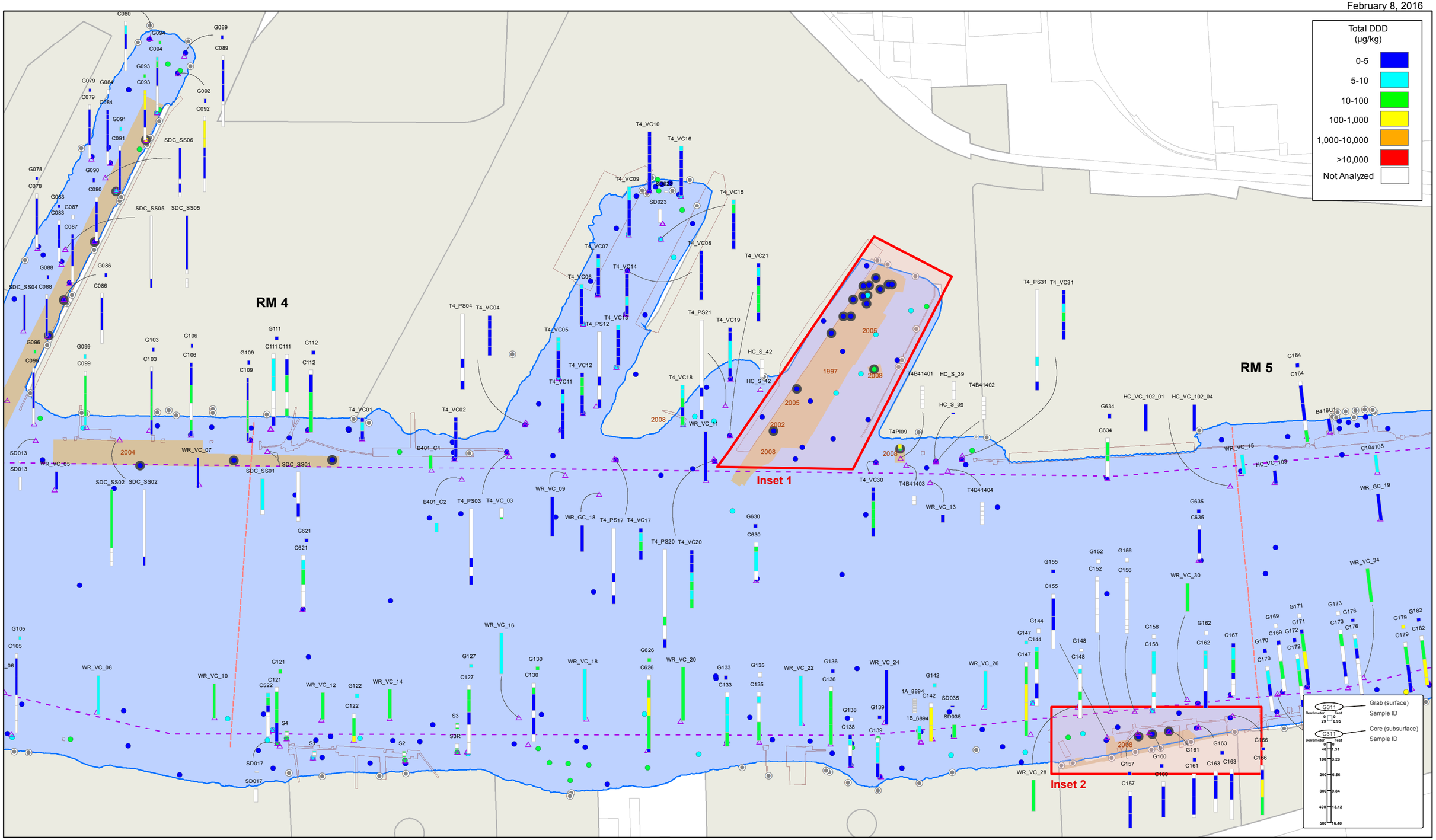
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-11 d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDD (µg/kg)
River Mile 03 to 04

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-8_Cores_SumDDD_Main.mxd) - 3/9/2009 -- 1:42:08 PM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

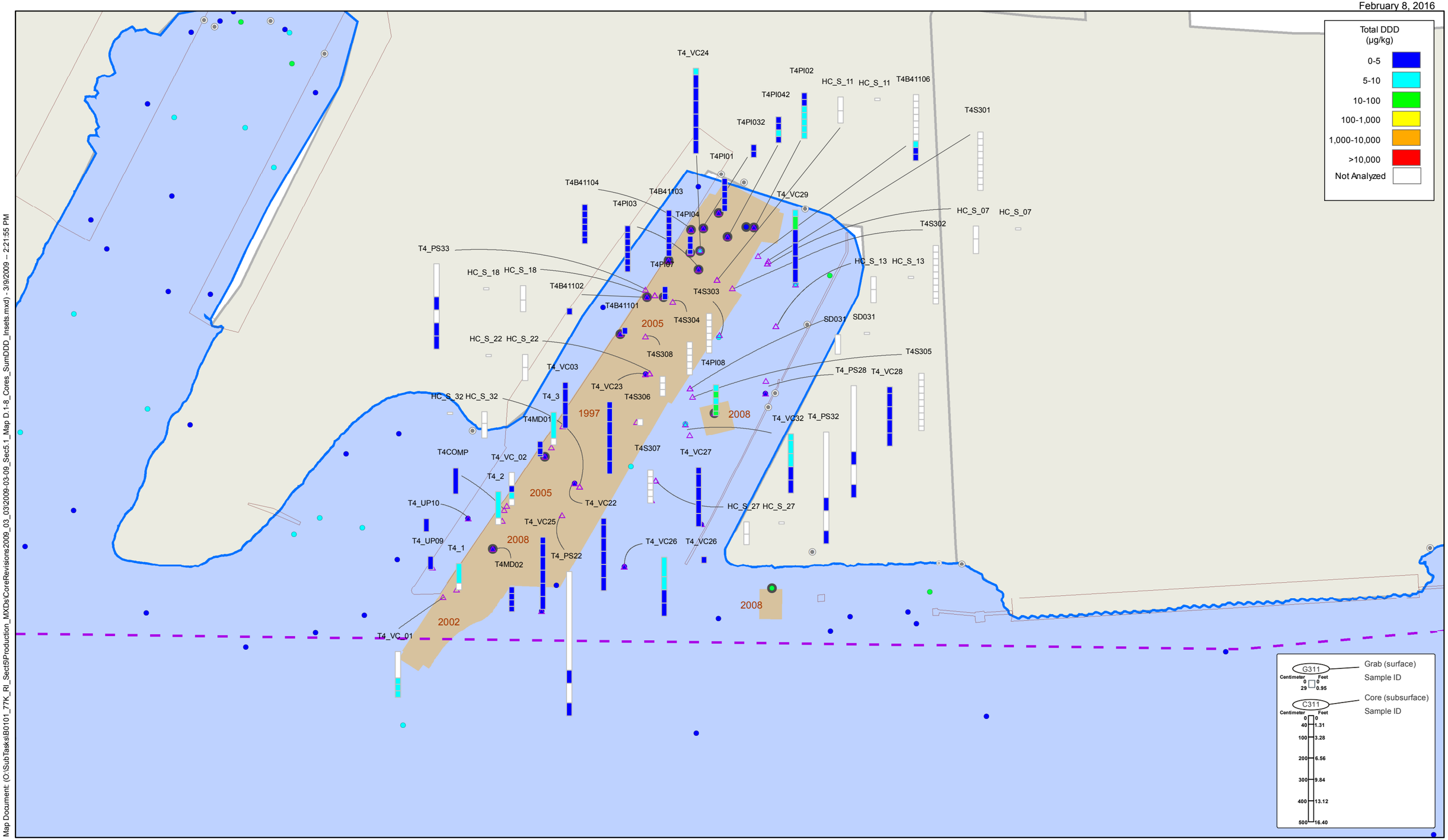
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-11e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDD (µg/kg)
River Mile 04 to 05 - Slips

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 135 270 540 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-11e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDD (µg/kg)
River Mile 04 to 05 - Slips - Inset 1

Total DDD (µg/kg)
- 0-5
- 5-10
- 10-100
- 100-1,000
- 1,000-10,000
- >10,000
- Not Analyzed

SGP08
SGP17
SGP10
SGP13
SGP14
SGP06
SGP12
SGP20
SGP15
SGP22
SGP24
SGP23
SGP21
SGP16
SGP18
2008
SGP05
SGP03
SGP19
SGP04
SGP09
SGP01
SGP07
SGP02

G311 Grab (surface) Sample ID
Centimeter 0 29 Feet 0 0.95

C311 Core (subsurface) Sample ID
Centimeter 0 40 100 200 300 400 500 Feet 0 1.31 3.28 6.56 9.84 13.12 16.40

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-8_Cores_SumDDD_Insets.mxd) - 3/9/2009 -- 2:21:55 PM

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 135 270 540 Feet

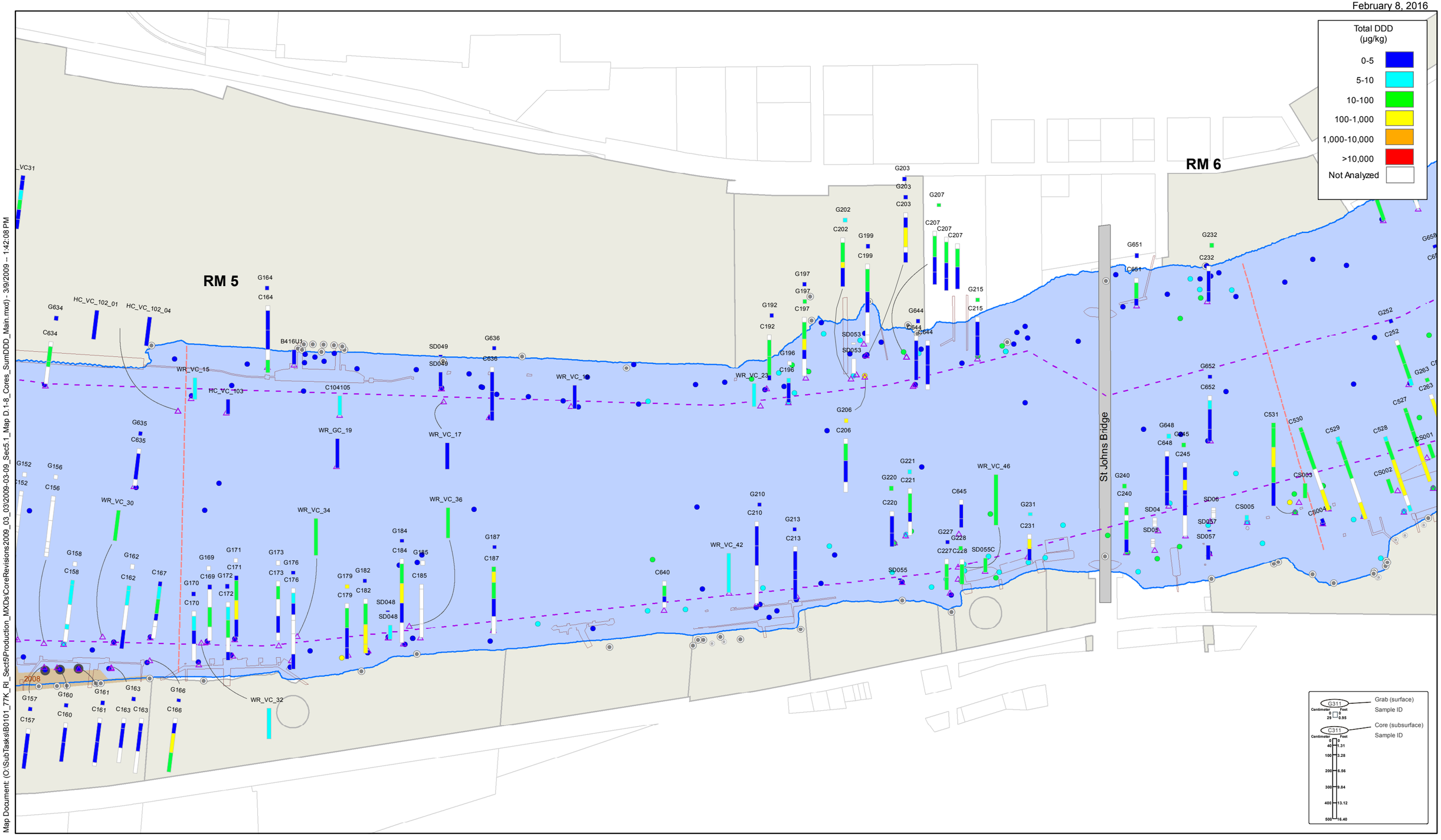
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-11e2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDD (µg/kg)
River Mile 04 to 05 - Slips - Inset 2

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-11f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDD (µg/kg)
River Mile 05 to 06

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-8_Cores_SumDDD_Main.mxd) - 3/9/2009 -- 1:42:08 PM

Total DDD (µg/kg)
- 0-5
- 5-10
- 10-100
- 100-1,000
- 1,000-10,000
- >10,000
- Not Analyzed

RM 6

RM 7

Railroad Bridge

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

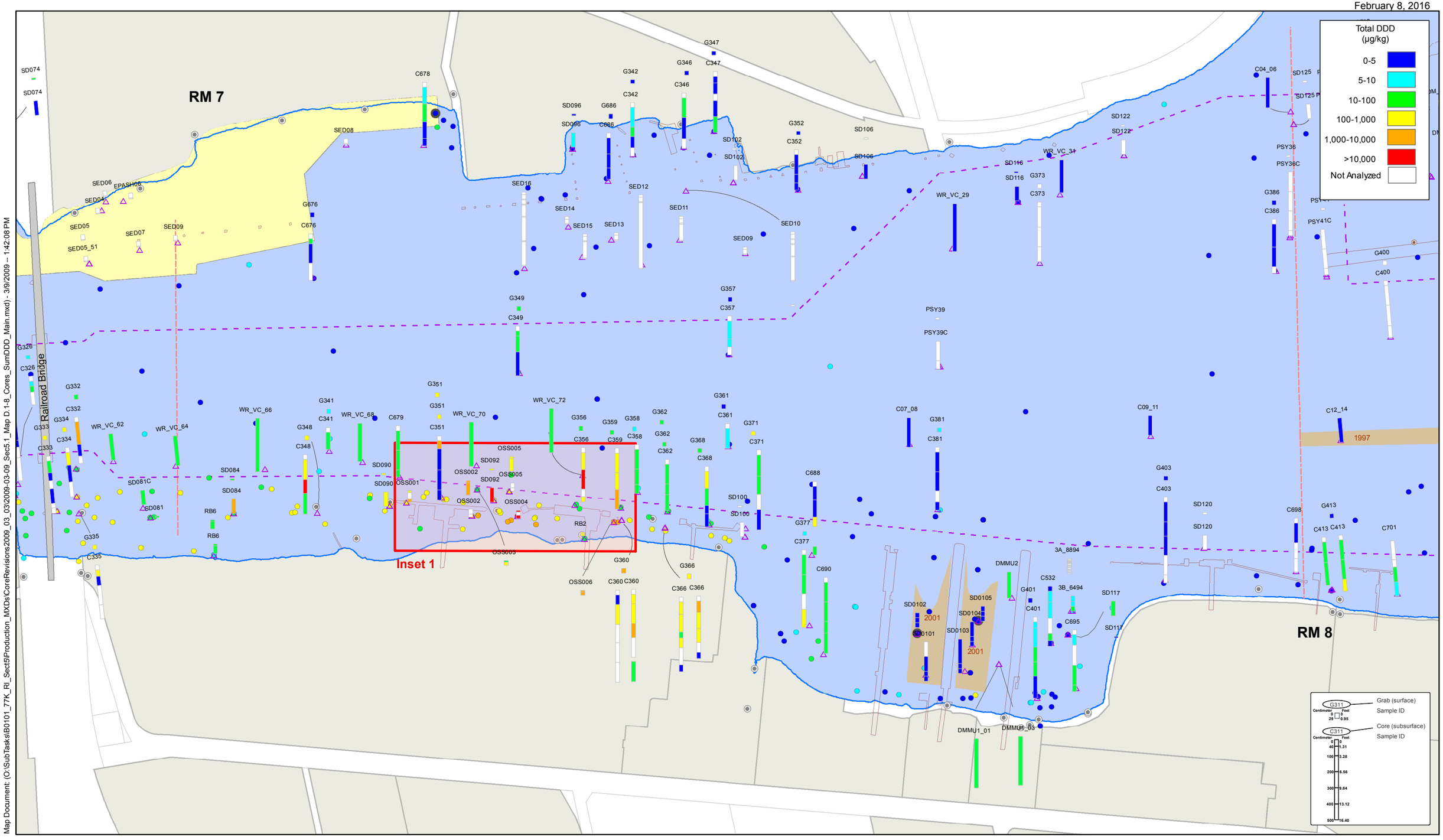
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-11g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDD (µg/kg)
River Mile 06 to 07




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-8_Cores_SumDDD_Main.mxd) - 3/9/2009 -- 1:42:08 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

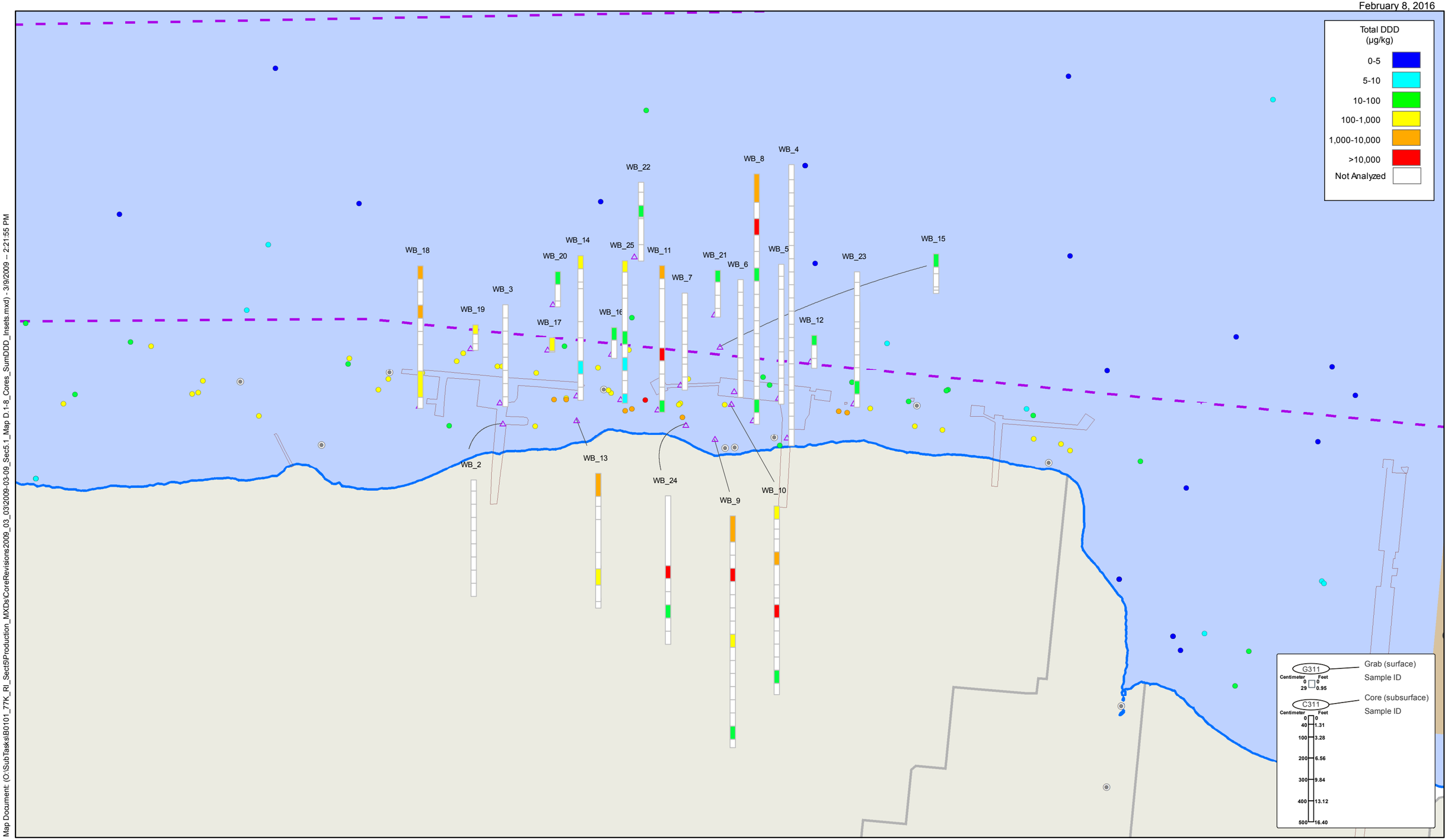
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-11 h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDD (µg/kg)
River Mile 07 to 08

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 135 270 540 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-11h1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDD (µg/kg)
River Mile 07 to 08 - Inset 1

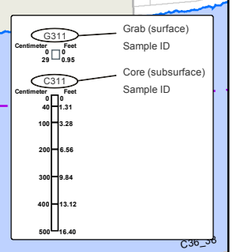
Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_032009-03-09_Sec5.1_Map D.1-8_Cores_SumDDD_Main.mxd) - 3/9/2009 -- 1:42:08 PM

RM 8

RM 9

Total DDD (µg/kg)
- 0-5
- 5-10
- 10-100
- 100-1,000
- 1,000-10,000
- >10,000
- Not Analyzed

PSY18 PSY18C G364 C364 PSY16 PSY16C G379 C379 G380 C380 SD136 SD136 G383 C383 G388 C388 PSY11 PSY11C G396 C396 G397 C397 PSY07 PSY07C G405 C405 SD141 SD141 G415 C415 4A_8894 G421 C421 4B_5094 G417 C417 PSY01 PSY01C G425 C425 C425 G426 C426 G430 C430 G382 C382 G393 C393 G402 C402 PSY20 PSY20C PSY23 PSY23C DM_24 C708 G372 G372 C372 PSY24 PSY24C C703 C702 G384 G384 C384 PSY27 PSY27C PSY27C_2 SD133 SD133 C04_06 SD125 PSY34 SD125 PSY34C PSY33 PSY33C DM_20 DM_20 G706 C706 G392 C392 SD127 SD127 PSY30 PSY30C PSY30C_2 PSY36 PSY36C G386 C386 PSY41 PSY41C PSY43 PSY43C G409 C409 G420 C420 C714 SD138 SD138 G400 C400 G720 C720 C727 PSY50 PSY50C C36_36

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

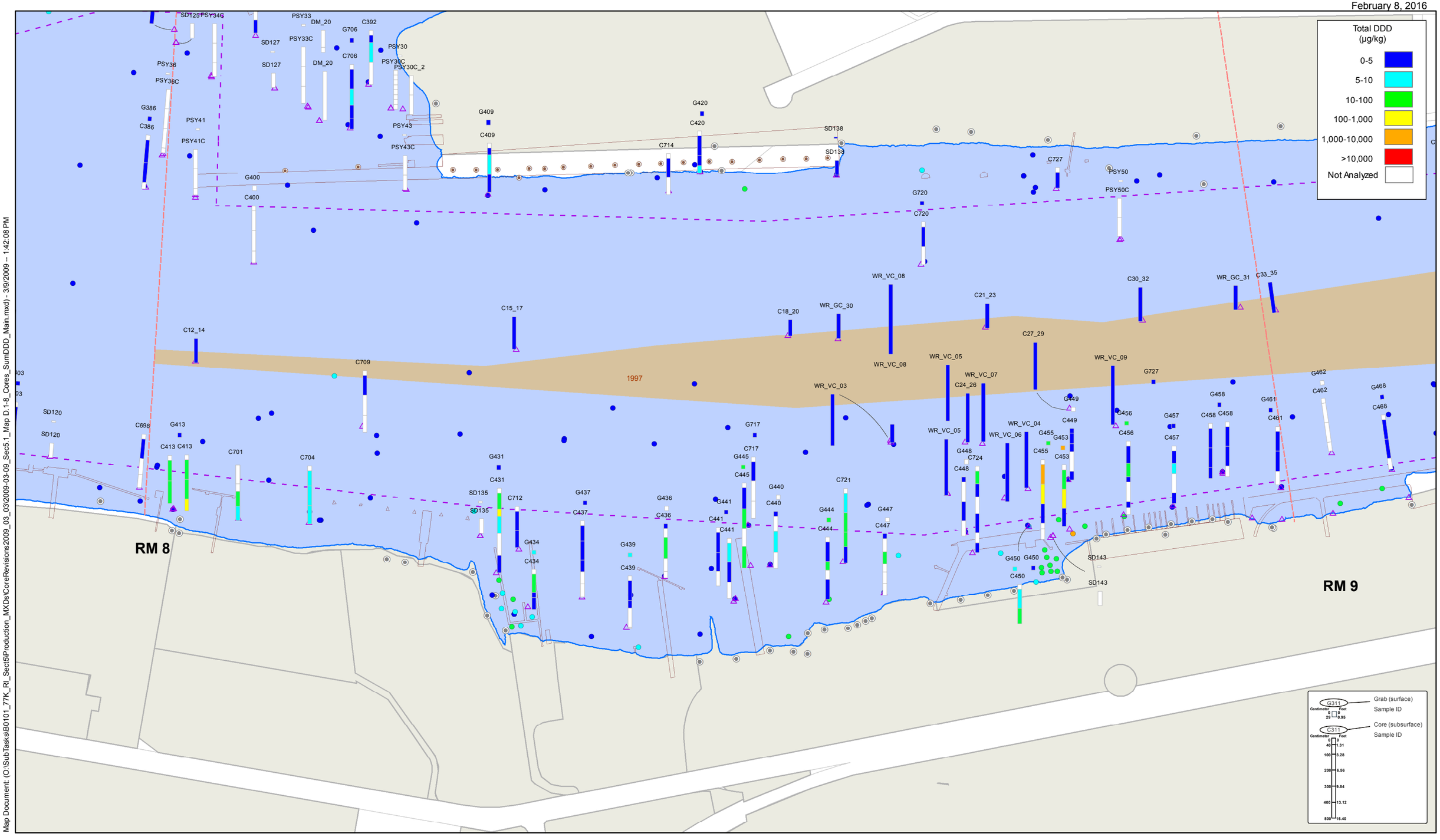
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-11 i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDD (µg/kg)
River Mile 08 to 09 - Swan Is. East




Map Document: (O:\SubTask\tB0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-8_Cores_SumDDD_Main.mxd) - 3/9/2009 -- 1:42:08 PM

**Map D1.2-11j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDD (µg/kg)
River Mile 08 to 09 - Swan Is. West

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-8_Cores_SumDDD_Main.mxd) - 3/9/2009 -- 1:42:08 PM

Total DDD (µg/kg)
- 0-5
- 5-10
- 10-100
- 100-1,000
- 1,000-10,000
- >10,000
- Not Analyzed

**RM 10**

**RM 9**

G454 C454 SD150 C733 WR_VC_33 WR_VC_35 WR_VC_37 WR_VC_39 WR_VC_41 WR_VC_43 WR_VC_45 G742 C742 G743 C743 SD04 G746 C746 C749 2000 WR_GC_32 WR_GC_33 WR_GC_31 C33_35 C36_38 C39_41 WR_VC_04 C42_44 RC483 C45_47 WR_VC_03 WR_VC_05 C48_50 C51_52 1997 G471 C471 G474 G477 C477 G462 C462 G468 C468 G458 C458 G461 C461 SD151 G735 C735 G738 G739 C739 G492 C492 HC_VC_53 T2_01_2 T2U1 2002 G494 C494 T2U2 T2_01_1 2005 WR_GC_34 G748 C748 WR_GC_35 G747 C747 WR_VC_106

Grab (surface) Sample ID (G311)
Core (subsurface) Sample ID (C311)

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

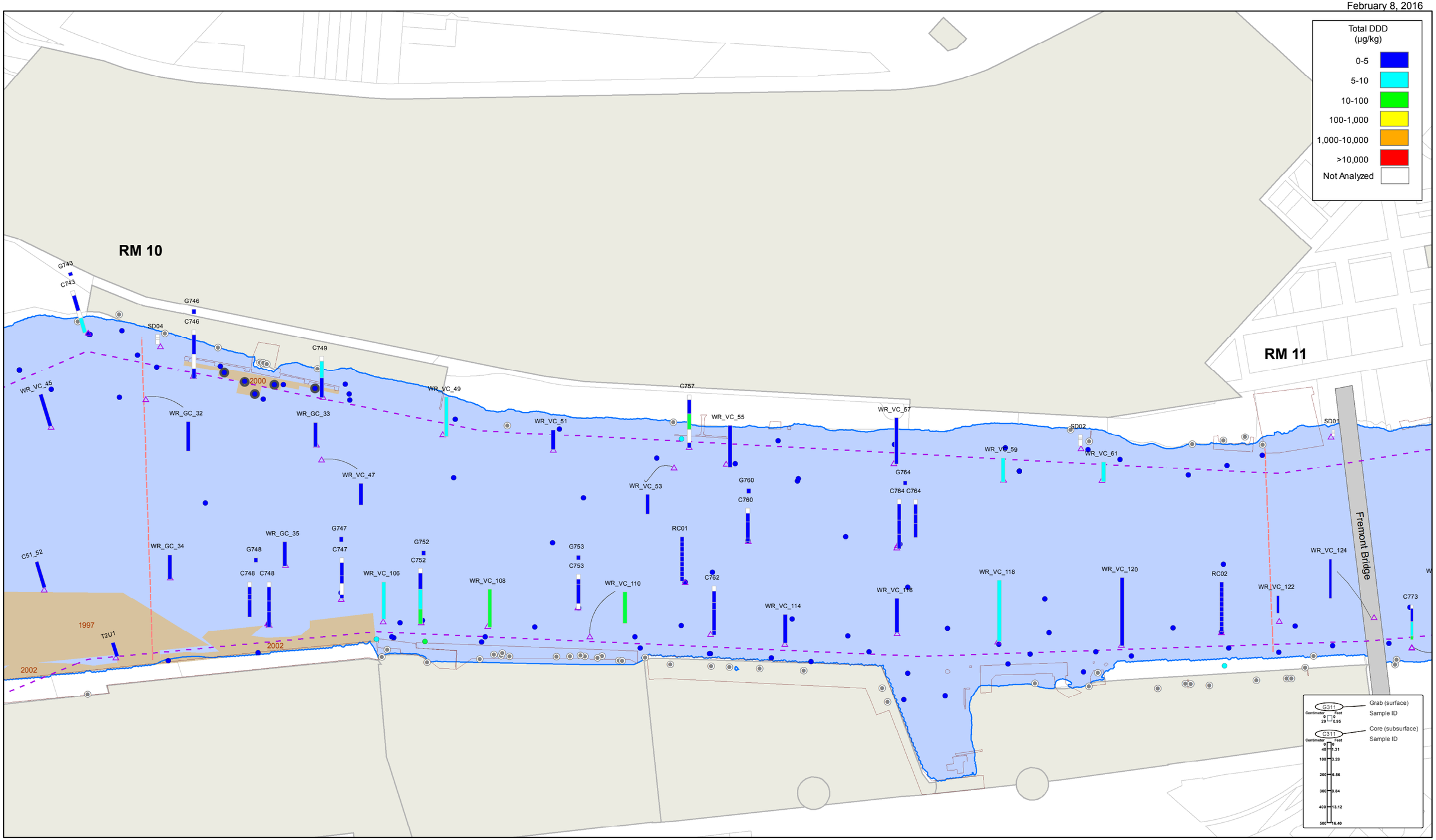
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-11k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDD (µg/kg)
River Mile 09 to 10

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

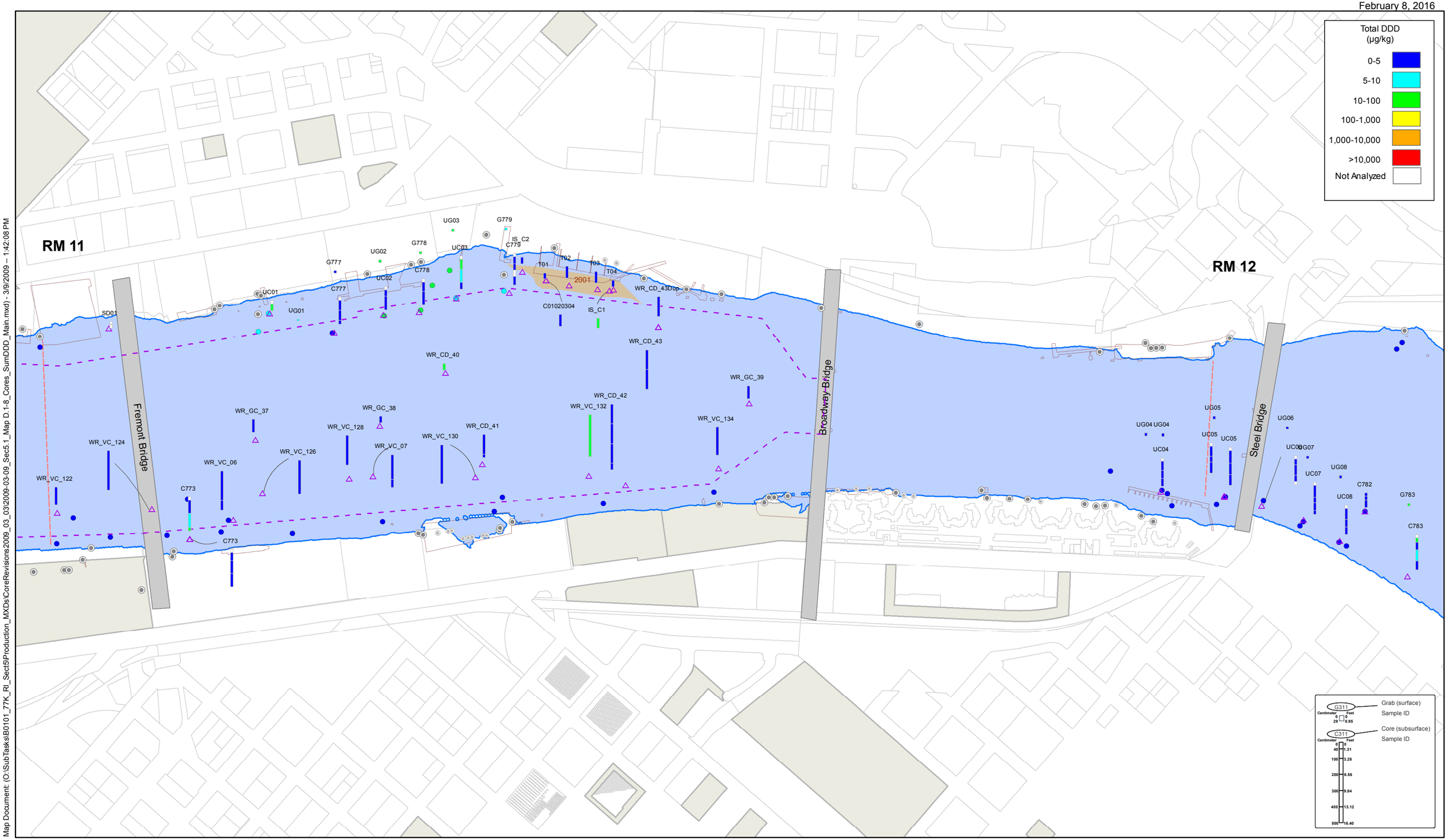
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-11I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDD (µg/kg)
River Mile 10 to 11

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-8_Cores_SumDDD_Main.mxd) - 3/9/2009 -- 1:42:08 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

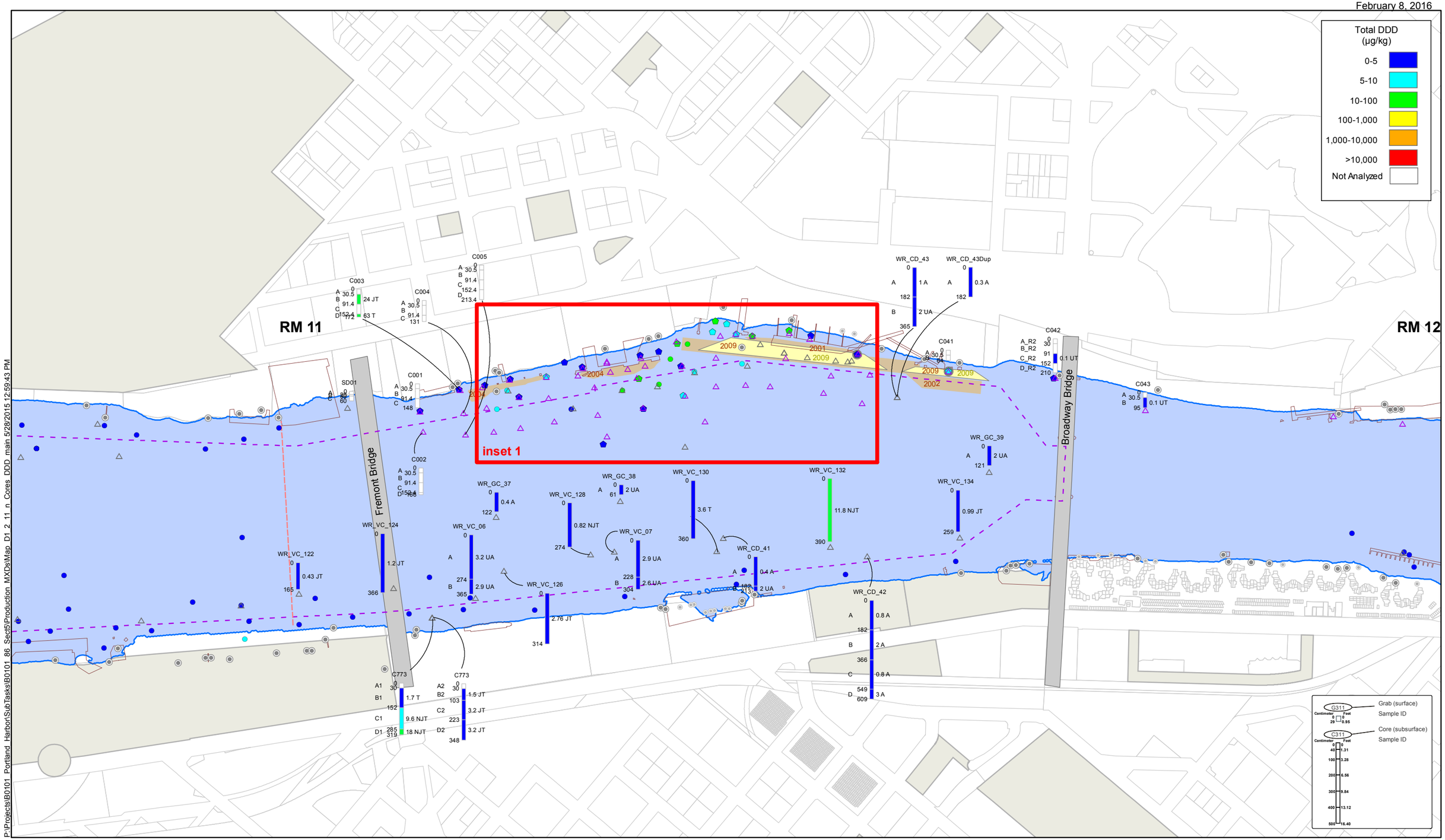
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-11 m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDD (µg/kg)
River Mile 11 to 12

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-11n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDD (µg/kg)

River Mile 11.0 - 11.8

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Total DDD (µg/kg)
- 0-5
- 5-10
- 10-100
- 100-1,000
- 1,000-10,000
- >10,000
- Not Analyzed

GNZCOMP2003 · G778 · C778 · C023 · C026 · C029 · T01 · C01020304 · C033 · C019 · C048 · UG03 · UC03 · C047 · C032 · C035 · C038 · C009 · UG01 · UC01 · C010 · GNCOMP2003 · GNVC03 · C012 · C015 · GNVC01 · C022 · C025 · IS_C2 · T03 · T02 · T04 · G779 · C779 · IS_C1 · C039 · C006 · C020 · C016 · UG02 · G777 · C777 · C013 · C027 · C024 · C031 · C034 · C036 · C037 · C040 · C007 · C008 · C011 · C014 · C017 · C018 · C021 · C028 · WR_CD_40

2009 · 2001 · 2009 · 2009 · 2009 · 2002 · 2004 · 2004

Fremont Bridge

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

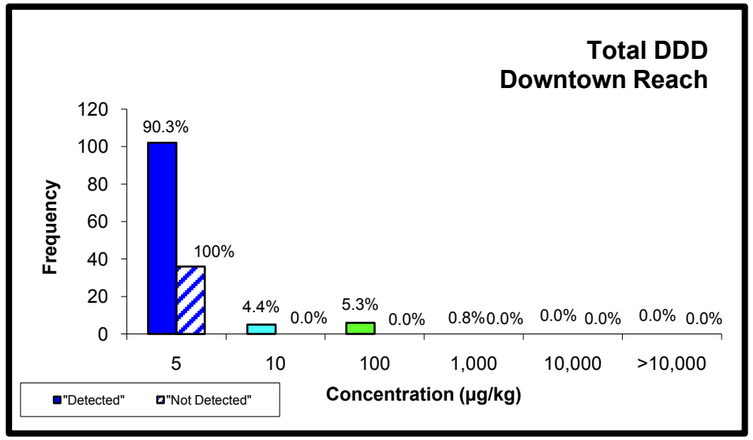
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

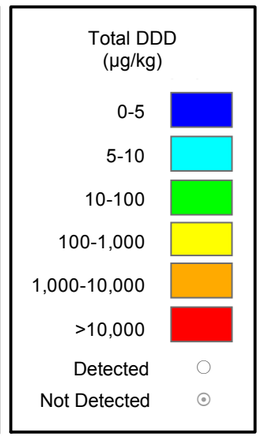
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

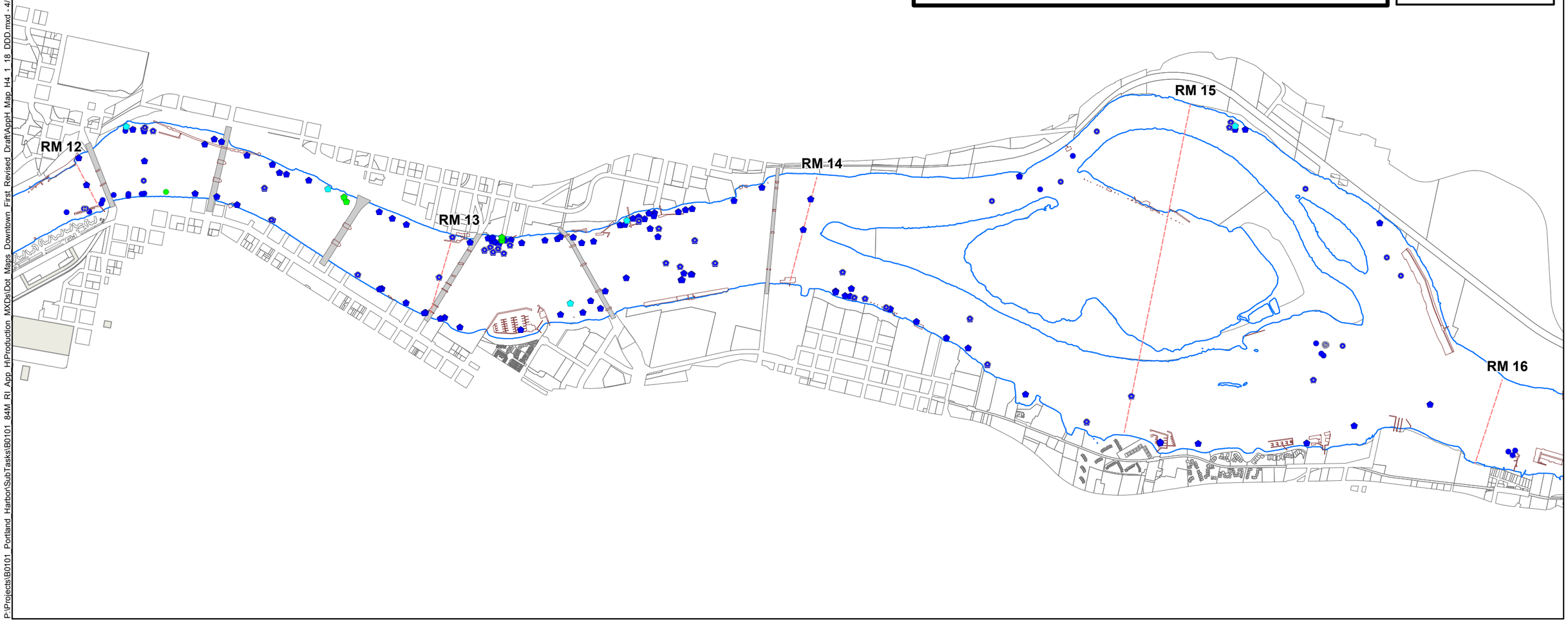
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-11o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total DDD (µg/kg)

River Mile 11.0 - 11.8 - Inset 1

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

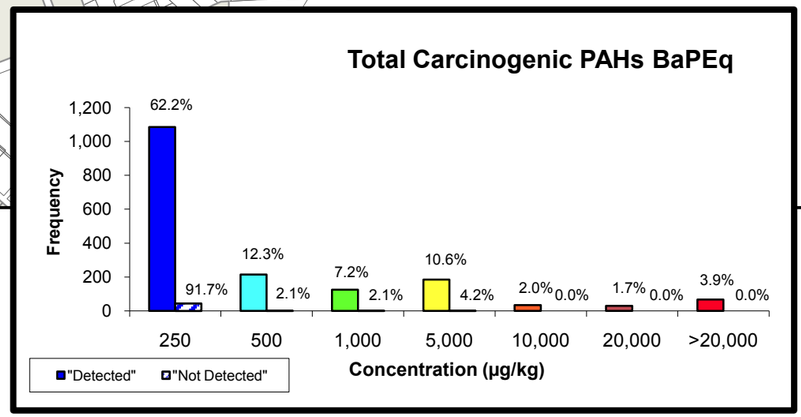
0 700 1,400 2,800 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-12**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Total DDD (µg/kg)
Downtown Reach

RM 1
RM 2
RM 3
RM 4
RM 5
RM 6
RM 7
RM 8
RM 8
RM 9
RM 10
RM 11
RM 12




Total cPAHs BaPEq (µg/kg)
0-250
250-500
500-1,000
1,000-5,000
5,000-10,000
10,000-20,000
>20,000
Detected
Not Detected

N
0 1,000 2,000 3,000 4,000 5,000 Feet

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

Map Features
- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-13**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

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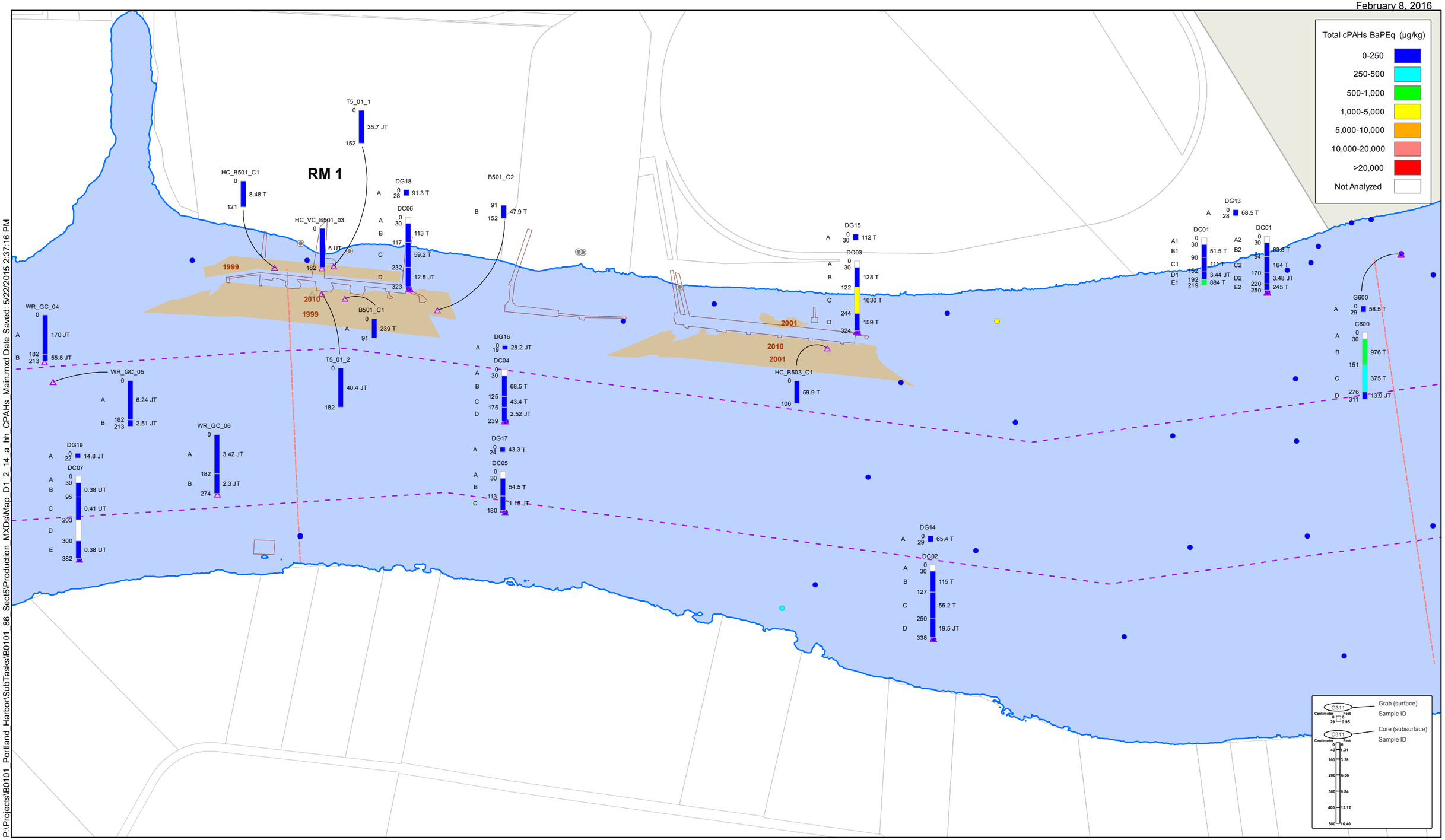


FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 1 to 2

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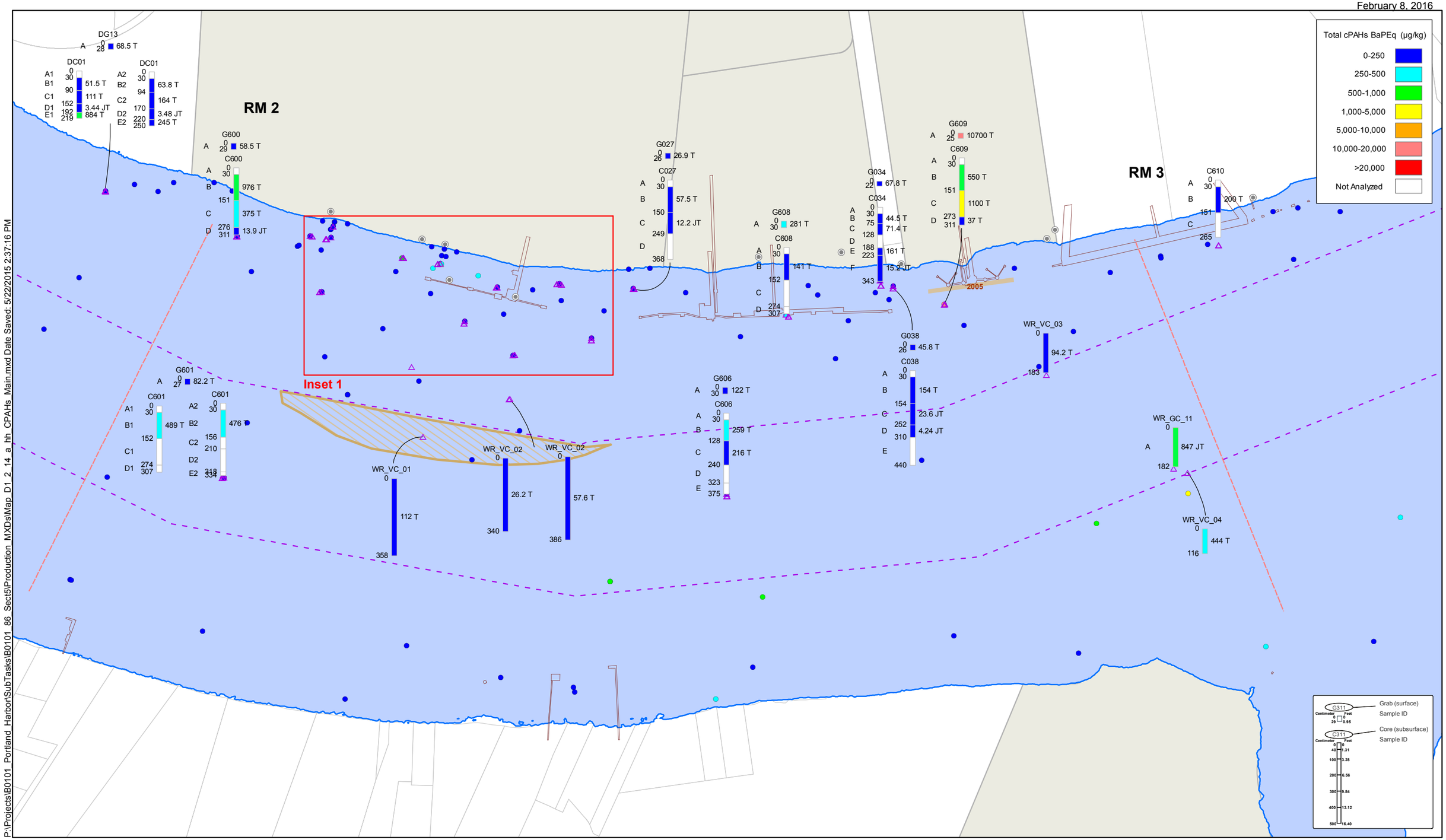


N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

## Map Features

- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 2 to 3

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RM 2

Total cPAHs BaPEq (µg/kg)
- 0-250
- 250-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- >20,000
- Not Analyzed

G011 0 25 230 T
C011 A1 0 30 120 T; B1 127 147 T; C1 212 307 T; D1 341; E1; F1 467 505 0.00071 JT
C011 A2 0 30 77 T; B2 91 300 T; C2 137 115 T; D2 199 165 T; E2 256; F2; G2 381 499
G009 0 24 139 T
C009 A 0 30 105 T; B 153 71.4 T; C 273
G015 0 29 569 T
C015 A 0 30 173 T; B 107 126 T; C 210 571 T; D 270 334 T; E 343
G019 0 20 196 T
C019 A1 0 30 799 T; B1 86 273 T; C1 175 48.4 T; D1 264
G020 0 29 194 T
C020 A 0 30 272 T; B 102 423 T; C 179 310 T; D 232
G025 0 19 176 T
C025 A1 0 30 6.75 JT; B1 78 0.41 UT; C1 198; D1 305
C025 A2 0 30; B2 152; C2; D2 288 0.051 JT; E2 344 454
RB13 A 0 30 19.8 T; B 60 32.7 T
G602 A 0 30 56.3 T
C602 A 0 30; B 57.7 T; C 151 123 T; D 273 80.3 T 318
G604 A 0 30 64.4 T
C604 A 0 30; B 71.4 T; C 151 112 T; D 273 82.1 T 343
G022 0 28 44.4 T
C022 A 0 30; B 53.3 T; C 152 56.9 T; D 277 327
G605 A 0 30 54.7 T
C605 A 0 30; B 66.2 T; C 151 104 T; D 273 66.4 T 341
C01_03 0 95.9 JT 137

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14b1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 2 to 3 - Inset 1

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Total cPAHs BaPEq (µg/kg)
- 0-250
- 250-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- >20,000
- Not Analyzed

Sauvie Island Bridge

RM 3

MG001 A 0 22 440 T

MC001 2A 0 30 Arc; 2B 151 172 T; 2C 278 0.28 UT; 2D 338 Arc

MC001 1A 0 30 Arc; 1B 151 0.28 UT; 1C 280 0.019 JT

MG0021 A 0 28 725 T

MG0022 A 0 26 913 T

MC002 A 0 30 Arc; B 152 505 T; C 237 0.904 JT; D 343 0.478 JT

MG006 A 0 23 347 T

MC006 A 0 30 Arc; B 110 119 T; C 196 64.3 T; D 264 25.4 T; E 287 Arc

MG009 A 0 21 395 T

MC009 A 0 30 Arc; B 111 972 T; C 126 Arc

MG008 A 0 28 215 T

MC008 A 0 30 Arc; B 155 0.28 UT; C 277 0.0843 JT; D 378 0.28 UT

G311 Grab (surface) Sample ID (Centimeter 0 29; Feet 0 0.95)

C311 Core (subsurface) Sample ID (Centimeter 0 40 100 200 300 400 500; Feet 0 1.31 3.28 6.56 9.84 13.12 16.40)

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

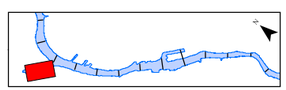
**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected



**Map D1.2-14c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 3 Multnomah Channel

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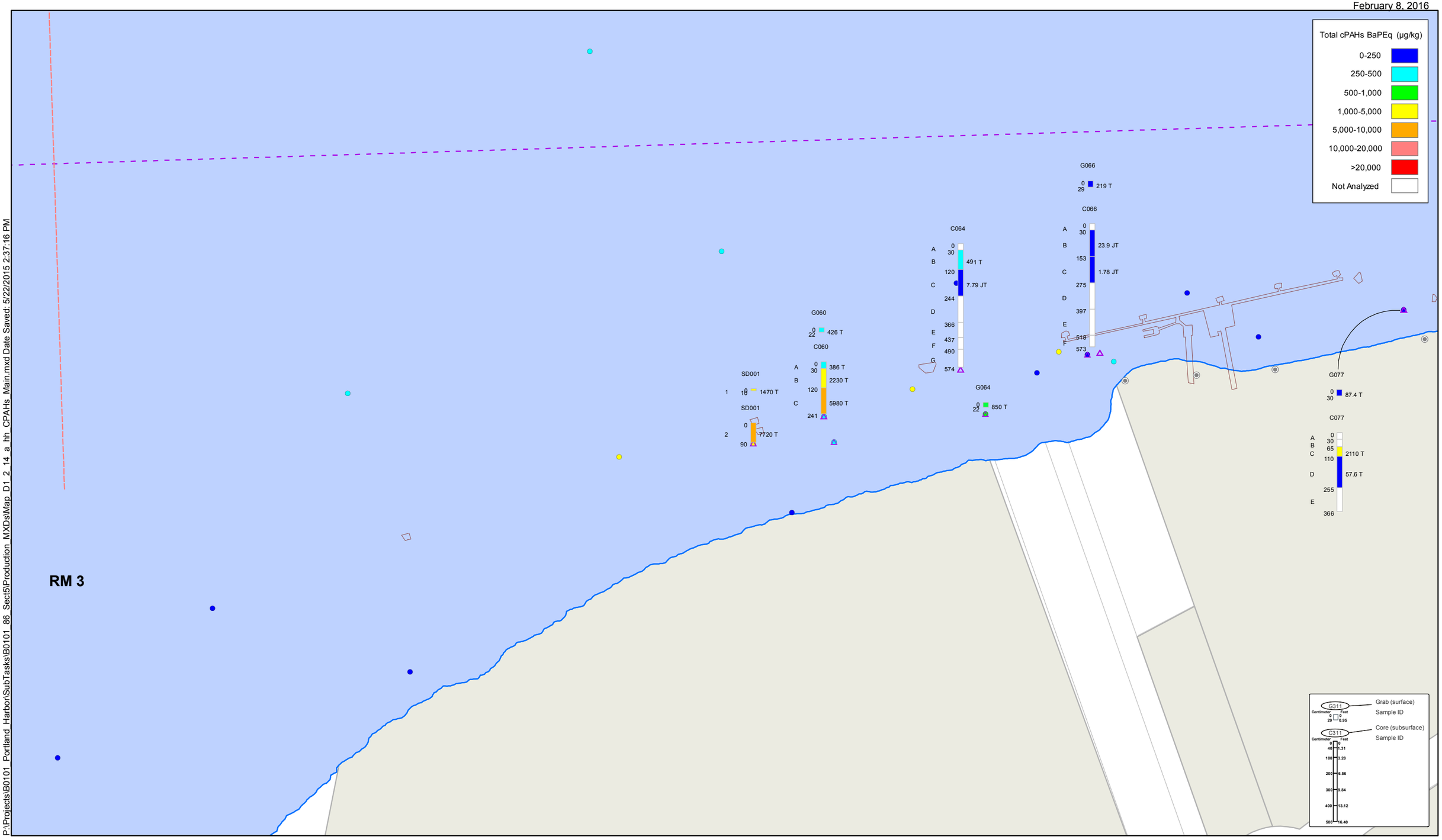


N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**

- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 3 to 3.5

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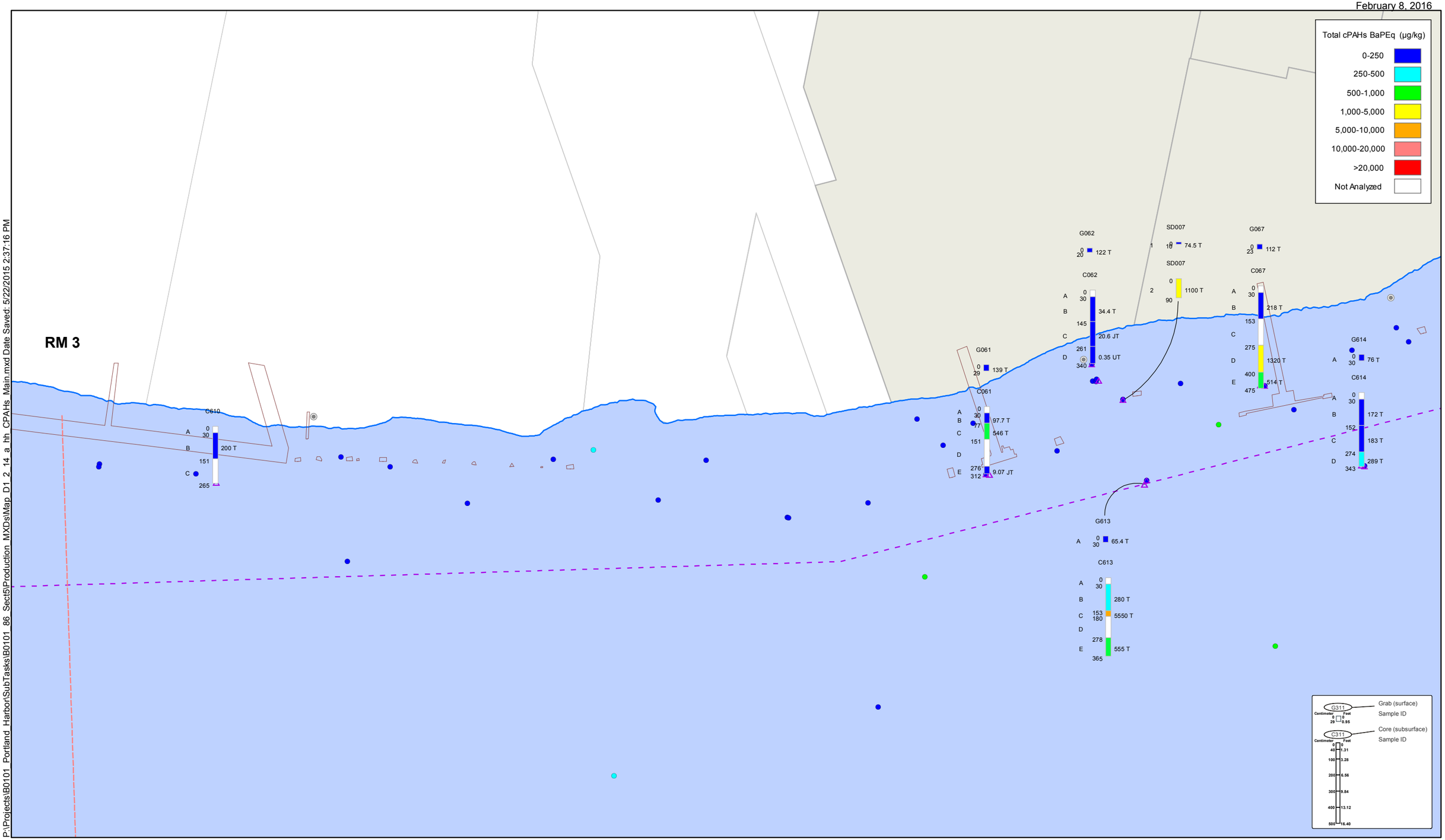


FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 3 to 3.5

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Total cPAHs BaPEq (µg/kg)
- 0-250
- 250-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- >20,000
- Not Analyzed

2004

RM 4

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 3.5 to 4

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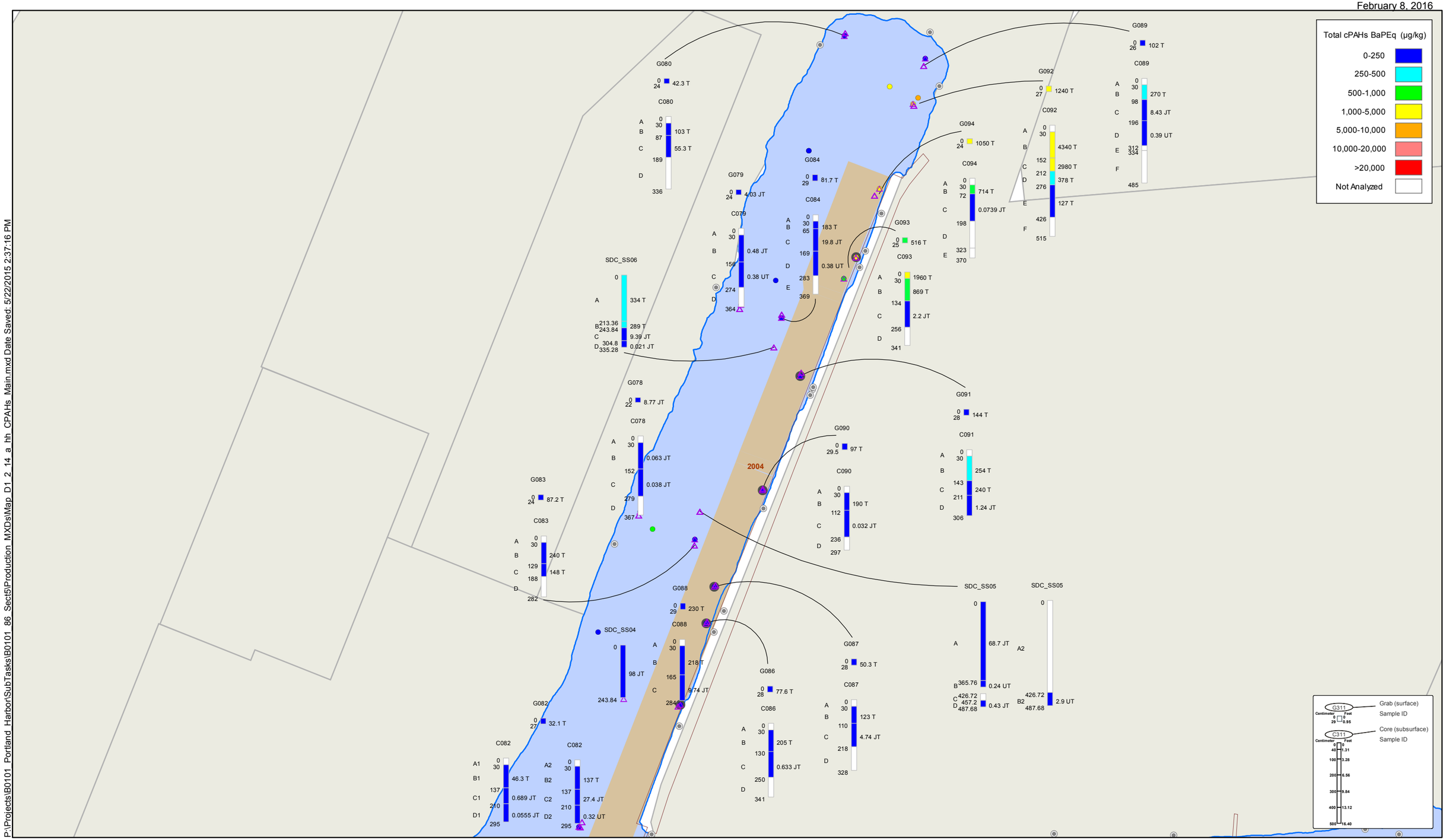


N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 3.5 to 4 International Slip

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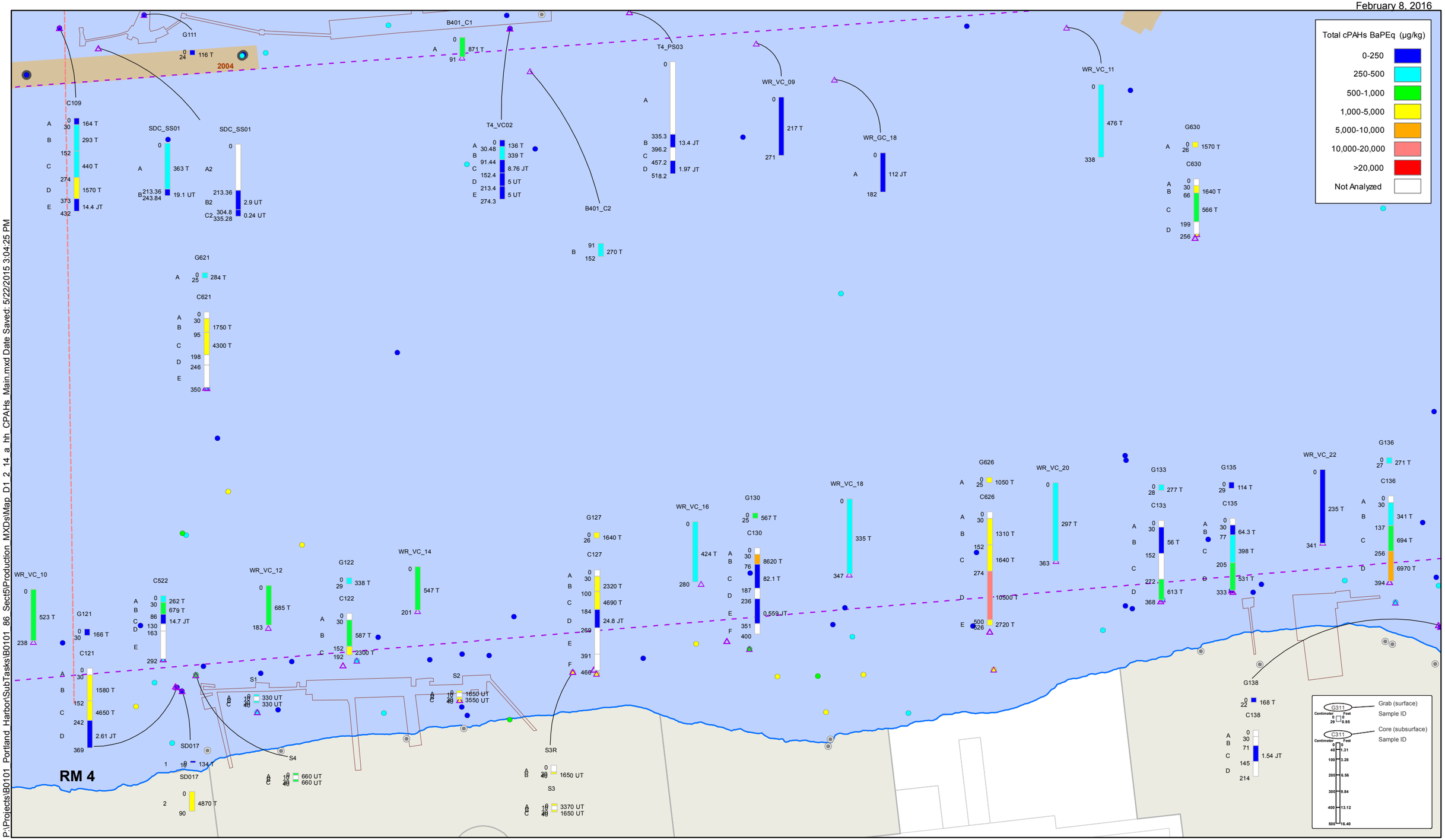


FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 4 to 4.5

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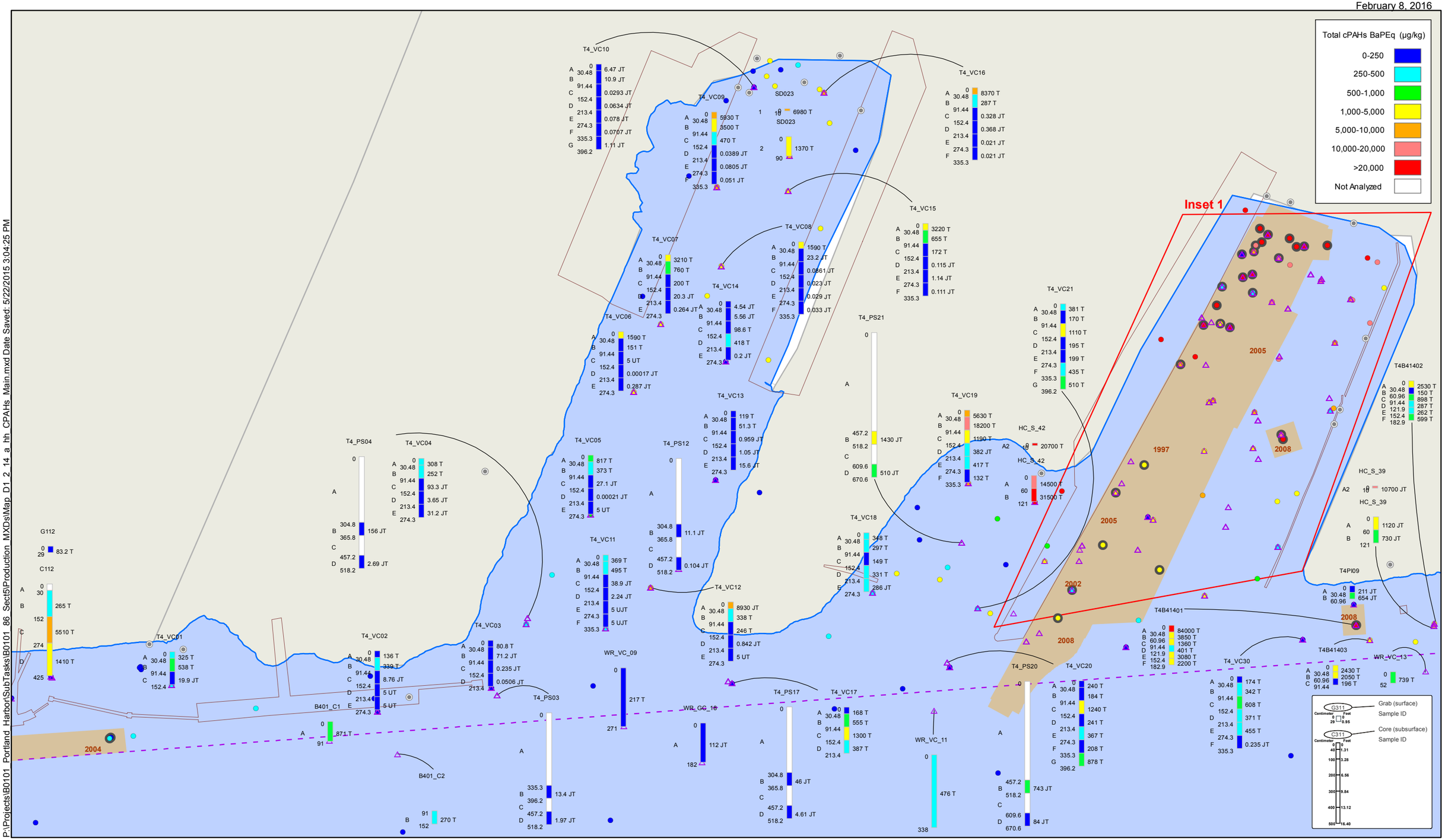


FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

## Map Features

- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 4 to 4.5 Slips 1 and 3

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Total cPAHs BaPEq (µg/kg)
- 0-250
- 250-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- >20,000
- Not Analyzed

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14i1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 4 to 4.5 - Slip 3 - Inset 1

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RM 5

Total cPAHs BaPEq (µg/kg)
- 0-250
- 250-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- >20,000
- Not Analyzed

Inset 1

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

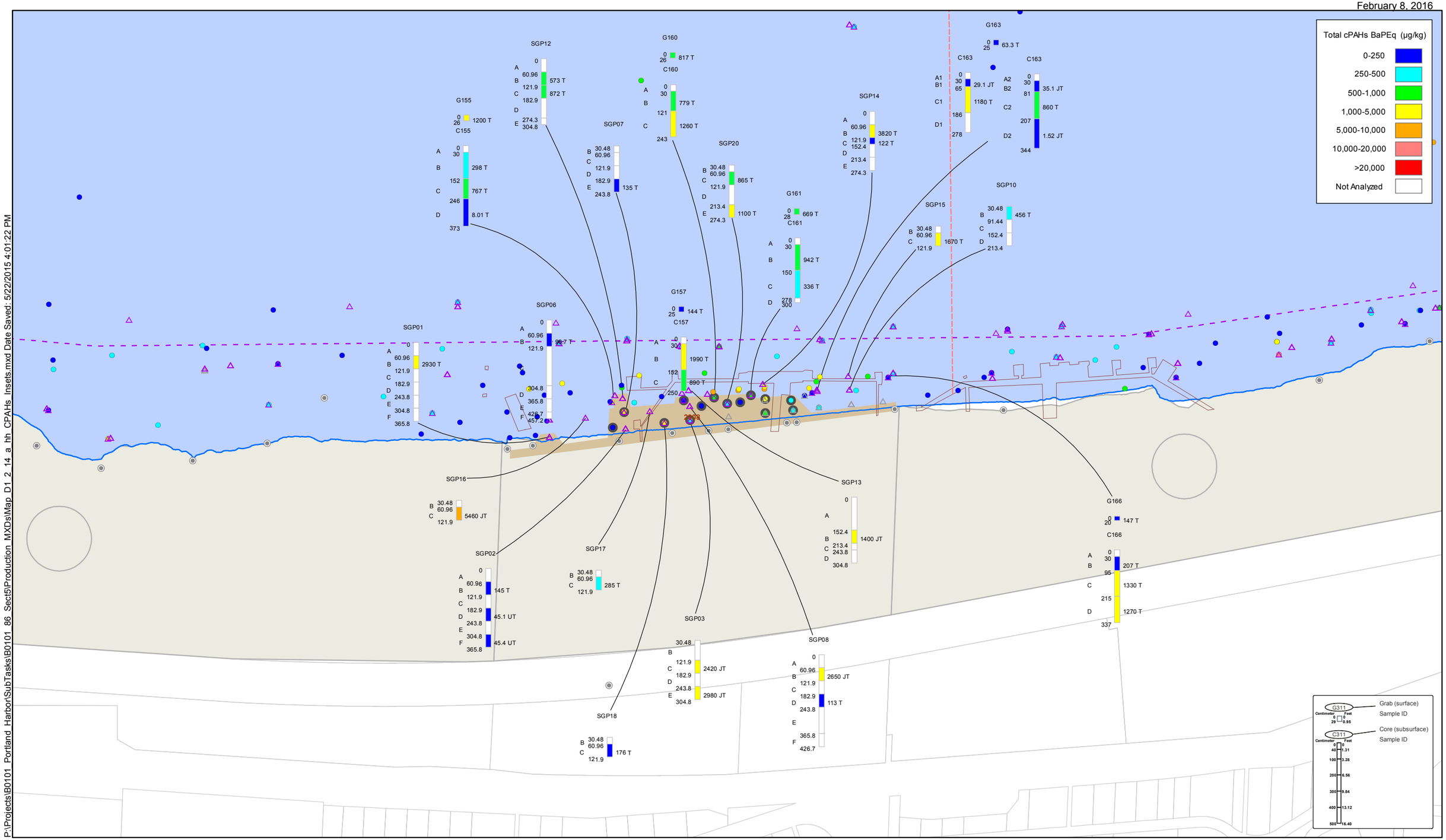
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 4.5 to 5

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

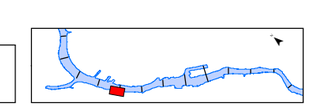
**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

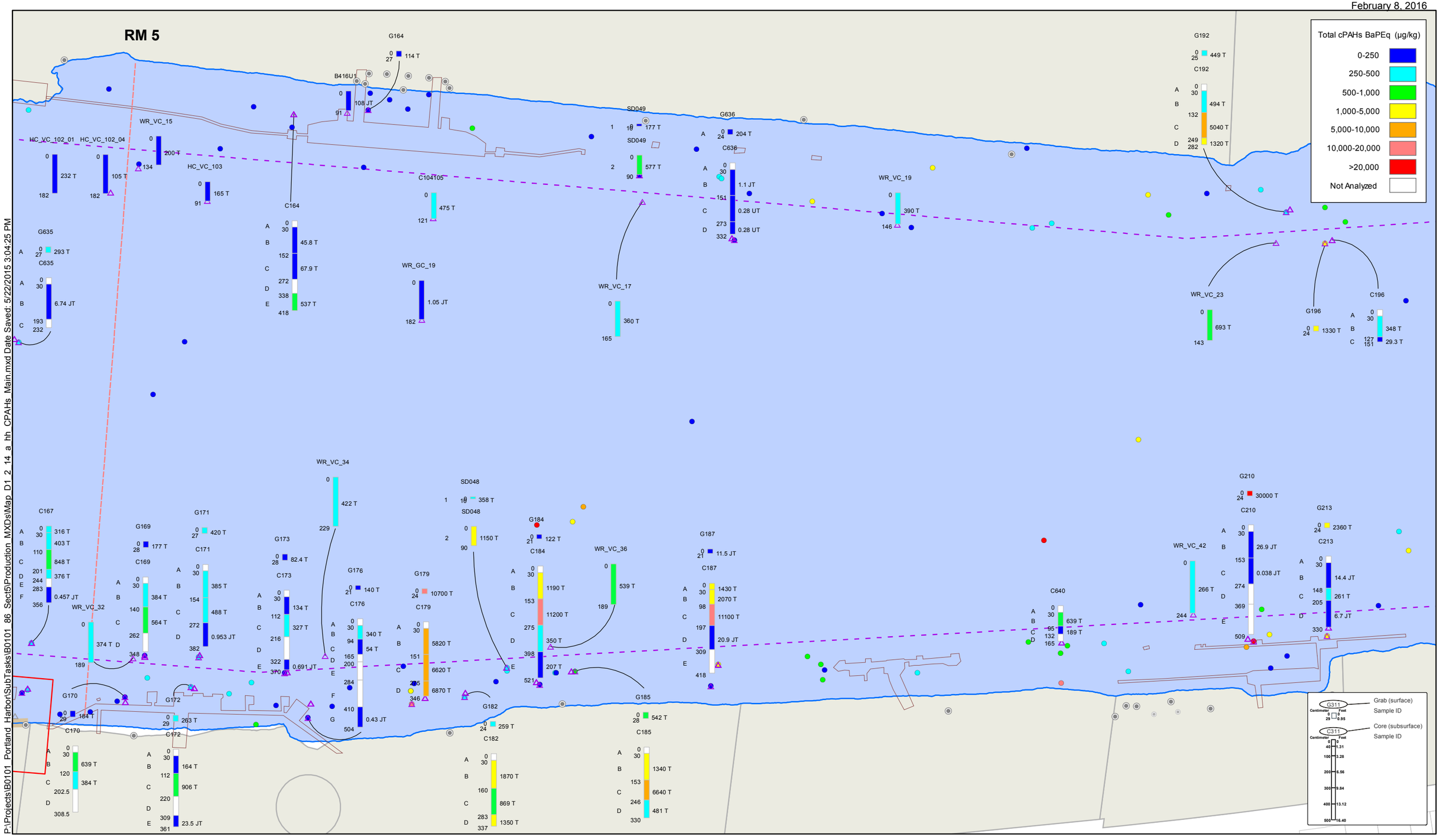
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected



**Map D1.2-14j1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 4.5 to 5 - Inset 1




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

## Map Features

- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 5 to 5.5

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RM 6

St Johns Bridge

Total cPAHs BaPEq (µg/kg)
- 0-250
- 250-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- >20,000
- Not Analyzed

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

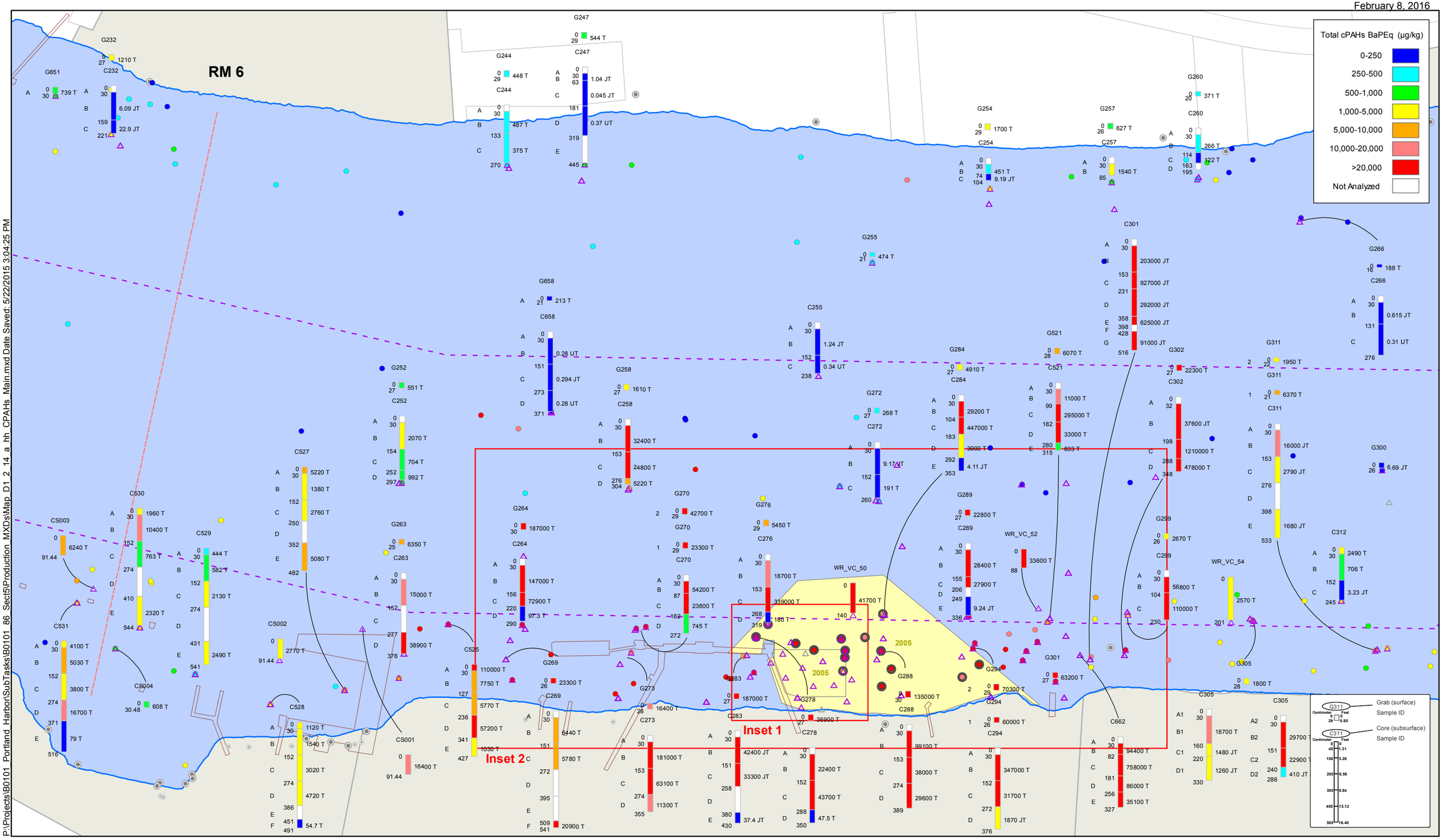
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

Grab (surface) Sample ID
Core (subsurface) Sample ID

**Map D1.2-14l**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 5.5 to 6

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

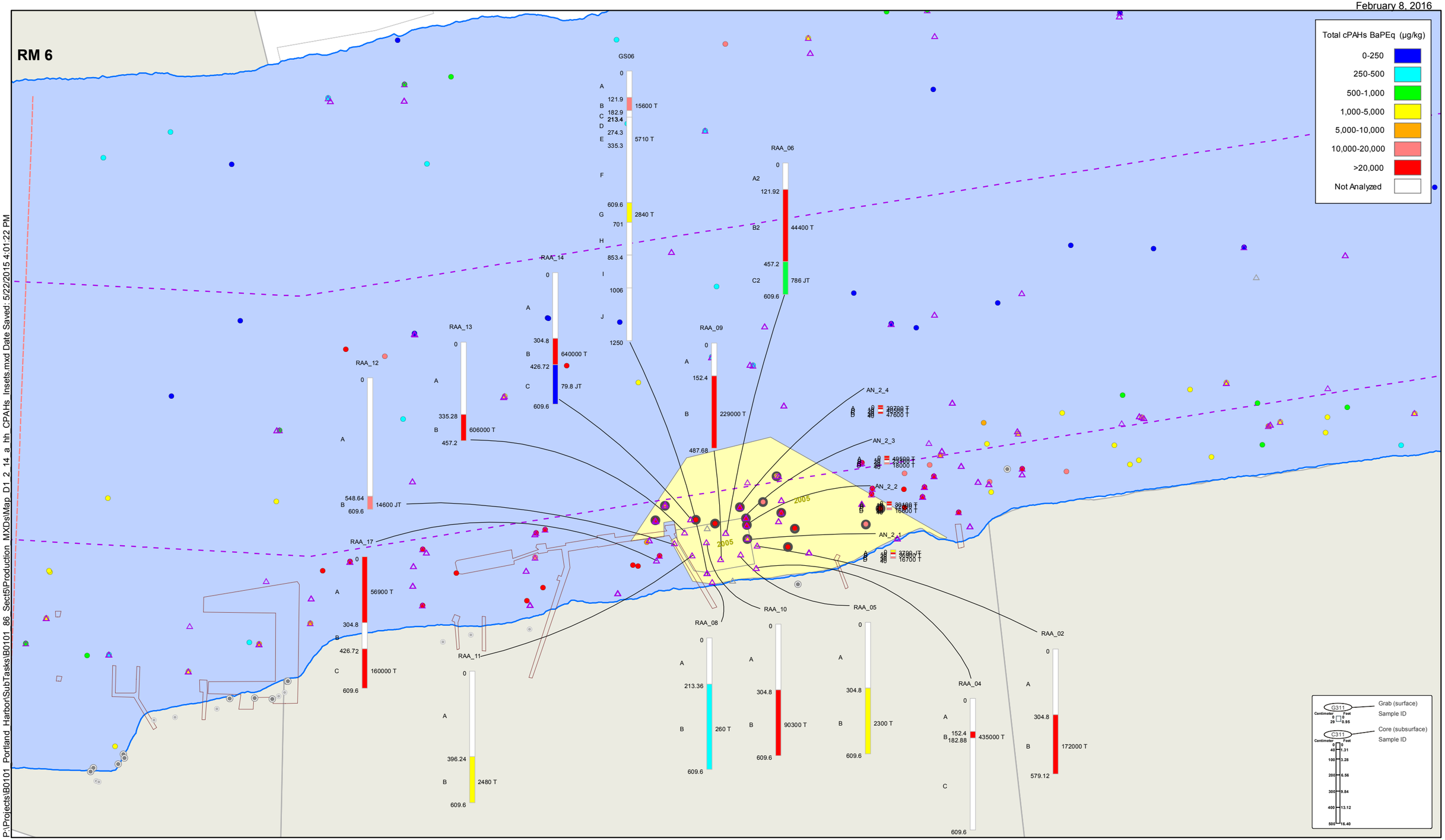
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

Grab (surface) Sample ID
Core (subsurface) Sample ID

**Map D1.2-14m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 6 to 6.5

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**

- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

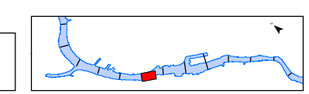
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected



**Map D1.2-14m1**

Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 6 to 6.5 - Inset 1

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RM 6

Total cPAHs BaPEq (µg/kg)
- 0-250
- 250-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- >20,000
- Not Analyzed

GS04: 0 A 121.9 B 182.9 C 274.3 D 304.8 335.3 E 579.1 F 640.1 G 731.5 H 823 I 914.4 J 944.9 K 1158 L 1219 — 227 T; 4.17 JT; 5 UT

GSC5: 0 A 60.96 B 152.4 C 213.4 D 396.2 E 457.2 — 148 T; 13.1 JT; 0.36 UT

GSB7: 0 A 24.38 60.96 B 152.4 C 213.4 D 396.2 E 457.2 — 46600 JT; 187000 JT; 202000 T

AN_1_5: A 0 48 — 194 T; B 0 48 — 0.1 JT

GSD4: 0 A 60.96 B 152.4 C 213.4 — 7.28 JT; 3.41 JT

GSD5: 0 A 45.72 B 60.96 — 864 JT

GSD2: 0 A 60.96 B 152.4 C 213.4 — 38.9 JT; 6.71 JT

AN_2_5: A 0 48 — 360 T; B 0 48 — 3 UT

GS05: 0 A 91.44 121.9 B 274.3 C 335.3 D 609.6 E 670.6 F 1006 G 1097 H 1189 I 1280 J — 99500 T; 8060 T; 57.9 JT

GSB5: 0 A 60.96 B 152.4 C — 49100 T; 24600 T

GSC7: 0 A 42.67 60.96 B 152.4 C 213.4 D 396.2 E 457.2 — 132000 T; 377000 JT; 94400 T; 68.6 T

AN_1_3: A 0 48 — 119000 T; B 0 48 — 167000 JT

AN_1_2: A 0 48 — 46200 T; B 0 48 — 24600 T

AN_1_1: A 0 48 — 22600 T; B 0 48 — 12800 T

GSC2: 0 A 60.96 B 152.4 C 213.4 — 47900 T; 13500 T

GS09: 0 A 121.9 B 182.9 C 274.3 D 335.3 E 701 F 823 G — 19100 T; 27800 T; 14100 T

GSB2: 0 A 60.96 B 152.4 C — 25000 T; 21800 T; D 396.2 457.2 — 2540 T

GS07: 0 A 121.9 B 182.9 C 274.3 D 335.3 E 457.2 F 548.6 G 701 H 823 I 853.4 J 914.4 K 1250 — 374000 T; 109000 T; 128000 T

GS08: 0 A 91.44 121.9 B 182.9 C 182.9 D 243.8 274.3 E F 609.6 G 701 H I 883.9 914.4 J 1219 — 36.2 JT; 19.3 JT; 22.1 JT

2005

Grab (surface) Sample ID (e.g. G311)
Core (subsurface) Sample ID (e.g. C311)

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14m2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 6 to 6.5 - Inset 2

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Total cPAHs BaPEq (µg/kg)
- 0-250
- 250-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- >20,000
- Not Analyzed

Railroad Bridge

2004

RM 7

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 6.5 to 7

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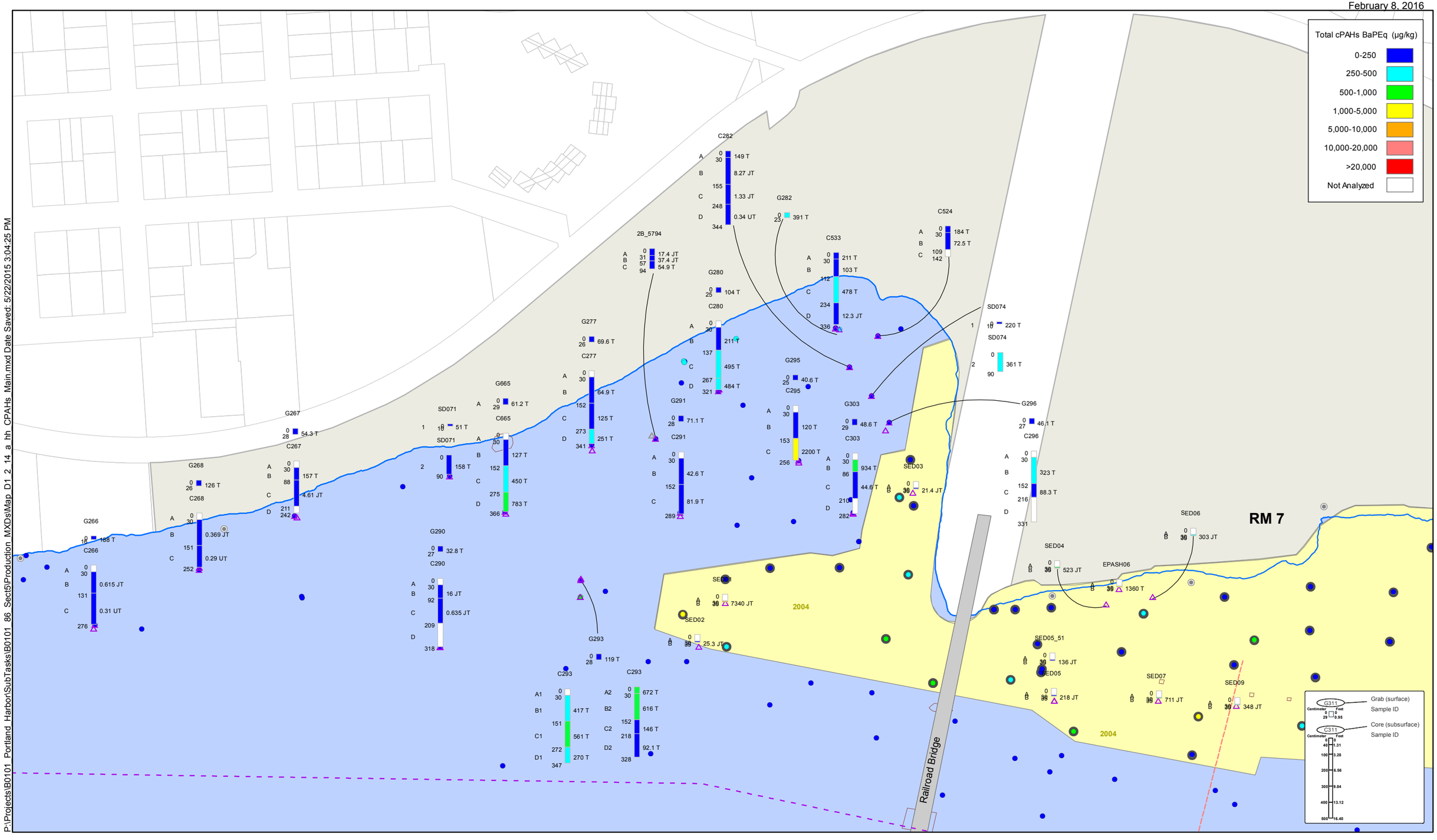


FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 6.5 to 7

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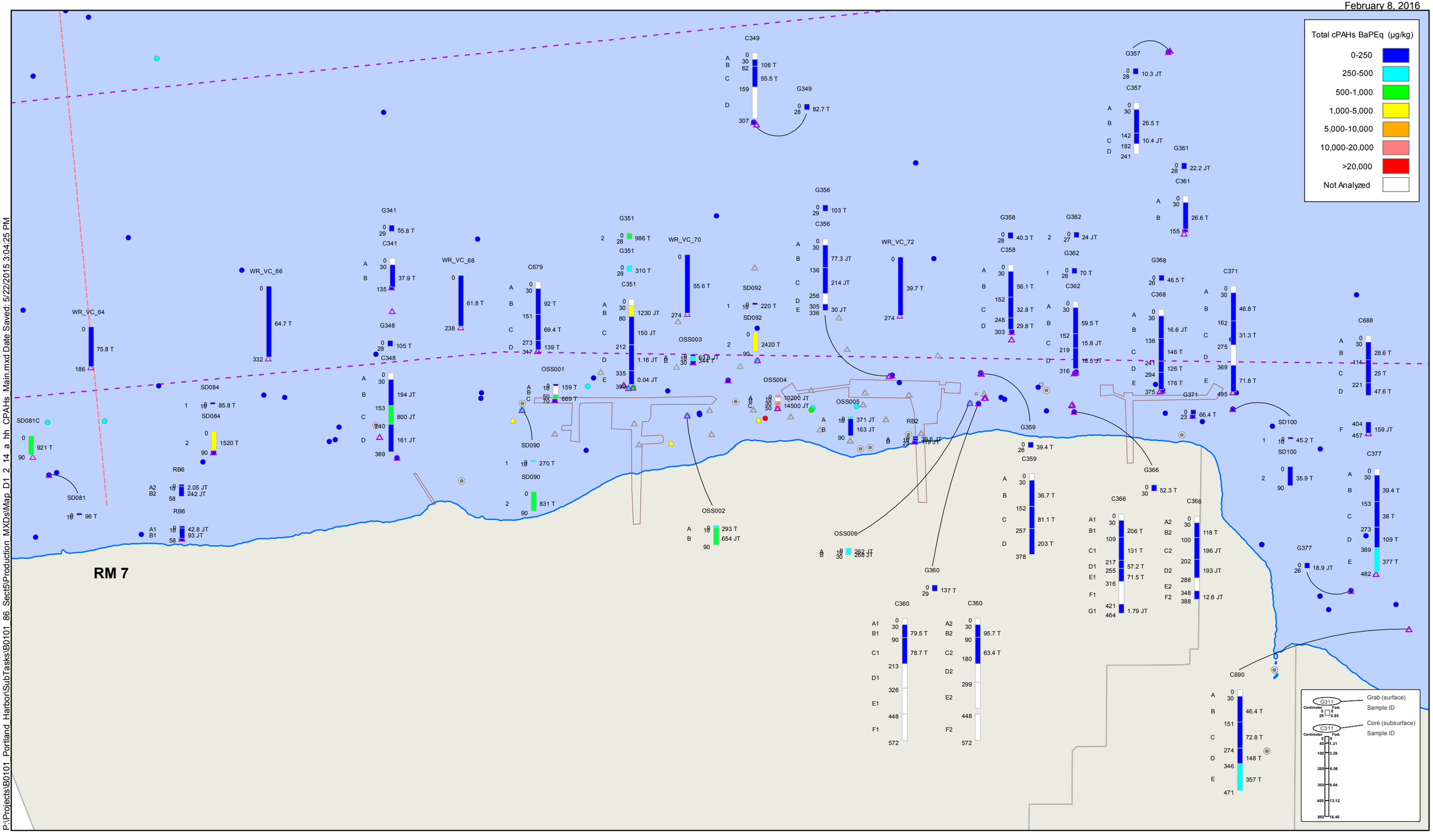


FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

Grab (surface) Sample ID
Core (subsurface) Sample ID

**Map D1.2-14p**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 7 to 7.5

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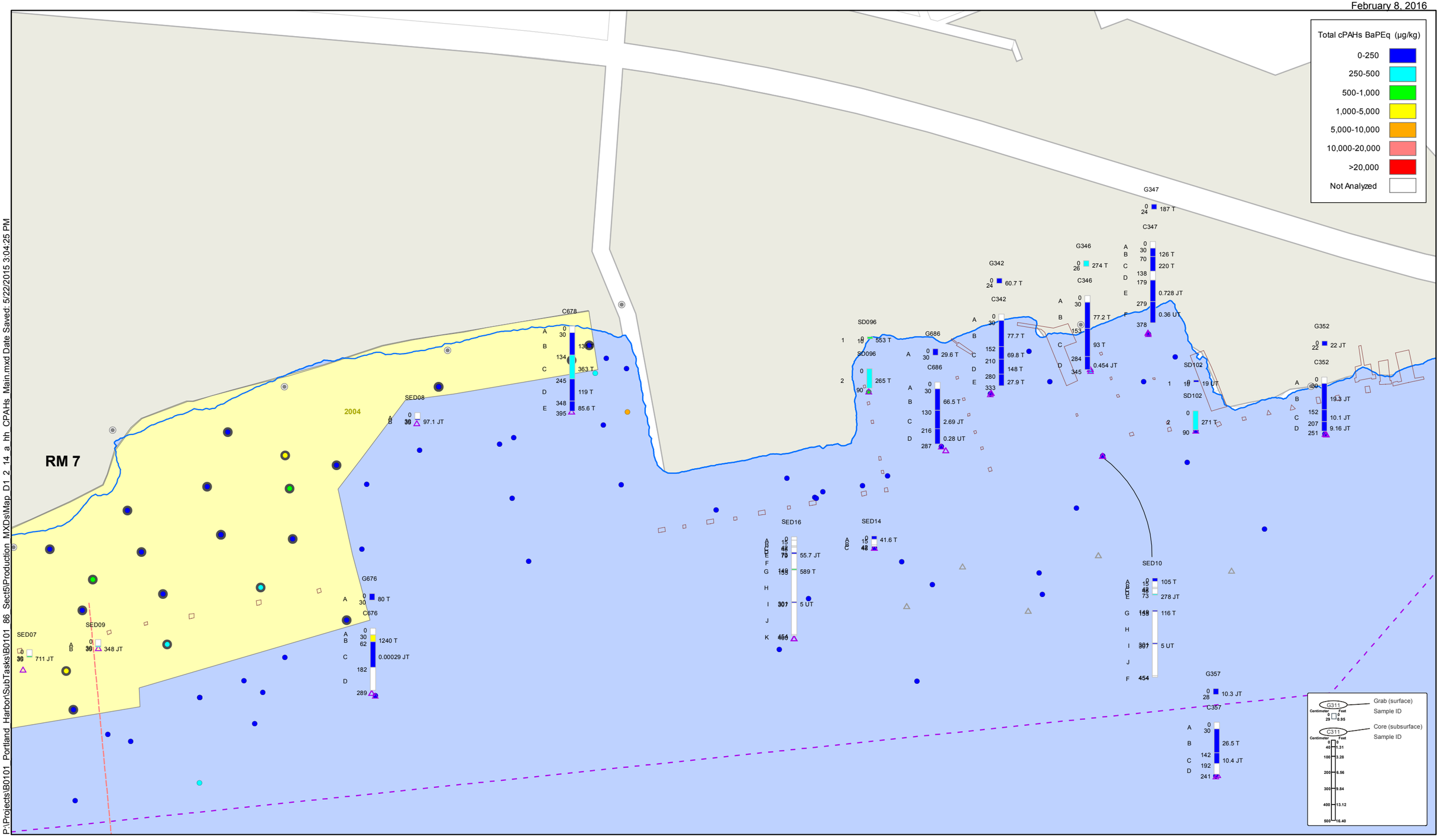


FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

## Map Features

- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14q**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 7 to 7.5

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Total cPAHs BaPEq (µg/kg)
- 0-250
- 250-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- >20,000
- Not Analyzed

RM 8

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14r**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 7.5 to 8

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RM 8

Total cPAHs BaPEq (µg/kg)
- 0-250
- 250-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- >20,000
- Not Analyzed

G347 187 T; C347 126 T, 220 T, 0.728 JT, 0.36 UT
SD102 19 UT, 271 T
G352 22 JT; C352 19.5 JT, 10.1 JT, 9.16 JT
SD106 21 JT, 84.5 T
SD116 20 JT, 2.02 T
WR_VC_31 38.9 T
WR_VC_29 36.1 T
G373 11.8 JT; C373 11.8 JT, 64.6 T, 61 T
SD122 29.7 T, 75.3 T
PSY24 125 T; PSY24C 278 T, 40.9 T
C04_06 126 T
PSY34 50.3 T; PSY34C 51.7 T, 135 T, 140 T
SD125 37.3 T, 199 T
PSY36 32.6 T; PSY36C 28.6 JT, 617 JT, 1820 JT, 10 UT
C702 207 T, 113 T, 42.5 T, 0.28 UT
SD127 30.9 T, 157 T
G386 38.7 T; C386 57.9 T, 0.44 UT
PSY41 35.2 T
G357 10.3 JT; C357 26.5 T, 10.4 JT
PSY39 17.7 T; PSY39C 21.9 T, 10 UT

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14s**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 7.5 to 8

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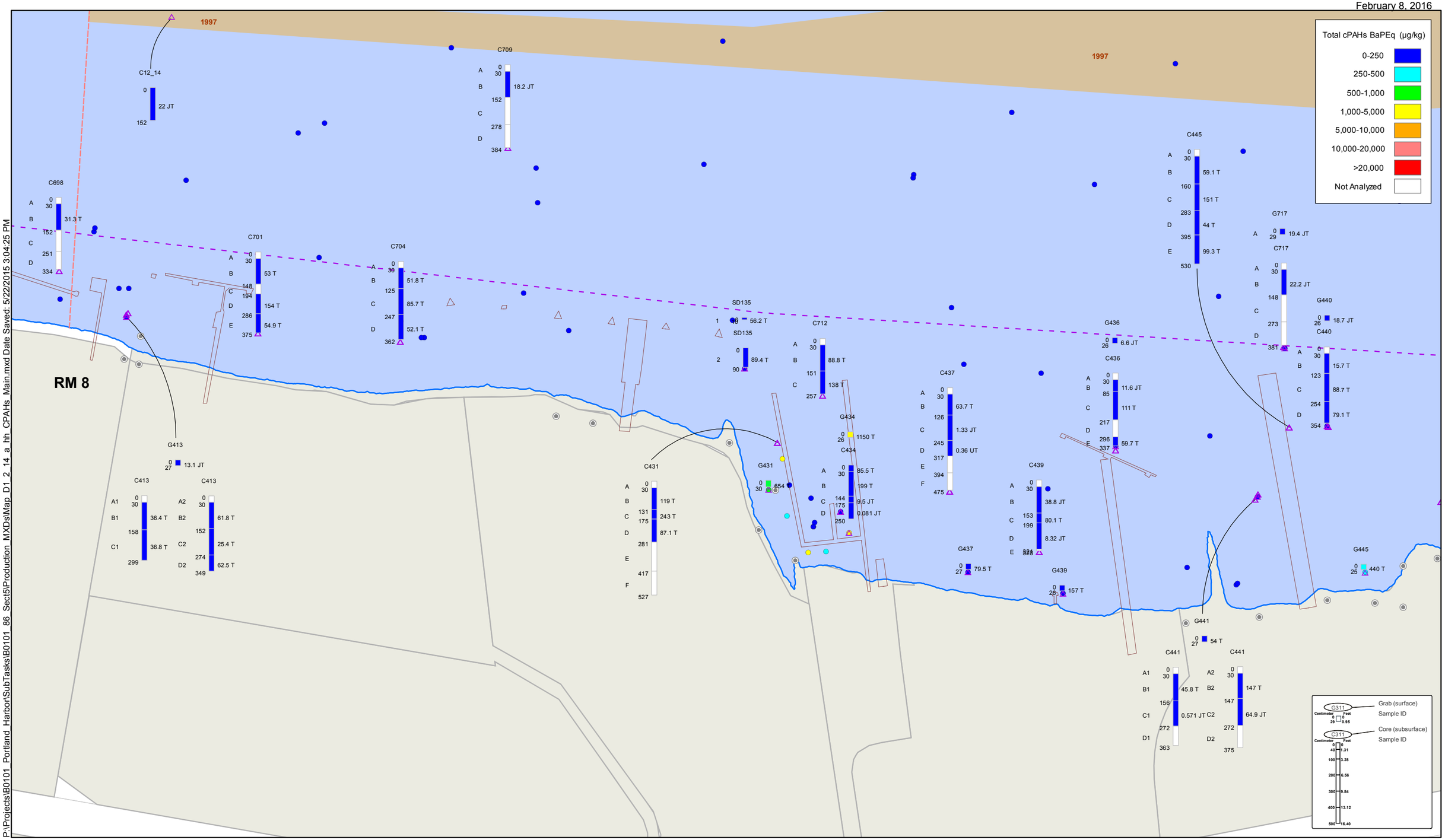


FEATURE SOURCES:
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Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

## Map Features

- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14t**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 8 to 8.5

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Total cPAHs BaPEq (µg/kg)
- 0-250
- 250-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- >20,000
- Not Analyzed

RM 8

1997

1997

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

Grab (surface) Sample ID
Core (subsurface) Sample ID

**Map D1.2-14u**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 8 to 8.5

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Total cPAHs BaPEq (µg/kg)
- 0-250
- 250-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- >20,000
- Not Analyzed

1997

RM 9

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14v**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 8.5 to 9

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Total cPAHs BaPEq (µg/kg)
- 0-250
- 250-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- >20,000
- Not Analyzed

RM 9

SD138 1 18 0 22.2 T
SD138 2 90 0 110 T
C727 A 0 30 B 64.6 T 129
PSY50 18 0 20.6 T
PSY50C A 0 44.9 JT 121 B 23.6 JT 237
SD150 1 18 0 166 T
SD150 2 90 0 40.9 T
G720 A 0 25 12.5 JT
C720 A 0 30 B 44.1 T 152 C 266
C18_20 0 9.28 JT 102
WR_GC_30 A 0 62.9 JT 152
C21_23 0 17.4 JT 152
C30_32 0 4.26 T 213
WR_GC_31 A 0 31.6 JT 152
C33_35 0 14.1 JT 193

1997

G311 Grab (surface) Sample ID
C311 Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

## Map Features

- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

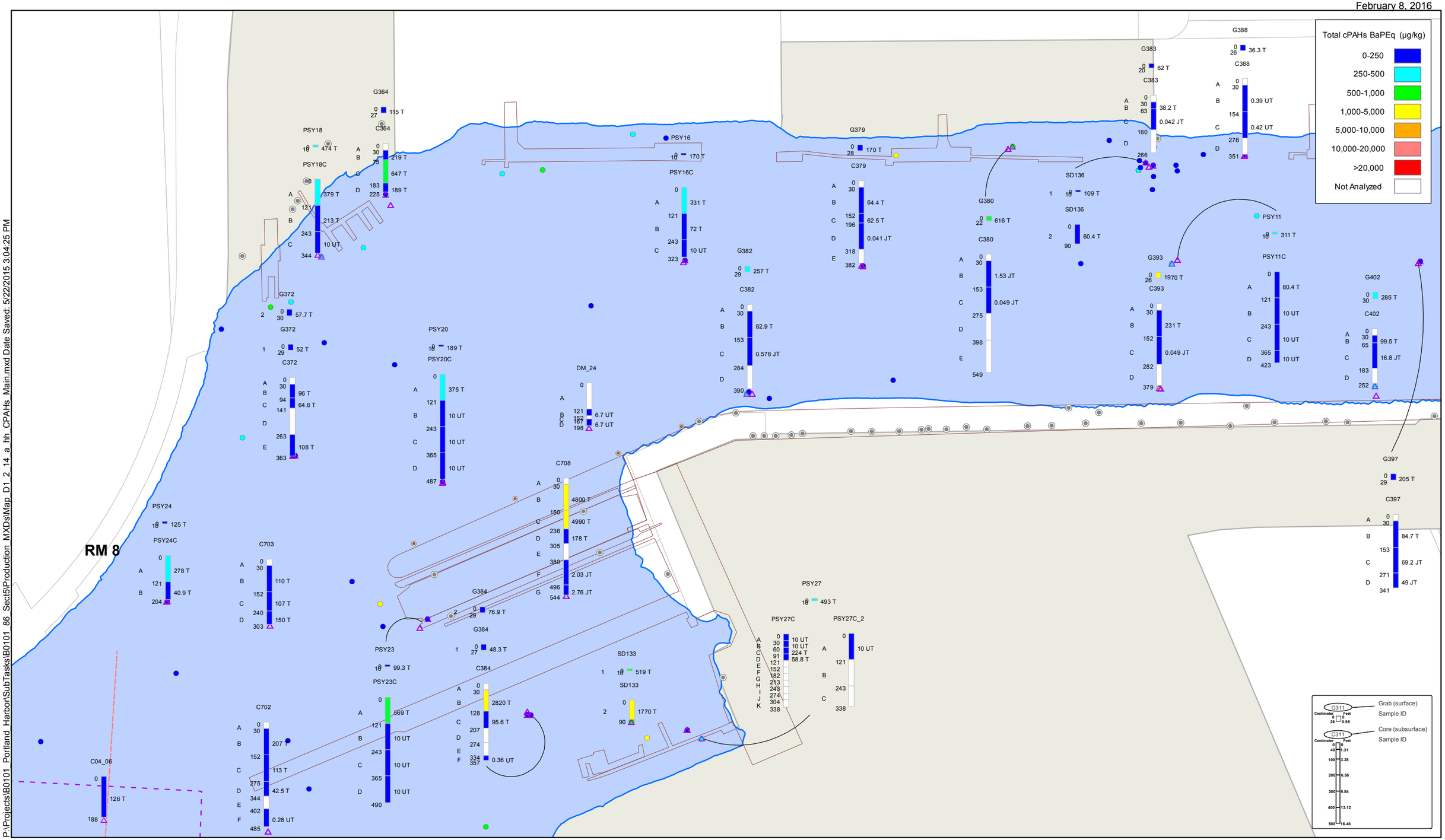
- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14w**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 8.5 to 9




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**

- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

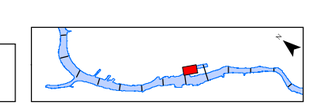
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

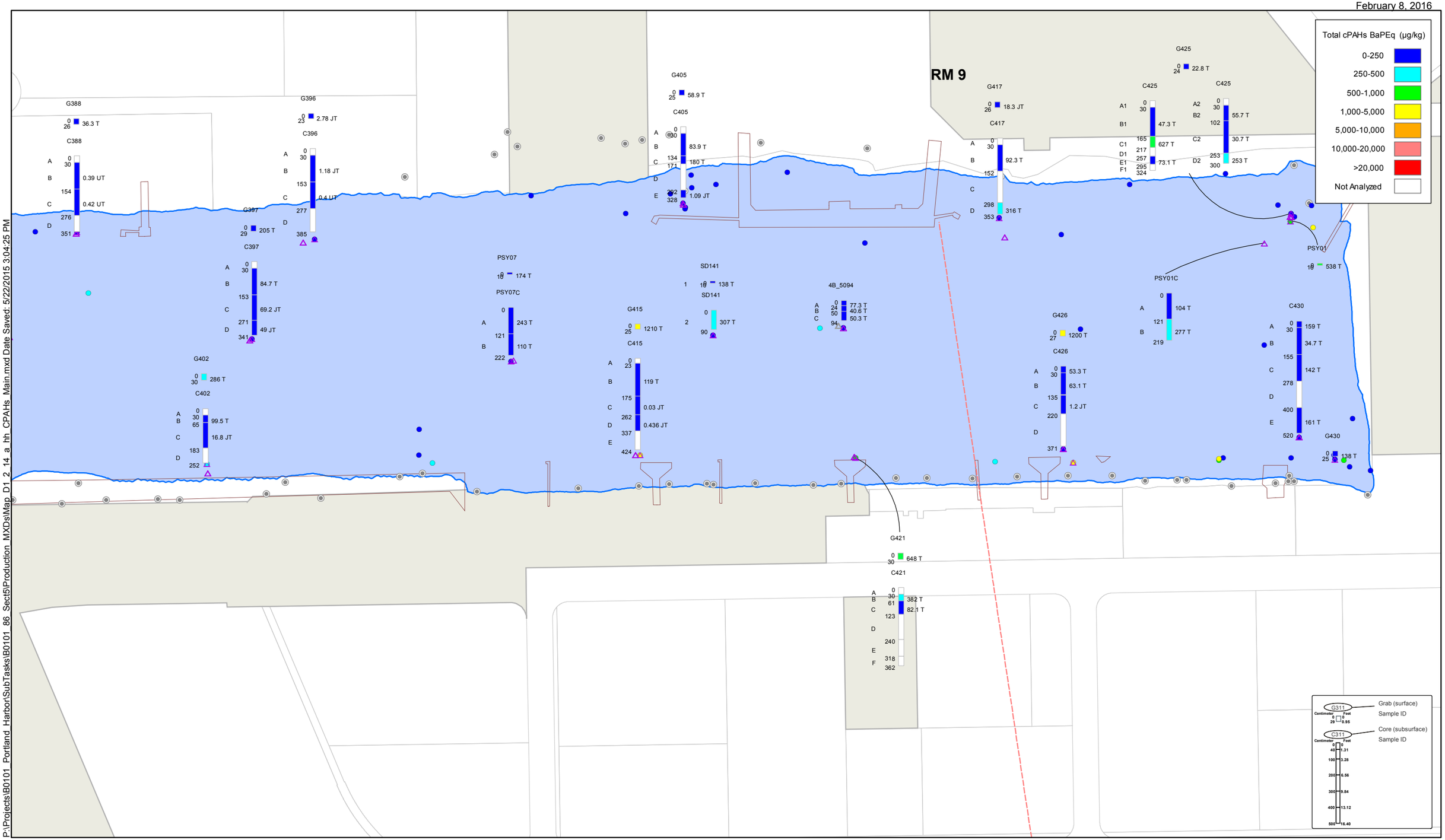
J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected



**Map D1.2-14x**

Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 8 to 8.5 Swan Island Lagoon




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**

- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

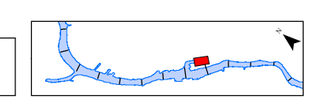
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected



**Map D1.2-14y**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 8.5 to 9 Swan Island Lagoon

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Total cPAHs BaPEq (µg/kg)
- 0-250
- 250-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- >20,000
- Not Analyzed

SD150 0 1 10 166 T
SD150 0 2 90 40.9 T
C733 A 0 30 B 116 38.5 T
G454 0 25 6.91 JT
C454 A 0 30 B 68 26.3 T C 101 68.8 T D 123 T E 237 56.6 T F 274 G 309 360 H 448
WR_VC_33 0 207 34.7 JT
WR_VC_35 0 189 41.8 T
WR_VC_37 0 128 111 T
WR_GC_31 A 0 152 31.6 JT
C33_35 0 193 14.1 JT
C36_38 0 152 11.9 JT
C39_41 0 244 11.1 JT
C42_44 0 274 12.6 JT
WR_VC_04 0 353 1.67 T
RC483 A 0 30 22.3 JT B 61 28 JT C 91 20.5 JT D 122 20.6 JT E 152 22.2 JT F 183 18.8 JT G 213 16.3 JT H 244 26.2 JT I 274 17.9 JT J 305 29.3 JT
1997
G471 0 28 8.51 JT
C471 A 0 30 B 152 7.53 JT C 274 10.3 JT D 364
G474 0 26 18.3 JT
C474 A 0 30 B 152 14.1 JT C 275 9.52 JT D 342
G462 0 27 19.6 JT
C462 A 0 30 B 152 17.3 JT C 275 37.3 T D 330
G461 0 27 23.9 T
C461 A 0 30 B 152 34.6 T C 279 41.5 T D 361
G468 0 28 78.6 T
C468 A 0 30 B 152 18.4 T C 272 24.2 T D 342
SD151 1 10 147 T
SD151 0 2 90 50.4 JT
G477 0 28 352 T
C477 A 0 30 B 123 55.7 T C 208 470 JT
G735 A 0 28 116 T
C735 A 0 30 B 85 24.5 JT C 166 63.3 T D 225 E 354
HA37 A 15.24 64 B 76.2 27.5
HA38 A 15.24 179 B 76.2 127
HA39 A 15.24 610 B 60.96 1230
HA41 A 15.24 145 B 60.96 1100
HA42 A 15.24 1040 B 60.96
HA43 A 15.24 690 B 76.2 16800

RM 9

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

## Map Features
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14z**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 9 to 9.5

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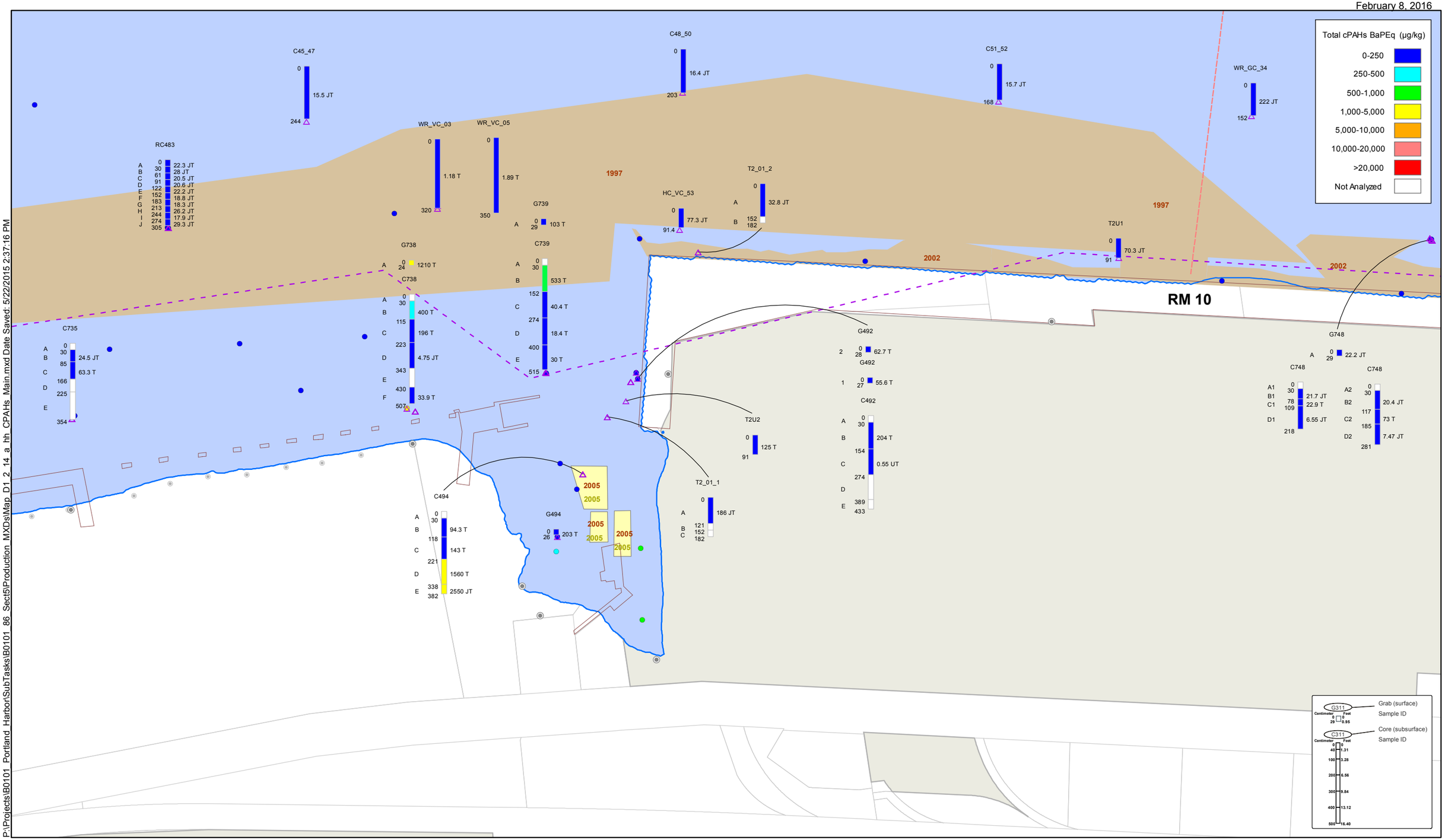


FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

## Map Features

- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14aa**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 9.5 to 10

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Total cPAHs BaPEq (µg/kg)
- 0-250
- 250-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- >20,000
- Not Analyzed

RM 10

G742 A 0 28 13.8 JT
C742 A 0 30 B 98.7 T 156 C 36.5 T D 277 294
G743 A 0 22 24.7 T
C743 A 0 30 B 0.807 JT 129 C 175 D 269 T 269
G746 A 0 30 13.9 JT
SD04 A 0 30 84.6 JT B 43.9 JT 60
C746 A 0 30 B 481 T 151 C 240 D 303 0.643 JT
1999
WR_VC_43 0 18.5 JT 271
WR_VC_41 0 15.5 JT 155
WR_VC_45 0 117 T 207
WR_GC_32 0 A 3.21 JT 182
WR_VC_39 0 35 T 125
WR_VC_37 0 111 T 128
WR_VC_35 0 41.8 T 189
C48_50 0 16.4 JT 203

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14bb**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 9.5 to 10

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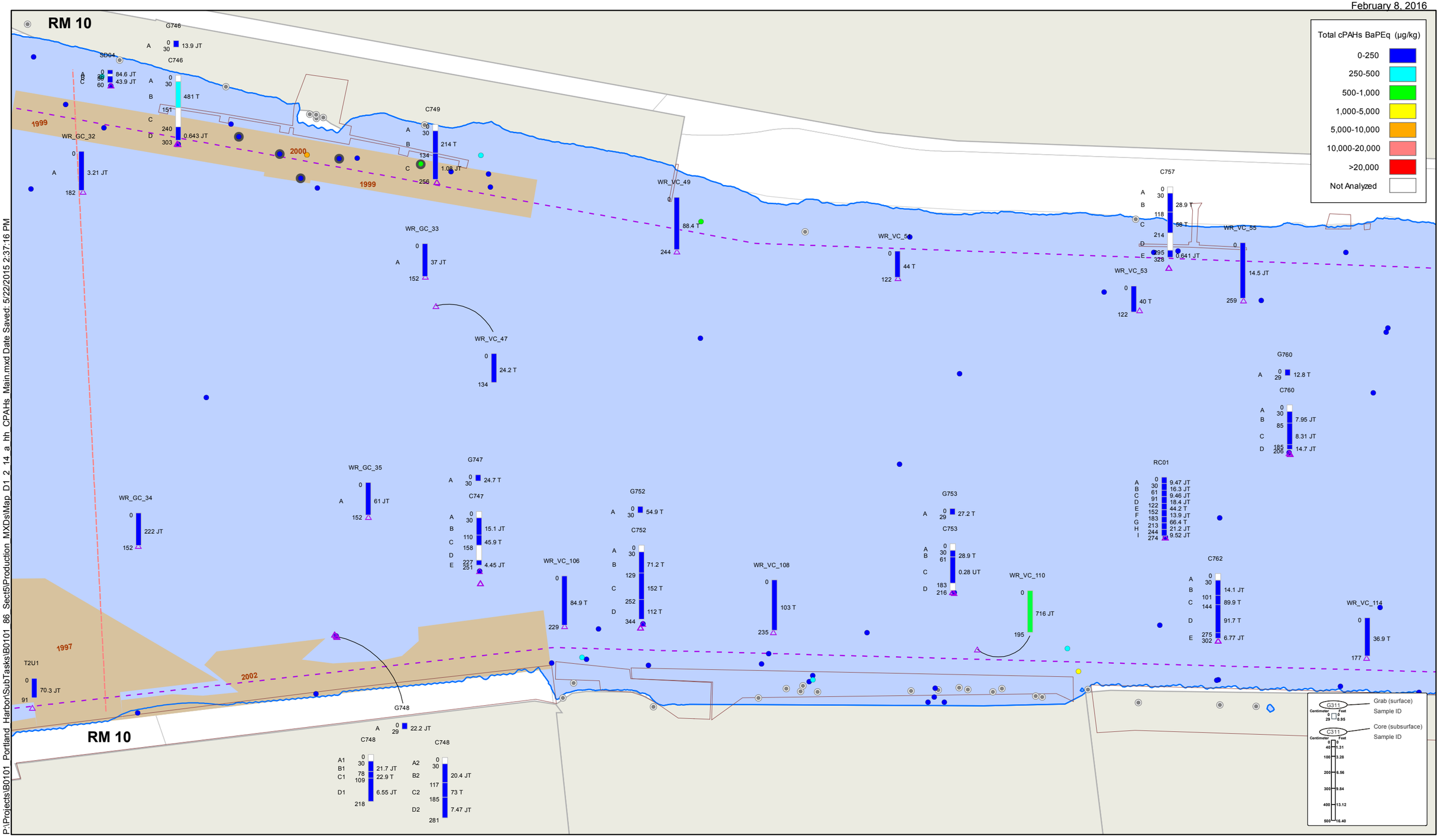


FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

## Map Features

- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14cc**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 10 to 10.5

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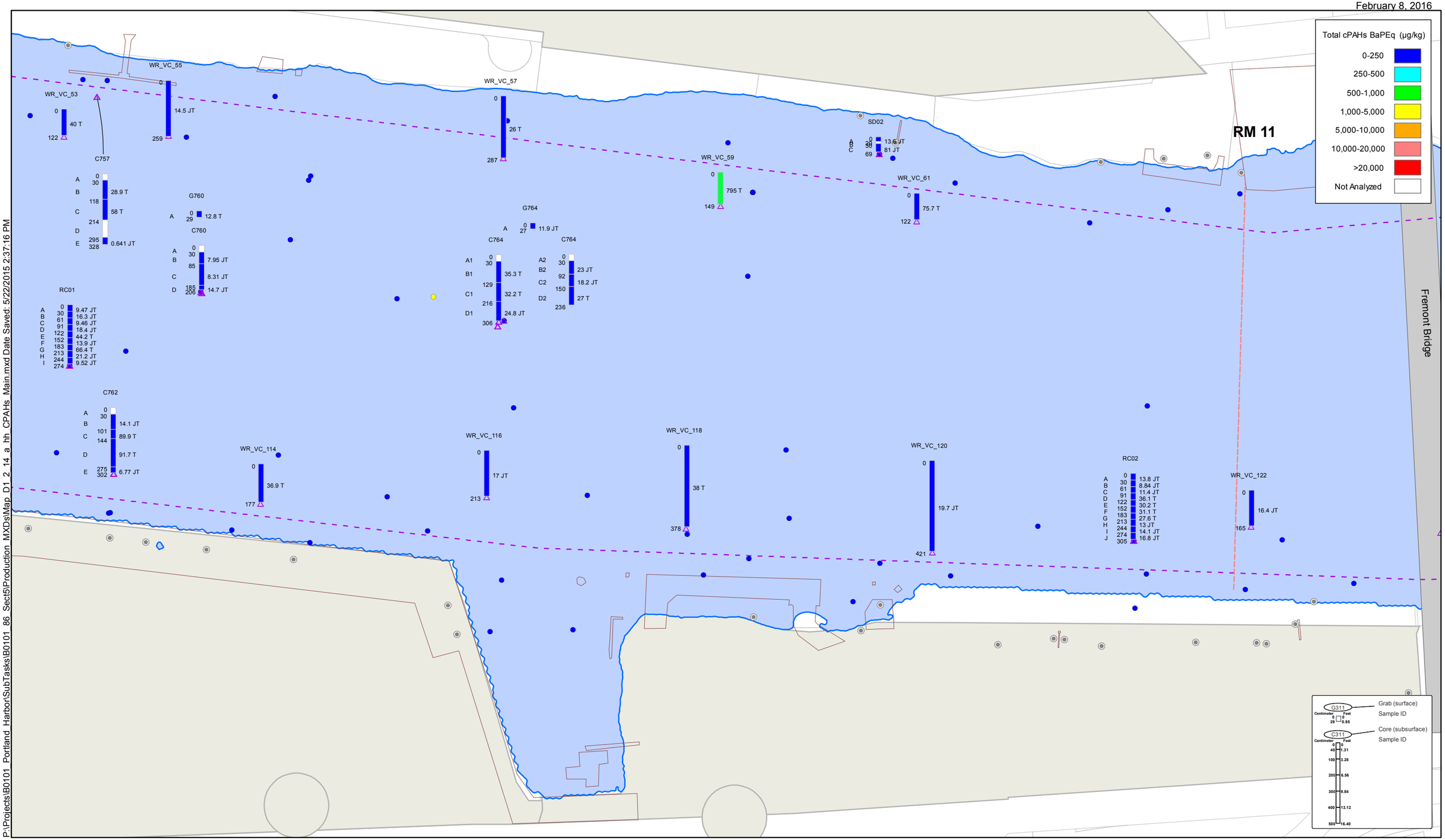


N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14dd**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 10.5 to 11

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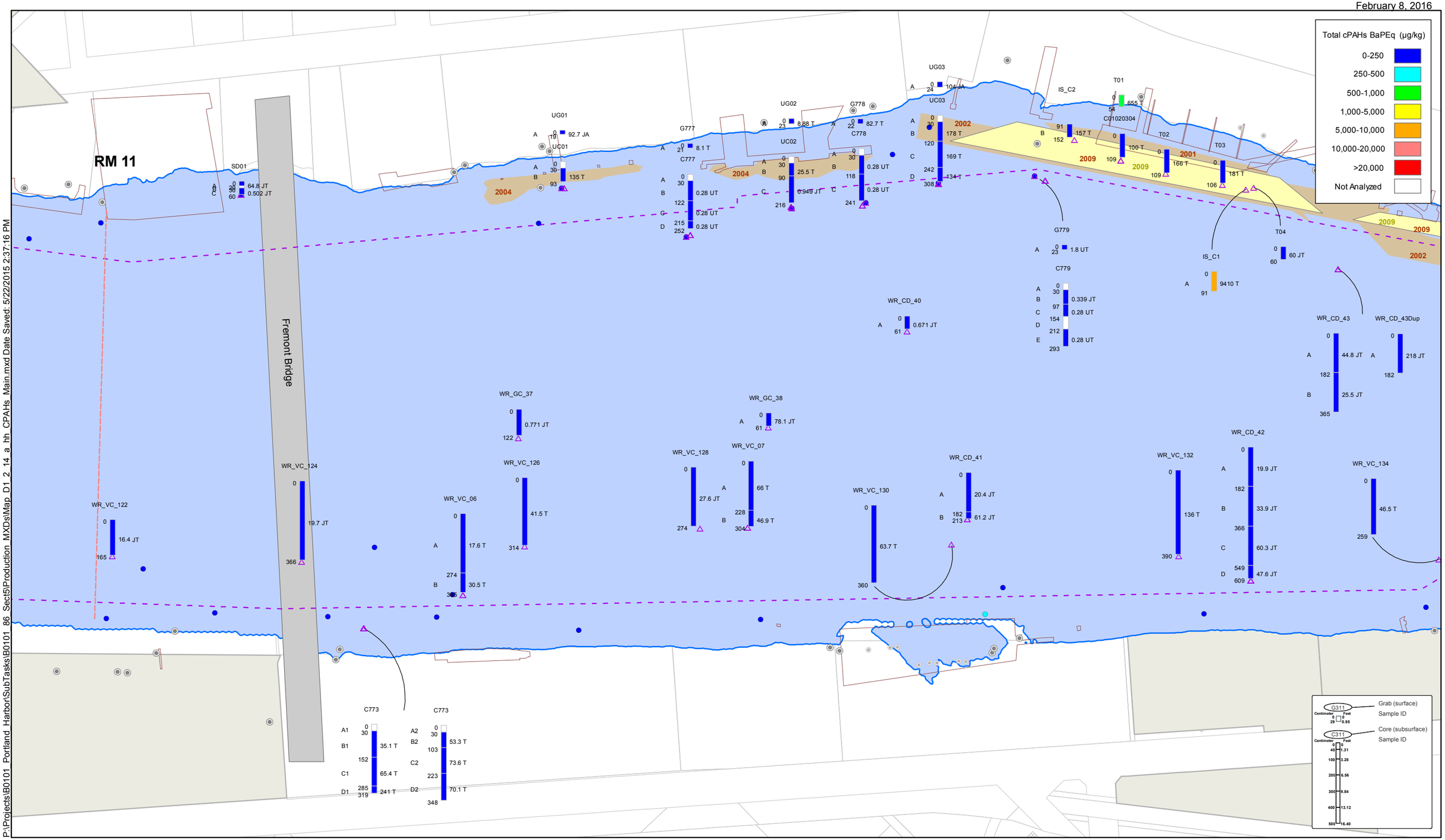



N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

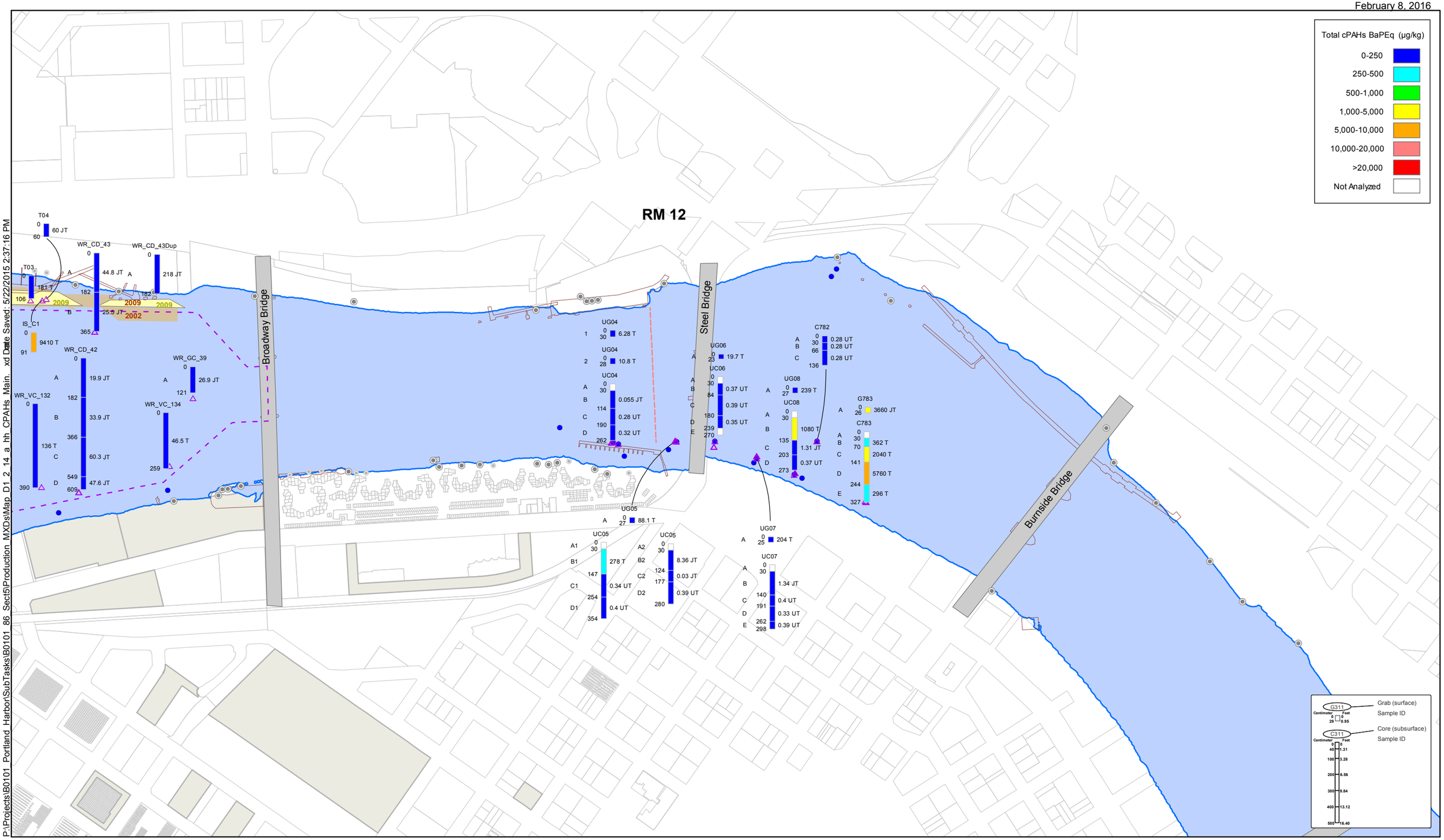
- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

A = Summed value based on limited number of analytes
J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14ee**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 11 to 11.5

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**

- River Miles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

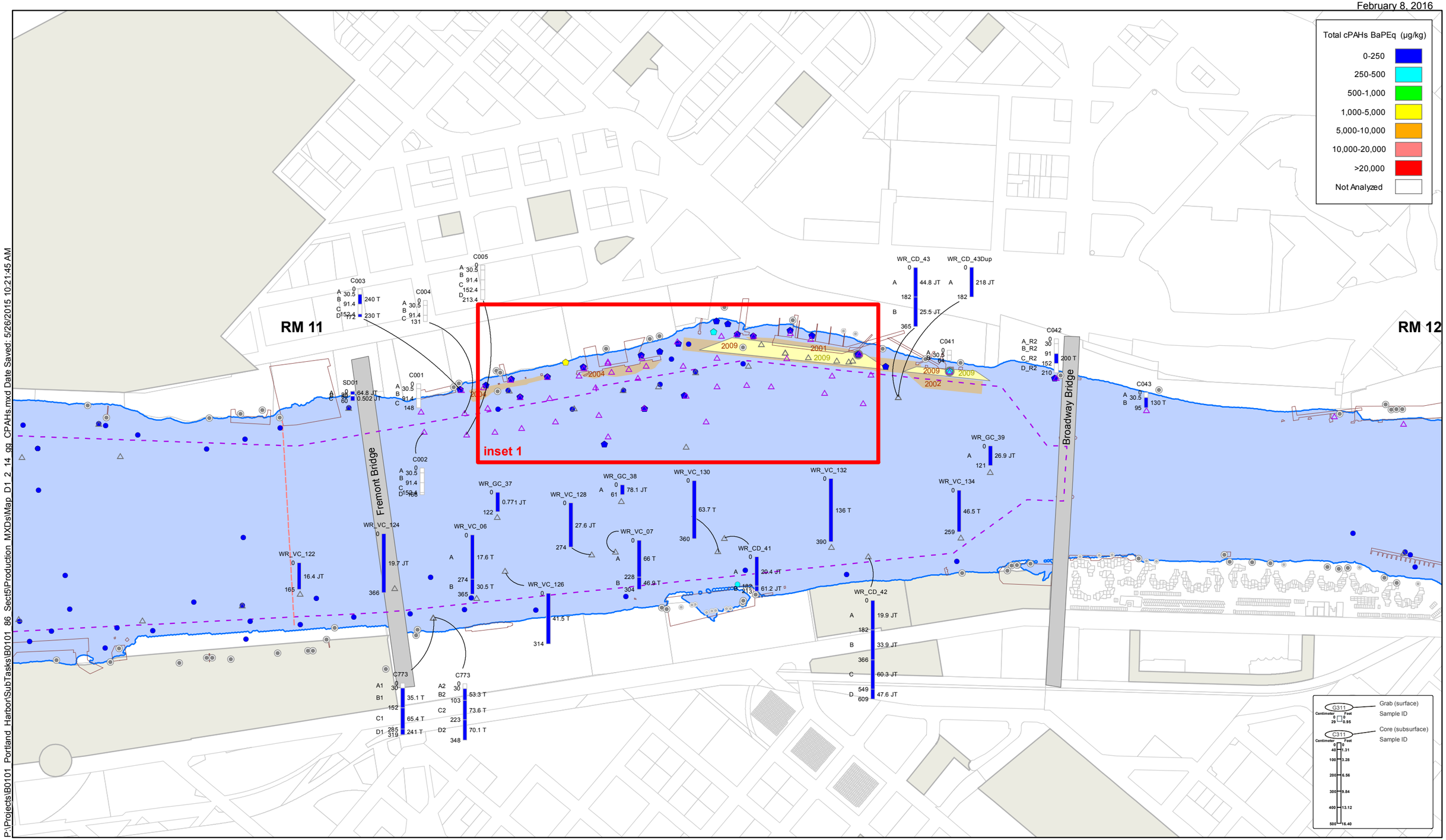
- Surface Chemistry
- Core Locations Analyzed for CPAHs
- Core Locations Not Analyzed for CPAHs
- Capping Areas
- Dredging Areas
- Future Dredging Areas

- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

J = Estimated value
T = Result derived or selected from >1 reported value
U = Analyte was analyzed for but not detected

**Map D1.2-14ff**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 11.5 to 12.5

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-14gg**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 11.0 - 11.8

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Total cPAHs BaPEq (µg/kg)
- 0-250
- 250-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- >20,000
- Not Analyzed

GNZCOMP2003 · G778 · C778 · C023 · C019 · C026 · C029 · T01 · C01020304 · C033 · C048 · UG03 · UC03 · C047 · C032 · C009 · C010 · GNCOMP2003 · GNVC03 · C012 · C015 · GNVC01 · C022 · C025 · IS_C2 · C035 · C038 · UG01 · UC01 · T03 · T02 · T04 · G779 · C779 · IS_C1 · C039 · C006 · C020 · C016 · UG02 · UC02 · G777 · C777 · C007 · C013 · C011 · C008 · C014 · C017 · C018 · C021 · C024 · C027 · C028 · C031 · C034 · C036 · C037 · C040 · WR_CD_40

2009 · 2001 · 2004 · 2002

Fremont Bridge

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

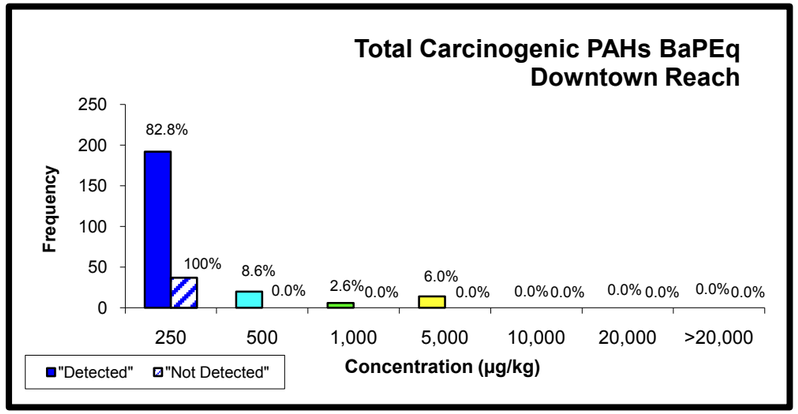
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

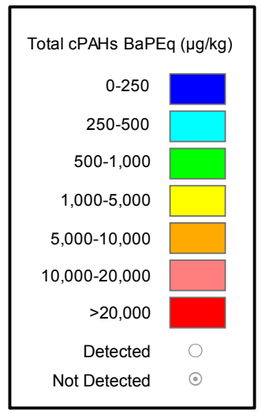
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

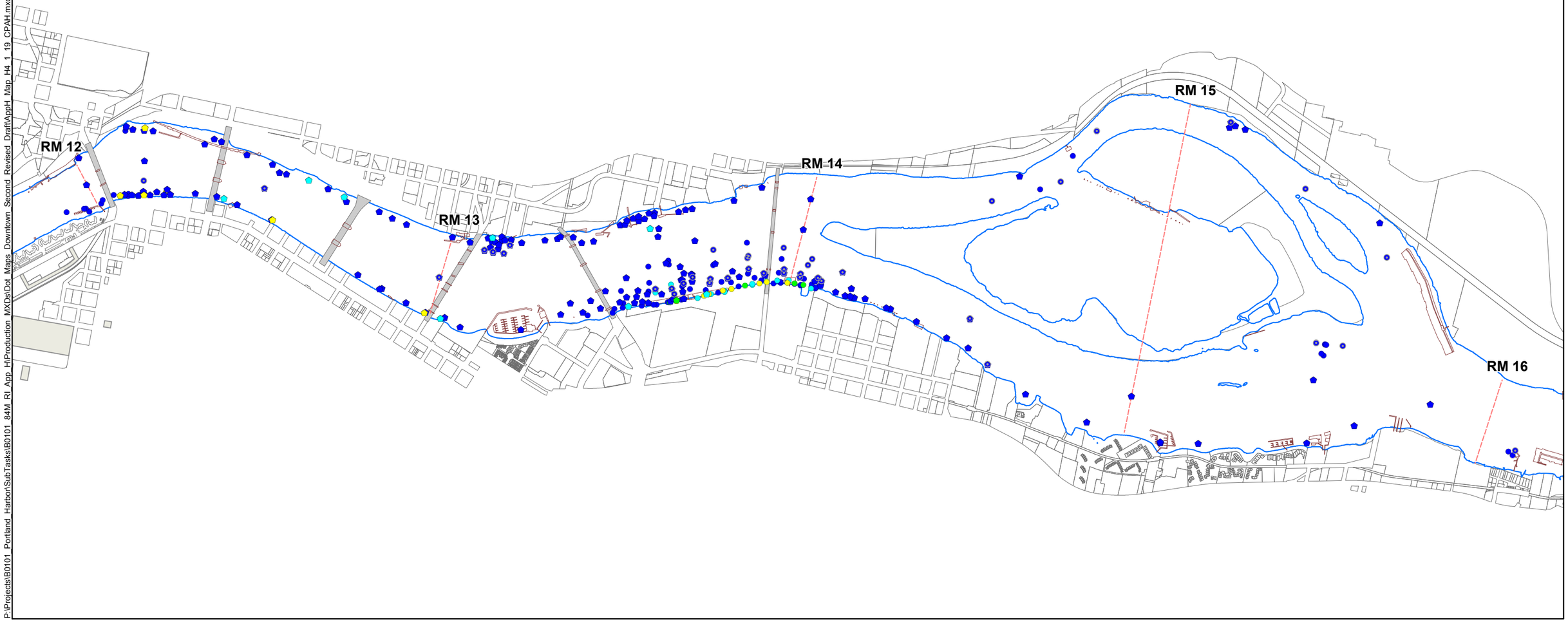
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-14hh**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)

River Mile 11.0 - 11.8 - Inset 1

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

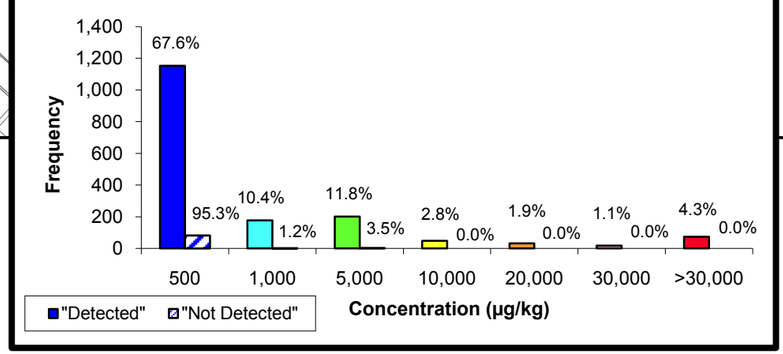
- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-15**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Total Carcinogenic PAHs BaPEq (µg/kg)
Downtown Reach

P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_84M_RI_App_H\Production_MXDs\Dot_Maps_Second_Revised_Draft\AppH_Map_H3_1_39_Surface_Sed_LPAHs.mxd - 6/17/2011 @ 2:24:48 PM

RM 1
RM 2
RM 3
RM 4
RM 5
RM 6
RM 7
RM 8
RM 8
RM 9
RM 10
RM 11
RM 12

**Total Low Molecular Weight PAHs**




Total LPAHs (µg/kg)

- 0-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- 20,000-30,000
- > 30,000
- Detected
- Not Detected

N

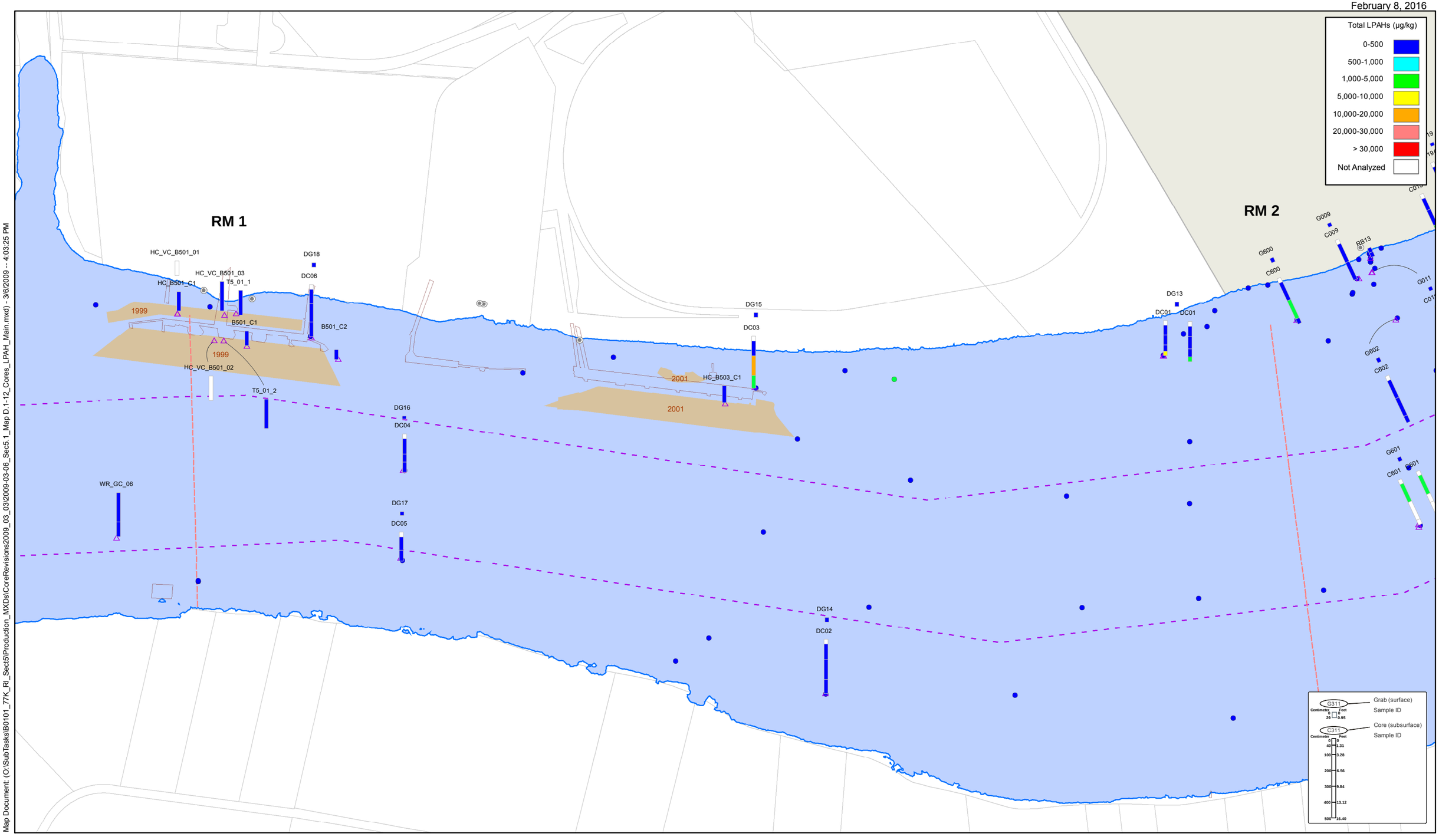
0 1,000 2,000 3,000 4,000 5,000 Feet

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-16**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-12_Cores_LPAH_Main.mxd) - 3/6/2009 -- 4:03:25 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

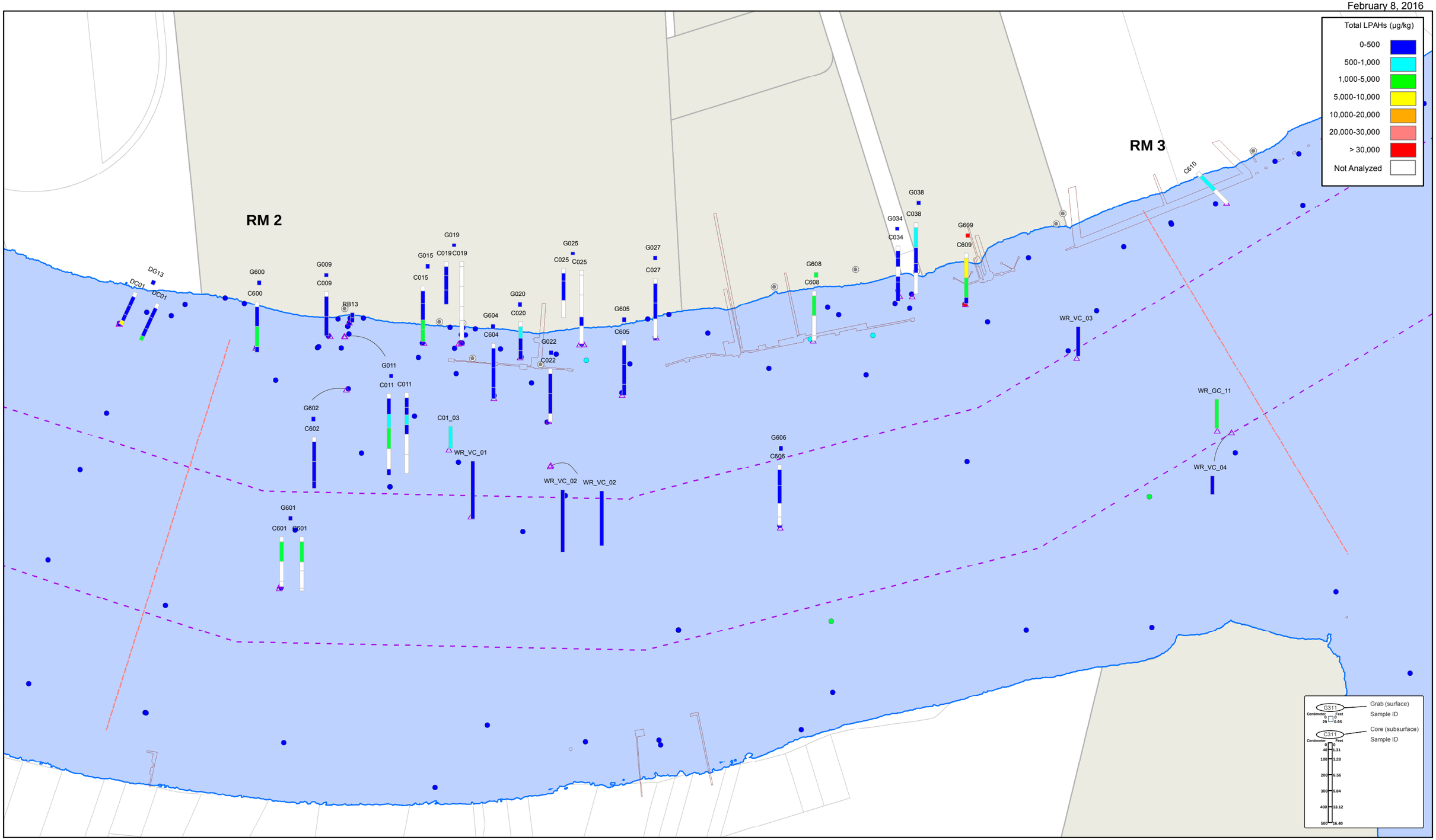
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-17a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)

River Mile 01 to 02

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

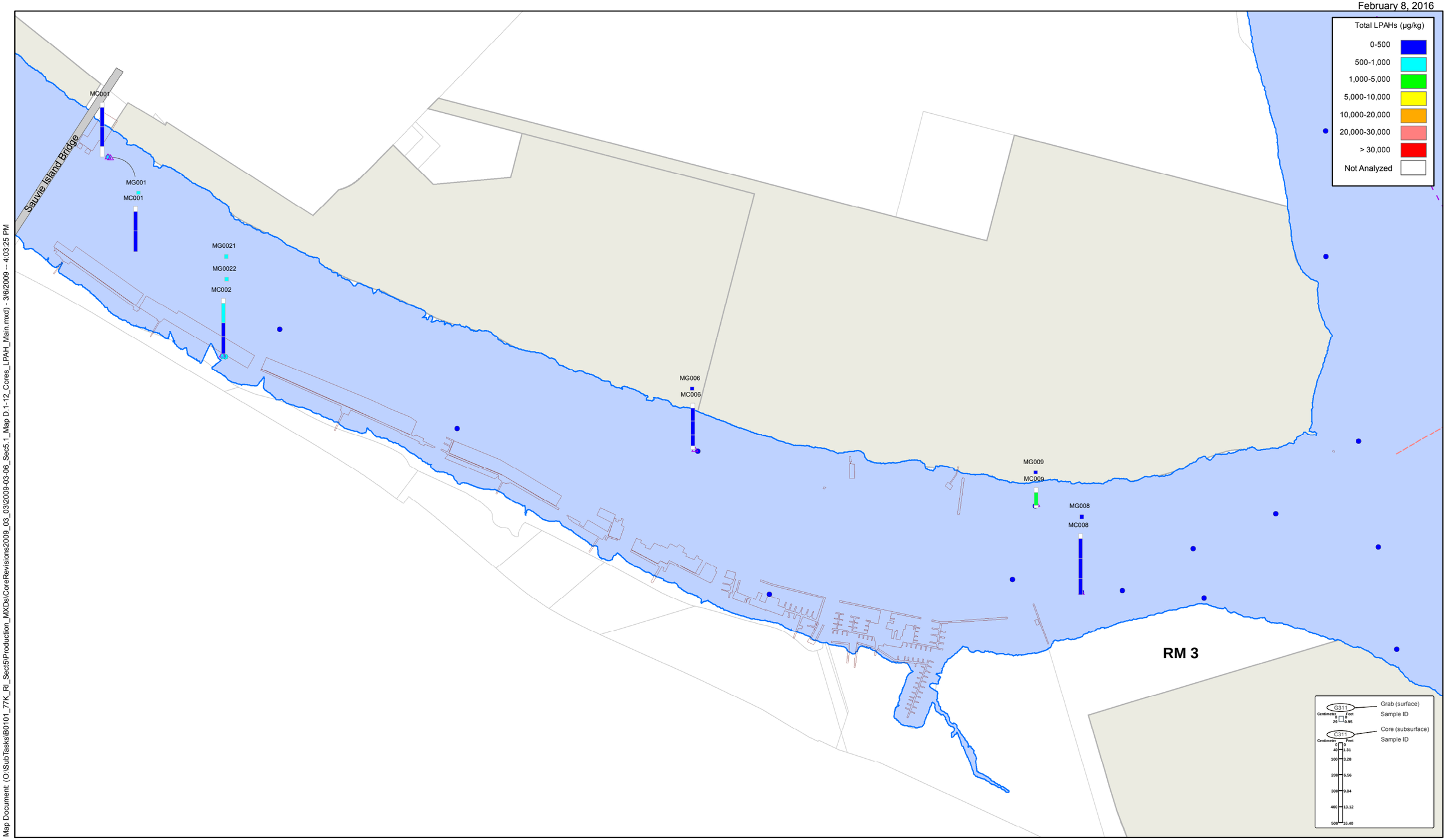
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-17b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)

River Mile 02 to 03

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-17c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)

River Mile 03 - Multnomah Channel

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-12_Cores_LPAH_Main.mxd) - 3/6/2009 -- 4:03:25 PM

RM 3

RM 4

Total LPAHs (µg/kg)
- 0-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- 20,000-30,000
- > 30,000
- Not Analyzed

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-17d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)

River Mile 03 to 04

Map Document: (O:\SubTask\tB0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-12_Cores_LPAH_Main.mxd) - 3/6/2009 -- 4:03:25 PM

Total LPAHs (µg/kg)
- 0-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- 20,000-30,000
- > 30,000
- Not Analyzed

RM 4

RM 5

Inset 1

Inset 2

Grab (surface) Sample ID

Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-17e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)

River Mile 04 to 05 - Slips

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-12_Cores_LPAH_Insets.mxd) - 3/6/2009 -- 4:32:46 PM

Total LPAHs (µg/kg)
- 0-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- 20,000-30,000
- > 30,000
- Not Analyzed

T4_VC24, T4PI02, HC_S_11, HC_S_11, T4B41106, T4PI042, T4PI032, T4S301, T4PI01, T4B41104, T4B41103, T4PI03, T4PI04, T4_VC29, HC_S_07, HC_S_07, T4S302, T4_PS33, HC_S_18, HC_S_18, T4PI07, HC_S_13, HC_S_13, T4B41102, T4S303, T4B41101, T4S304, SD031, SD031, 2005, HC_S_22, HC_S_22, T4S308, T4S305, T4_VC03, T4PI08, T4_PS28, T4_VC28, T4_VC23, HC_S_32, HC_S_32, T4_3, T4S306, 1997, 2008, T4MD01, T4_VC32, T4_PS32, T4COMP, T4_VC_02, T4S307, T4_VC27, T4_2, 2005, T4_VC22, HC_S_27, HC_S_27, T4_UP10, T4_VC25, T4_UP09, 2008, T4_1, T4_VC26, T4_VC26, T4MD02, T4_PS22, 2008, 2002, T4_VC_01

G311 — Grab (surface) Sample ID
C311 — Core (subsurface) Sample ID

| Centimeter | Feet |
|---|---|
| 0 | 0 |
| 40 | 1.31 |
| 100 | 3.28 |
| 200 | 6.56 |
| 300 | 9.84 |
| 400 | 13.12 |
| 500 | 16.40 |

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 120 240 480 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

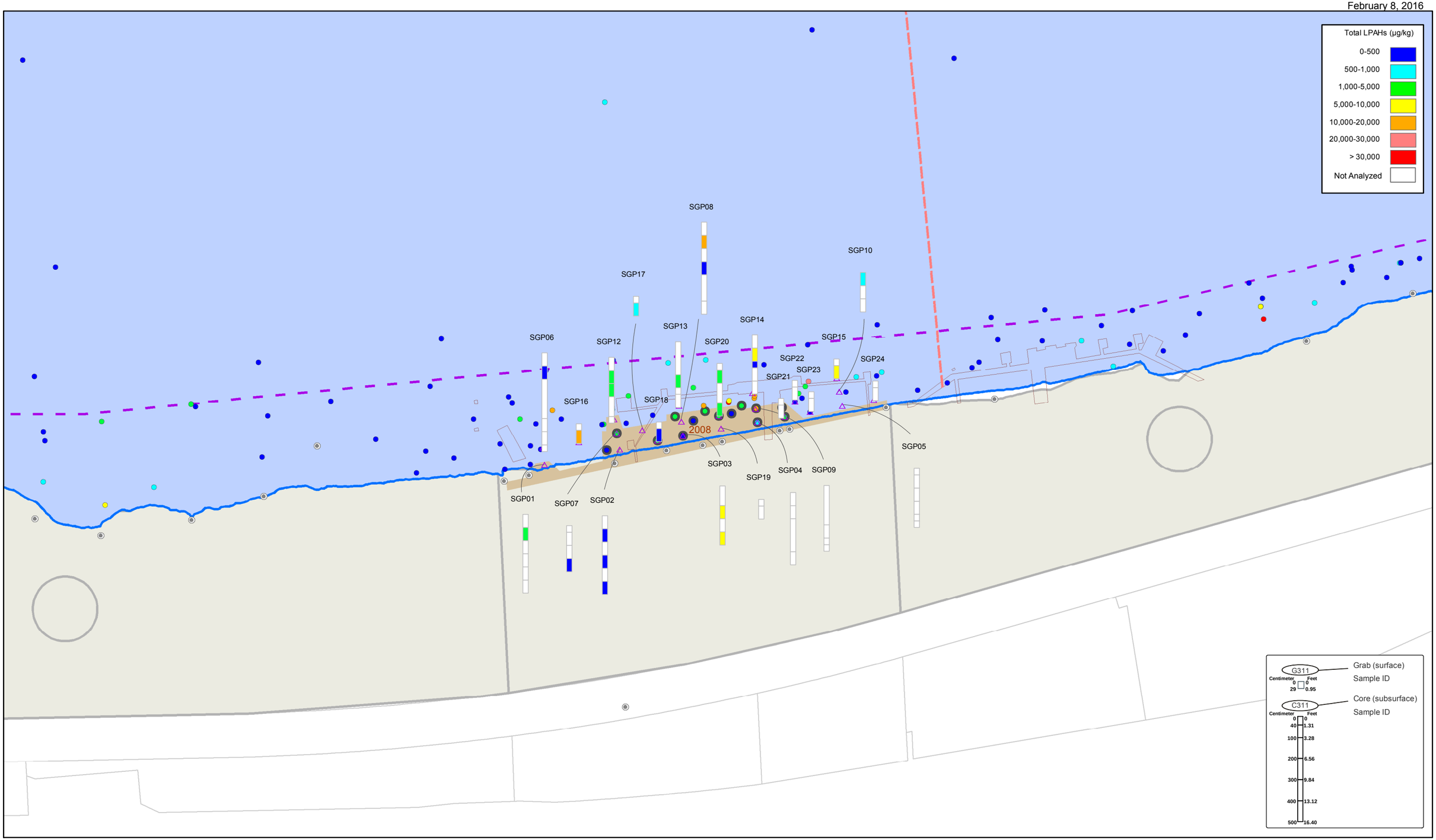
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-17e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)
River Mile 04 to 05 - Slips - Inset 1

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-12_Cores_LPAH_Insets.mxd) - 3/6/2009 -- 4:32:46 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

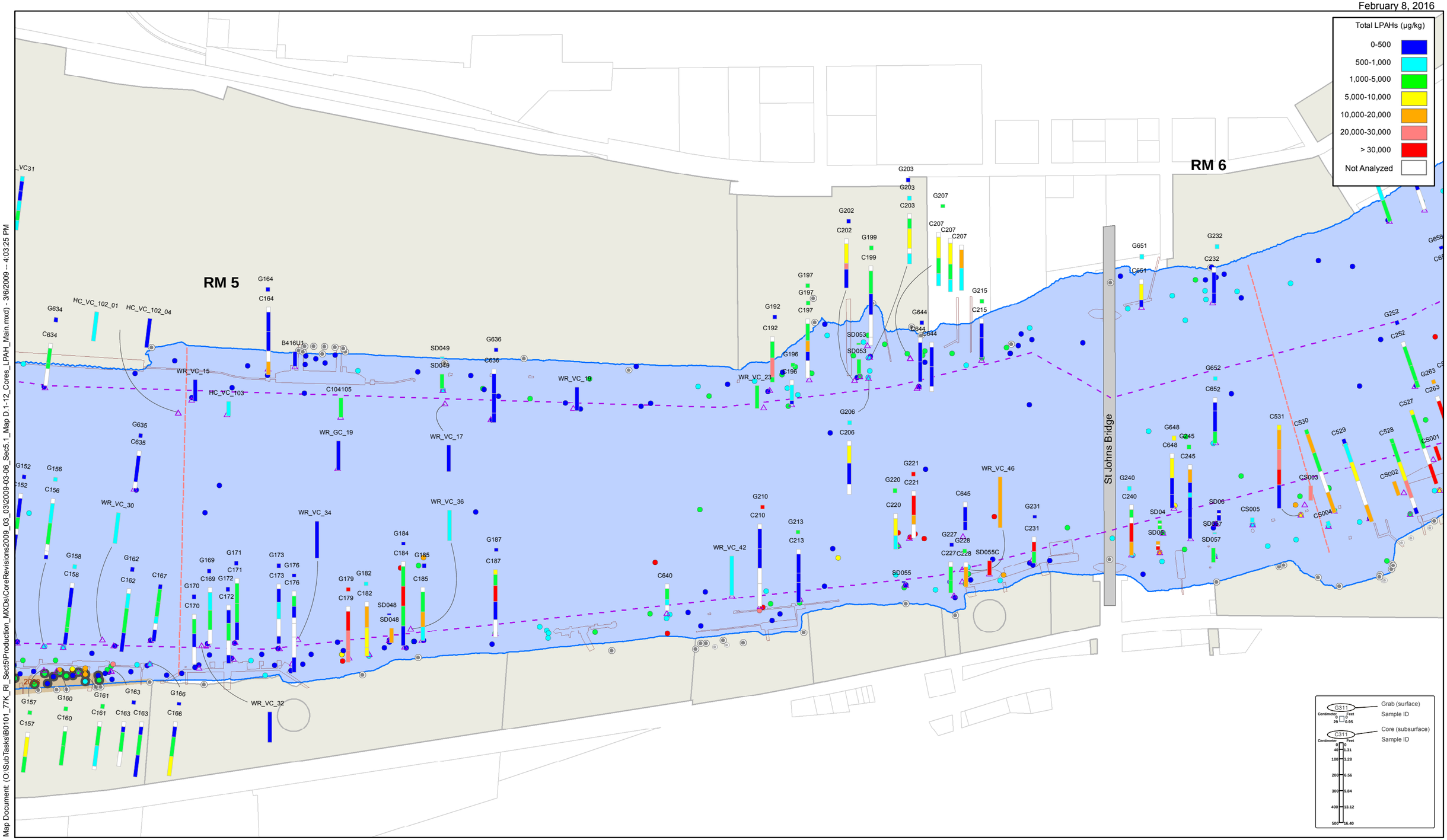
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-17e2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)

River Mile 04 to 05 - Slips - Inset 2

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

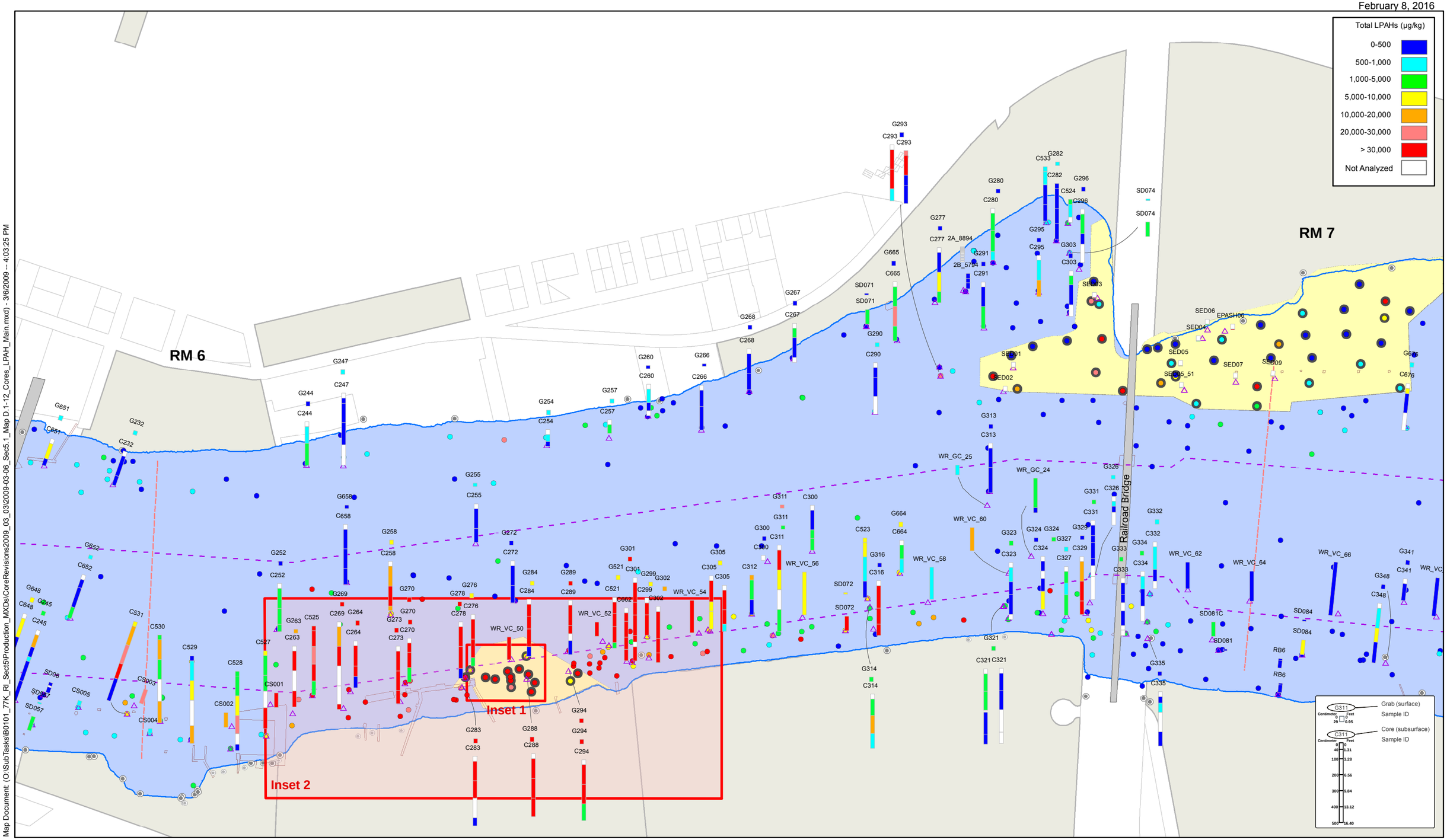
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-17f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)

River Mile 05 to 06

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

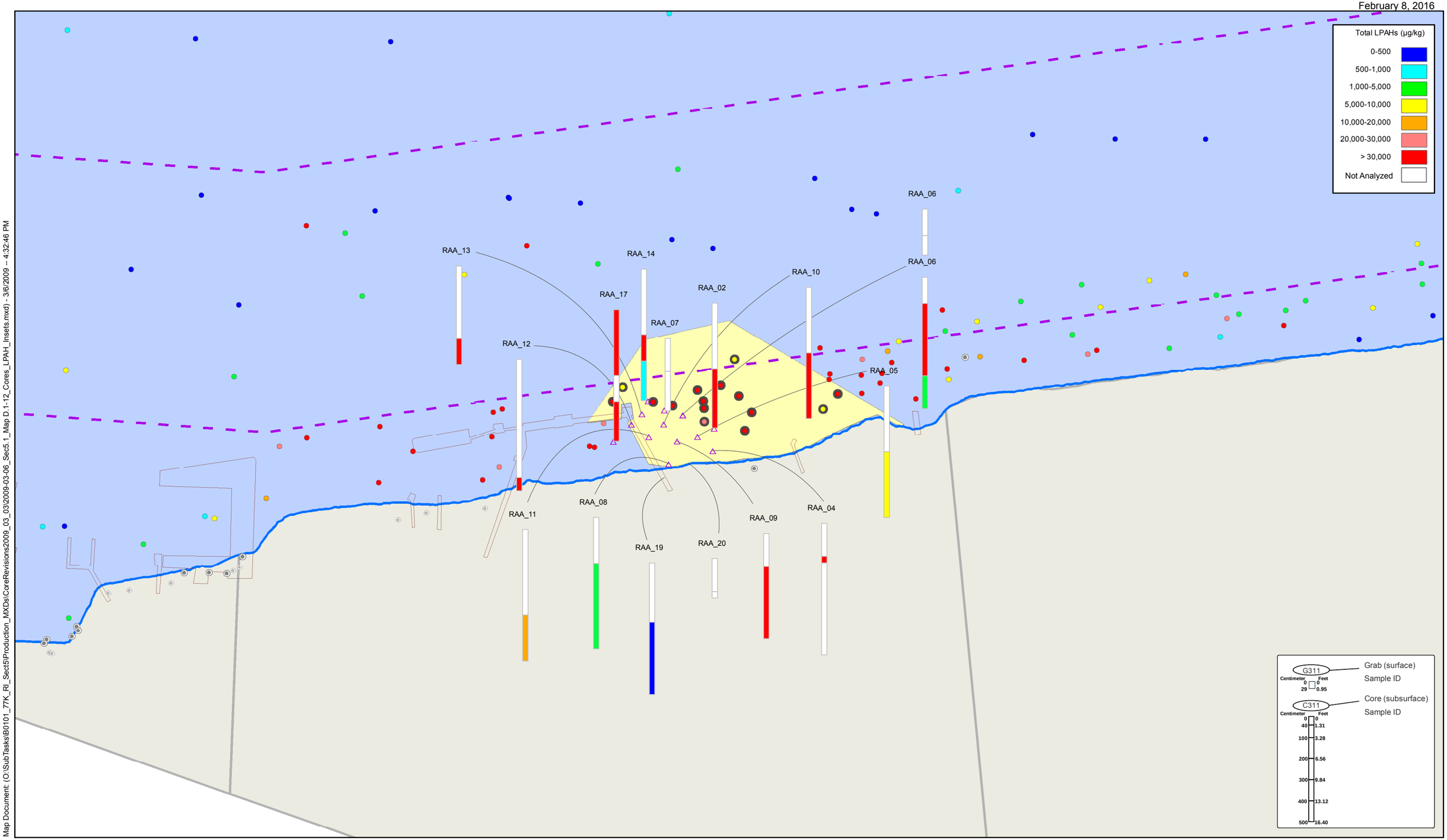
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-17g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)

River Mile 06 to 07

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

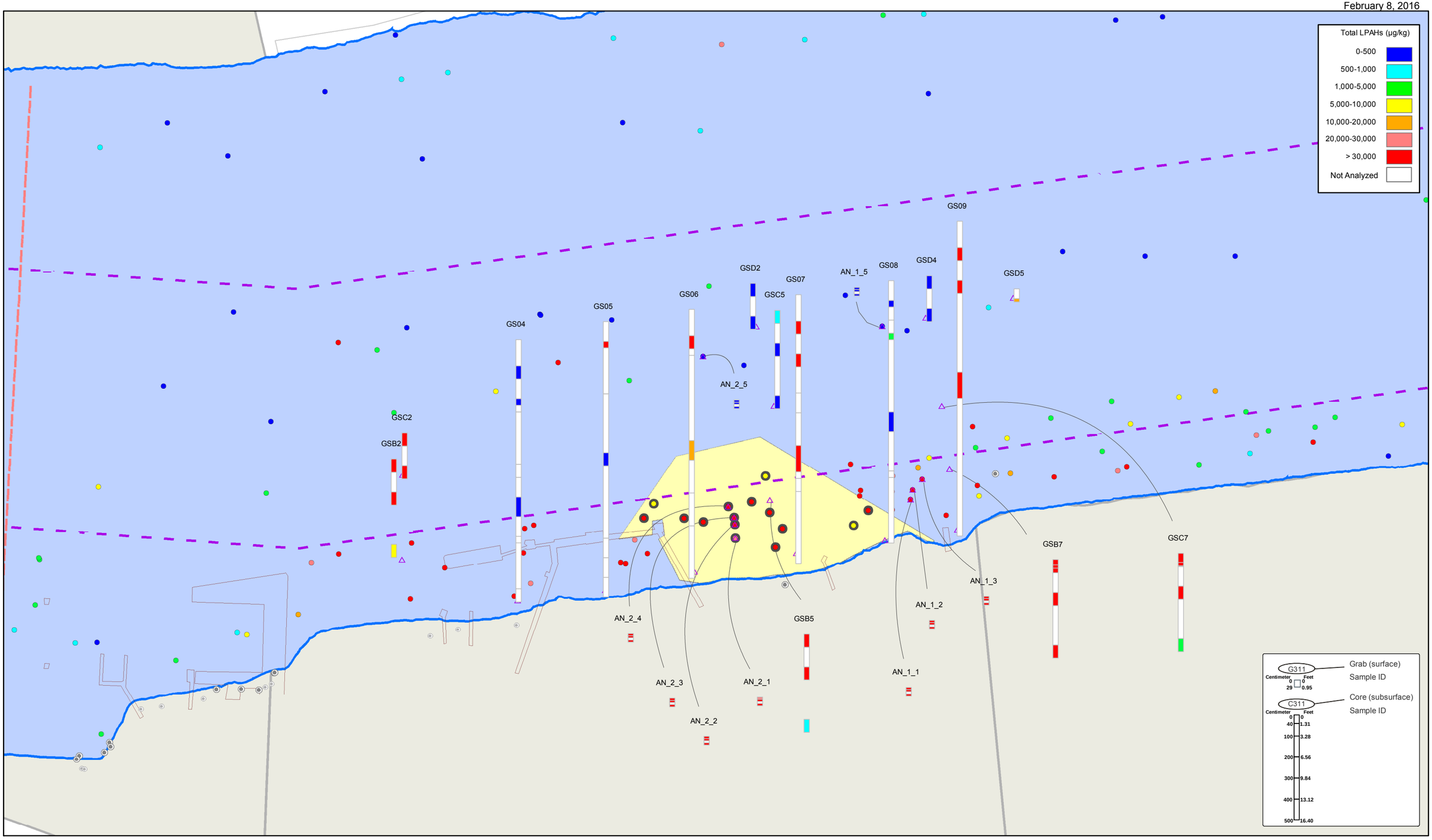
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-17 g1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)

River Mile 06 to 07 - Inset 1

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-12_Cores_LPAH_Insets.mxd) - 3/6/2009 - 4:32:46 PM




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 120 240 480 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-17 g2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)

River Mile 06 to 07 - Inset 2

RM 7

RM 8

Railroad Bridge

Total LPAHs (µg/kg)
- 0-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- 20,000-30,000
- > 30,000
- Not Analyzed

1997
2001
2001

Grab (surface) Sample ID
Core (subsurface) Sample ID

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-12_Cores_LPAH_Main.mxd) - 3/6/2009 -- 4:03:25 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

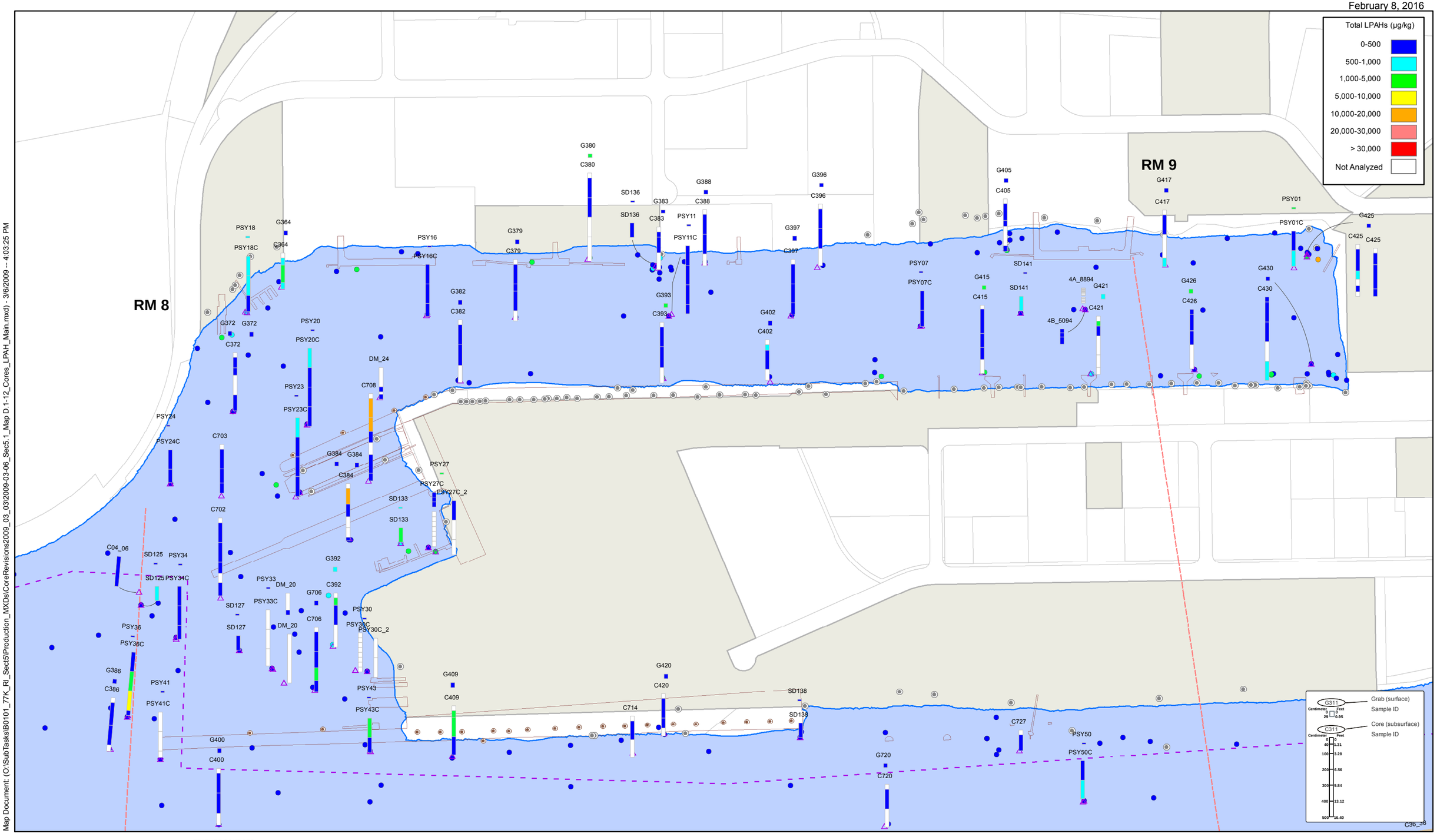
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-17h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)

River Mile 07 to 08

Map Document: (O:\SubTasks\B0101_7TK_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-12_Cores_LPAH_Main.mxd) - 3/6/2009 -- 4:03:25 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

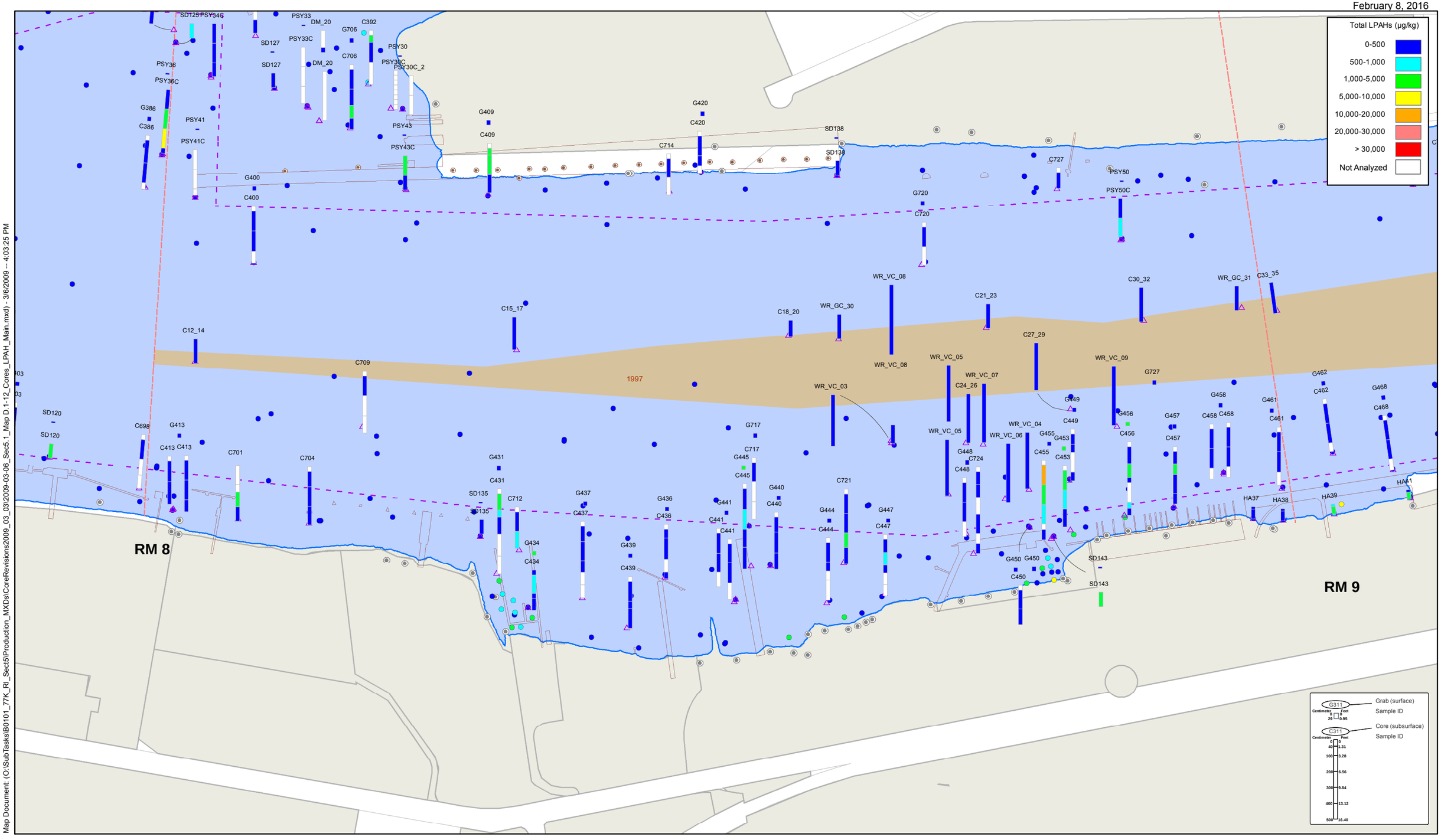
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-17 i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)

River Mile 08 to 09 - Swan Is. East

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

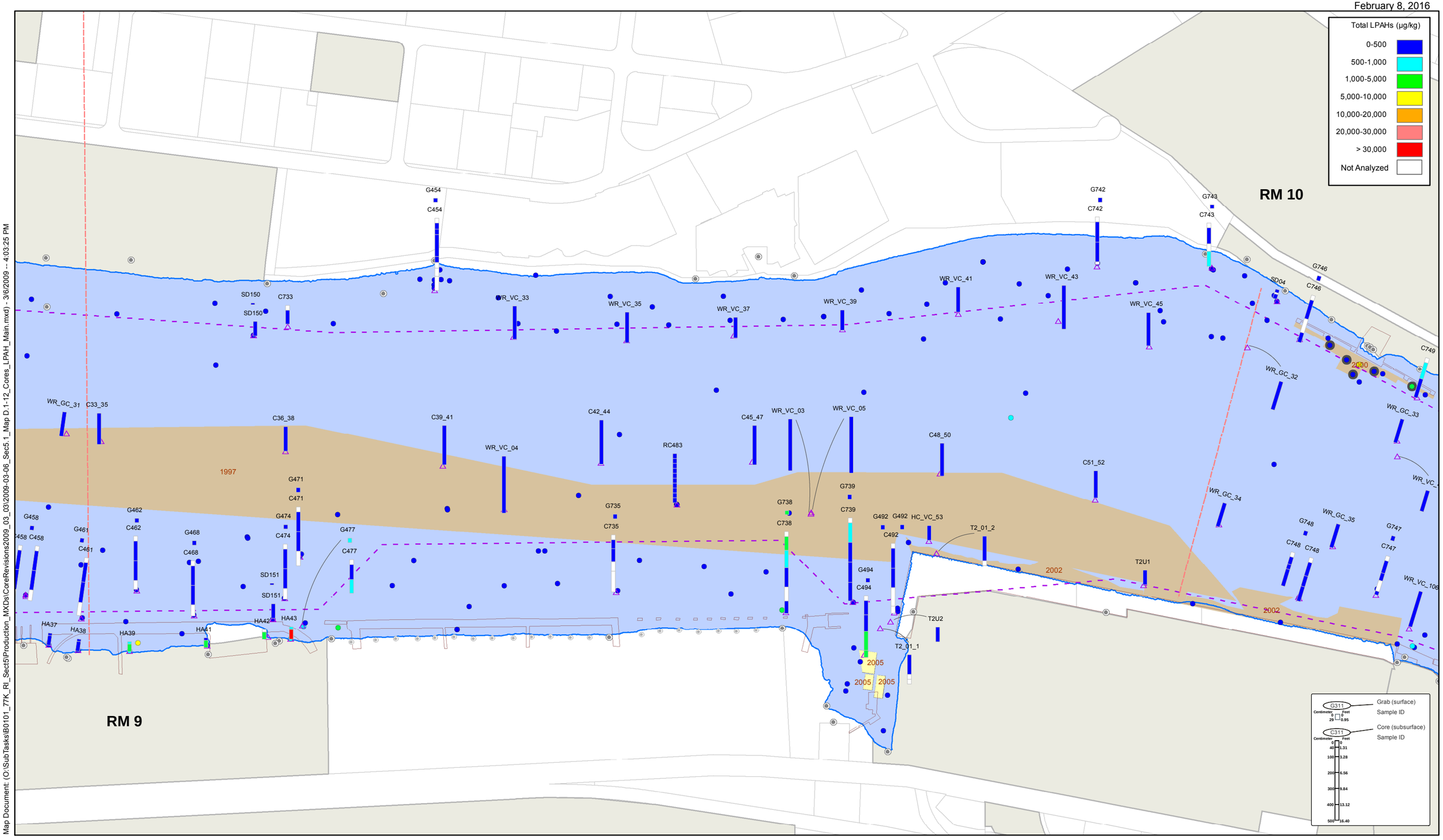
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-17j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)

River Mile 08 to 09 - Swan Is. West

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-12_Cores_LPAH_Main.mxd) - 3/6/2009 -- 4:03:25 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

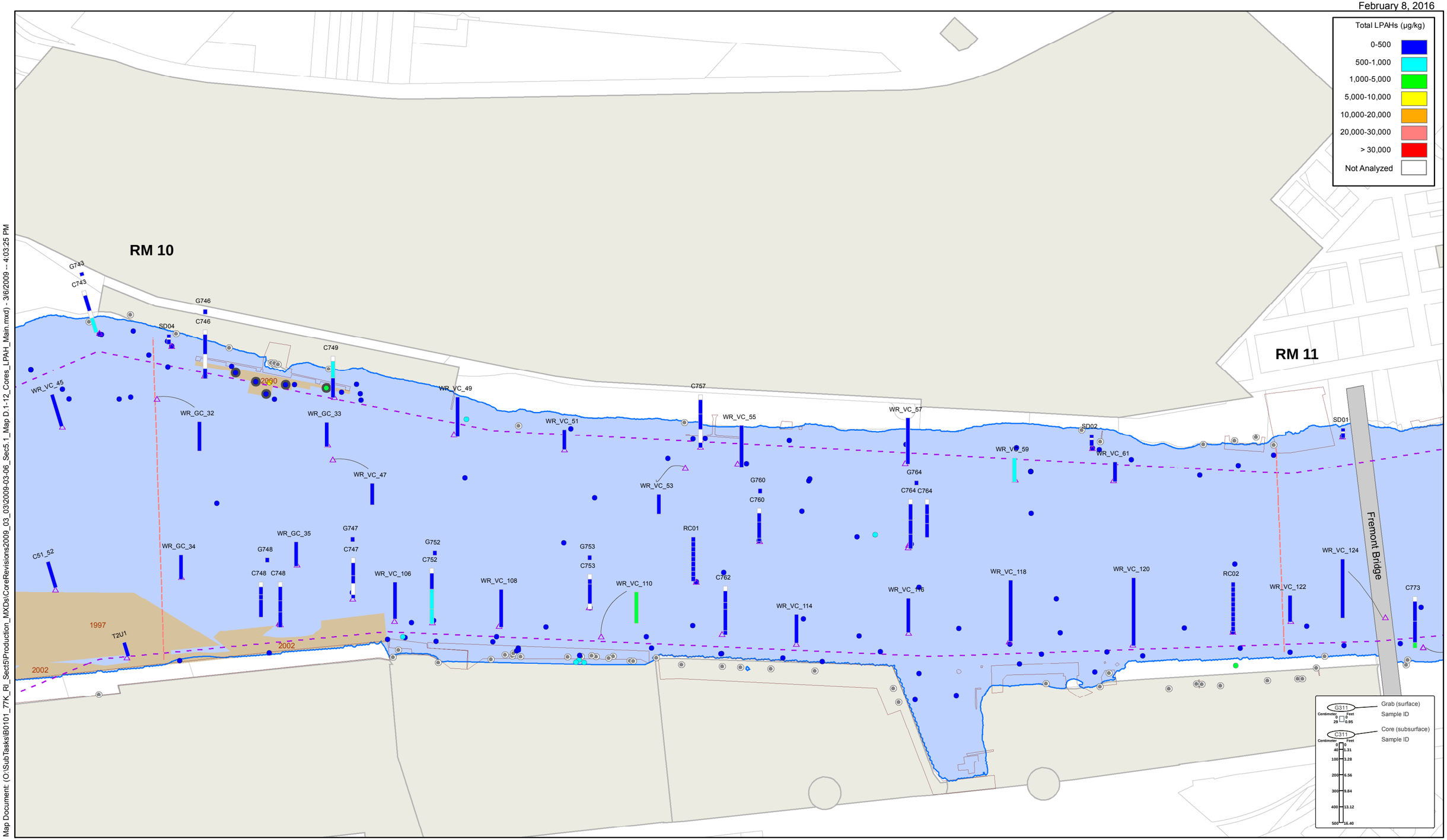
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-17k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)

River Mile 09 to 10

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

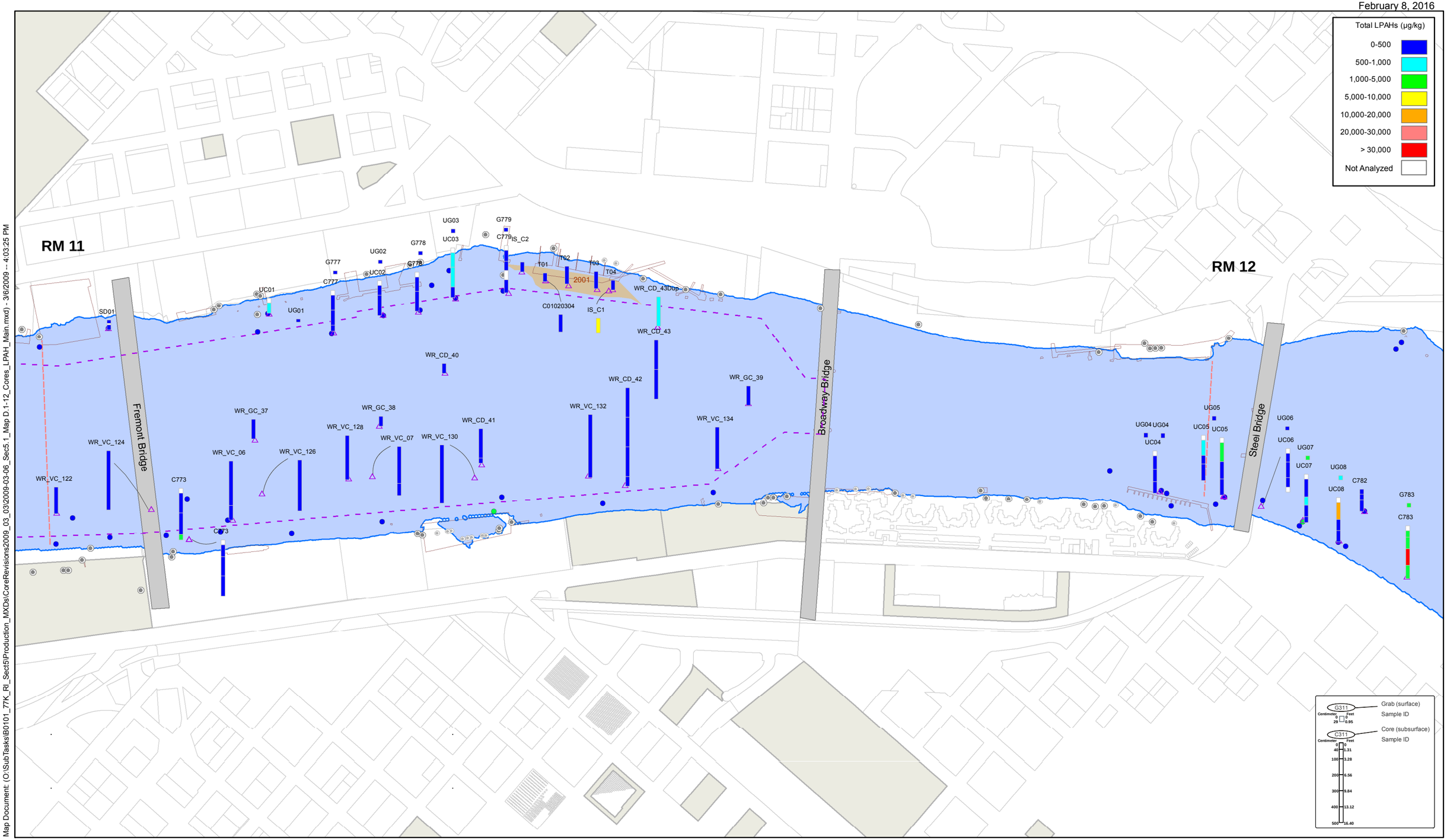
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-17I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)

River Mile 10 to 11




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-12_Cores_LPAH_Main.mxd) - 3/6/2009 -- 4:03:25 PM

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-17 m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)

River Mile 11 to 12

P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_86_Sect5\Production_MXDs\Map_D1_2_17_n_Cores_LPAHs main 6/1/2015 1:25:41 PM

Total LPAHs (µg/kg)
0-500
500-1,000
1,000-5,000
5,000-10,000
10,000-20,000
20,000-30,000
> 30,000
Not Analyzed

RM 11
RM 12
inset 1
Fremont Bridge
Broadway Bridge

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 100 200 300 400 500 Feet

**Map Features**
River MIles
Navigation Channel
Bridges
Docks and Structures
River Edge +13 ft NAVD

**Outfalls**
Outfall
Dock Drain
Roof Drain

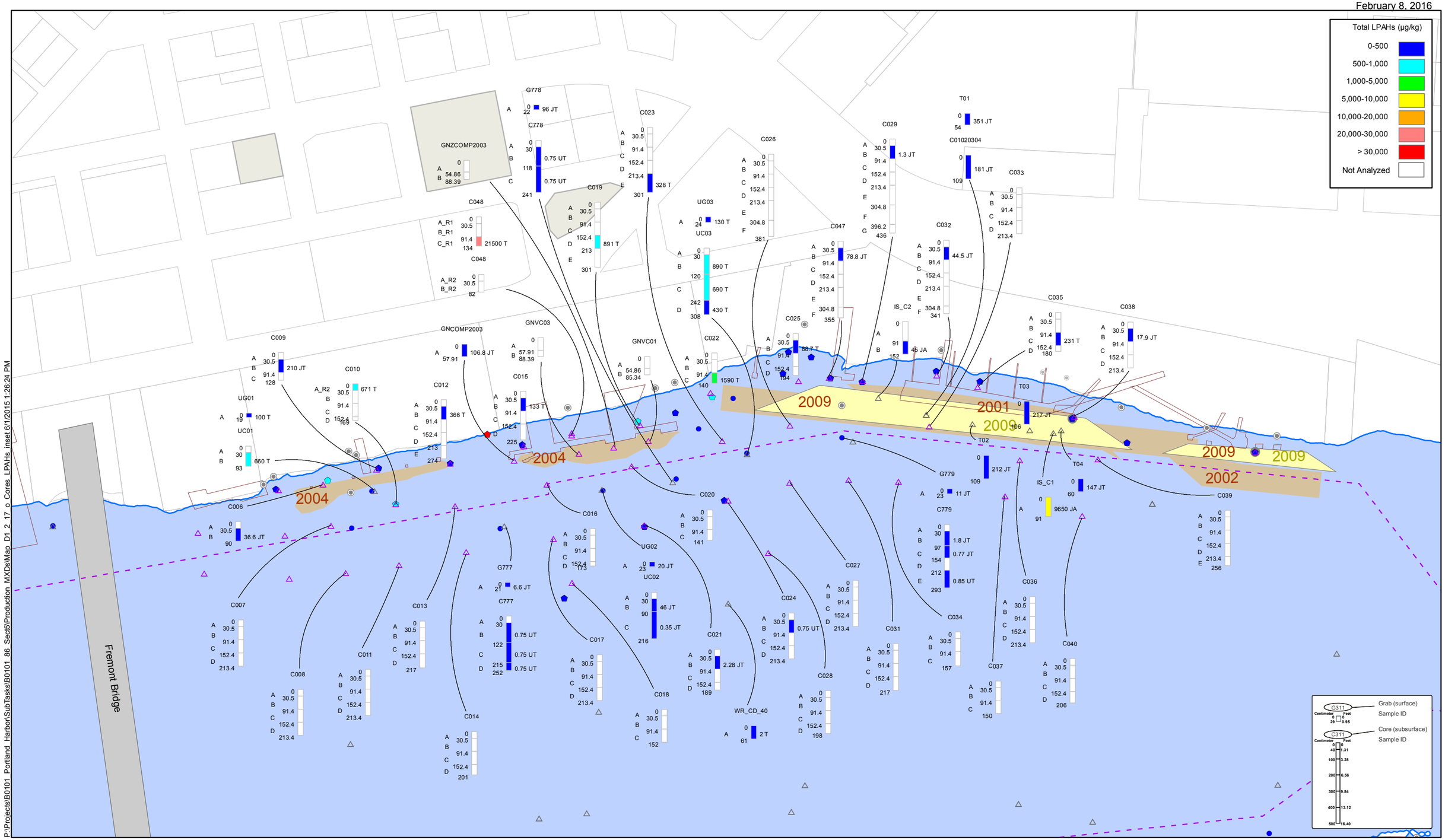
Surface Chemistry (Updated 2010 RI Data Set)
Surface Chemistry (2008 RI Data Set)
Core Locations (Updated 2010 RI Data Set)
Core Locations (2008 RI Data Set)

Capping Areas
Dredging Areas
Surface Dredge/Cap Locations
Upland ECSI Sites (2008)
Waterfront Taxlots

Grab (surface) Sample ID
Core (subsurface) Sample ID

**Map D1.2-17n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)

River Mile 11.0 - 11.8

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

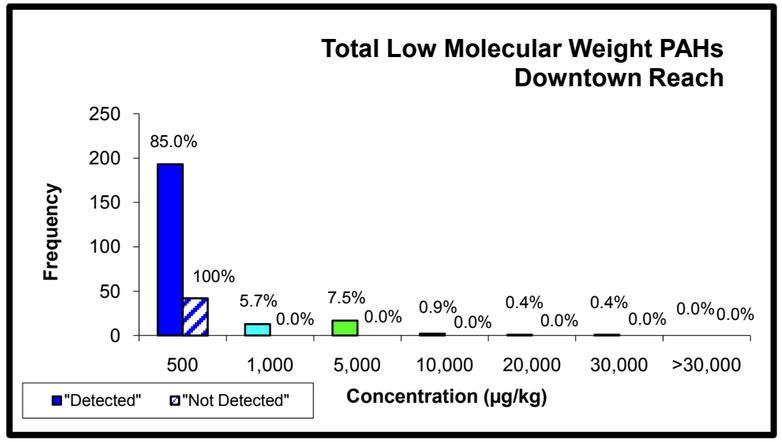
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

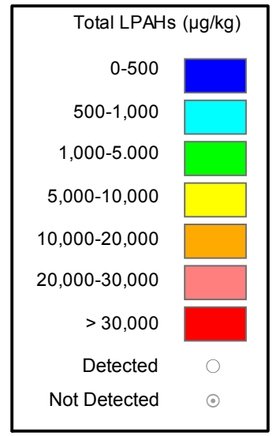
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

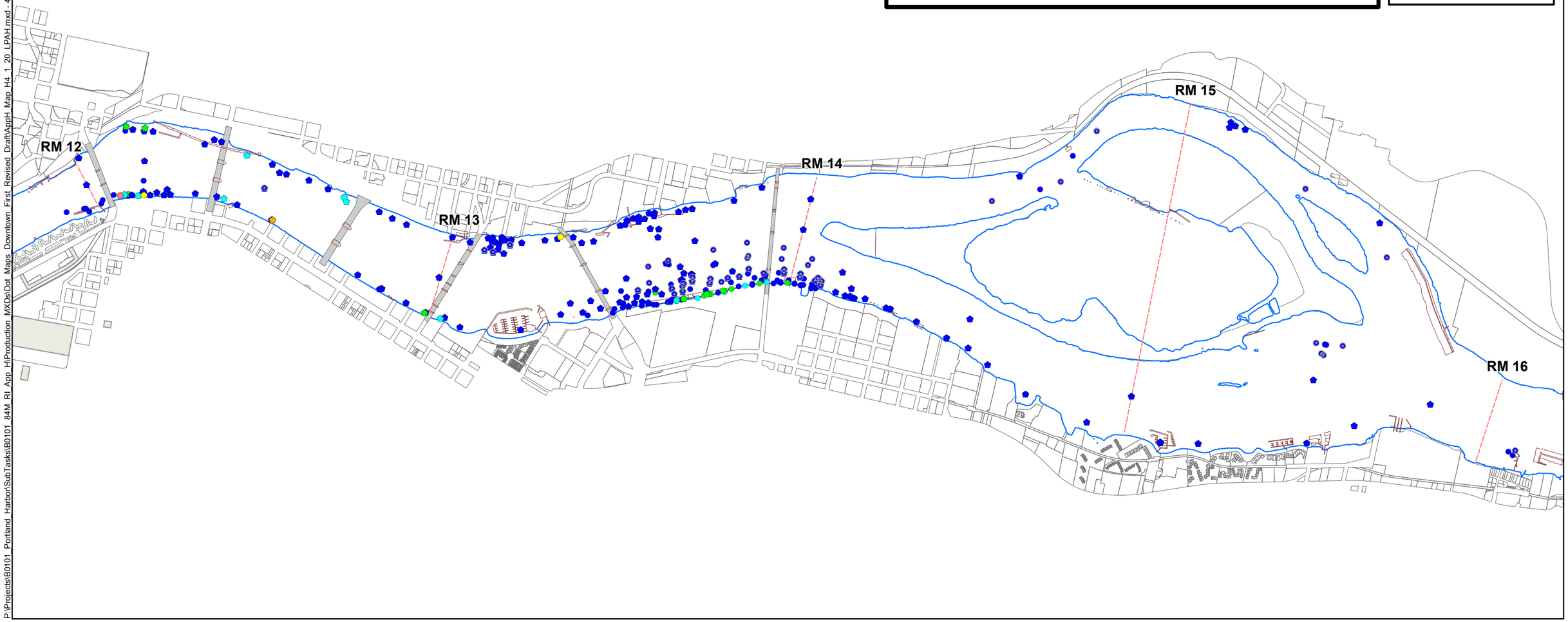
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-17o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)

River Mile 11.0 - 11.8 - Inset 1

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-18**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Total Low Molecular Weight PAHs (µg/kg)
Downtown Reach

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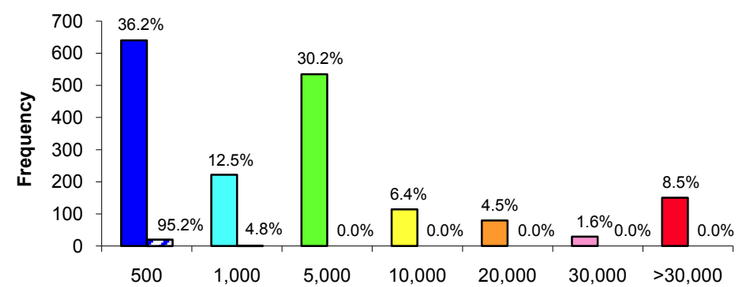
RM 1
RM 2
RM 3
RM 4
RM 5
RM 6
RM 7
RM 8
RM 8
RM 9
RM 10
RM 11
RM 12

## Total High Molecular Weight PAHs




Total HPAHs (µg/kg)

- 0-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- 20,000-30,000
- > 30,000
- Detected
- Not Detected

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-19**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-14_Cores_HPAH_Main.mxd) - 3/13/2009 -- 2:12:31 PM

RM 1

RM 2

Total HPAHs (µg/kg)

- 0-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- 20,000-30,000
- > 30,000
- Not Analyzed

HC_VC_B501_01
HC_VC_B501_03
HC_B501_C1
T5_01_1
DG18
DC06
1999
B501_C1
B501_C2
HC_VC_B501_02
T5_01_2
DG15
DC03
2001
HC_B503_C1
DG16
DC04
WR_GC_06
DG17
DC05
DG14
DC02
DG13
DC01
G600
C600
C009
RB13
G011
C011
G602
C602
G601
C601

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

## Map Features

- River Miles
- Docks and Structures
- Bridges
- Navigation Channel
- River Edge +13 ft NAVD

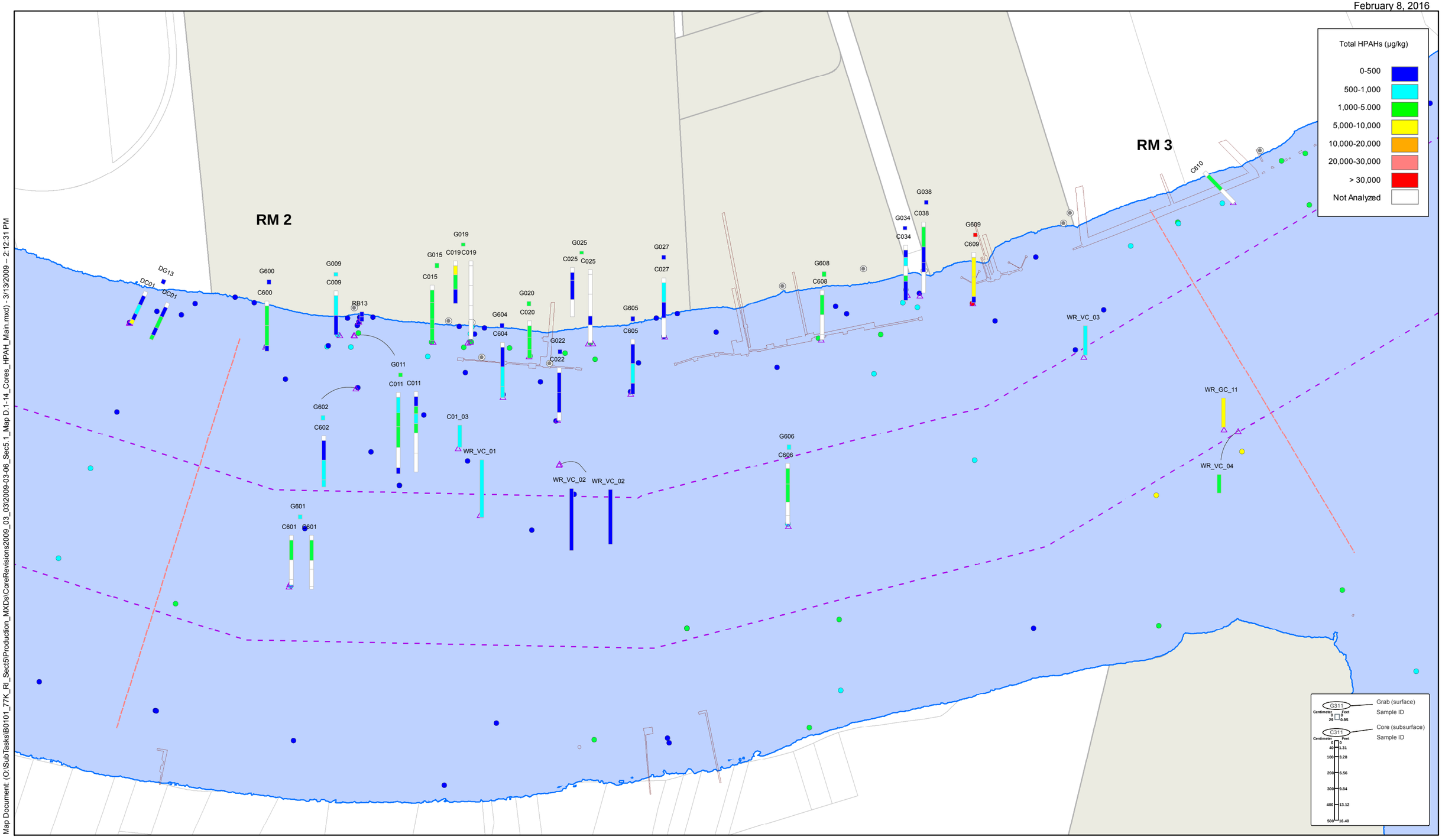
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-20a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)
River Mile 01 to 02

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

## Map Features

- River Miles
- Docks and Structures
- Bridges
- Navigation Channel
- River Edge +13 ft NAVD

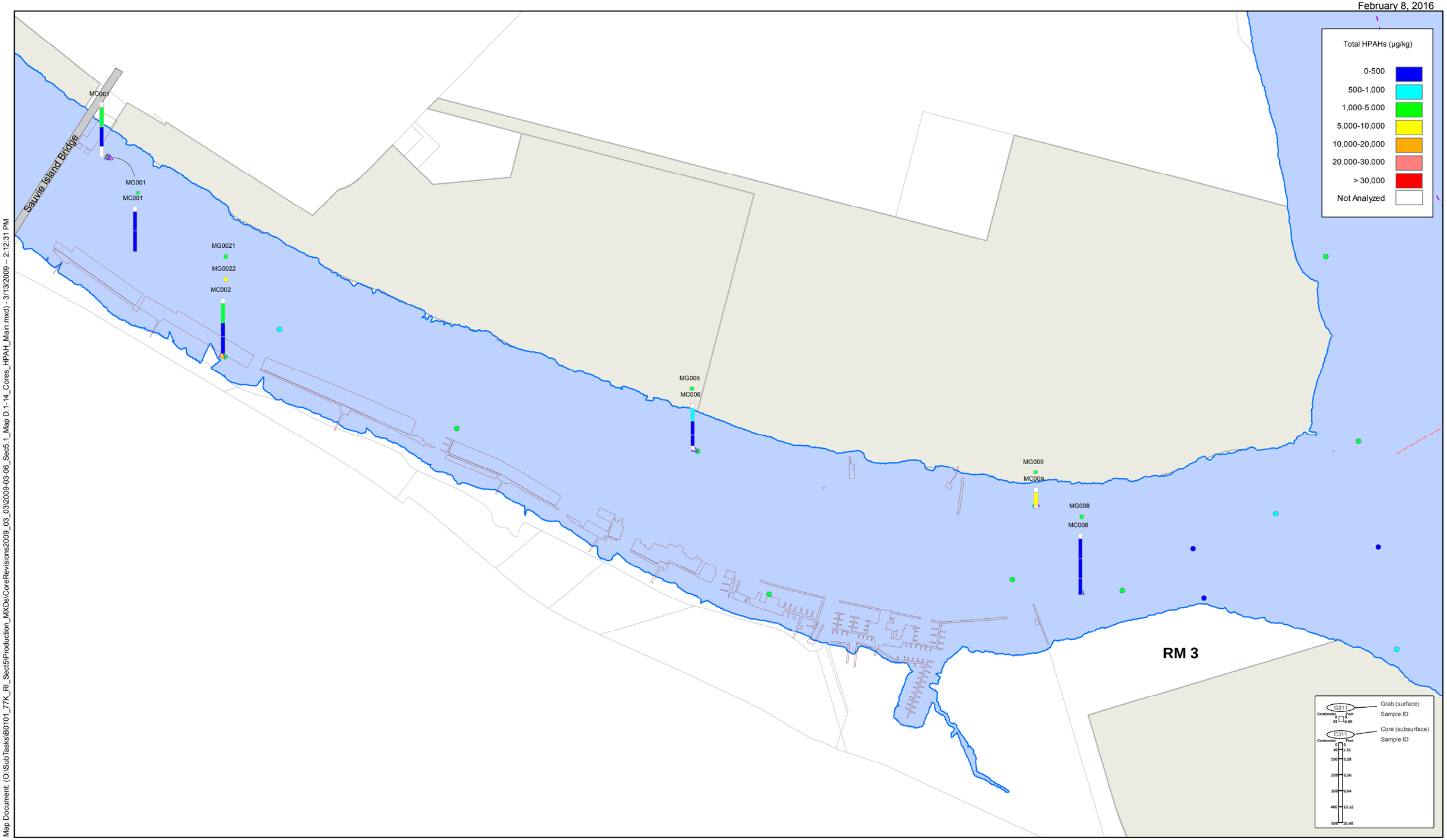
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-20b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)
River Mile 02 to 03

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Docks and Structures
- Bridges
- Navigation Channel
- River Edge +13 ft NAVD

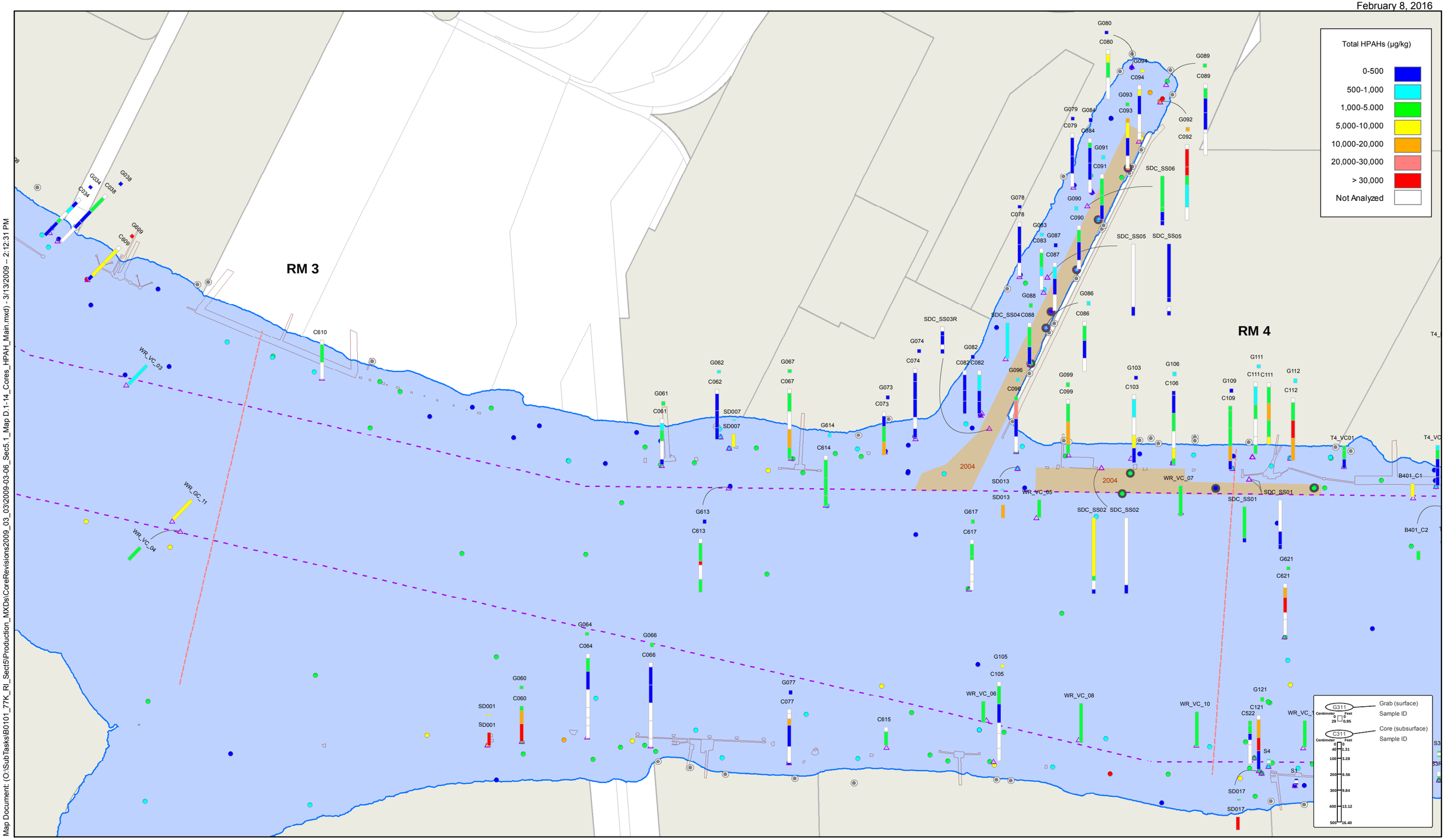
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-20c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)
River Mile 03 - Multnomah Channel

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

## Map Features

- River Miles
- Docks and Structures
- Bridges
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-20d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)
River Mile 03 to 04

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-14_Cores_HPAH_Main.mxd) - 3/13/2009 -- 2:12:31 PM

RM 4

RM 5

Inset 1

Inset 2

Total HPAHs (µg/kg)

- 0-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- 20,000-30,000
- > 30,000
- Not Analyzed

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Docks and Structures
- Bridges
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

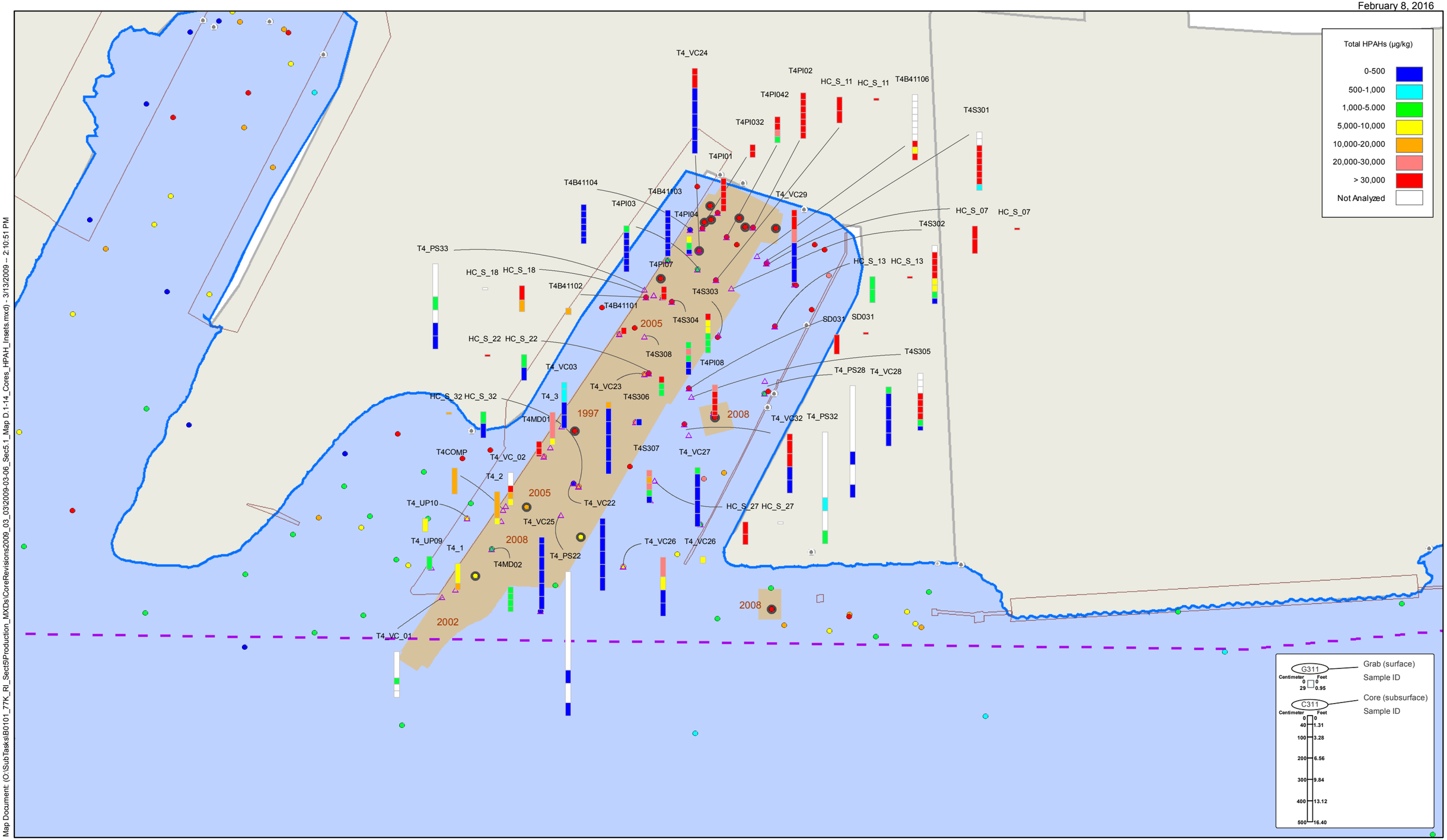
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-20e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)

River Mile 04 to 05 - Slips

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

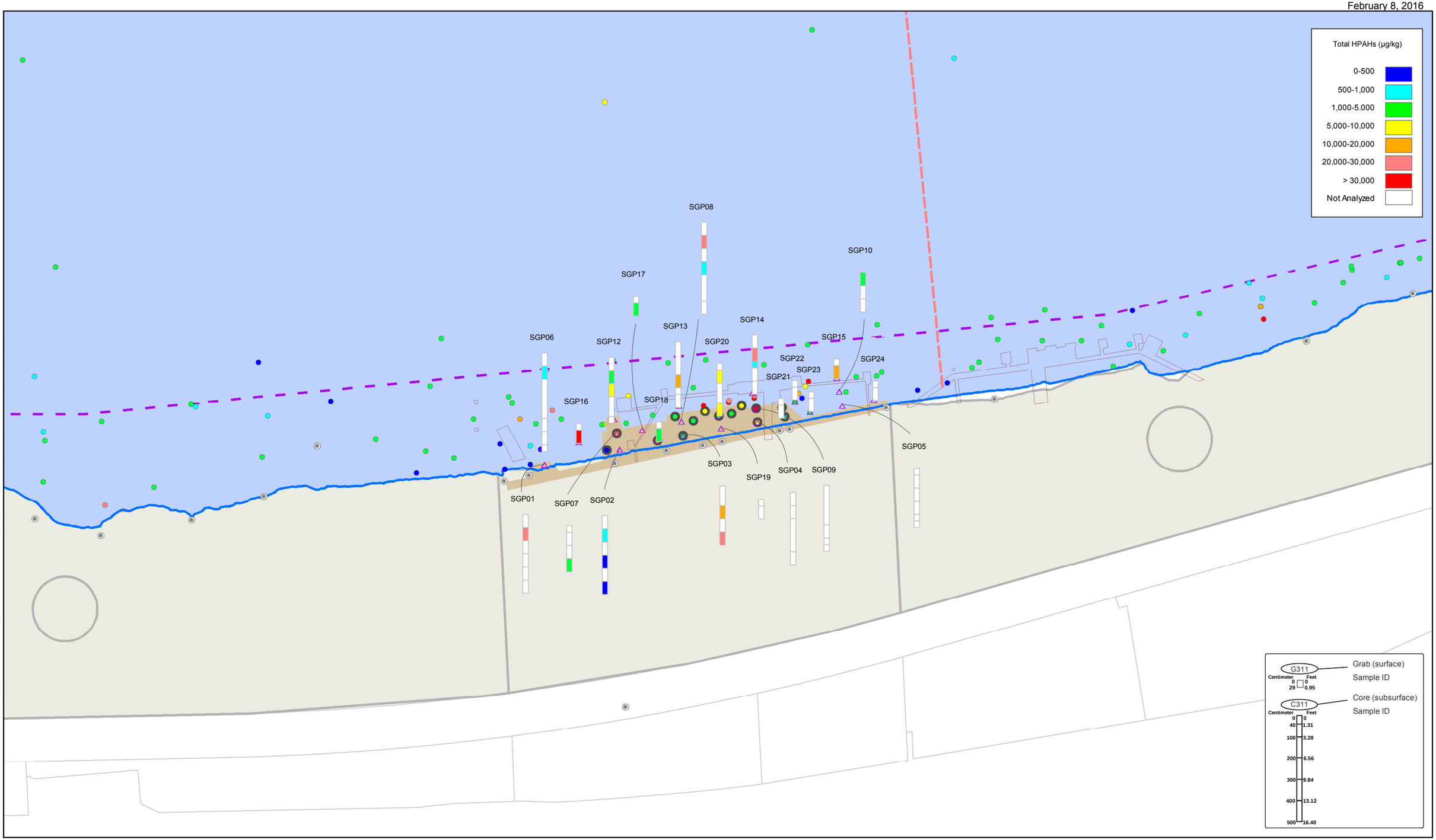
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-20e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)

River Mile 04 to 05 - Slips - Inset 1

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-14_Cores_HPAH_Insets.mxd) - 3/13/2009 -- 2:10:51 PM




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-20 e2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)

River Mile 04 to 05 - Slips - Inset 2

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-14_Cores_HPAH_Main.mxd) - 3/13/2009 -- 2:12:31 PM

RM 5

RM 6

St Johns Bridge

Total HPAHs (µg/kg)

- 0-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- 20,000-30,000
- > 30,000
- Not Analyzed

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Docks and Structures
- Bridges
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

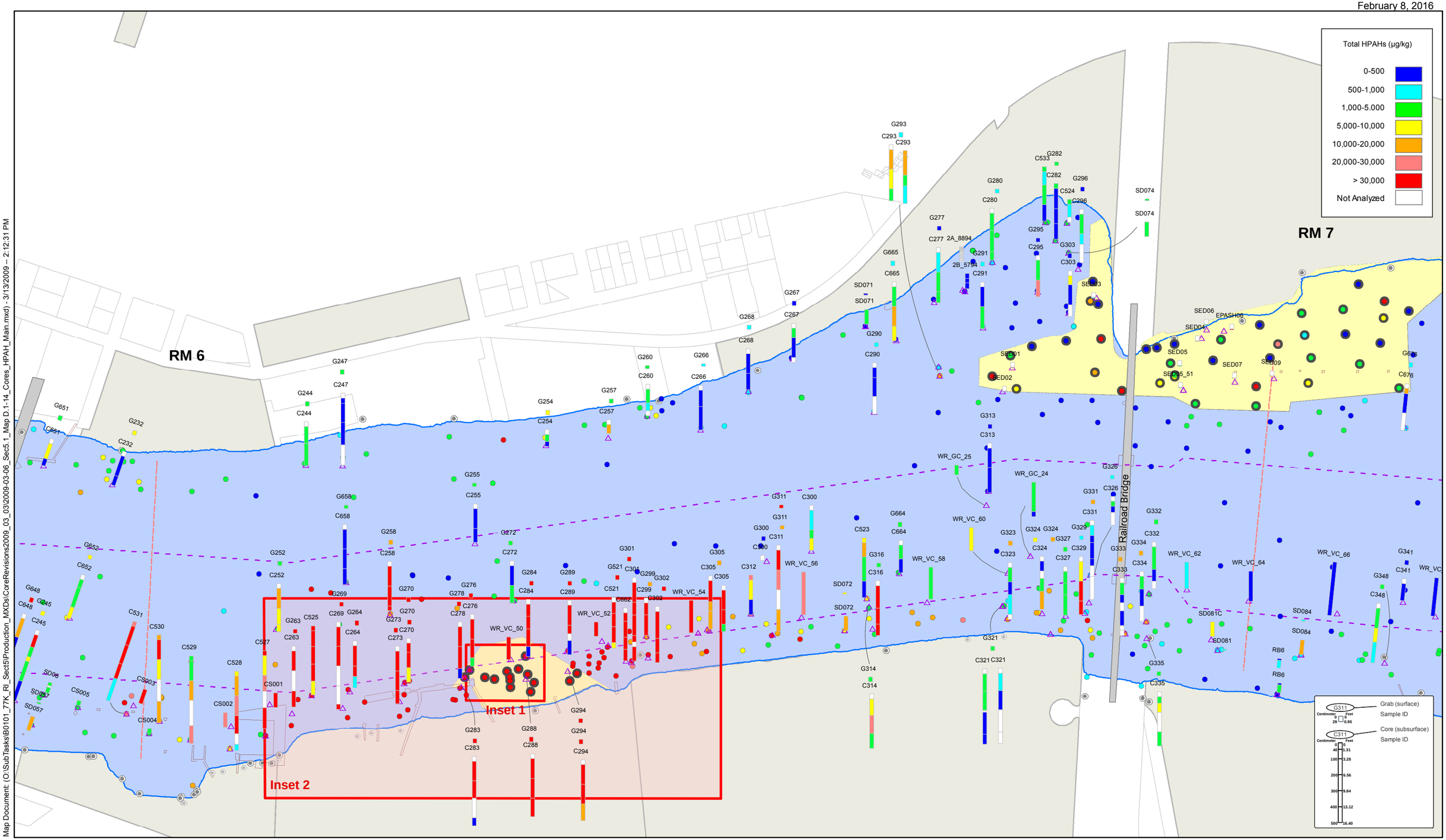
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-20f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)

River Mile 05 to 06

Map Document: (O:\SubTasks\B0101_7TK_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-14_Cores_HPAH_Main.mxd) - 3/13/2009 -- 2:12:31 PM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

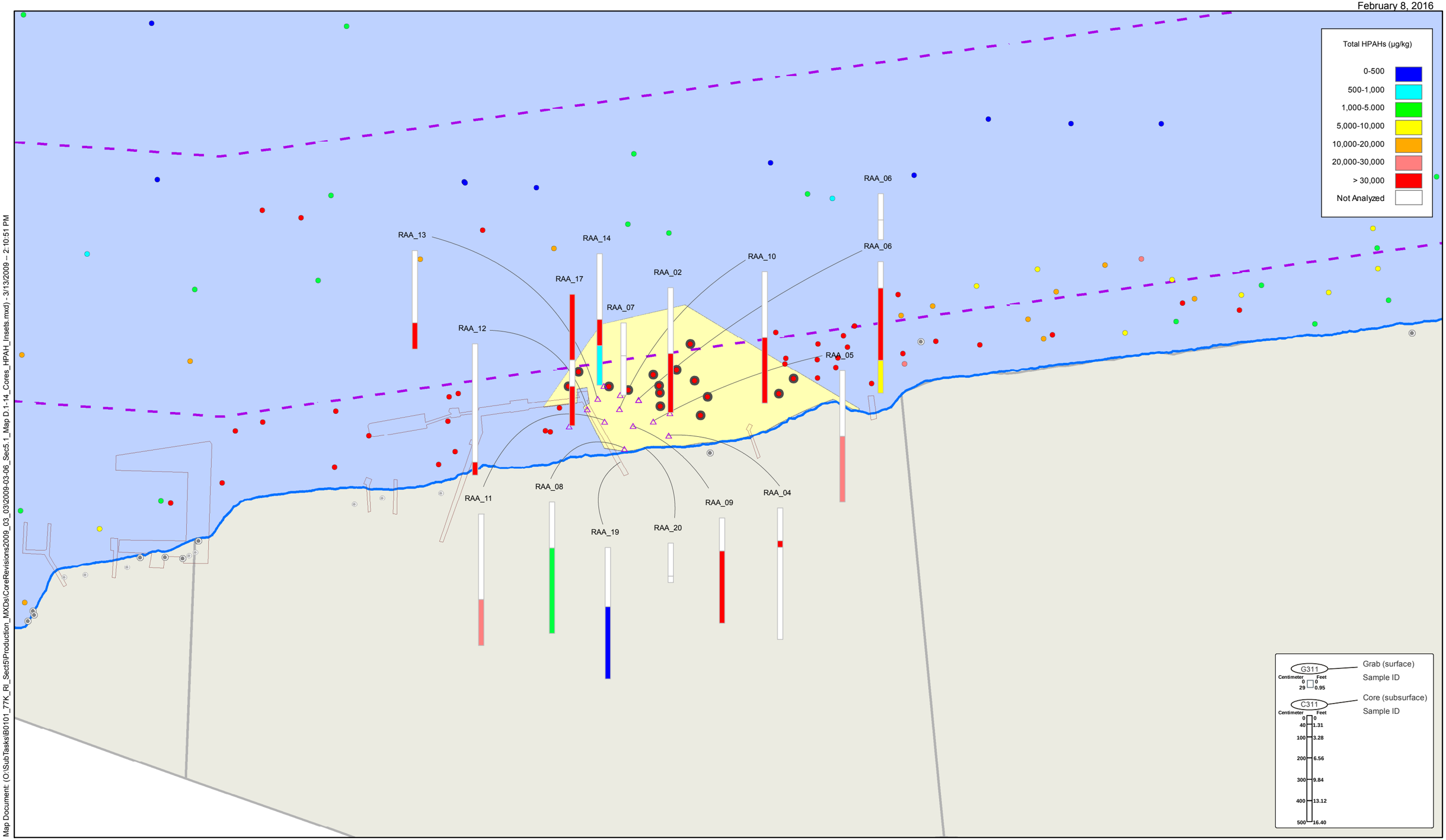
**Map Features**
- River Miles
- Docks and Structures
- Bridges
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-20g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)
River Mile 06 to 07

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-20 g1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)

River Mile 06 to 07 - Inset 1

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-14_Cores_HPAH_Insets.mxd) - 3/13/2009 -- 2:10:51 PM

Total HPAHs (µg/kg)

- 0-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- 20,000-30,000
- > 30,000
- Not Analyzed

GS09 GSD2 GS07 AN_1_5 GS08 GSD4 GSD5 GS04 GS05 GS06 GSC5 AN_2_5 GSC2 GSB2 GSB7 GSC7 AN_1_3 AN_1_2 AN_2_4 GSB5 AN_1_1 AN_2_3 AN_2_1 AN_2_2

G311 Centimeter 0 29 Feet 0 0.95 — Grab (surface) Sample ID

C311 Centimeter 0 40 100 200 300 400 500 Feet 0 1.31 3.28 6.56 9.84 13.12 16.40 — Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

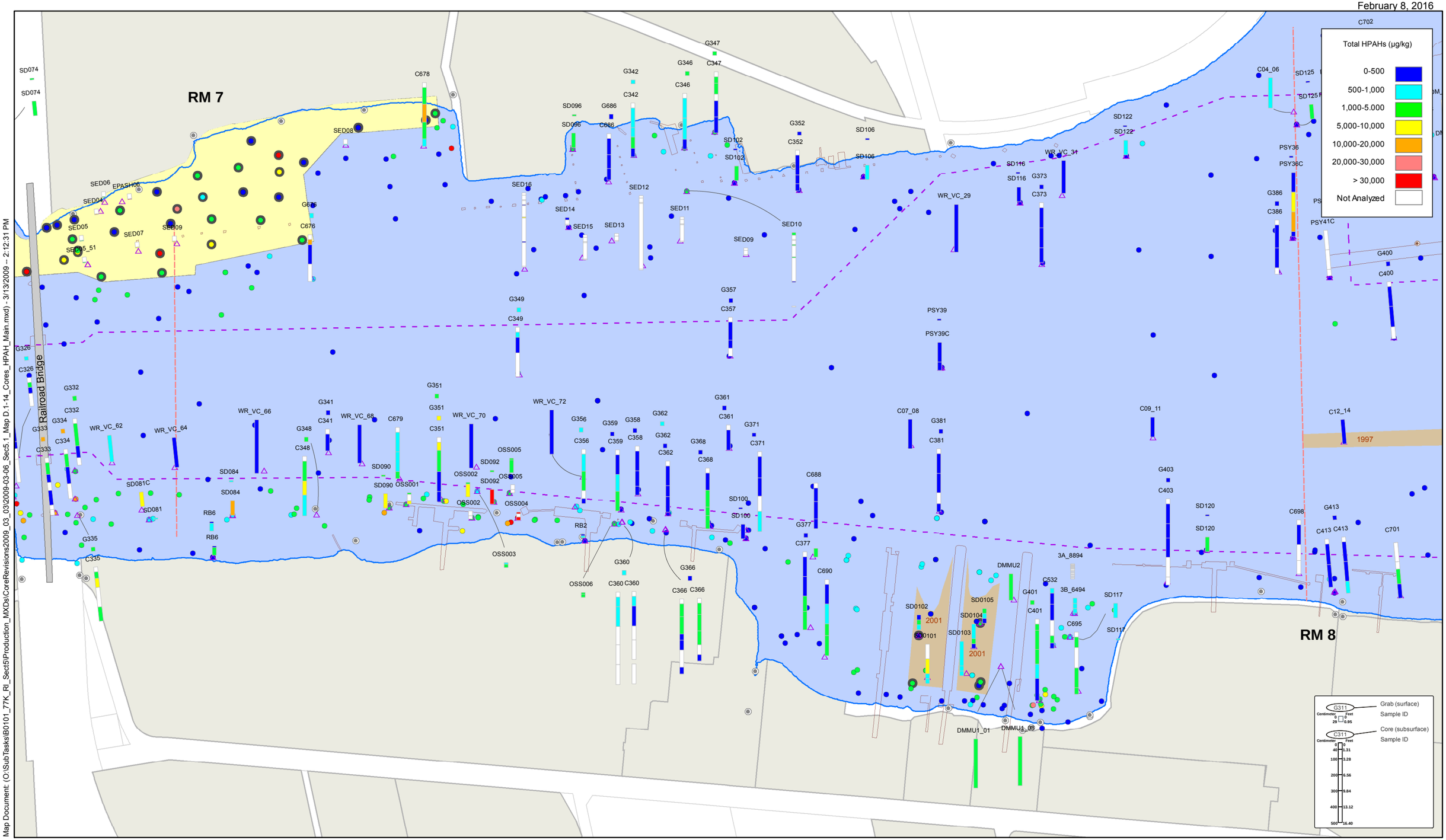
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-20g2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)

River Mile 06 to 07 - Inset 2

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Docks and Structures
- Bridges
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-20h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)
River Mile 07 to 08

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-14_Cores_HPAH_Main.mxd) - 3/13/2009 -- 2:12:31 PM

RM 8

RM 9

Total HPAHs (µg/kg)

- 0-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- 20,000-30,000
- > 30,000
- Not Analyzed

Grab (surface) Sample ID

Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Docks and Structures
- Bridges
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-20i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)

River Mile 08 to 09 - Swan Is. East

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-14_Cores_HPAH_Main.mxd) - 3/13/2009 -- 2:12:31 PM

Total HPAHs (µg/kg)

- 0-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- 20,000-30,000
- > 30,000
- Not Analyzed

RM 8

RM 9

1997

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Docks and Structures
- Bridges
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

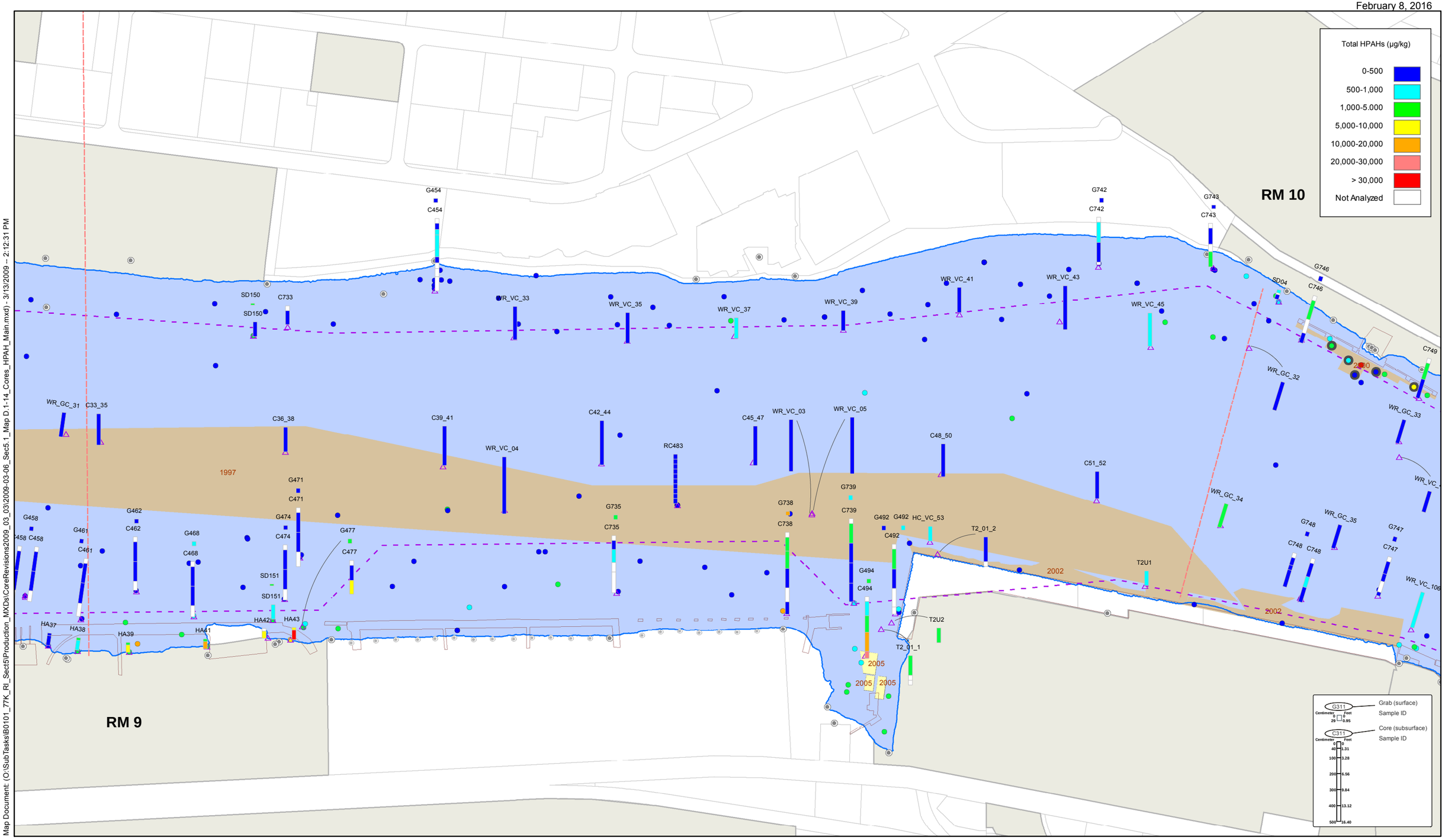
Grab (surface) Sample ID

Core (subsurface) Sample ID

**Map D1.2-20j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)

River Mile 08 to 09 - Swan Is. West

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-14_Cores_HPAH_Main.mxd) - 3/13/2009 -- 2:12:31 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Docks and Structures
- Bridges
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

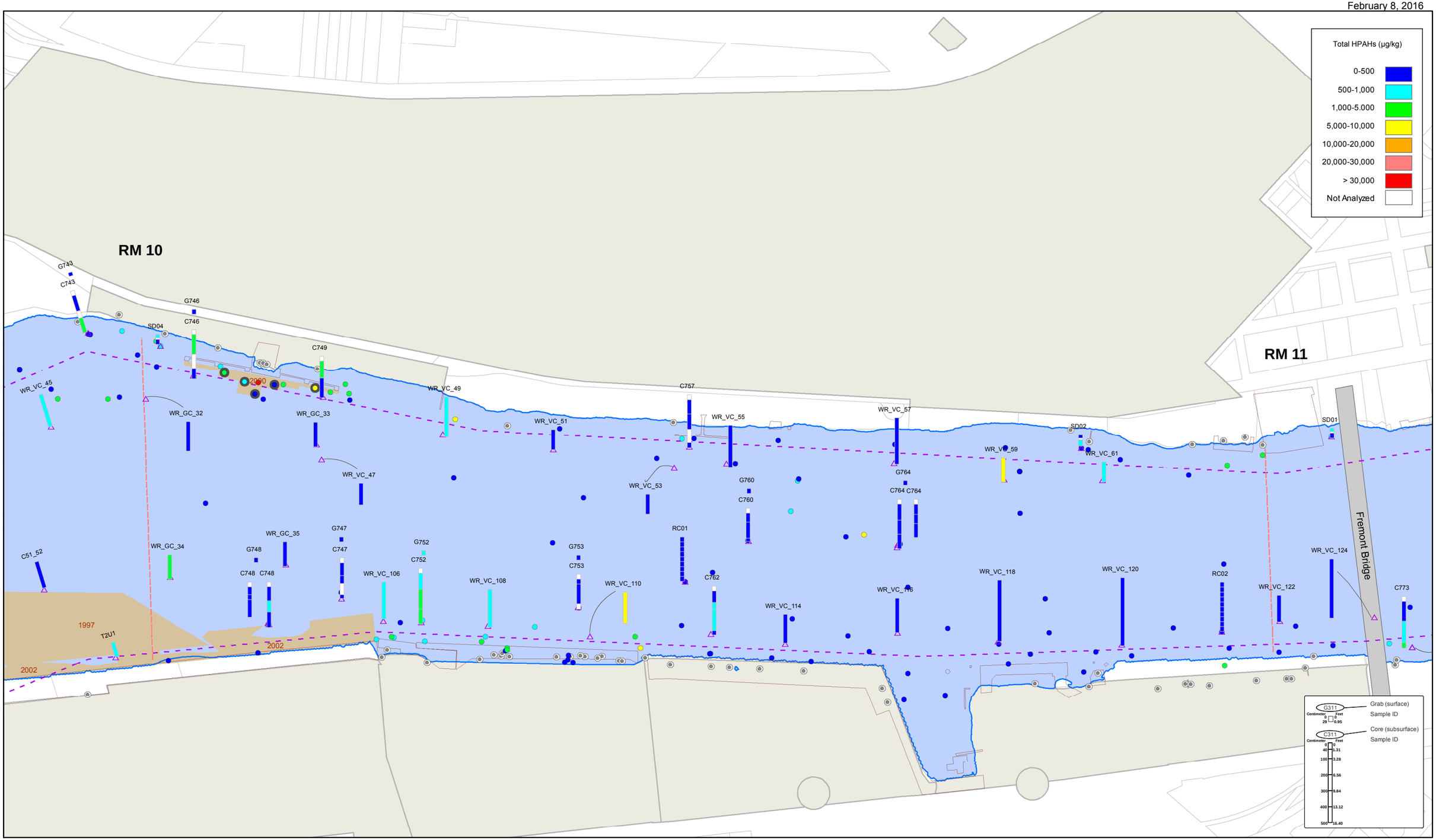
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-20k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)
River Mile 09 to 10

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-14_Cores_HPAH_Main.mxd) - 3/13/2009 -- 2:12:31 PM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Docks and Structures
- Bridges
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

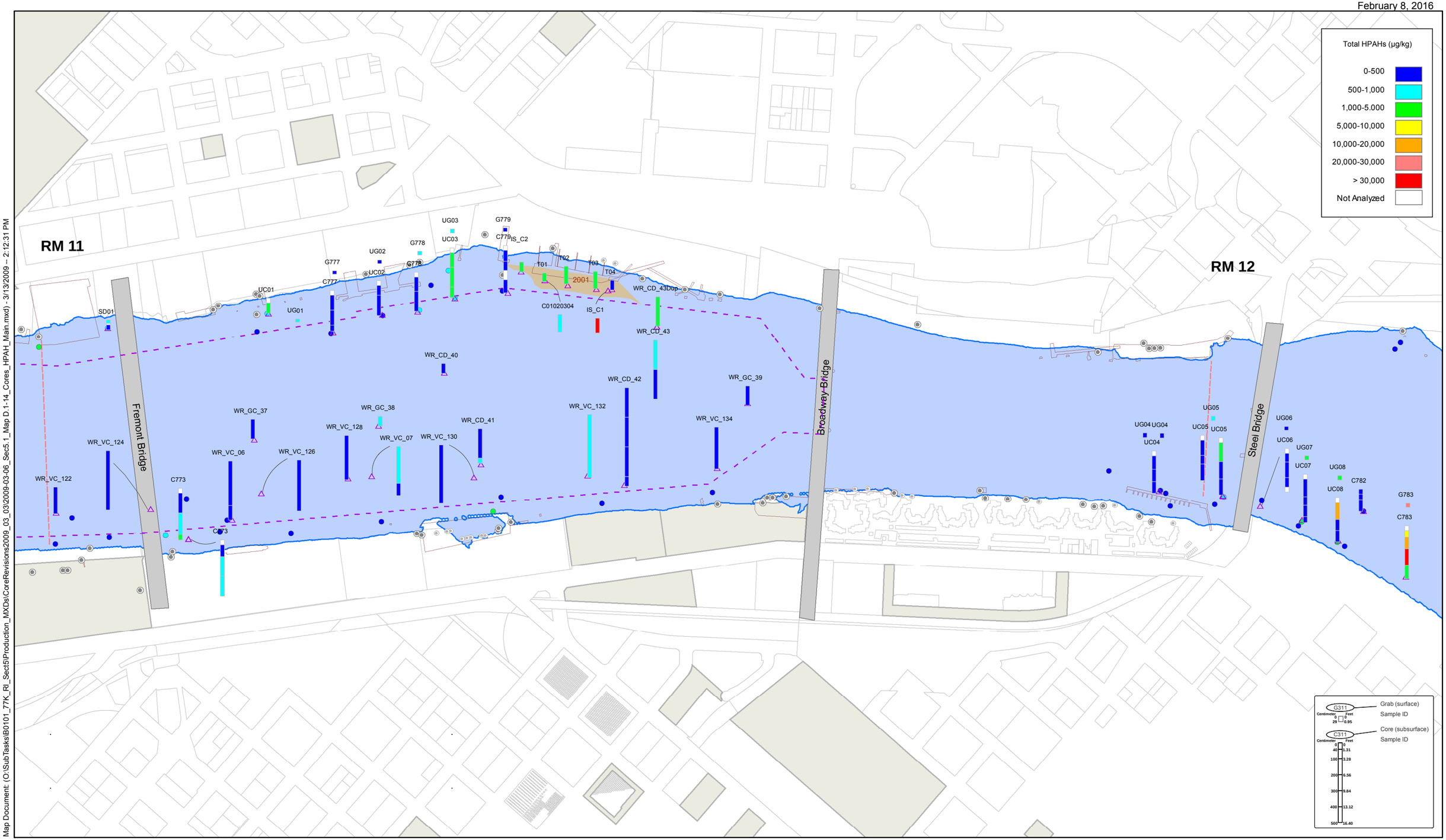
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-20I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)

River Mile 10 to 11

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-14_Cores_HPAH_Main.mxd) - 3/13/2009 -- 2:12:31 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Docks and Structures
- Bridges
- Navigation Channel
- River Edge +13 ft NAVD

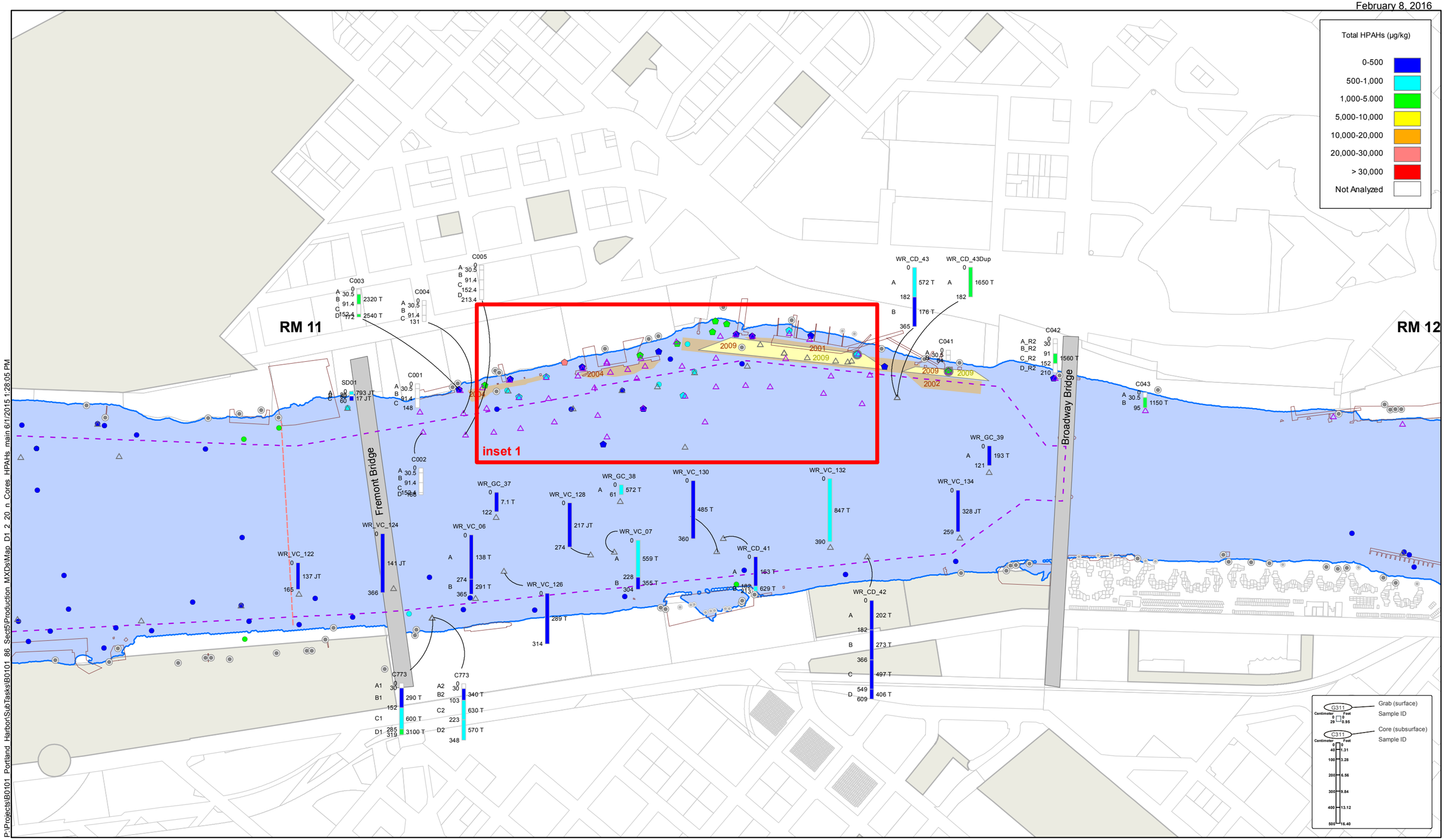
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-20 m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)
River Mile 11 to 12




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-20n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)

River Mile 11.0 - 11.8

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Total HPAHs (µg/kg)
- 0-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- 10,000-20,000
- 20,000-30,000
- > 30,000
- Not Analyzed

Fremont Bridge

GNZCOMP2003 · G778 · C778 · C023 · C026 · C029 · T01 · C01020304 · C033 · C048 · C019 · UG03 · UC03 · C047 · C032 · C035 · C038 · C009 · UG01 · UC01 · C010 · GNCOMP2003 · GNVC03 · C012 · C015 · GNVC01 · C022 · C025 · IS_C2 · T03 · T02 · G779 · C779 · IS_C1 · T04 · C039 · C006 · C016 · UG02 · C020 · C027 · C024 · C031 · C034 · C036 · C040 · C007 · C013 · G777 · C777 · C017 · C021 · C028 · C037 · C008 · C011 · C014 · C018 · WR_CD_40

2009 · 2001 · 2009 · 2009 · 2009 · 2002 · 2004 · 2004

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

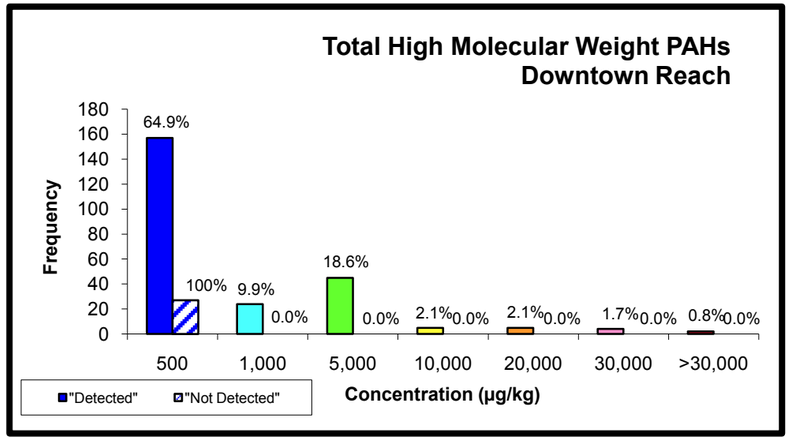
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

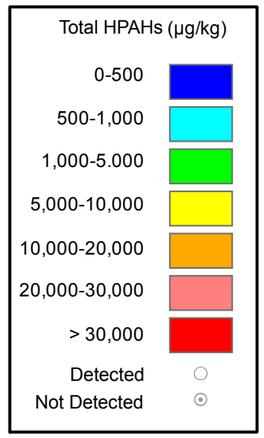
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

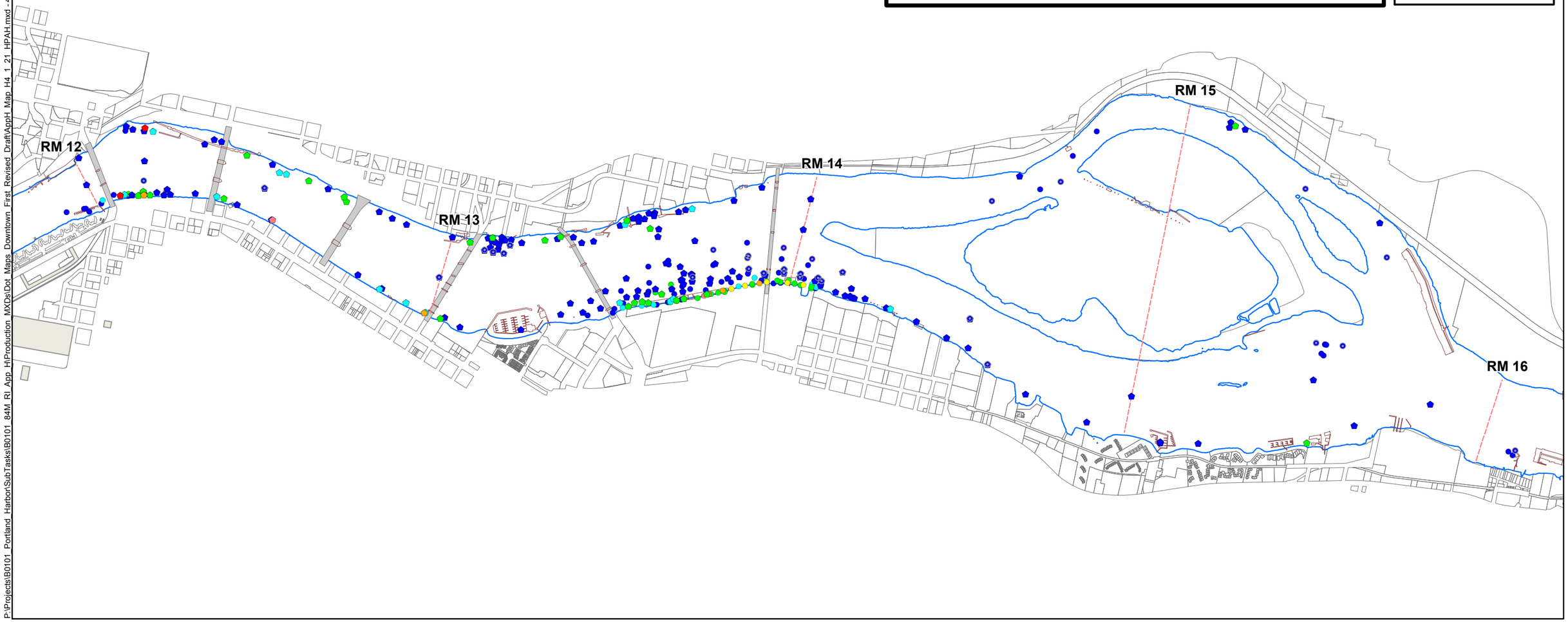
Grab (surface) Sample ID
Core (subsurface) Sample ID

**Map D1.2-20o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)

River Mile 11.0 - 11.8 - Inset 1

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-21**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Total High Molecular Weight PAHs (µg/kg)
Downtown Reach

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RM 1
RM 2
RM 3
RM 4
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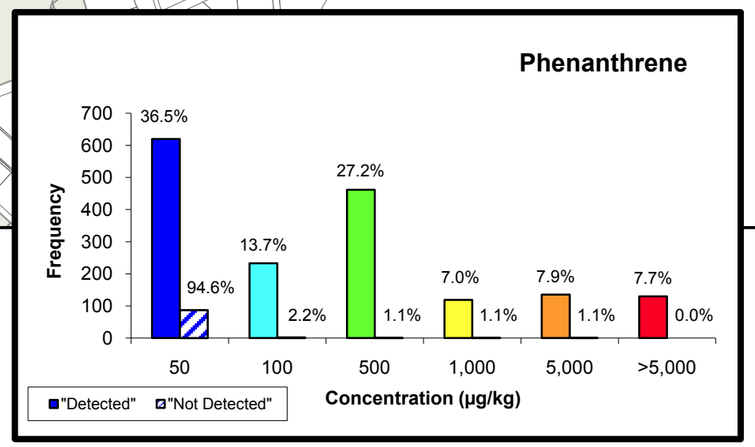
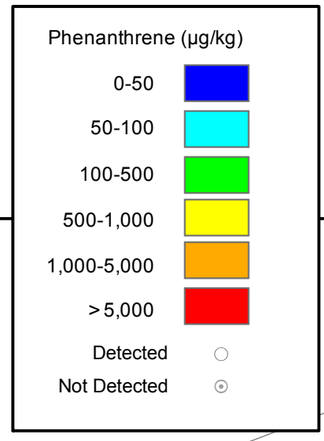
RM 8
RM 9
RM 10
RM 11
RM 12




N

0 1,000 2,000 3,000 4,000 5,000 Feet

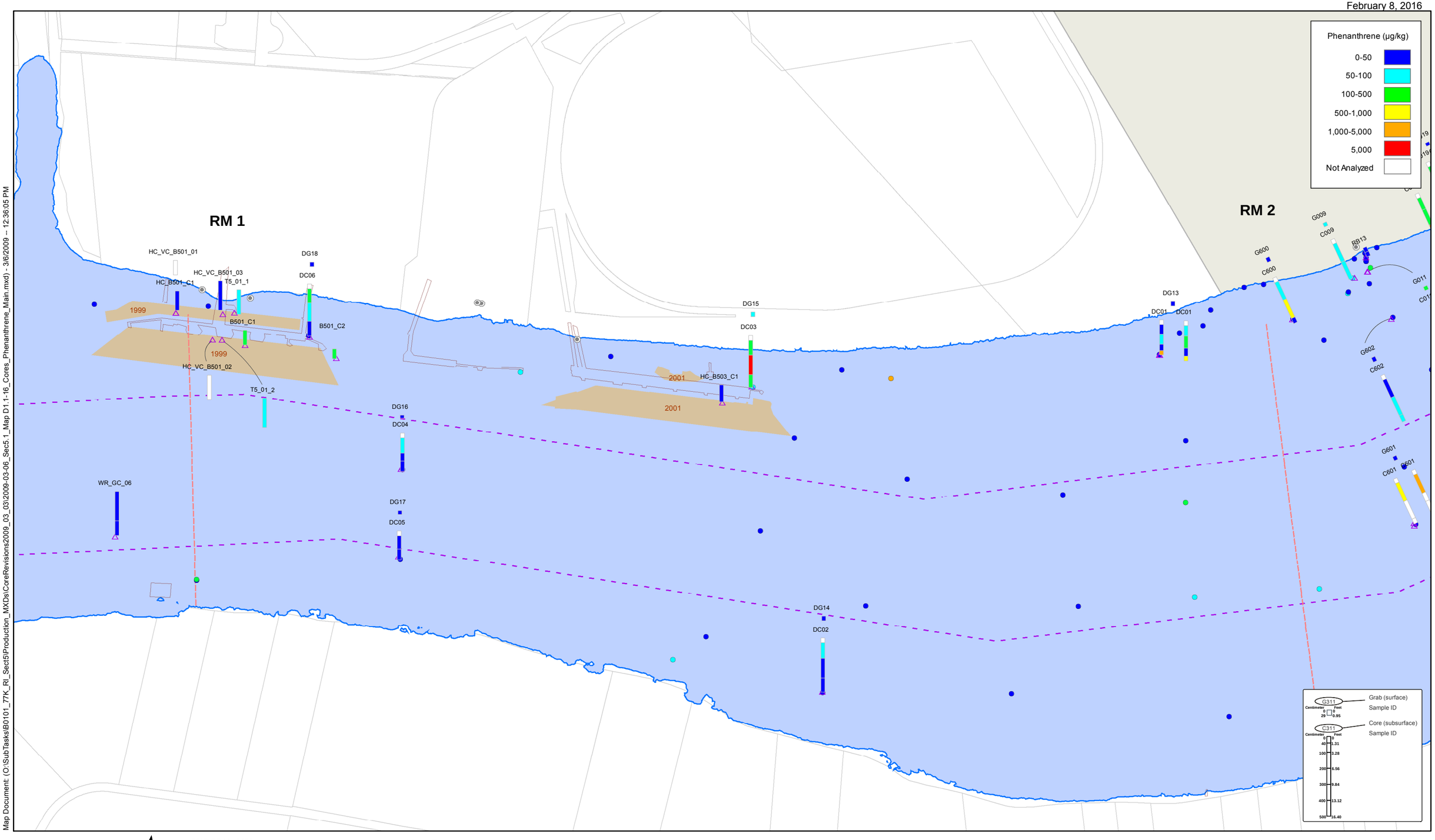
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-22**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Phenanthrene (µg/kg)

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D1.1-16_Cores_Phenanthrene_Main.mxd) - 3/6/2009 -- 12:36:05 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-23a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Phenanthrene (µg/kg)
River Mile 01 to 02

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D1.1-16_Cores_Phenanthrene_Main.mxd) - 3/6/2009 -- 12:36:05 PM

RM 2

RM 3

Phenanthrene (µg/kg)
- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- 5,000
- Not Analyzed

DG13, DC01, DC01, G600, C600, G009, C009, RB13, G019, G015, C019, C019, C015, G020, C020, G604, C604, G025, C025, C025, G022, C022, G027, C027, G605, C605, G608, C608, G034, C034, G038, C038, G609, C609, C610, WR_VC_03, WR_GC_11, WR_VC_04, G011, C011, C011, G602, C602, C01_03, WR_VC_01, WR_VC_02, WR_VC_02, G606, C606, G601, C601, G601

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

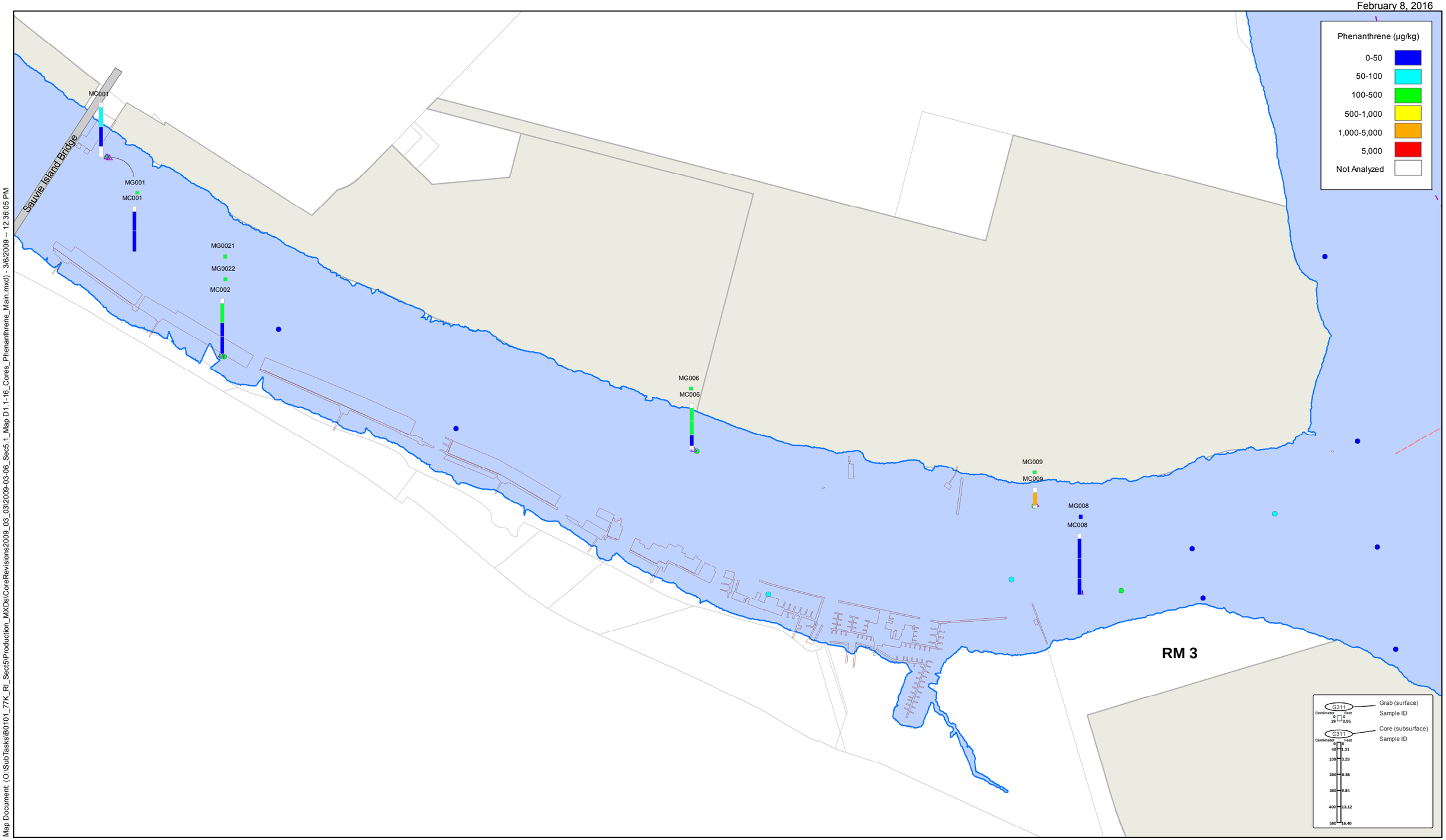
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-23b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Phenanthrene (µg/kg)
River Mile 02 to 03

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

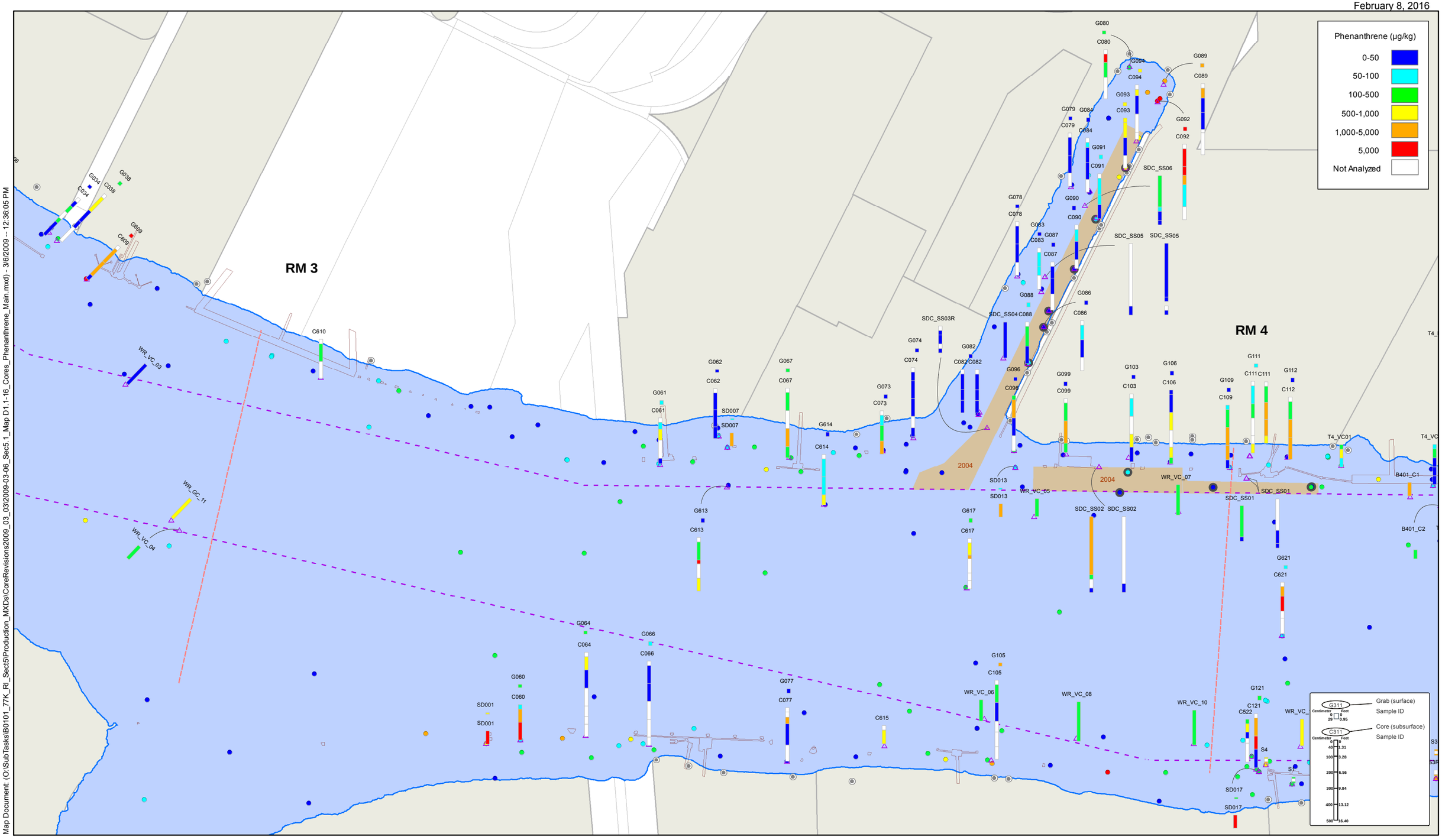
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-23c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Phenanthrene (µg/kg)
River Mile 03 - Multnomah Channel

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_032009-03-06_Sec5.1_Map D1.1-16_Cores_Phenanthrene_Main.mxd) - 3/6/2009 -- 12:36:05 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-23d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Phenanthrene (µg/kg)
River Mile 03 to 04

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D1.1-16_Cores_Phenanthrene_Main.mxd) - 3/6/2009 -- 12:36:05 PM

Phenanthrene (µg/kg)
- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- 5,000
- Not Analyzed

RM 4

RM 5

Inset 1

Inset 2

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-23e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Phenanthrene (µg/kg)
River Mile 04 to 05 - Slips

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D1.1-16_Cores_Phenanthrene_Insets.mxd) - 3/6/2009 -- 1:17:05 PM

Phenanthrene (µg/kg)
- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- 5,000
- Not Analyzed

T4_VC24, T4PI02, HC_S_11, HC_S_11, T4B41106, T4PI042, T4PI032, T4S301, T4PI01, T4B41104, T4B41103, T4PI03, T4PI04, T4_VC29, HC_S_07, HC_S_07, T4S302, T4_PS33, HC_S_18, HC_S_18, T4PI07, HC_S_13, HC_S_13, T4B41102, T4S303, T4B41101, T4S304, 2005, SD031, SD031, HC_S_22, HC_S_22, T4S308, T4S305, T4_VC03, T4PI08, T4_PS28, T4_VC28, T4_VC23, HC_S_32, HC_S_32, T4_3, T4S306, 1997, 2008, T4_VC32, T4_PS32, T4MD01, T4COMP, T4_VC_02, T4S307, T4_VC27, T4_2, 2005, T4_UP10, T4_VC22, HC_S_27, HC_S_27, T4_VC25, T4_UP09, 2008, T4_1, T4_PS22, T4_VC26, T4_VC26, T4MD02, 2008, 2002, T4_VC_01

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 125 250 500 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

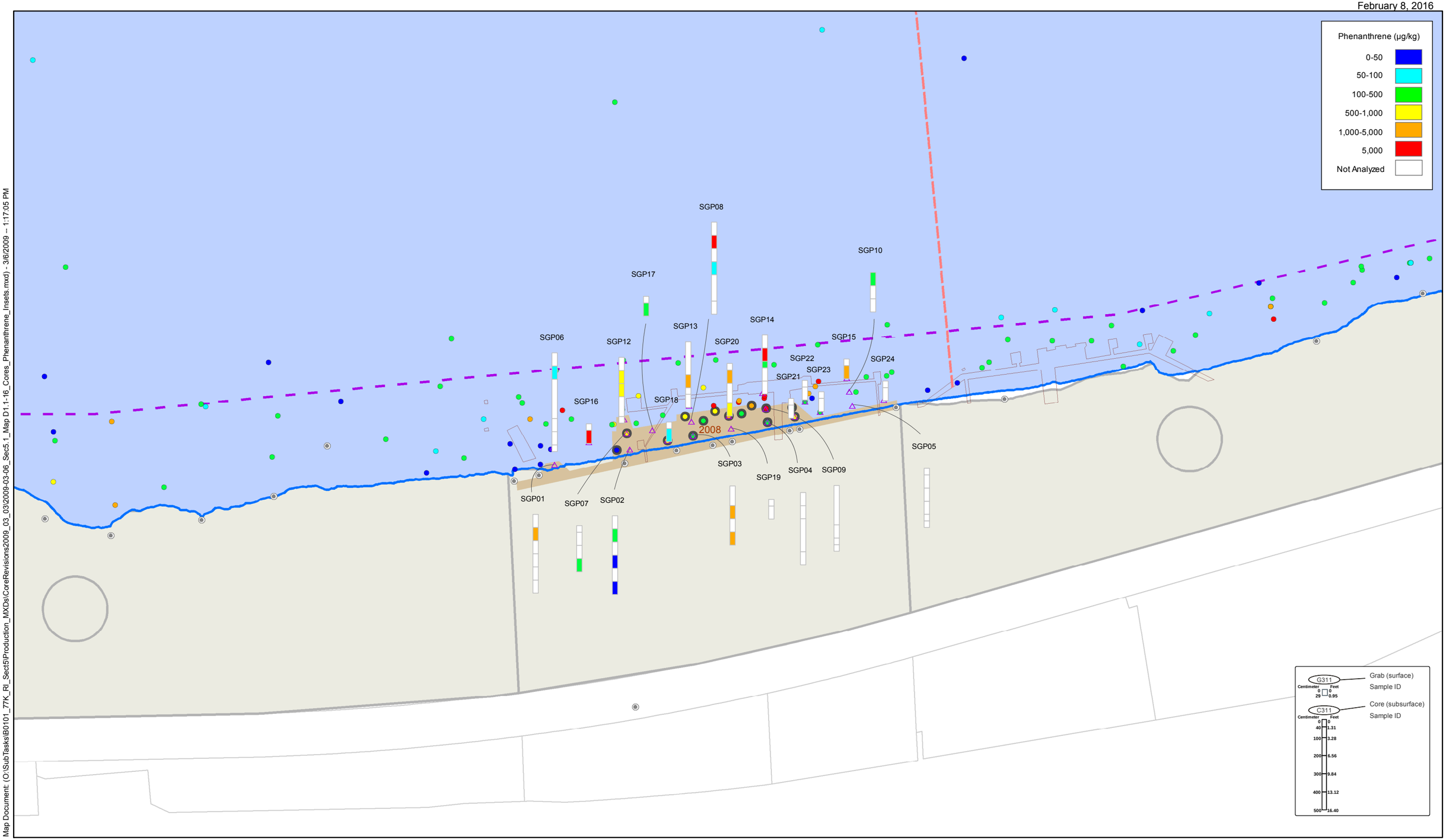
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-23e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Phenanthrene (µg/kg)

River Mile 04 to 05 - Slips - Inset 1

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

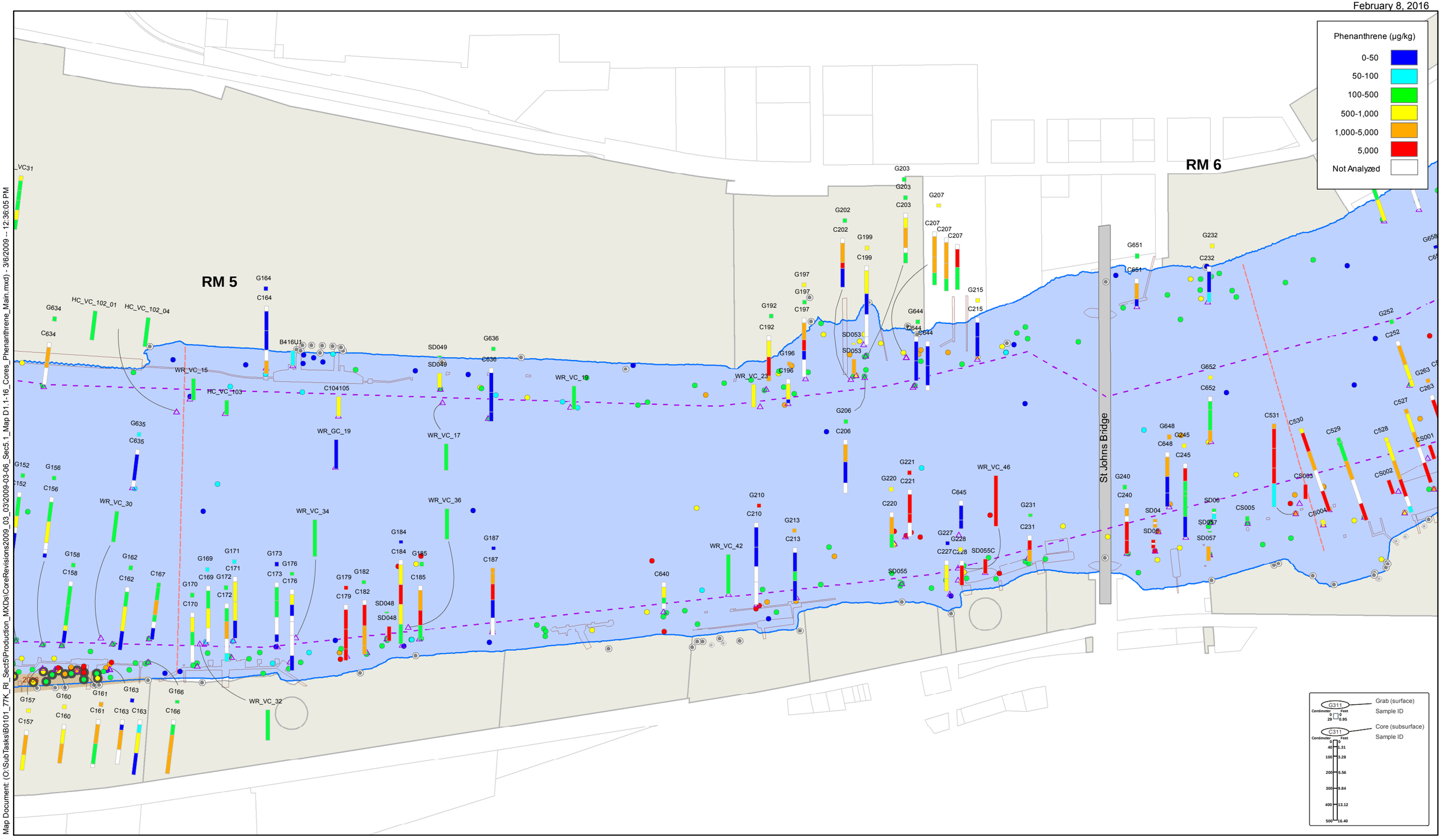
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-23e2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Phenanthrene (µg/kg)

River Mile 04 to 05 - Slips - Inset 2

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

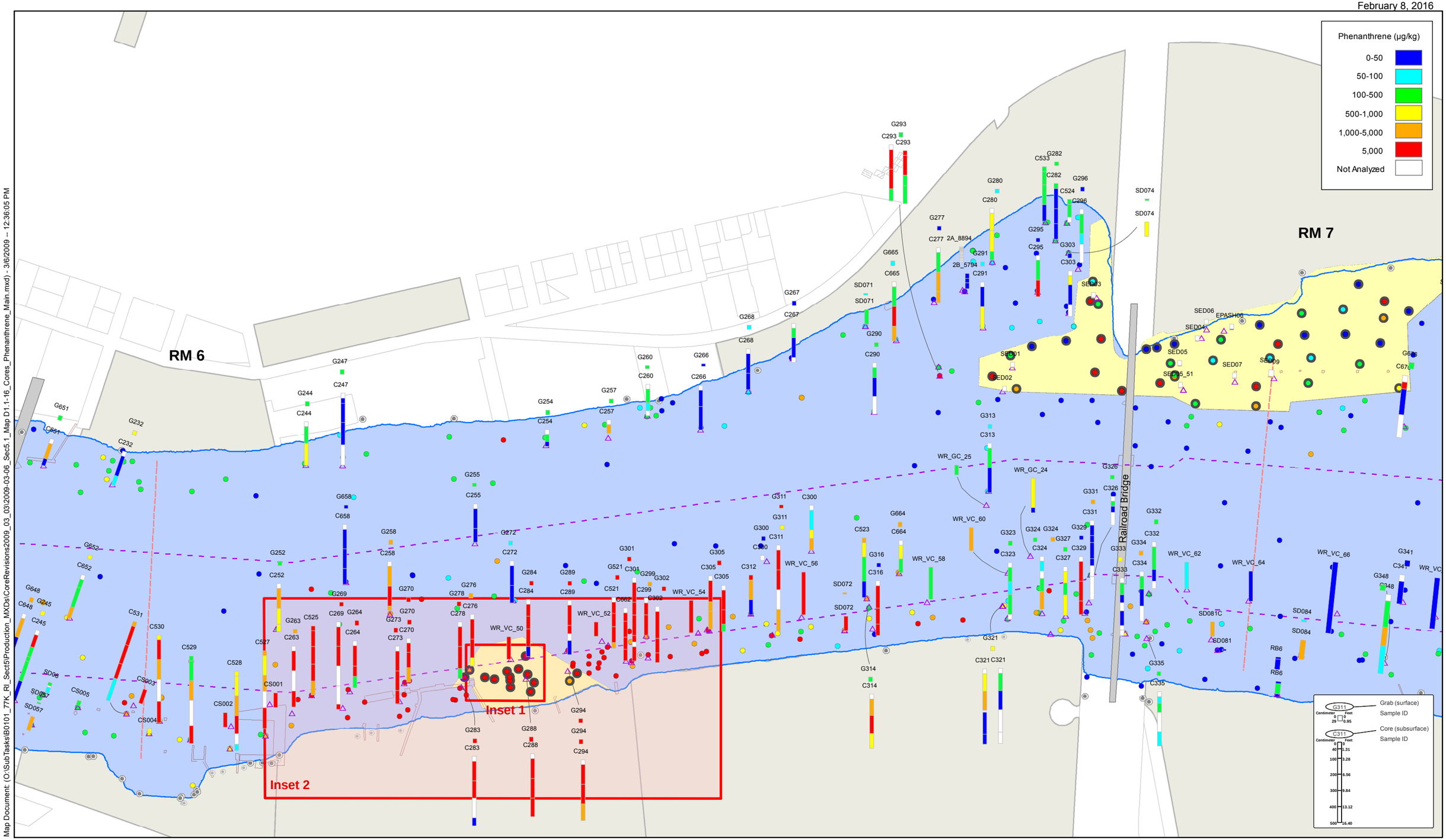
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-23f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Phenanthrene (µg/kg)

River Mile 05 to 06

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

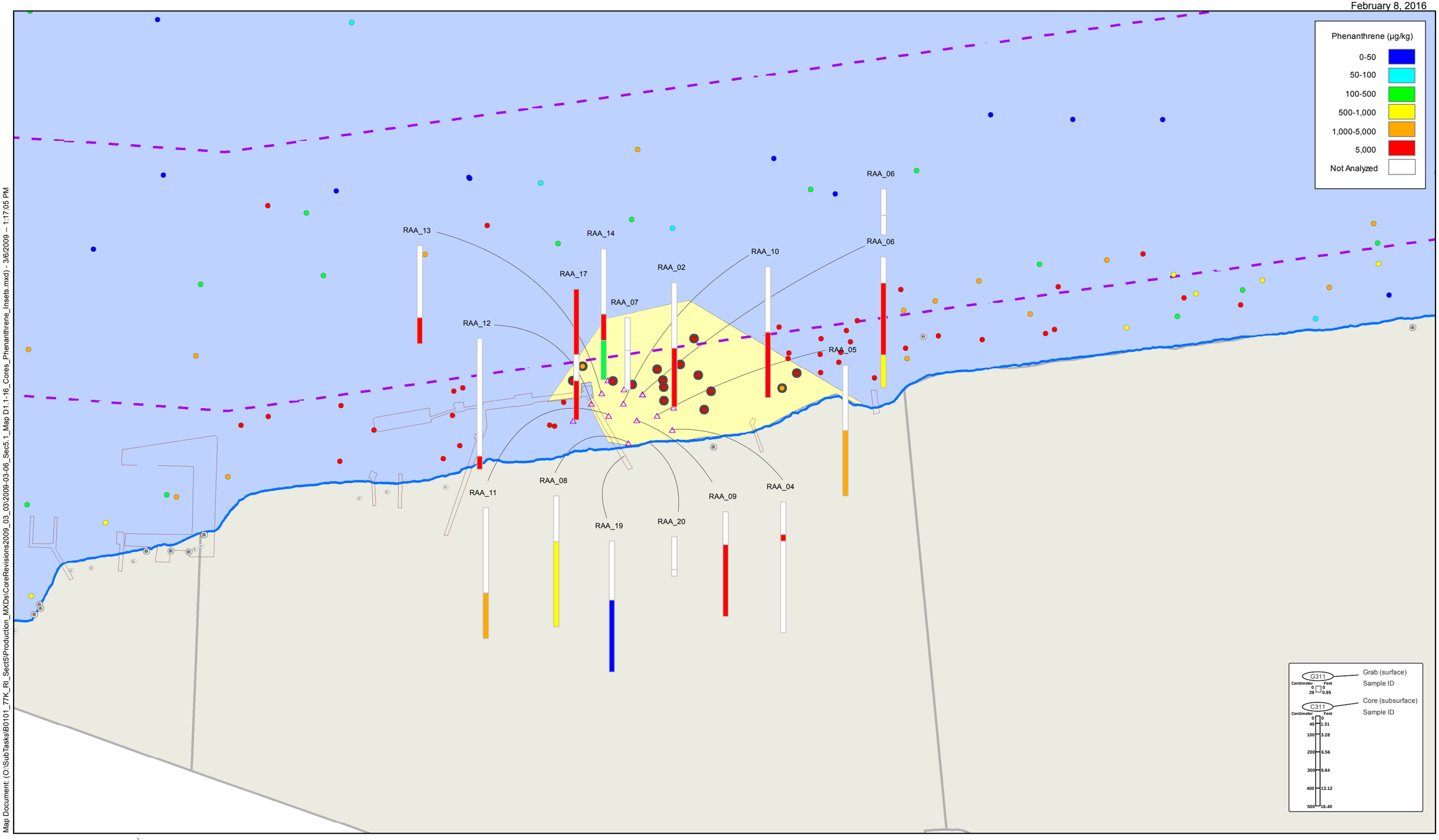
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-23g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Phenanthrene (µg/kg)
River Mile 06 to 07

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D1.1-16_Cores_Phenanthrene_Insets.mxd) - 3/6/2009 -- 1:17:05 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-23g1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Phenanthrene (µg/kg)

River Mile 06 to 07 - Inset 1

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D1.1-16_Cores_Phenanthrene_Insets.mxd) - 3/6/2009 -- 1:17:05 PM

Phenanthrene (µg/kg)
- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- 5,000
- Not Analyzed

GS09
GSD5
GSD4
AN_1_5
GS08
GSD2
GS07
GS06
GSC5
GS05
GS04
AN_2_5
GSC2
GSB2
GSB7
GSC7
AN_1_3
AN_1_2
AN_2_4
GSB5
AN_1_1
AN_2_3
AN_2_1
AN_2_2

G311 Centimeter 0 29 Feet 0 0.95 — Grab (surface) Sample ID
C311 Centimeter 0 40 100 200 300 400 500 Feet 0 1.31 3.28 6.56 9.84 13.12 16.40 — Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

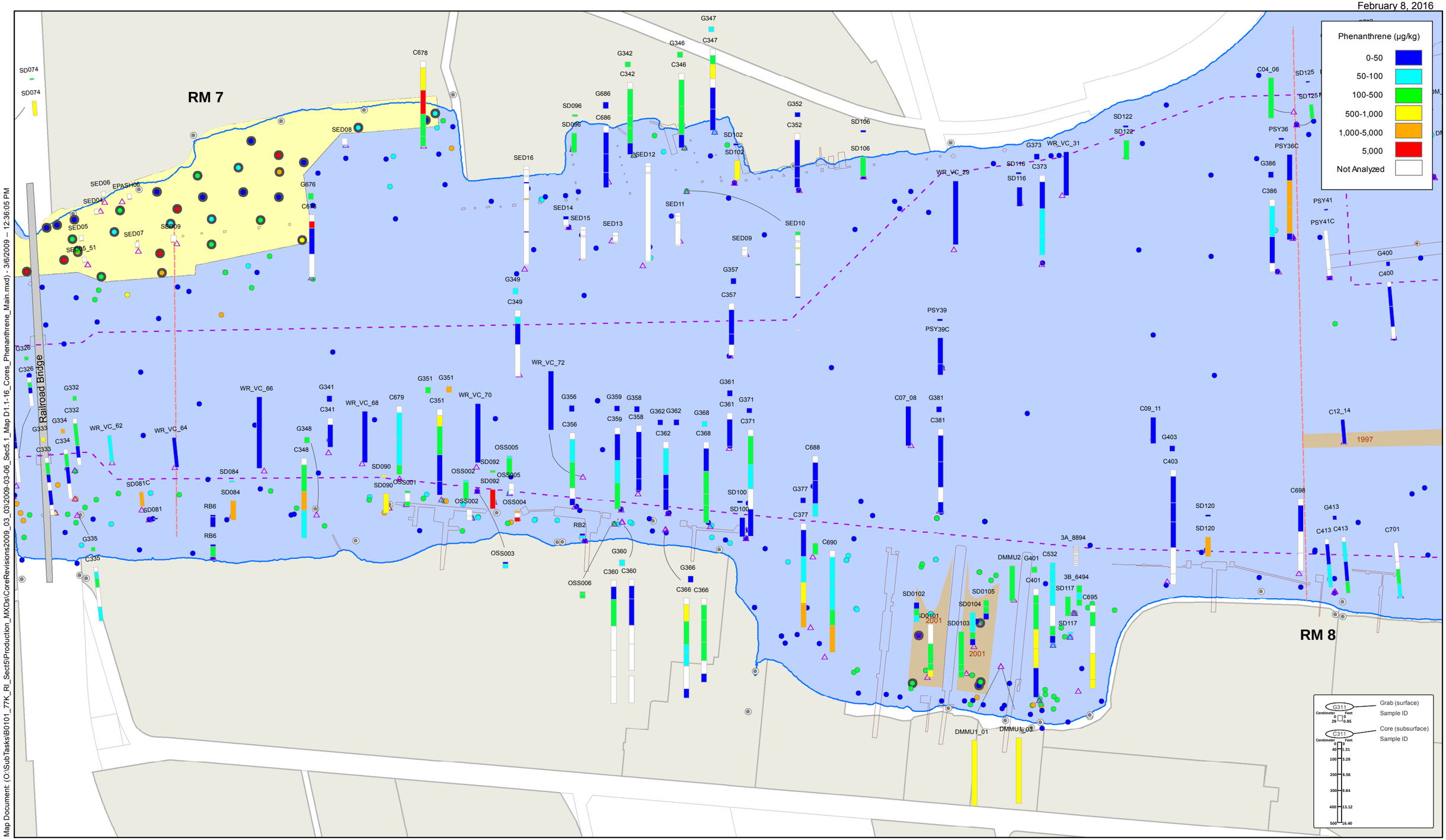
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-23g2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Phenanthrene (µg/kg)

River Mile 06 to 07 - Inset 2

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

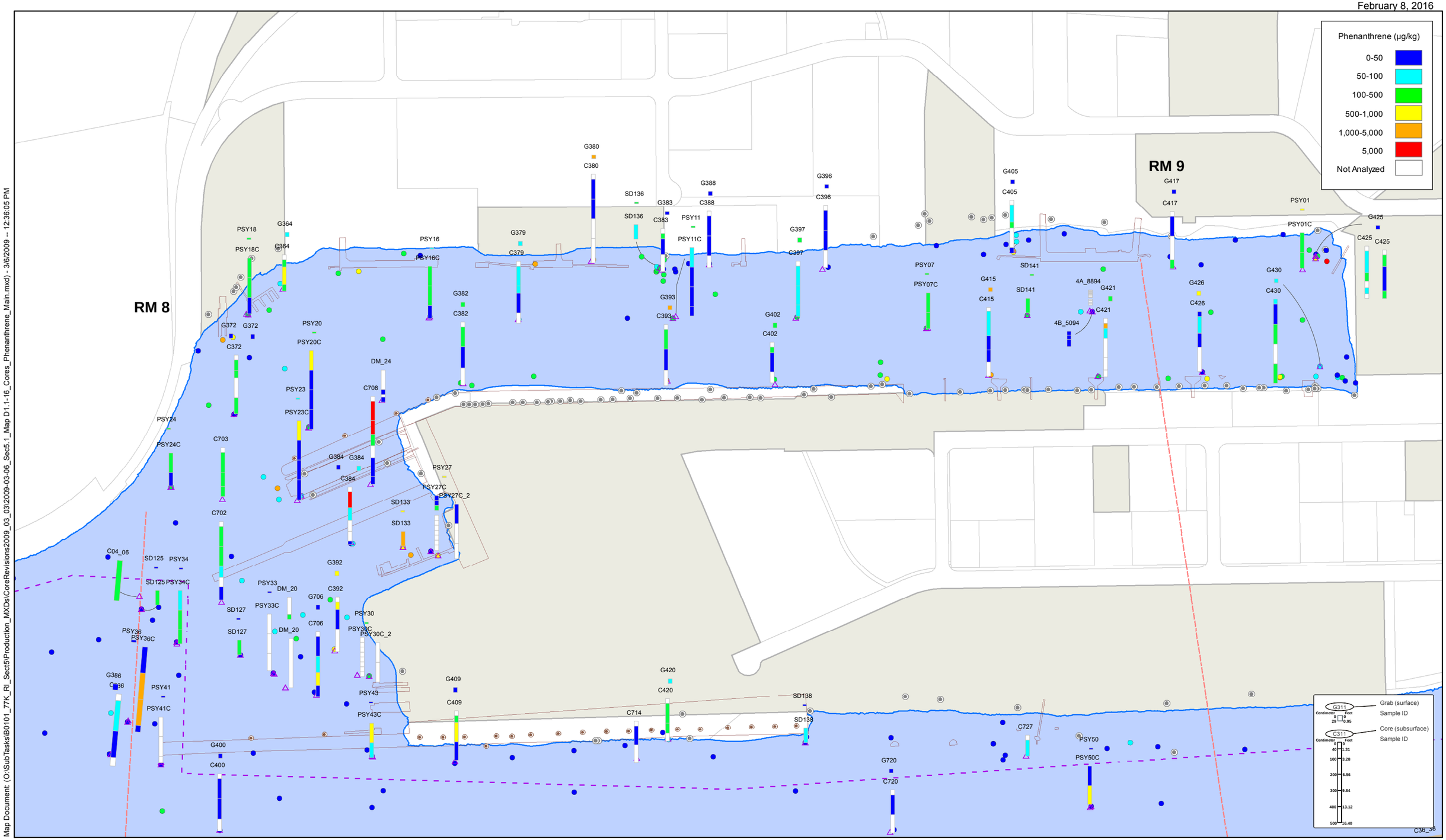
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-23h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Phenanthrene (µg/kg)
River Mile 07 to 08




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D1.1-16_Cores_Phenanthrene_Main.mxd) - 3/6/2009 -- 12:36:05 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

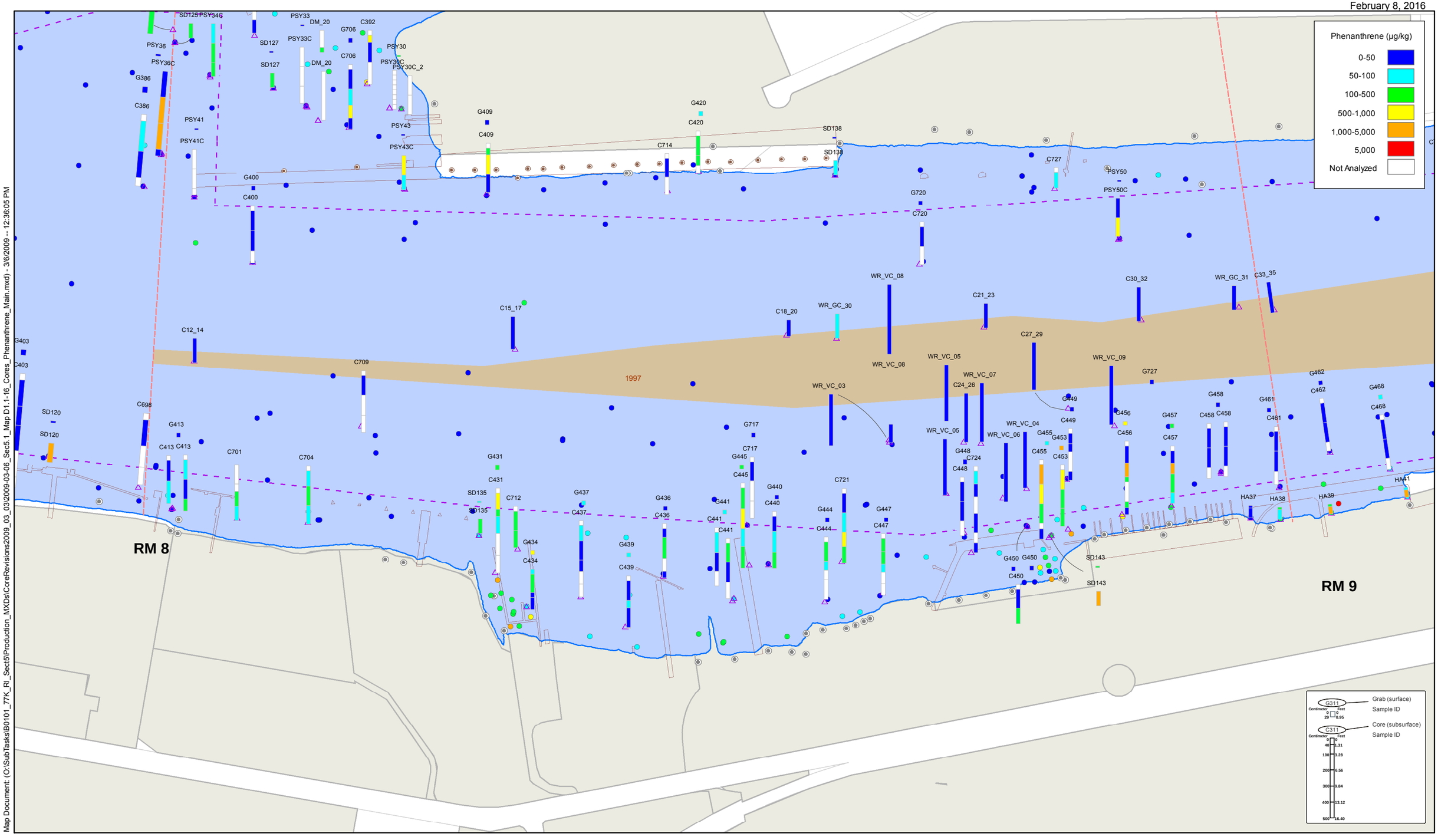
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-23i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Phenanthrene (µg/kg)

River Mile 08 to 09 - Swan Is. East

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-23j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Phenanthrene (µg/kg)

River Mile 08 to 09 - Swan Is. West

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D1.1-16_Cores_Phenanthrene_Main.mxd) - 3/6/2009 -- 12:36:05 PM

Phenanthrene (µg/kg)
- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- 5,000
- Not Analyzed

RM 10

RM 9

G454 C454 SD150 C733 WR_VC_33 WR_VC_35 WR_VC_37 WR_VC_39 WR_VC_41 WR_VC_43 WR_VC_45 G742 C742 G743 C743 G746 C746 SD04 C749 WR_GC_32 WR_GC_33 WR_GC_34 WR_GC_35 WR_VC_106 G748 C748 G747 C747 T2U1 T2_01_2 T2U2 T2_01_1 HC_VC_53 G492 C492 G494 C494 G739 C739 G738 C738 G735 C735 RC483 C45_47 WR_VC_03 WR_VC_05 C48_50 C51_52 C42_44 C39_41 WR_VC_04 C36_38 WR_GC_31 C33_35 G471 C471 G474 C474 G477 C477 SD151 HA43 HA42 HA41 HA39 HA38 HA37 G462 C462 G468 C468 G461 C461 G458 C458 1997 2000 2002 2005

Grab (surface) Sample ID
Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-23k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Phenanthrene (µg/kg)
River Mile 09 to 10

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D1.1-16_Cores_Phenanthrene_Main.mxd) - 3/6/2009 -- 12:36:05 PM

Phenanthrene (µg/kg)
- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- 5,000
- Not Analyzed

RM 10

RM 11

Fremont Bridge

G743 C743 G746 C746 SD04 C749 WR_VC_45 WR_GC_32 WR_GC_33 WR_VC_49 WR_VC_51 C757 WR_VC_55 WR_VC_57 SD02 WR_VC_59 WR_VC_61 SD01 G764 C764 C764 WR_VC_47 WR_VC_53 G760 C760 C51_52 WR_GC_34 WR_GC_35 G748 C748 C748 G747 C747 WR_VC_106 G752 C752 WR_VC_108 G753 C753 WR_VC_110 RC01 C762 WR_VC_114 WR_VC_116 WR_VC_118 WR_VC_120 RC02 WR_VC_122 WR_VC_124 C773 T2U1 1997 2002 2002 2000

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

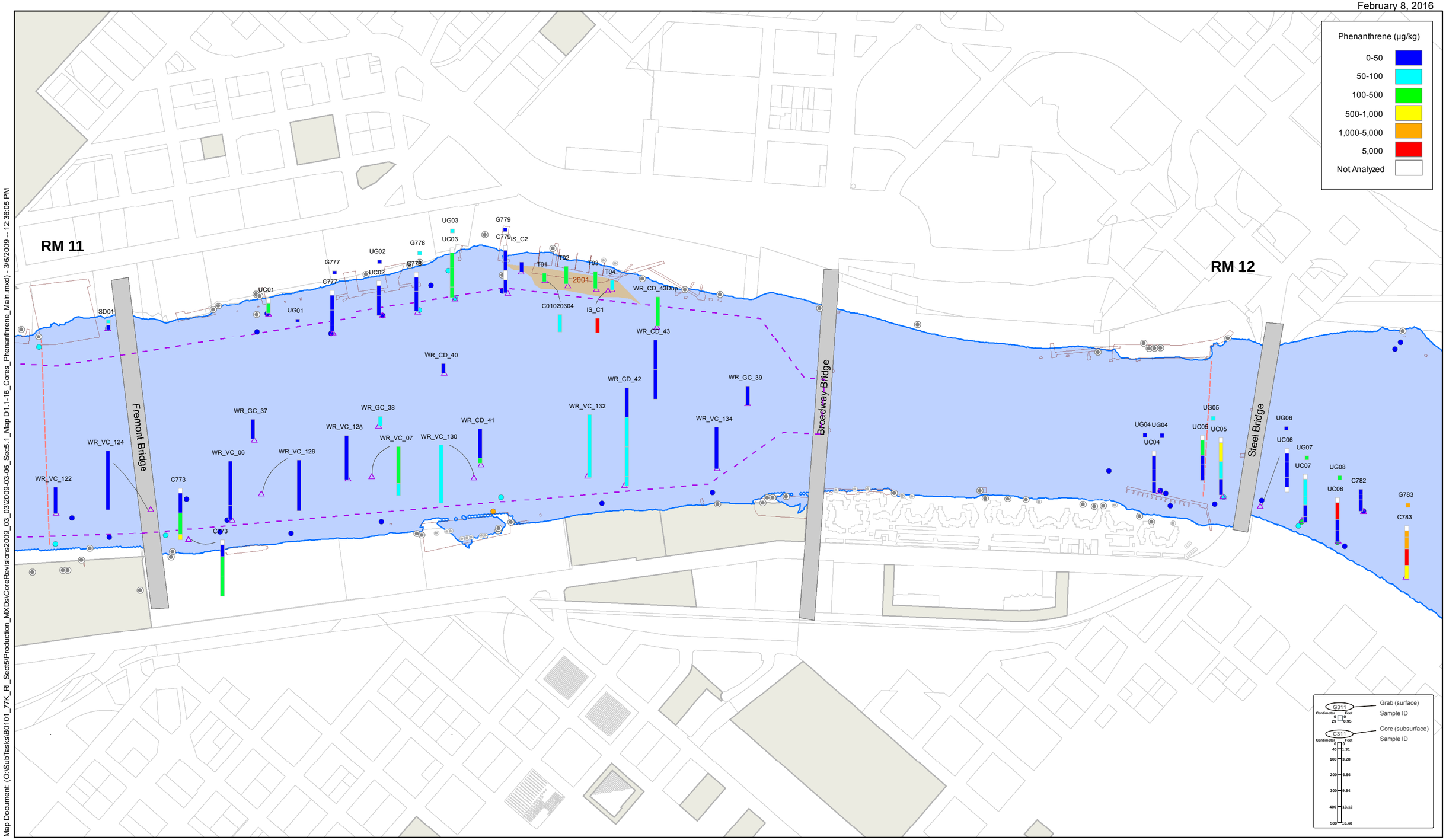
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-23I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Phenanthrene (µg/kg)

River Mile 10 to 11




Map Document: (O:\SubTasks\B0101_7TK_RI_Sect5\Production_MXDs\CoreRevisions2009_03_0312009-03-06_Sec5.1_Map D1.1-16_Cores_Phenanthrene_Main.mxd) - 3/6/2009 -- 12:36:05 PM

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Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

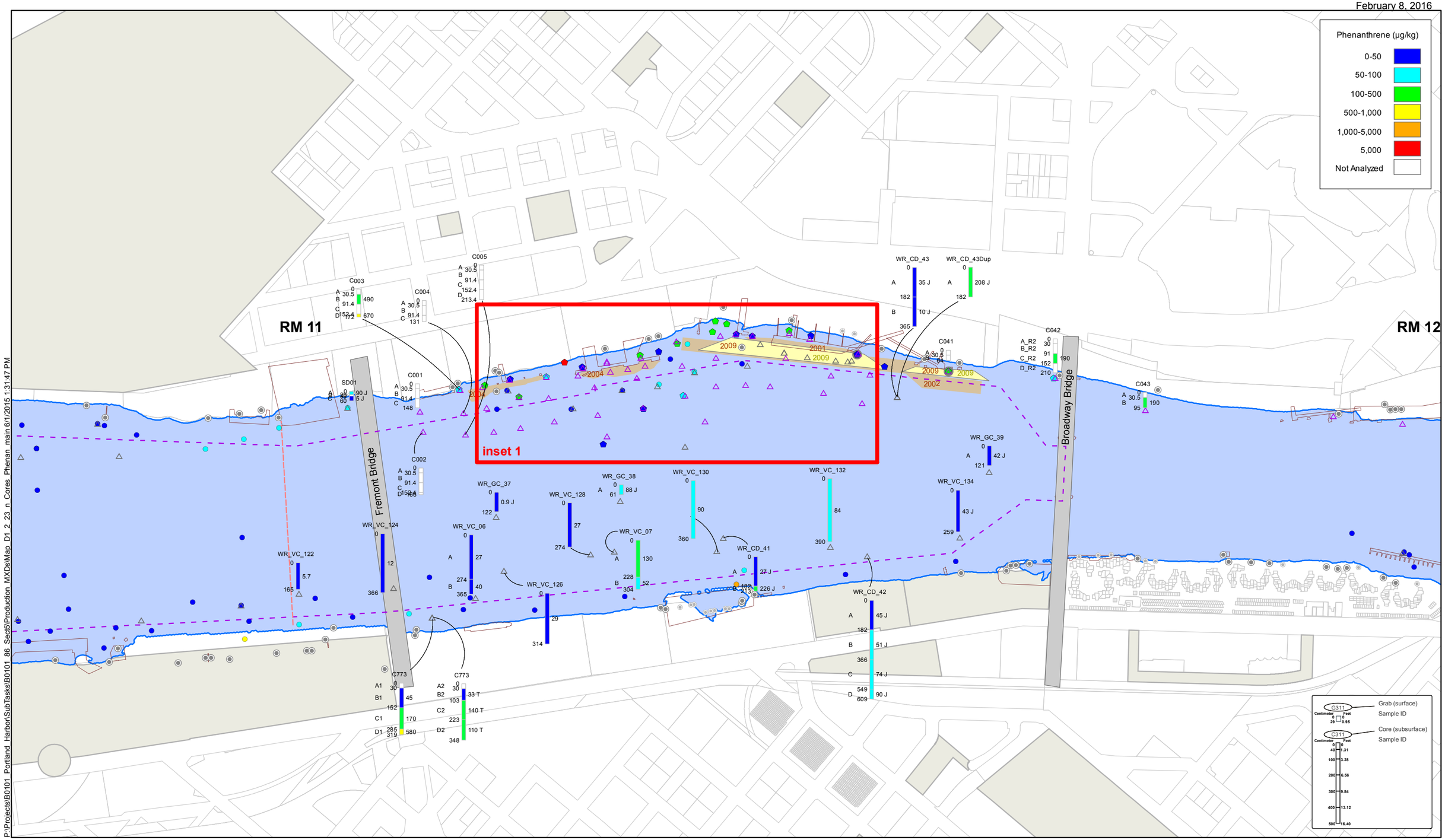
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-23 m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Phenanthrene (µg/kg)
River Mile 11 to 12




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

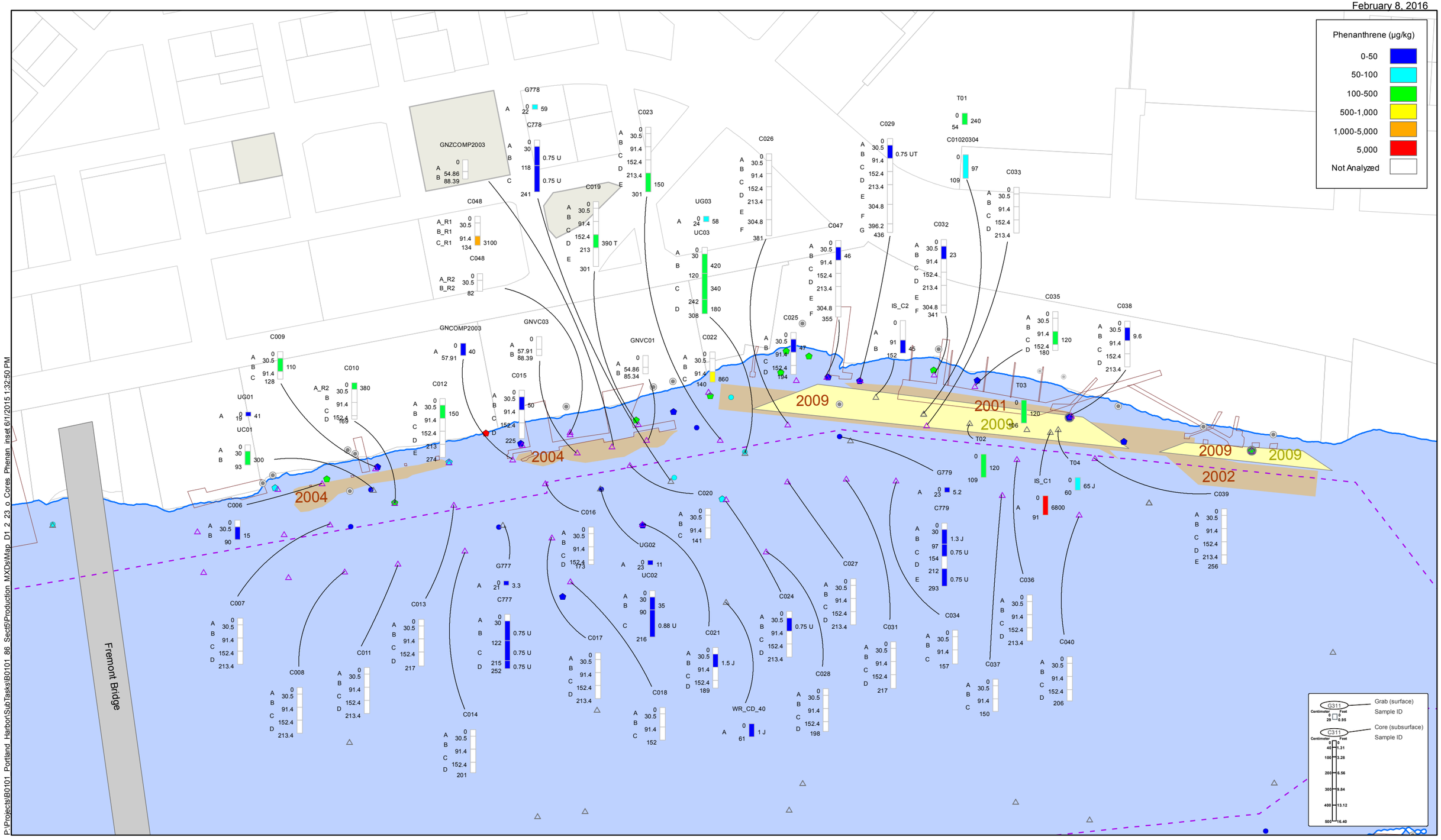
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-23n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Phenanthrene (µg/kg)

River Mile 11.0 - 11.8




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

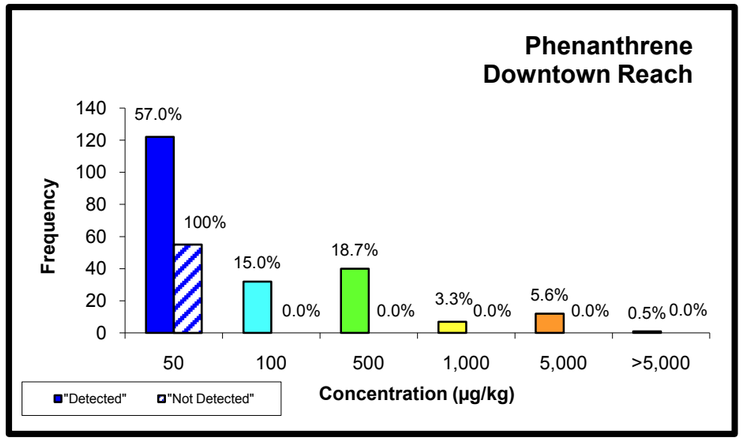
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

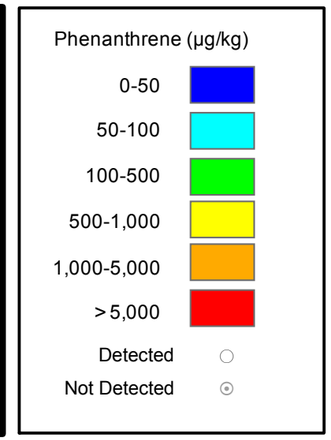
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

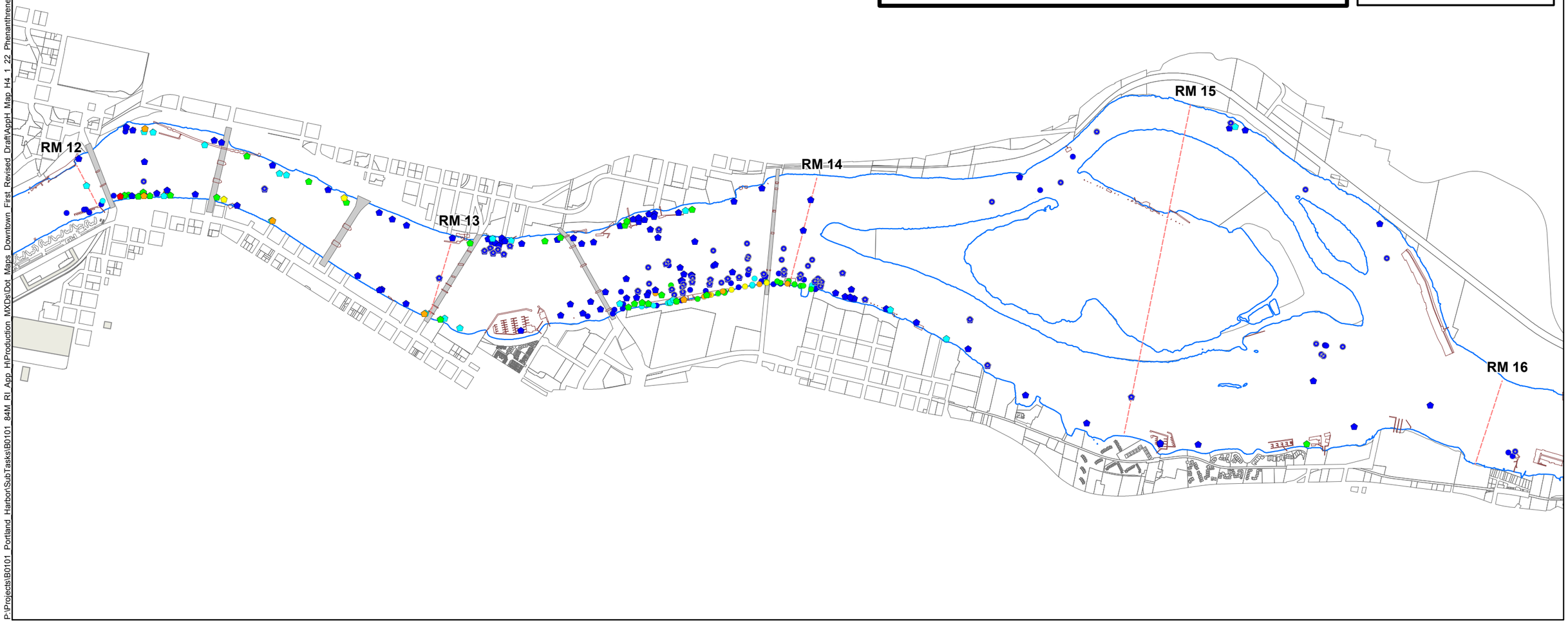
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-23o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Phenanthrene (µg/kg)

River Mile 11.0 - 11.8 - Inset 1

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

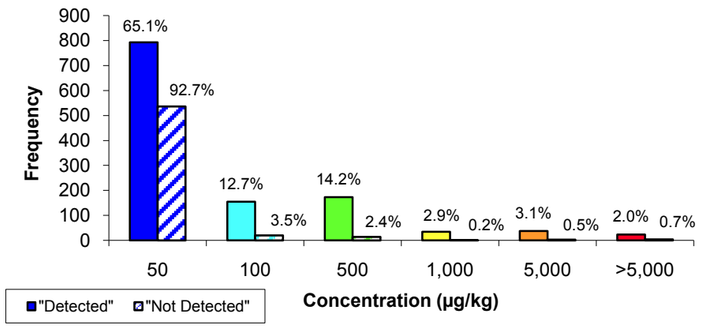
- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-24**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Phenanthrene (µg/kg)
Downtown Reach

P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_84M_RI_App_H\Production_MXDs\Dot_Maps_Second_Revised_Draft\AppH_Map_H3_1_45_Surface_Sed_Naphthalene.mxd - 6/17/2011 @ 2:57:55 PM

RM 1
RM 2
RM 3
RM 4
RM 5
RM 6
RM 7
RM 8
RM 8
RM 9
RM 10
RM 11
RM 12

**Naphthalene**




Naphthalene (µg/kg)

- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- > 5,000
- Detected
- Not Detected

N

0 1,000 2,000 3,000 4,000 5,000 Feet

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-25**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Naphthalene (µg/kg)

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D1.1-18_Cores_Naphthalene_Main.mxd) - 3/6/2009 -- 11:26:19 AM

RM 1

RM 2

Naphthalene (µg/kg)
- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- > 5,000
- Not Analyzed

HC_VC_B501_01
HC_VC_B501_03
HC_B501_C1
T5_01_1
DG18
DC06
1999
B501_C1
B501_C2
1999
HC_VC_B501_02
T5_01_2
DG15
DC03
2001
HC_B503_C1
2001
DG16
DC04
DG13
DC01
DC01
G600
C600
G009
C009
RB13
G011
C011
G602
C602
G601
C601
C601
WR_GC_06
DG17
DC05
DG14
DC02

G311 Grab (surface) Sample ID
C311 Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

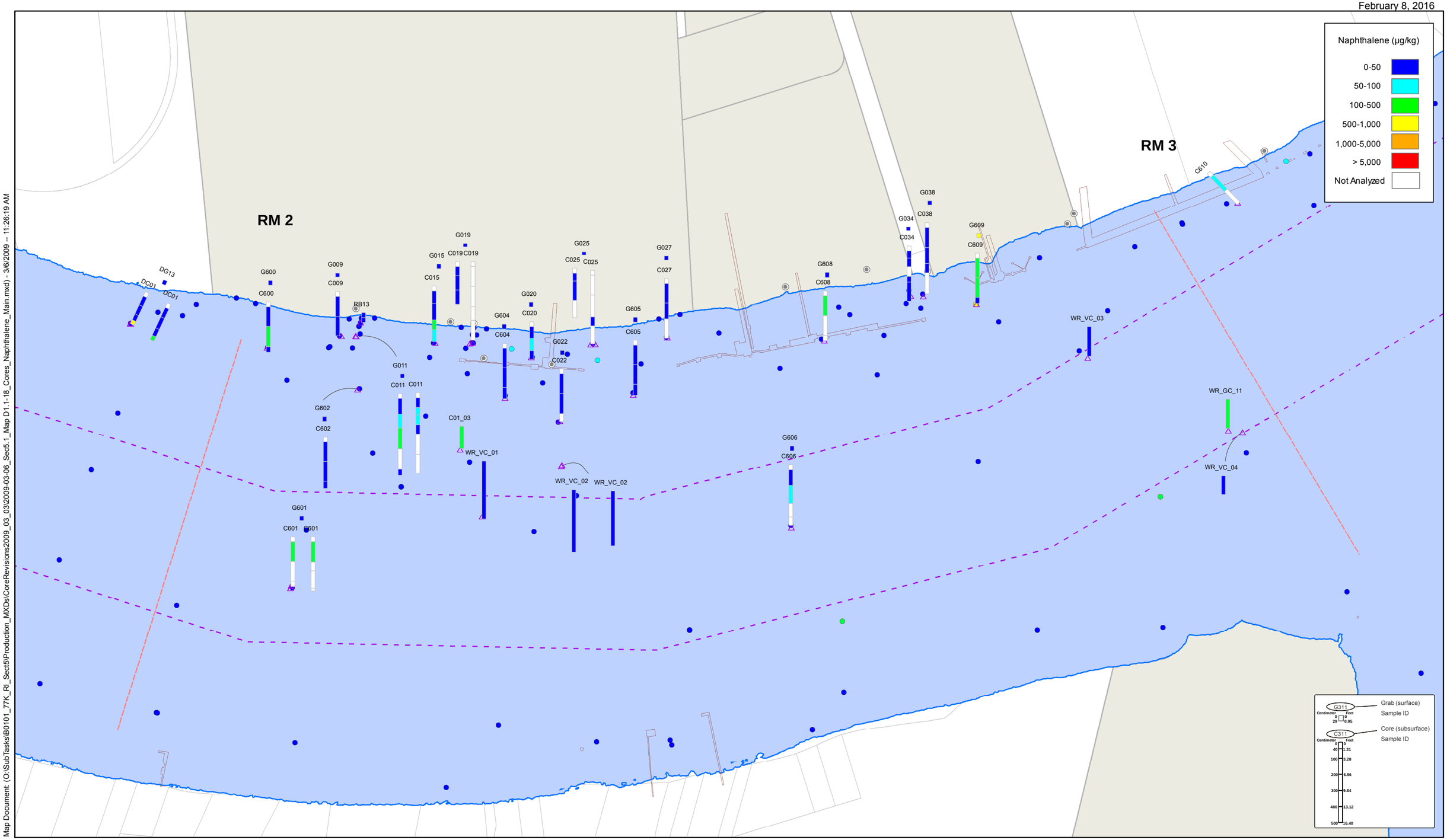
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-26a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Naphthalene (µg/kg)
River Mile 01 to 02

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

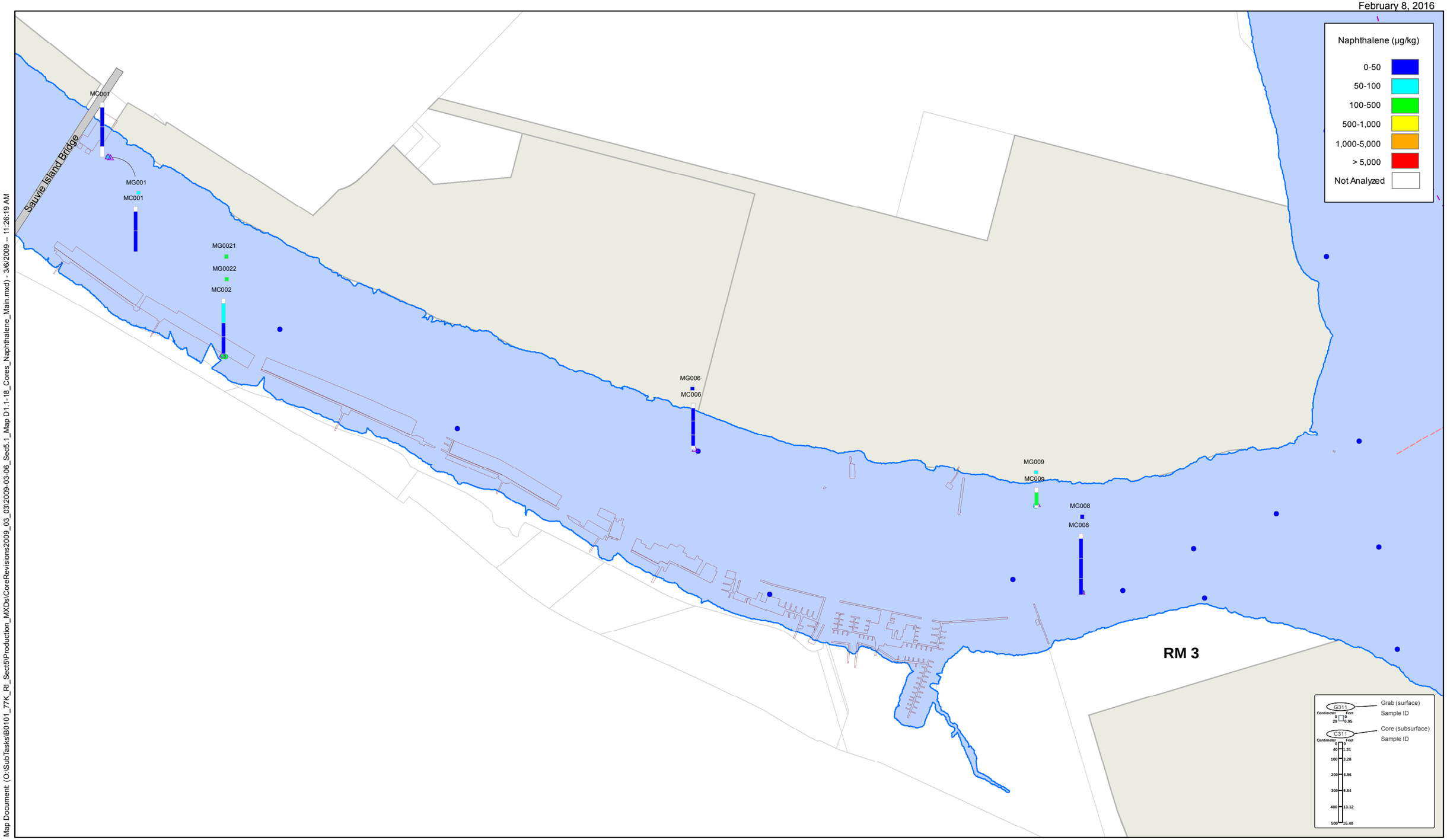
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-26b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Naphthalene (µg/kg)
River Mile 02 to 03

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

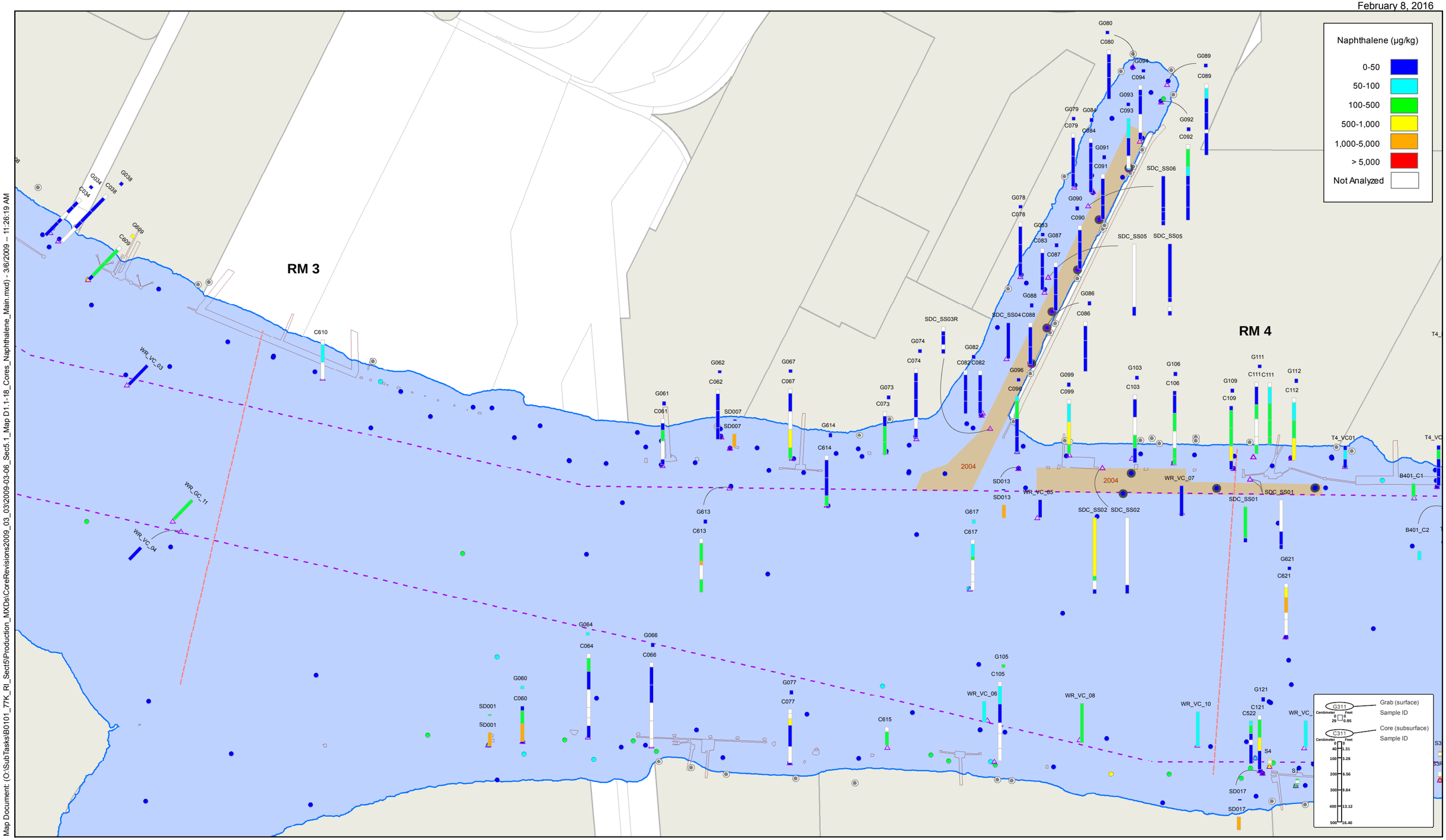
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-26c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Naphthalene (µg/kg)
River Mile 03 - Multnomah Channel

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D1.1-18_Cores_Naphthalene_Main.mxd) - 3/6/2009 -- 11:26:19 AM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-26d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Naphthalene (µg/kg)
River Mile 03 to 04

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D1.1-18_Cores_Naphthalene_Main.mxd) - 3/6/2009 -- 11:26:19 AM

Naphthalene (µg/kg)

- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- > 5,000
- Not Analyzed

RM 4

RM 5

Inset 1

Inset 2

Grab (surface) Sample ID

Core (subsurface) Sample ID

N

0 150 300 450 600 750 Feet

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

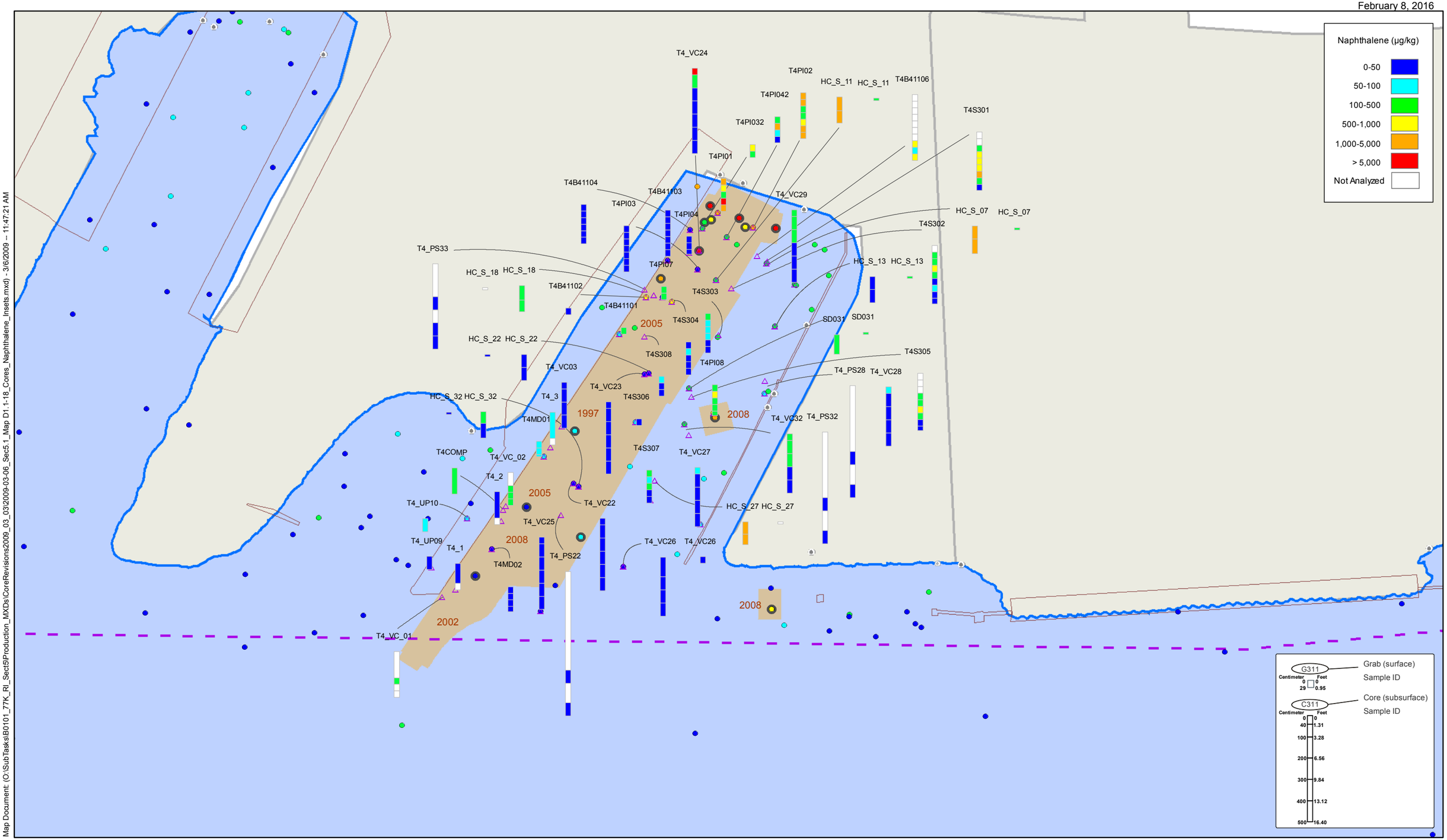
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-26e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Naphthalene (µg/kg)
River Mile 04 to 05 - Slips

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 120 240 480 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

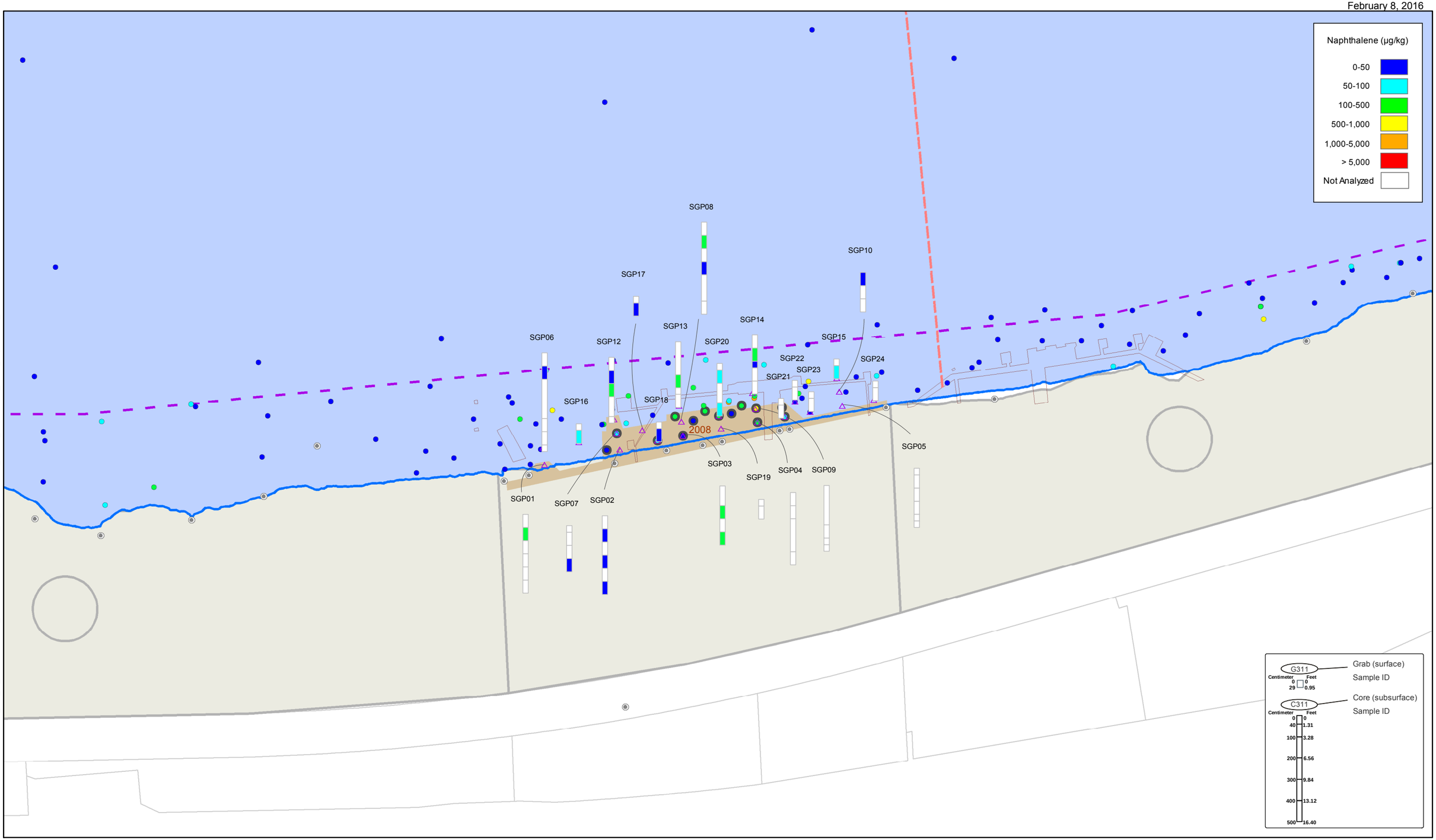
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-26e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Naphthalene (µg/kg)

River Mile 04 to 05 - Slips - Inset 1

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

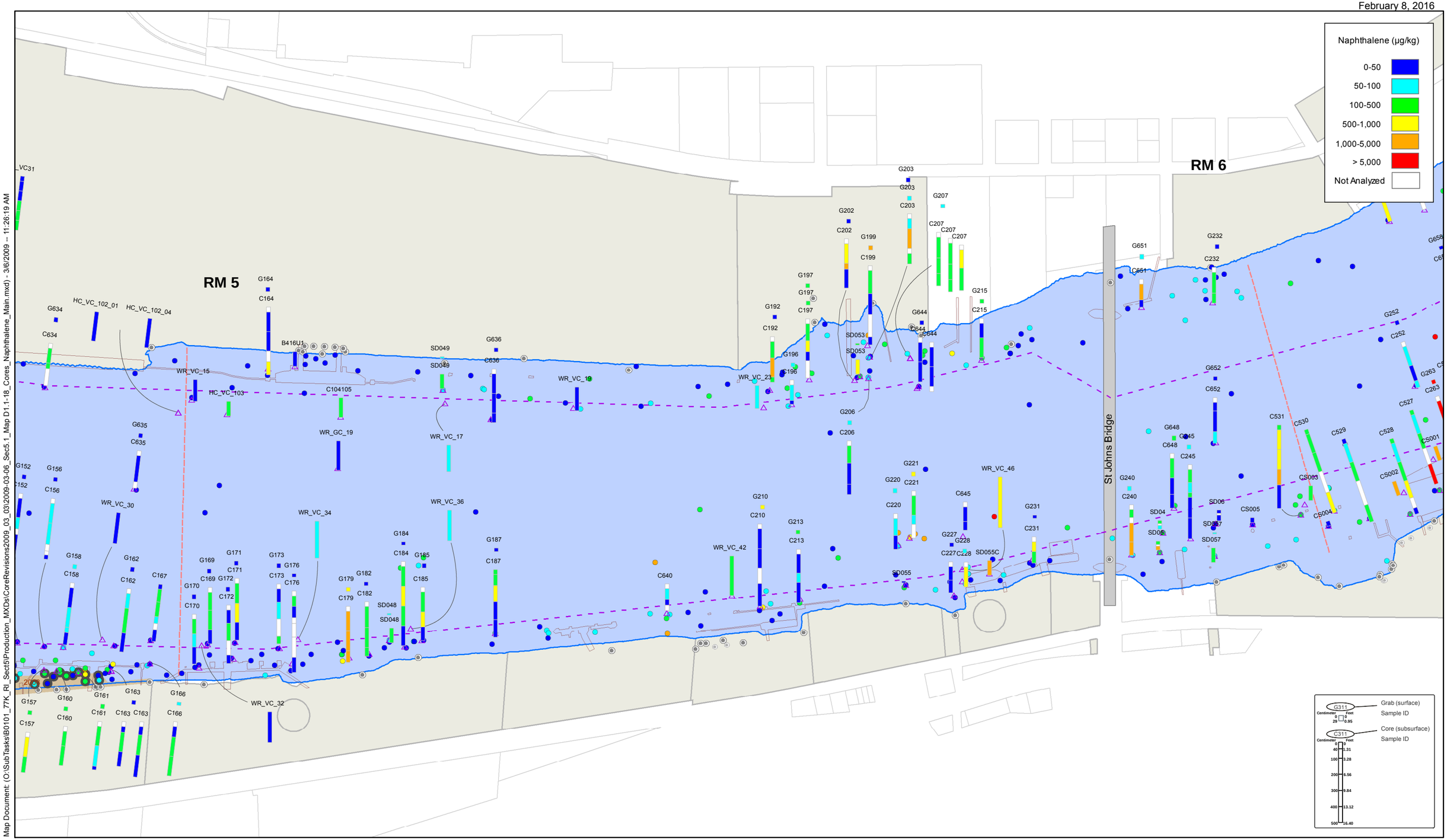
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-26e2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Naphthalene (µg/kg)
River Mile 04 to 05 - Slips - Inset 2

Map Document: (O:\SubTasks\B0101_77K_RI_Sec5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D1.1-18_Cores_Naphthalene_Main.mxd) - 3/6/2009 -- 11:26:19 AM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-26f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Naphthalene (µg/kg)
River Mile 05 to 06

Naphthalene (µg/kg)

- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- > 5,000
- Not Analyzed

RM 6

RM 7

Railroad Bridge

Inset 1

Inset 2

Grab (surface) Sample ID

Core (subsurface) Sample ID

Map Document: (O:\SubTasks\B0101_7TK_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D1.1-18_Cores_Naphthalene_Main.mxd) - 3/6/2009 -- 11:26:19 AM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-26g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Naphthalene (µg/kg)
River Mile 06 to 07

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D1.1-18_Cores_Naphthalene_Insets.mxd) - 3/6/2009 -- 11:47:21 AM

Naphthalene (µg/kg)

- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- > 5,000
- Not Analyzed

RAA_13
RAA_14
RAA_06
RAA_06
RAA_17
RAA_02
RAA_10
RAA_07
RAA_12
RAA_05
RAA_11
RAA_08
RAA_19
RAA_20
RAA_09
RAA_04

Grab (surface) Sample ID
Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-26g1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Naphthalene (µg/kg)

River Mile 06 to 07 - Inset 1

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D1.1-18_Cores_Naphthalene_Insets.mxd) - 3/6/2009 -- 11:47:21 AM

Naphthalene (µg/kg)

- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- > 5,000
- Not Analyzed

GS09 GSD4 GSD5 AN_1_5 GS08 GSD2 GS07 GS06 GSC5 GS05 GS04 AN_2_5 GSC2 GSB2 GSB7 GSC7 AN_1_3 AN_1_2 AN_2_4 GSB5 AN_1_1 AN_2_3 AN_2_1 AN_2_2

G311 Grab (surface) Sample ID

C311 Core (subsurface) Sample ID

| Centimeter | Feet |
|---|---|
| 0 | 0 |
| 40 | 1.31 |
| 100 | 3.28 |
| 200 | 6.56 |
| 300 | 9.84 |
| 400 | 13.12 |
| 500 | 16.40 |

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

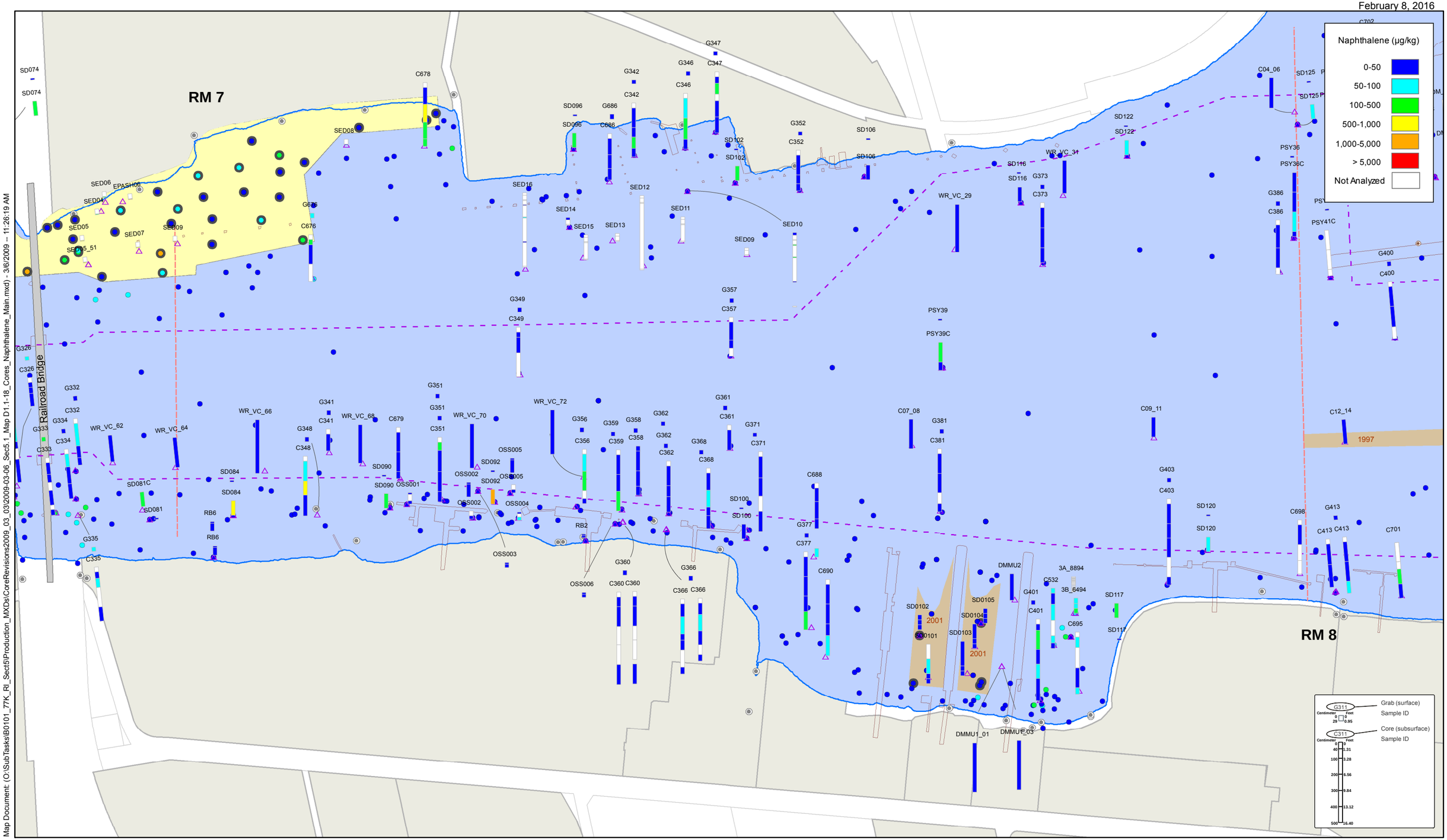
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-26g2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Naphthalene (µg/kg)
River Mile 06 to 07 - Inset 2

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

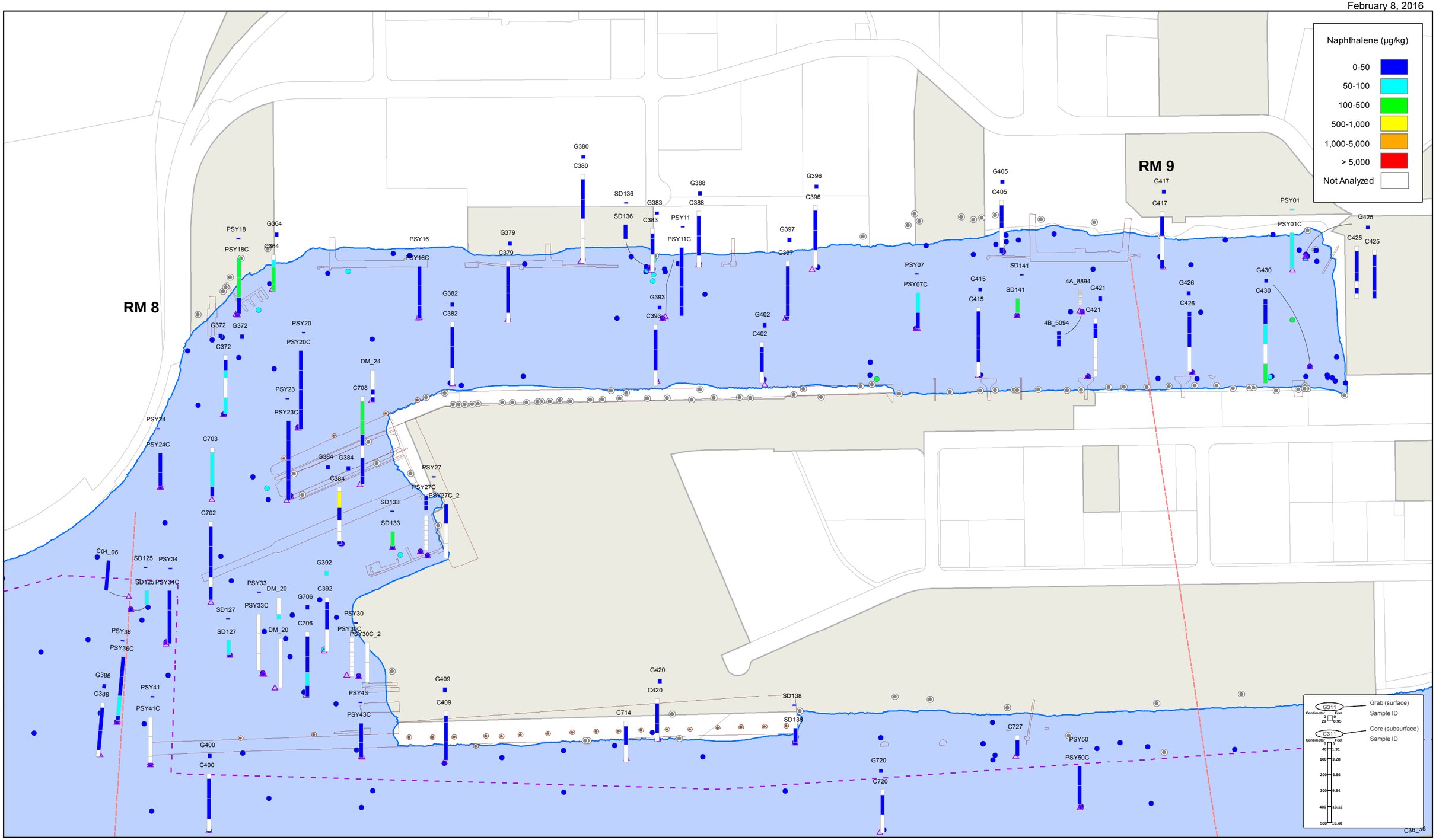
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-26h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Naphthalene (µg/kg)
River Mile 07 to 08

Map Document: (O:\Sub\Tasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D1.1-18_Cores_Naphthalene_Main.mxd) - 3/6/2009 -- 11:26:19 AM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

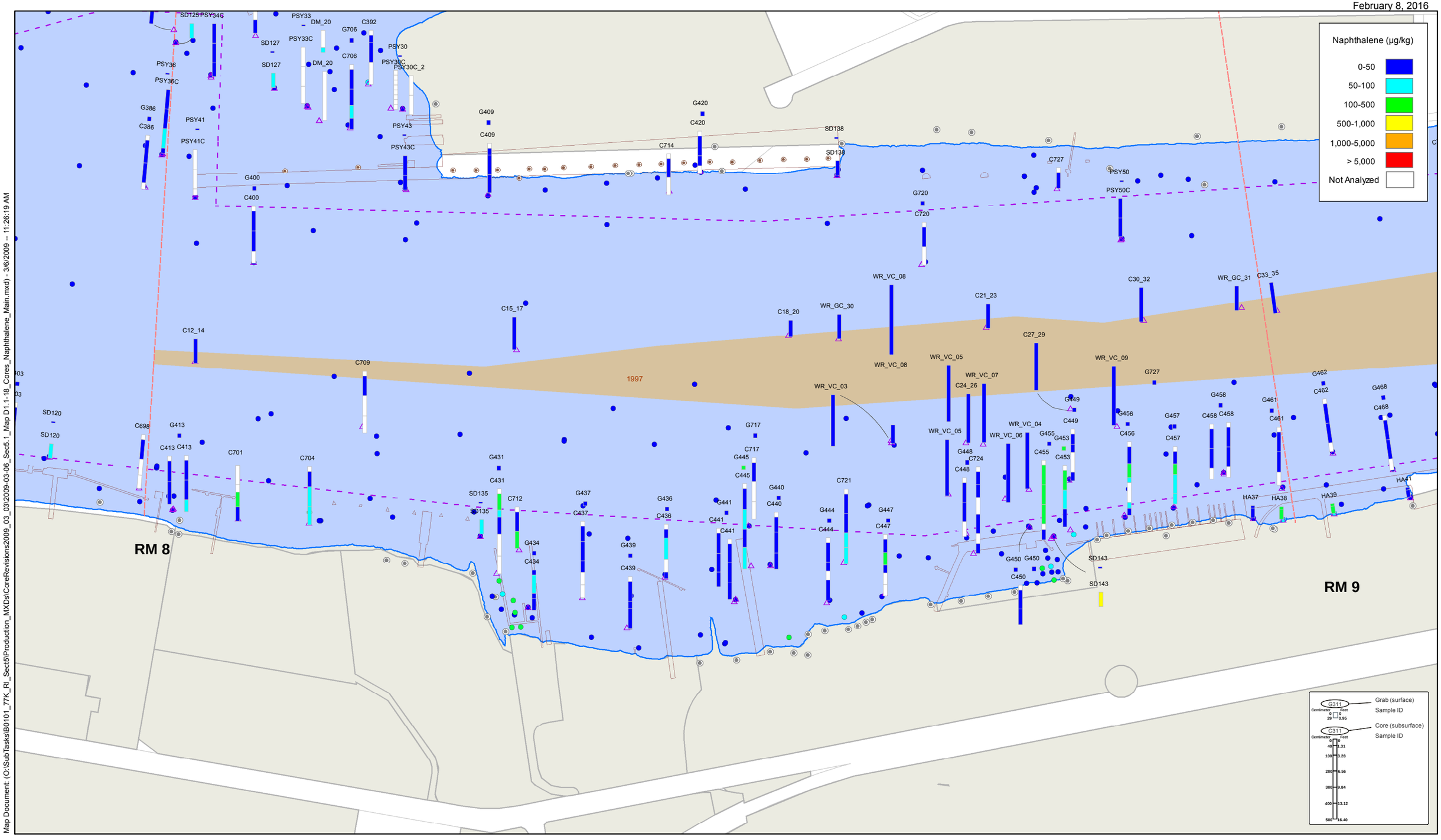
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-26i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Naphthalene (µg/kg)

River Mile 08 to 09 - Swan Is. East




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D1.1-18_Cores_Naphthalene_Main.mxd) - 3/6/2009 -- 11:26:19 AM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-26j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Naphthalene (µg/kg)
River Mile 08 to 09 - Swan Is. West

Naphthalene (µg/kg)

- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- > 5,000
- Not Analyzed

RM 10

RM 9

1997 2000 2002 2005

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

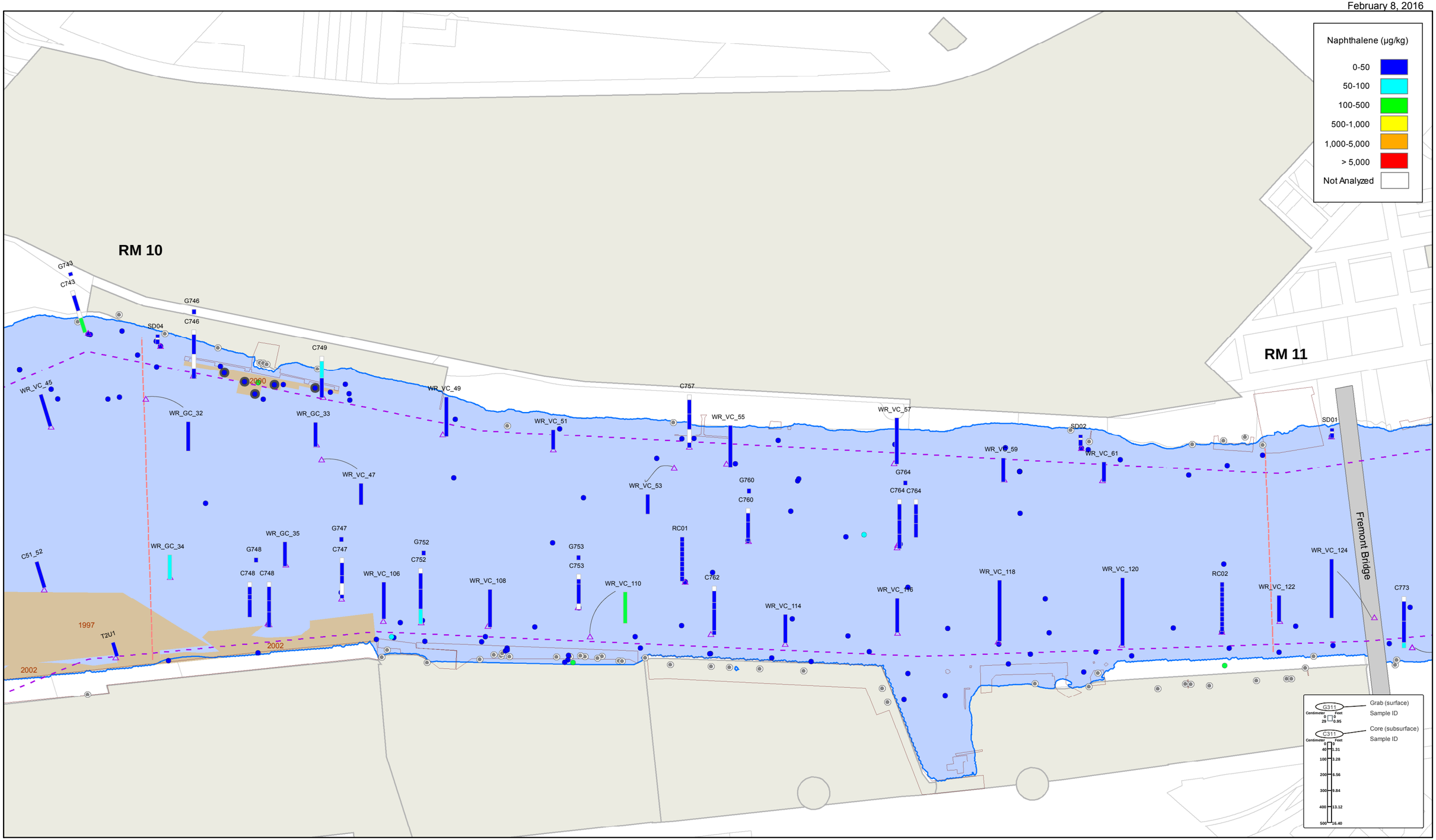
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-26k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Naphthalene (µg/kg)
River Mile 09 to 10

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D1.1-18_Cores_Naphthalene_Main.mxd) - 3/6/2009 -- 11:26:19 AM

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D1.1-18_Cores_Naphthalene_Main.mxd) - 3/6/2009 -- 11:26:19 AM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

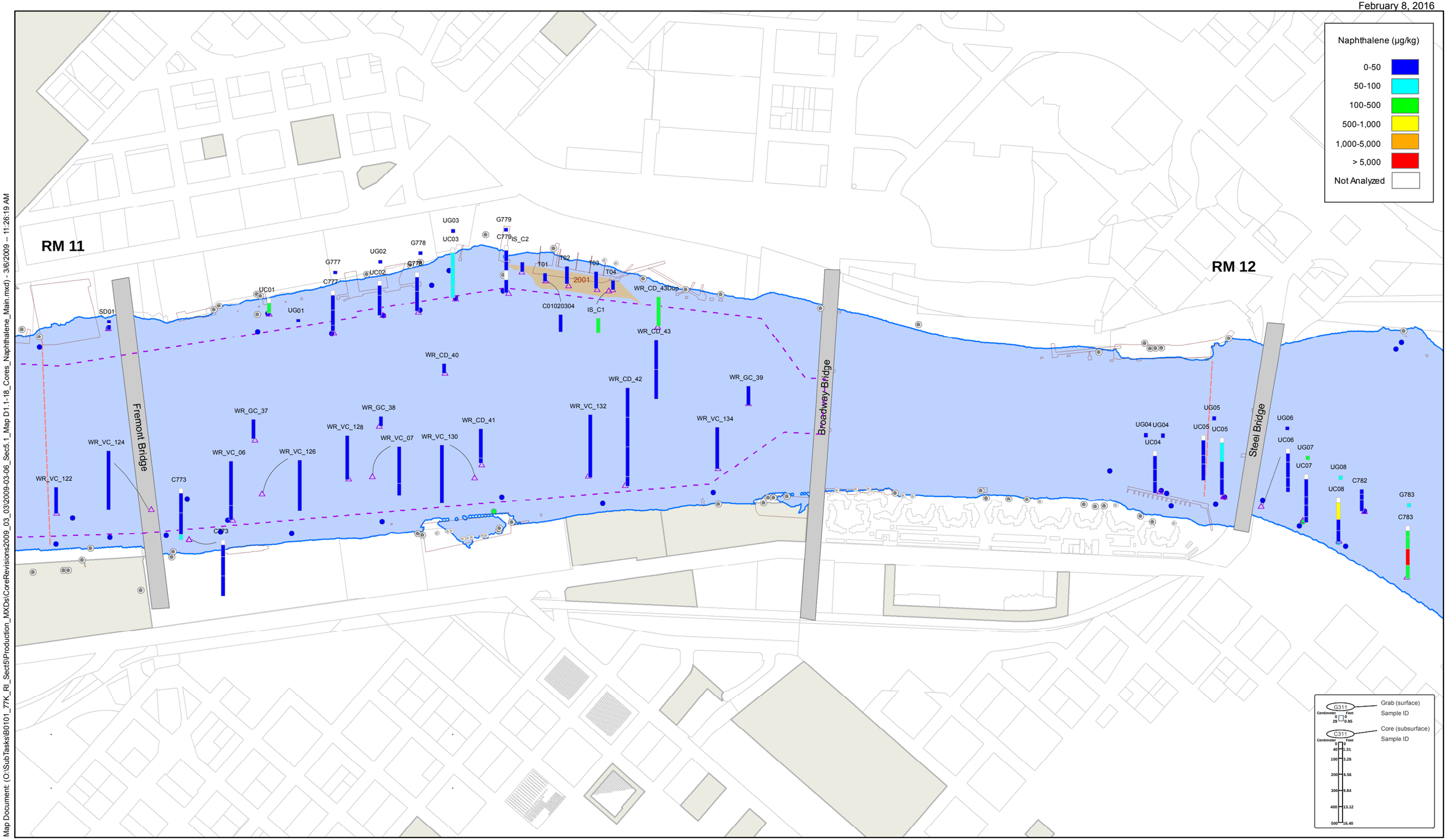
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-26I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Naphthalene (µg/kg)

River Mile 10 to 11

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

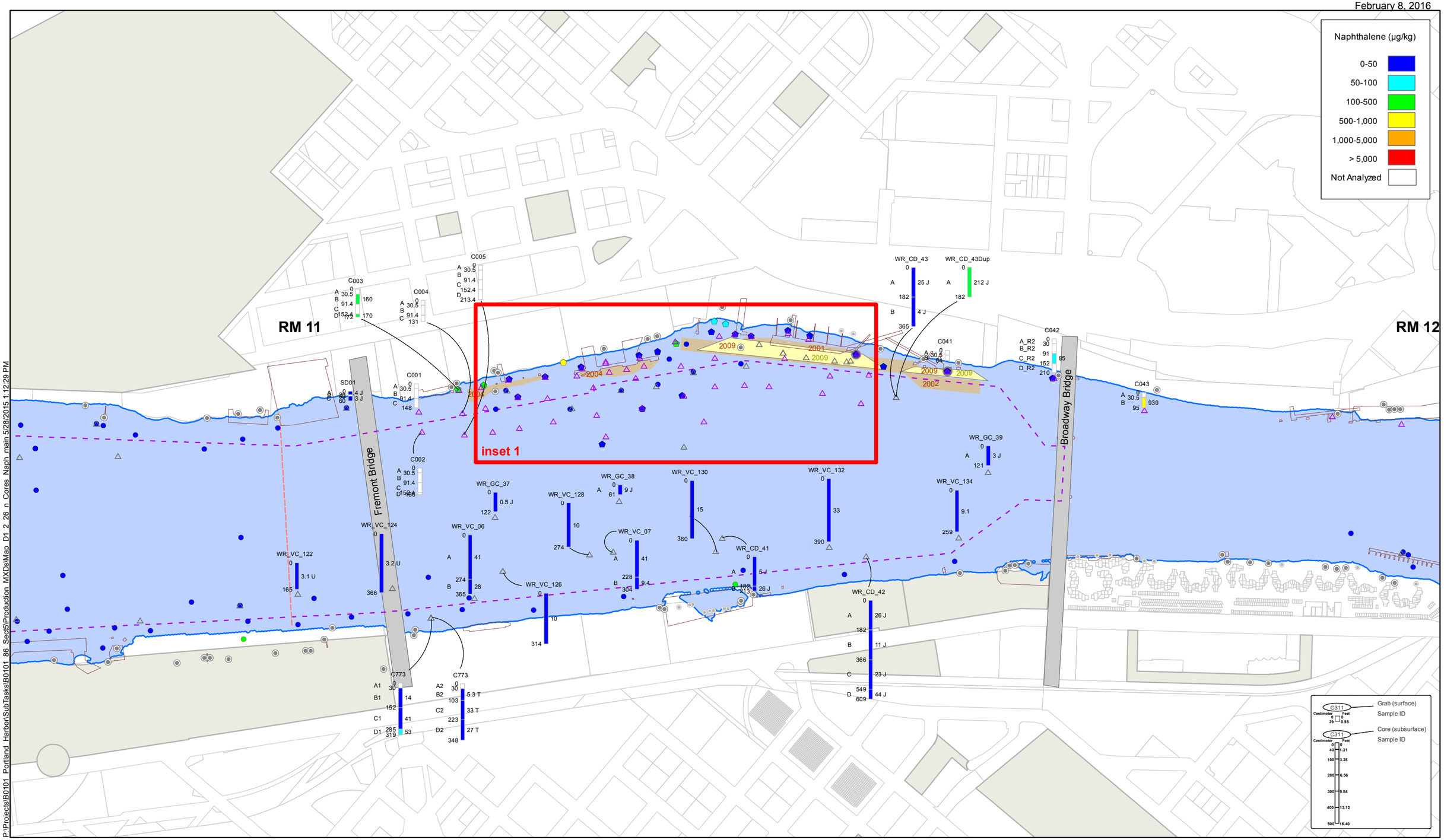
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-26m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Naphthalene (µg/kg)
River Mile 11 to 12

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

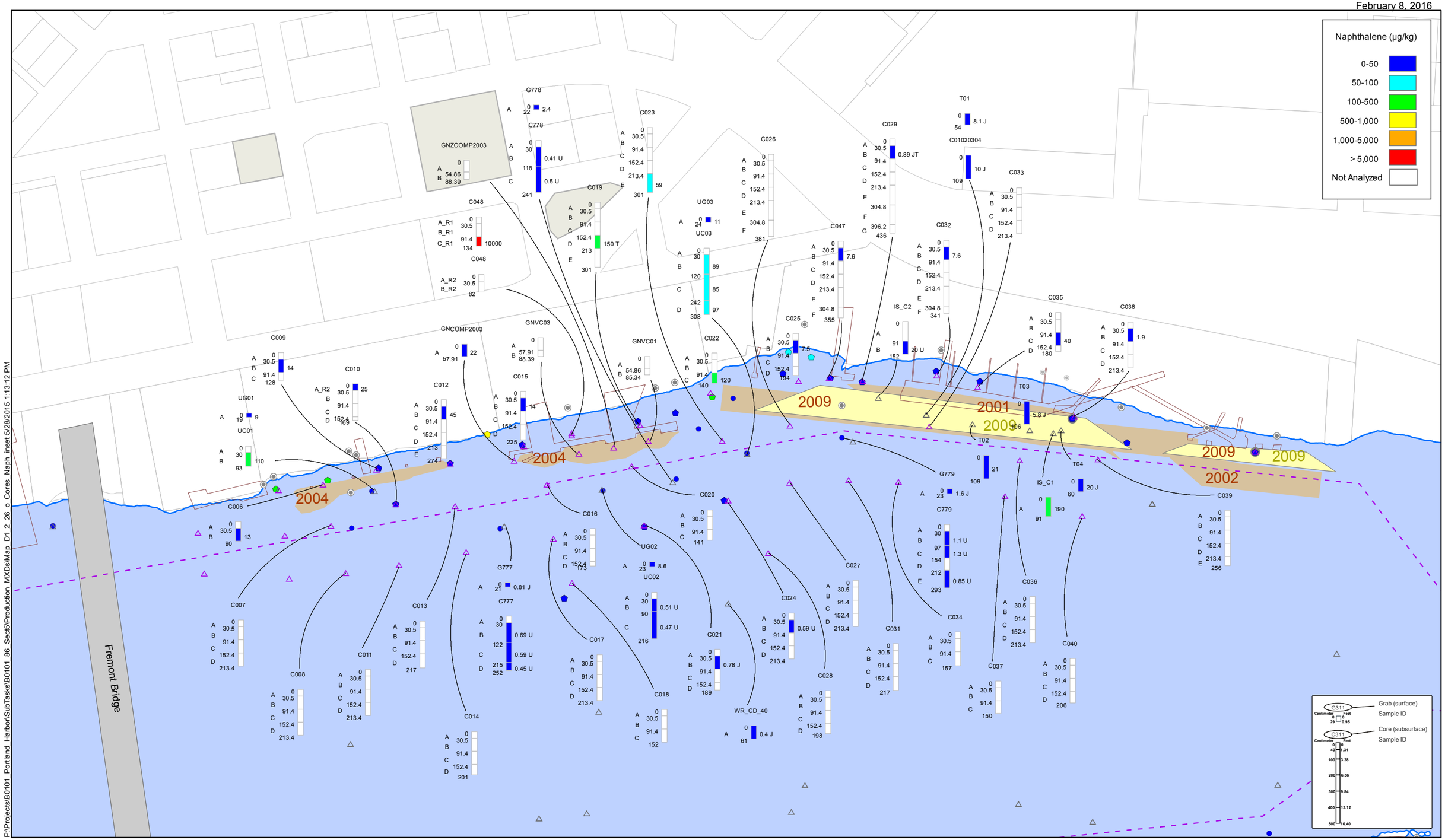
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-26n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Naphthalene (µg/kg)

River Mile 11.0 - 11.8

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

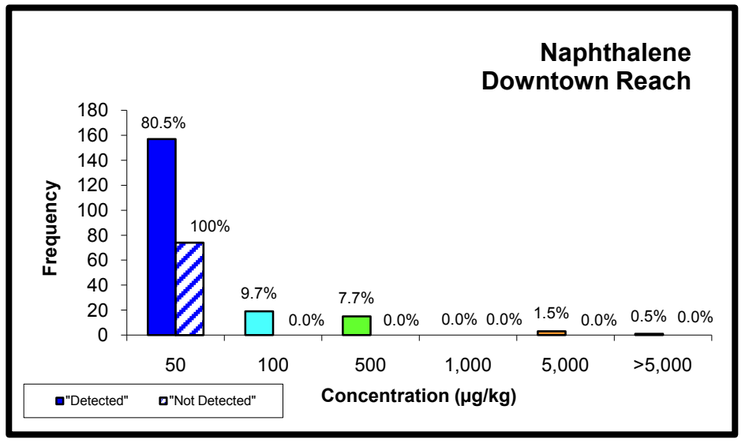
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

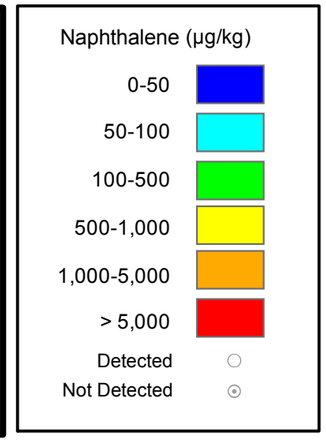
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

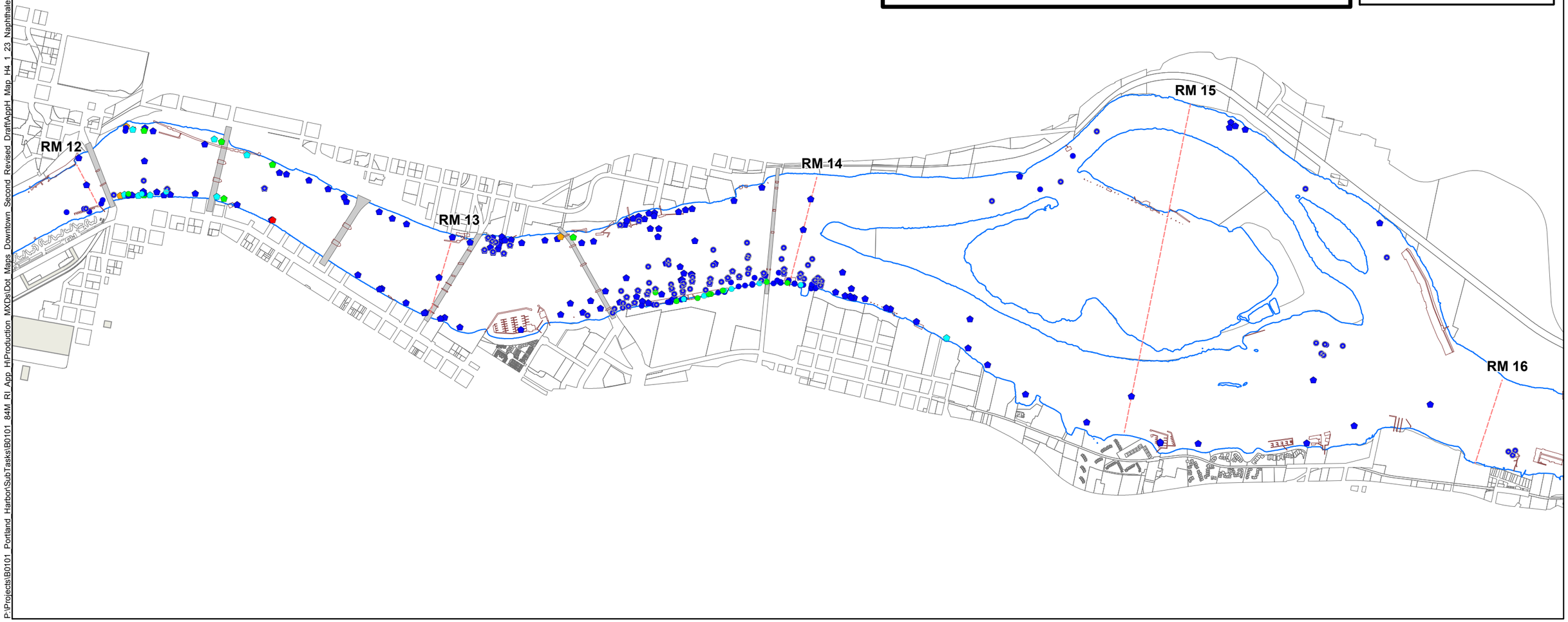
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-26o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Naphthalene (µg/kg)

River Mile 11.0 - 11.8 - Inset 1

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

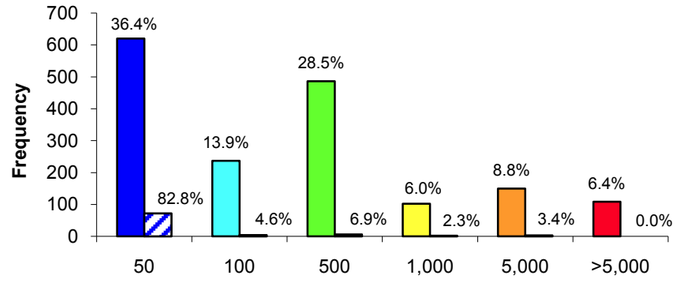
- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-27**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Naphthalene (µg/kg)
Downtown Reach

P:\Projects\B0101_PortlandHarborSubTasks\B0101_84M_RI_App_HIProduction_MXDs\DoT_Maps_Second_Revised_Draft\AppH_Map_H3_1_47_Surface_Sed_BAP.mxd - 6/18/2011 @ 5:14:13 PM

RM 1
RM 2
RM 3
RM 4
RM 5
RM 6
RM 7
RM 8
RM 8
RM 9
RM 10
RM 11
RM 12

**Benzo(a)pyrene**




Benzo(a)pyrene (µg/kg)

- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- > 5,000
- Detected
- Not Detected

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

N

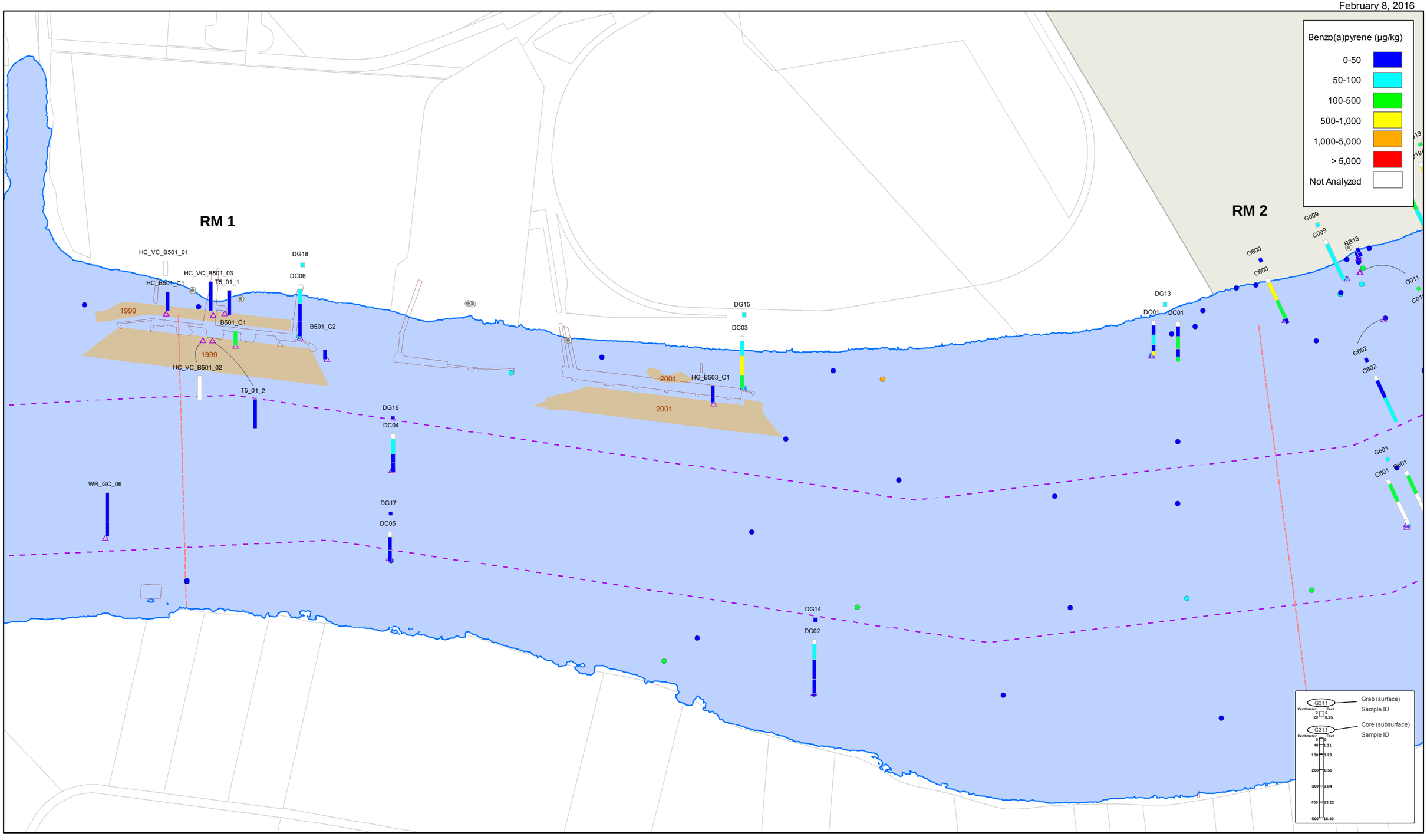
0 1,000 2,000 3,000 4,000 5,000 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-28**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Benzo(a)pyrene (µg/kg)

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-20_Cores_Benzo(a)pyrene_Main.mxd) - 3/10/2009 -- 11:14:44 AM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

## Map Features

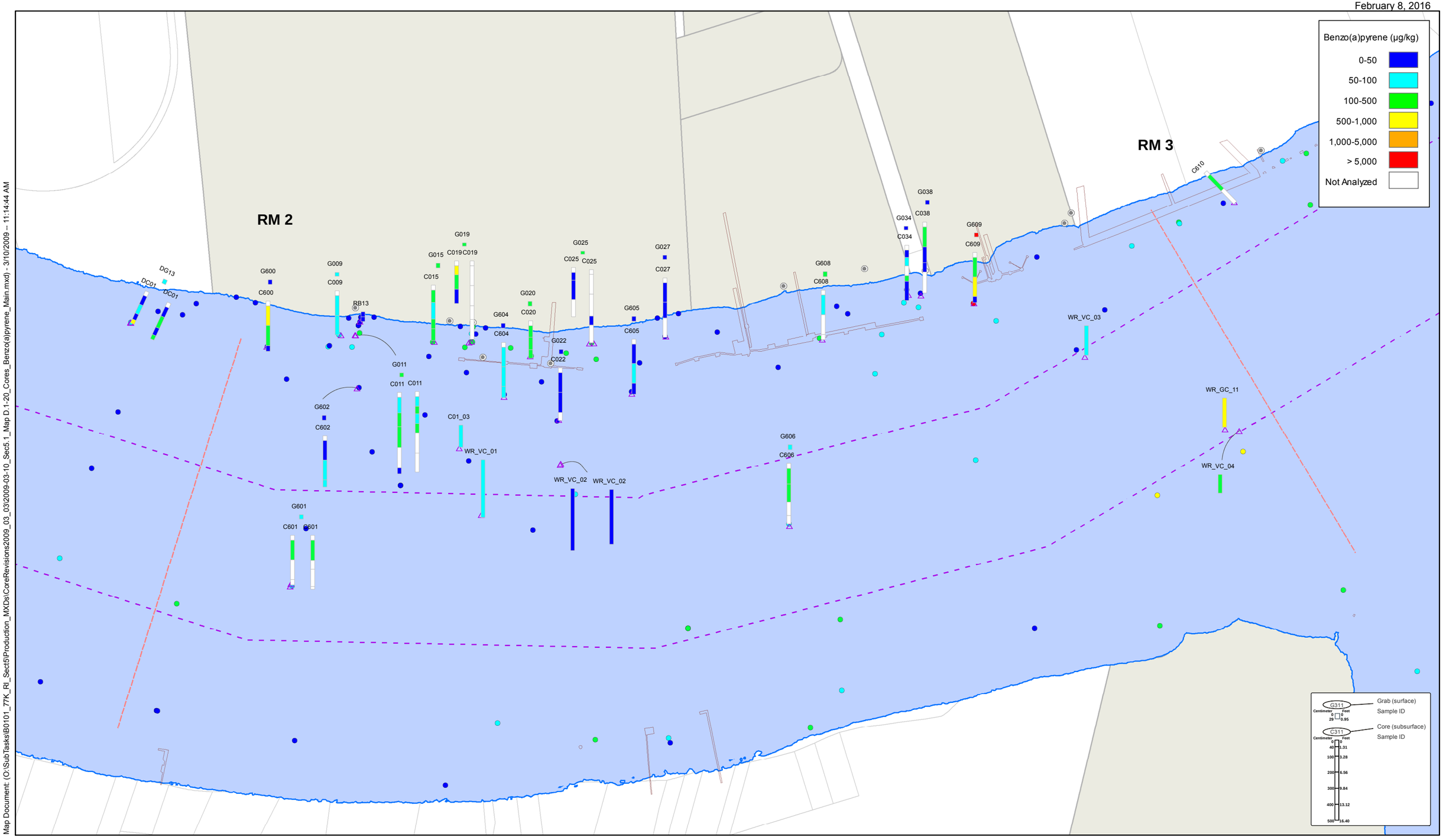
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-29a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Benzo(a)pyrene (µg/kg)
River Mile 01 to 02

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

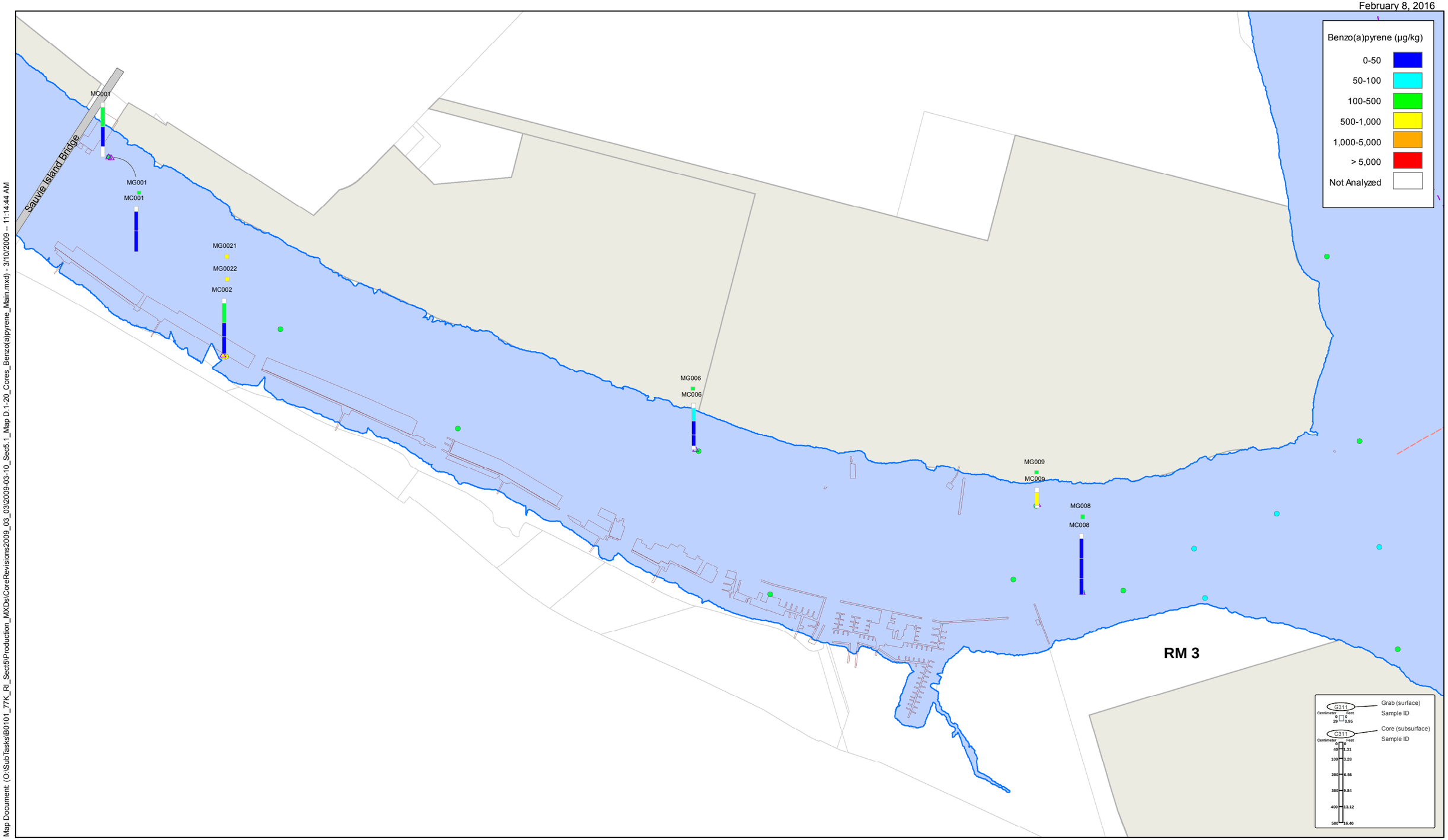
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-29b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Benzo(a)pyrene (µg/kg)
River Mile 02 to 03

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

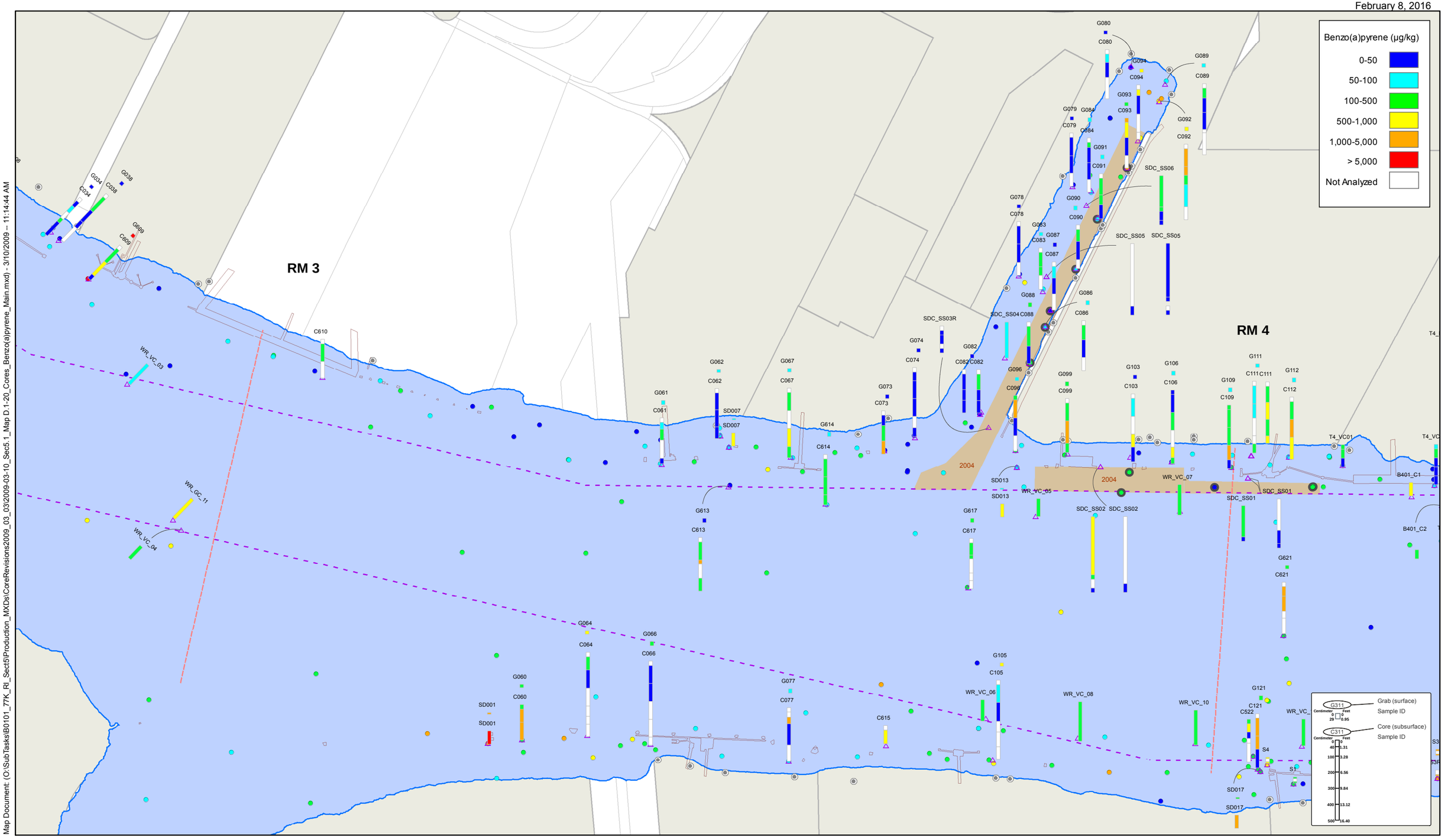
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-29c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Benzo(a)pyrene (µg/kg)
River Mile 03 - Multnomah Channel

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-20_Cores_Benzo(a)pyrene_Main.mxd) - 3/10/2009 -- 11:14:44 AM

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0 150 300 450 600 750 Feet

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-29d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Benzo(a)pyrene (µg/kg)
River Mile 03 to 04

Benzo(a)pyrene (µg/kg)
- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- > 5,000
- Not Analyzed

RM 4

RM 5

Inset 1

Inset 2

Grab (surface) Sample ID

Core (subsurface) Sample ID

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-20_Cores_Benzo(a)pyrene_Main.mxd) - 3/13/2009 -- 11:39:42 AM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-29e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Benzo(a)pyrene (µg/kg)

River Mile 04 to 05 - Slips

Benzo(a)pyrene (µg/kg)
0-50
50-100
100-500
500-1,000
1,000-5,000
> 5,000
Not Analyzed

T4_VC24 T4PI02 HC_S_11 HC_S_11 T4B41106 T4PI042 T4PI032 T4S301 T4PI01 T4B41104 T4B41103 T4PI03 T4PI04 T4_VC29 HC_S_07 HC_S_07 T4S302 T4_PS33 HC_S_18 HC_S_18 T4PI07 HC_S_13 HC_S_13 T4B41102 T4S303 T4B41101 T4S304 2005 SD031 SD031 HC_S_22 HC_S_22 T4S308 T4S305 T4_VC03 T4PI08 T4_PS28 T4_VC28 T4_VC23 HC_S_32 HC_S_32 T4_3 T4S306 1997 2008 T4_VC32 T4_PS32 T4MD01 T4COMP T4_VC_02 T4S307 T4_VC27 T4_2 2005 T4_UP10 T4_VC22 HC_S_27 HC_S_27 T4_VC25 T4_UP09 T4_1 2008 T4_PS22 T4_VC26 T4_VC26 T4MD02 2008 2002 T4_VC_01

G311 Grab (surface) Sample ID
Centimeter 0 29 Feet 0 0.95
C311 Core (subsurface) Sample ID
Centimeter 0 40 100 200 300 400 500 Feet 0 1.31 3.28 6.56 9.84 13.12 16.40

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-20_Cores_Benzo(a)pyrene_Insets.mxd) - 3/13/2009 -- 11:36:31 AM

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-29e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Benzo(a)pyrene (µg/kg)

River Mile 04 to 05 - Slips - Inset 1

Benzo(a)pyrene (µg/kg)
- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- > 5,000
- Not Analyzed

SGP08
SGP17
SGP10
SGP06
SGP12
SGP13
SGP14
SGP20
SGP15
SGP22
SGP24
SGP23
SGP21
SGP16
SGP18
2008
SGP05
SGP03
SGP19
SGP04
SGP09
SGP01
SGP07
SGP02

G311 Grab (surface) Sample ID
Centimeter 0 29 Feet 0 0.95

C311 Core (subsurface) Sample ID
Centimeter 0 40 100 200 300 400 500 Feet 0 1.31 3.28 6.56 9.84 13.12 16.40

Map Document: (O:\SubTasks\B0101_7TK_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-20_Cores_Benzo(a)pyrene_Insets.mxd) - 3/10/2009 -- 11:26:36 AM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 120 240 480 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

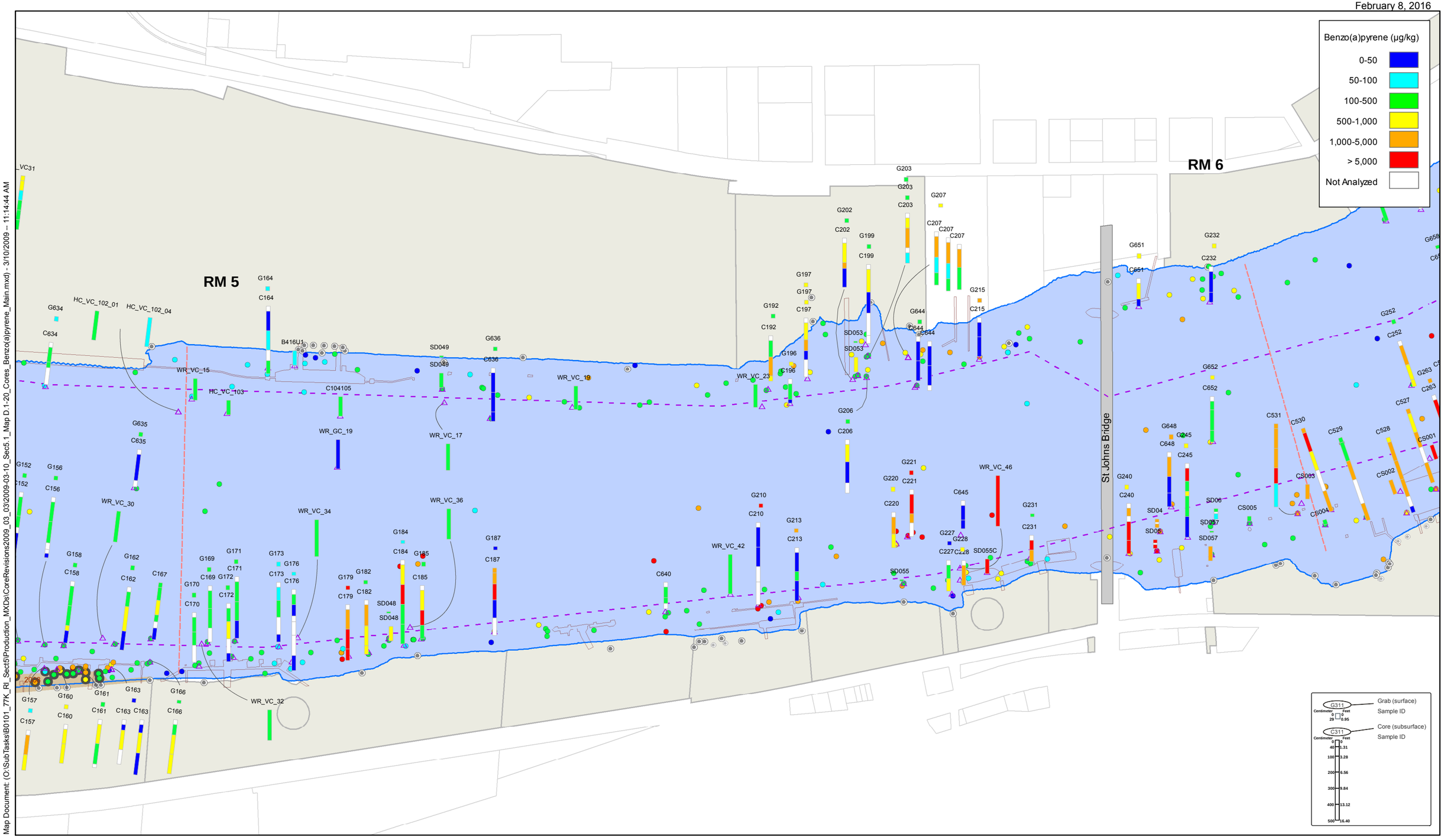
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-29e2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Benzo(a)pyrene (µg/kg)

River Mile 04 to 05 - Slips - Inset 2

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-29f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Benzo(a)pyrene (µg/kg)

River Mile 05 to 06

Benzo(a)pyrene (µg/kg)
- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- > 5,000
- Not Analyzed

RM 6

RM 7

Railroad Bridge

Inset 1

Inset 2

Grab (surface) Sample ID

Core (subsurface) Sample ID

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-20_Cores_Benzo(a)pyrene_Main.mxd) - 3/10/2009 -- 11:14:44 AM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-29g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Benzo(a)pyrene (µg/kg)
River Mile 06 to 07

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-20_Cores_Benzo(a)pyrene_Insets.mxd) - 3/10/2009 -- 11:26:36 AM

Benzo(a)pyrene (µg/kg)
- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- > 5,000
- Not Analyzed

RAA_13 RAA_14 RAA_17 RAA_07 RAA_12 RAA_02 RAA_10 RAA_06 RAA_06 RAA_05 RAA_11 RAA_08 RAA_19 RAA_20 RAA_09 RAA_04

G311 Grab (surface) Sample ID
Centimeter 0 29 Feet 0 0.95

C311 Core (subsurface) Sample ID
Centimeter 0 40 100 200 300 400 500 Feet 0 1.31 3.28 6.56 9.84 13.12 16.40

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-29g1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Benzo(a)pyrene (µg/kg)

River Mile 06 to 07 - Inset 1

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_032009-03-10_Sec5.1_Map D.1-20_Cores_Benzo(a)pyrene_Insets.mxd) - 3/10/2009 -- 11:26:36 AM

Benzo(a)pyrene (µg/kg)
- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- > 5,000
- Not Analyzed

GS09 GS08 GS07 GS06 GS05 GS04 GSD5 GSD4 GSC5 GSD2 AN_1_5 AN_2_5 GSC2 GSB2 GSC7 GSB7 AN_1_3 AN_1_2 GSB5 AN_2_4 AN_2_3 AN_2_2 AN_2_1 AN_1_1

Grab (surface) Sample ID — e.g. G311 (Centimeter 0 29 / Feet 0 0.95)

Core (subsurface) Sample ID — e.g. C311 (Centimeter 0 40 100 200 300 400 500 / Feet 0 1.31 3.28 6.56 9.84 13.12 16.40)

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-29g2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Benzo(a)pyrene (µg/kg)

River Mile 06 to 07 - Inset 2

RM 7

RM 8

Railroad Bridge

Benzo(a)pyrene (µg/kg)
- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- > 5,000
- Not Analyzed

2001

2001

1997

Grab (surface) Sample ID

Core (subsurface) Sample ID

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-20_Cores_Benzo(a)pyrene_Main.mxd) - 3/10/2009 -- 11:14:44 AM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

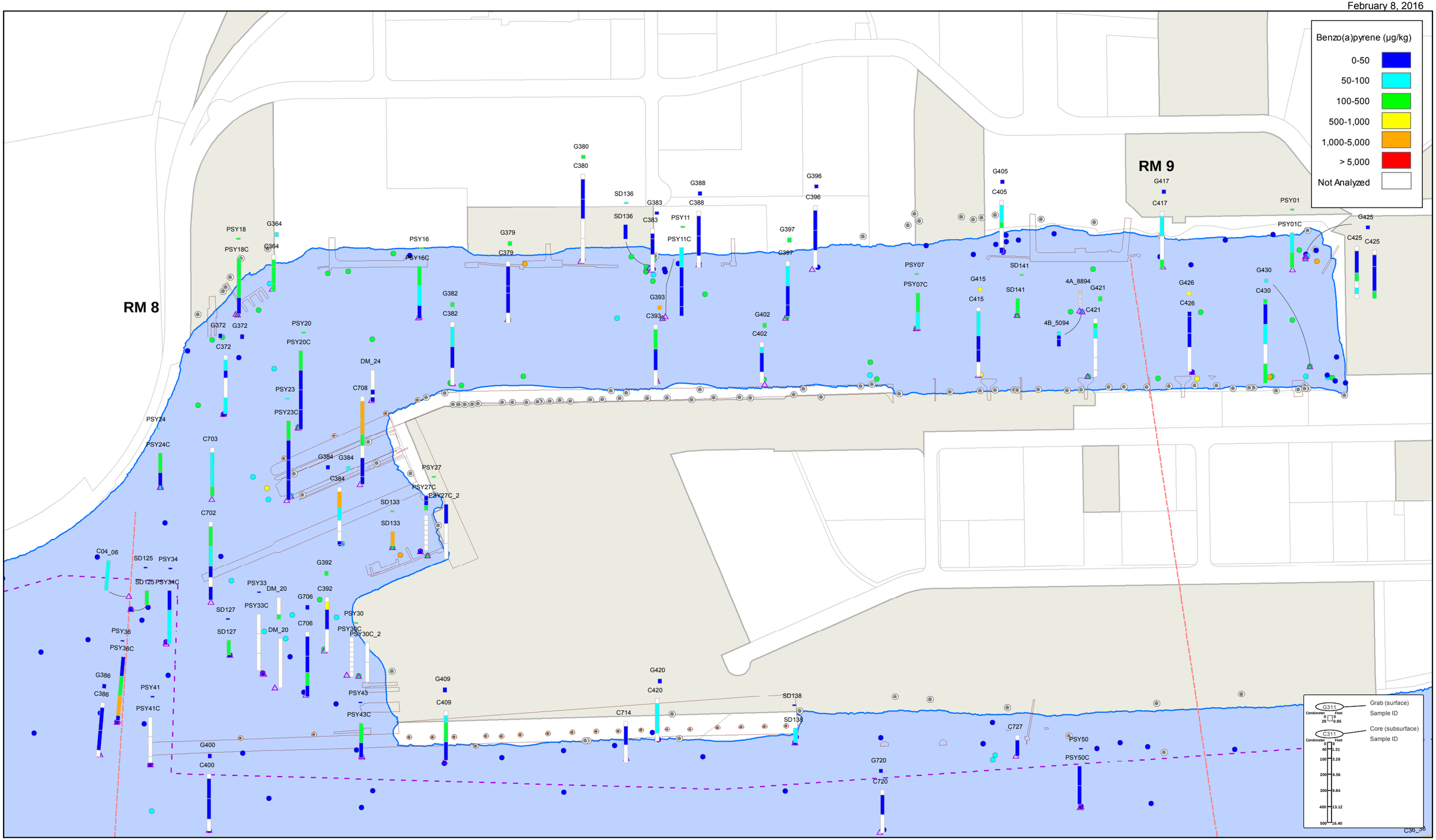
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-29h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Benzo(a)pyrene (µg/kg)
River Mile 07 to 08




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

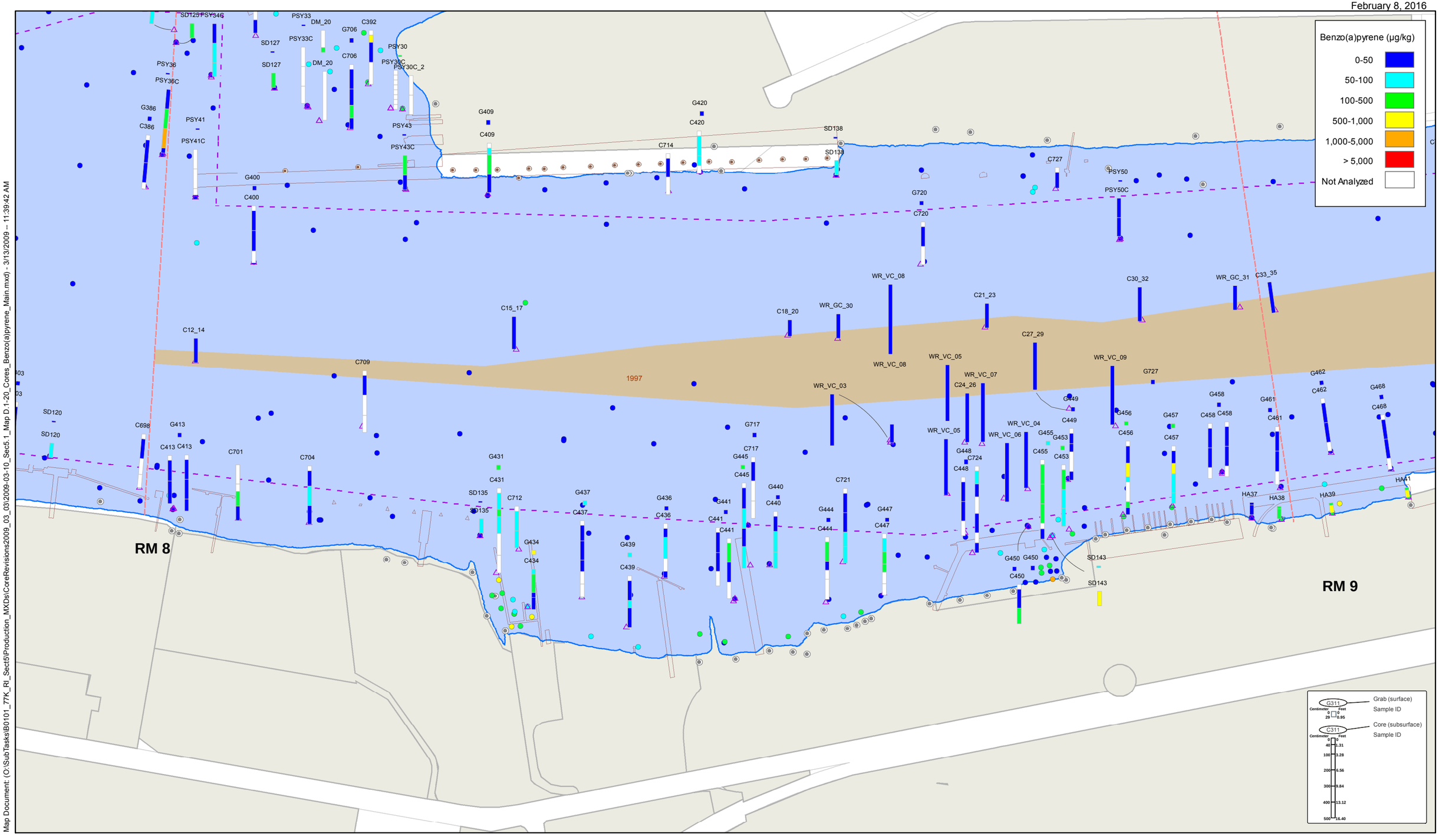
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-29i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Benzo(a)pyrene (µg/kg)

River Mile 08 to 09 - Swan Is. East

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-20_Cores_Benzo(a)pyrene_Main.mxd) - 3/10/2009 -- 11:14:44 AM




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-20_Cores_Benzo(a)pyrene_Main.mxd) - 3/13/2009 -- 11:39:42 AM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-29j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Benzo(a)pyrene (µg/kg)

River Mile 08 to 09 - Swan Is. West

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-20_Cores_Benzo(a)pyrene_Main.mxd) - 3/13/2009 -- 11:39:42 AM

Benzo(a)pyrene (µg/kg)
- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- > 5,000
- Not Analyzed

RM 10

RM 9

G454 C454 G742 C742 G743 C743 G746 C746 SD04 C749 SD150 C733 WR_VC_33 WR_VC_35 WR_VC_37 WR_VC_39 WR_VC_41 WR_VC_43 WR_VC_45 WR_GC_31 C33_35 C36_38 C39_41 C42_44 RC483 C45_47 WR_VC_03 WR_VC_05 C48_50 C51_52 WR_GC_32 WR_GC_33 WR_GC_34 WR_GC_35 WR_VC_04 G471 C471 G462 C462 G458 C458 G461 C461 G468 C468 G474 C474 G477 C477 G735 C735 G738 C738 G739 C739 G492 HC_VC_53 C492 T2_01_2 T2U1 G494 C494 T2U2 T2_01_1 G748 C748 G747 C747 WR_VC_106 SD151 HA37 HA38 HA39 HA41 HA42 HA43

1997 2000 2002 2005

G311 Grab (surface) Sample ID
C311 Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

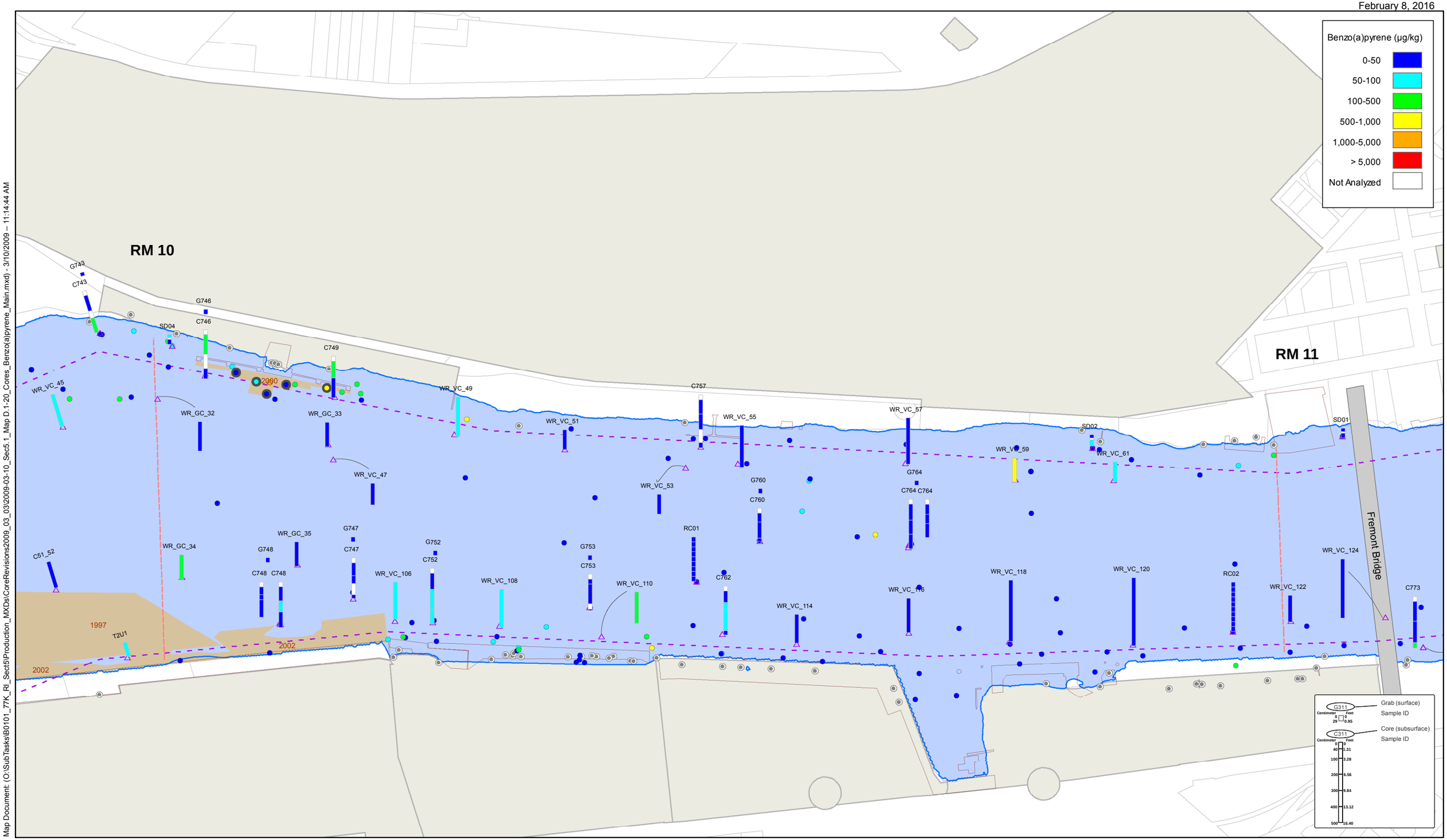
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-29k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Benzo(a)pyrene (µg/kg)
River Mile 09 to 10

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

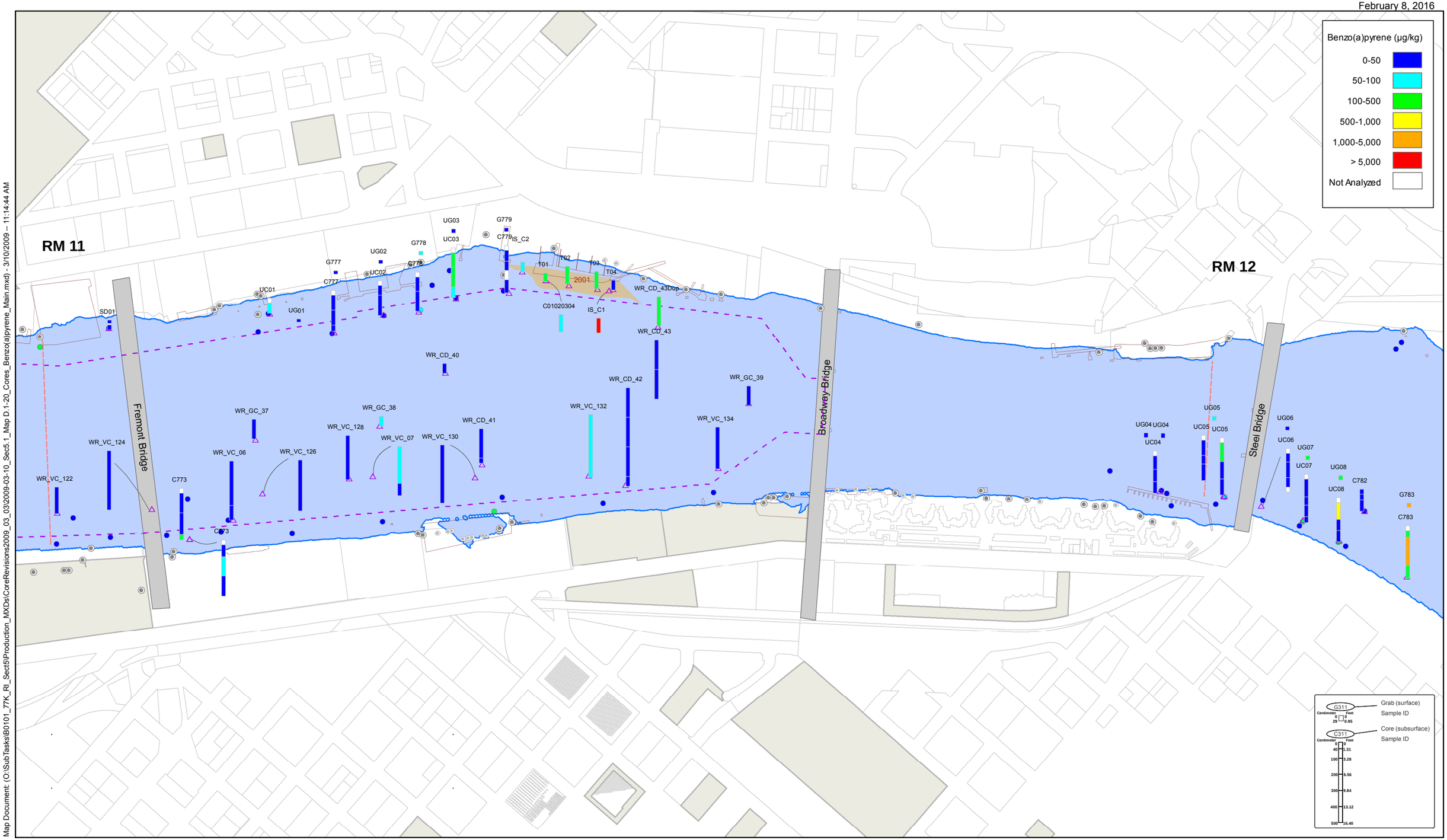
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-29I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Benzo(a)pyrene (µg/kg)

River Mile 10 to 11




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-20_Cores_Benzo(a)pyrene_Main.mxd) - 3/10/2009 -- 11:14:44 AM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

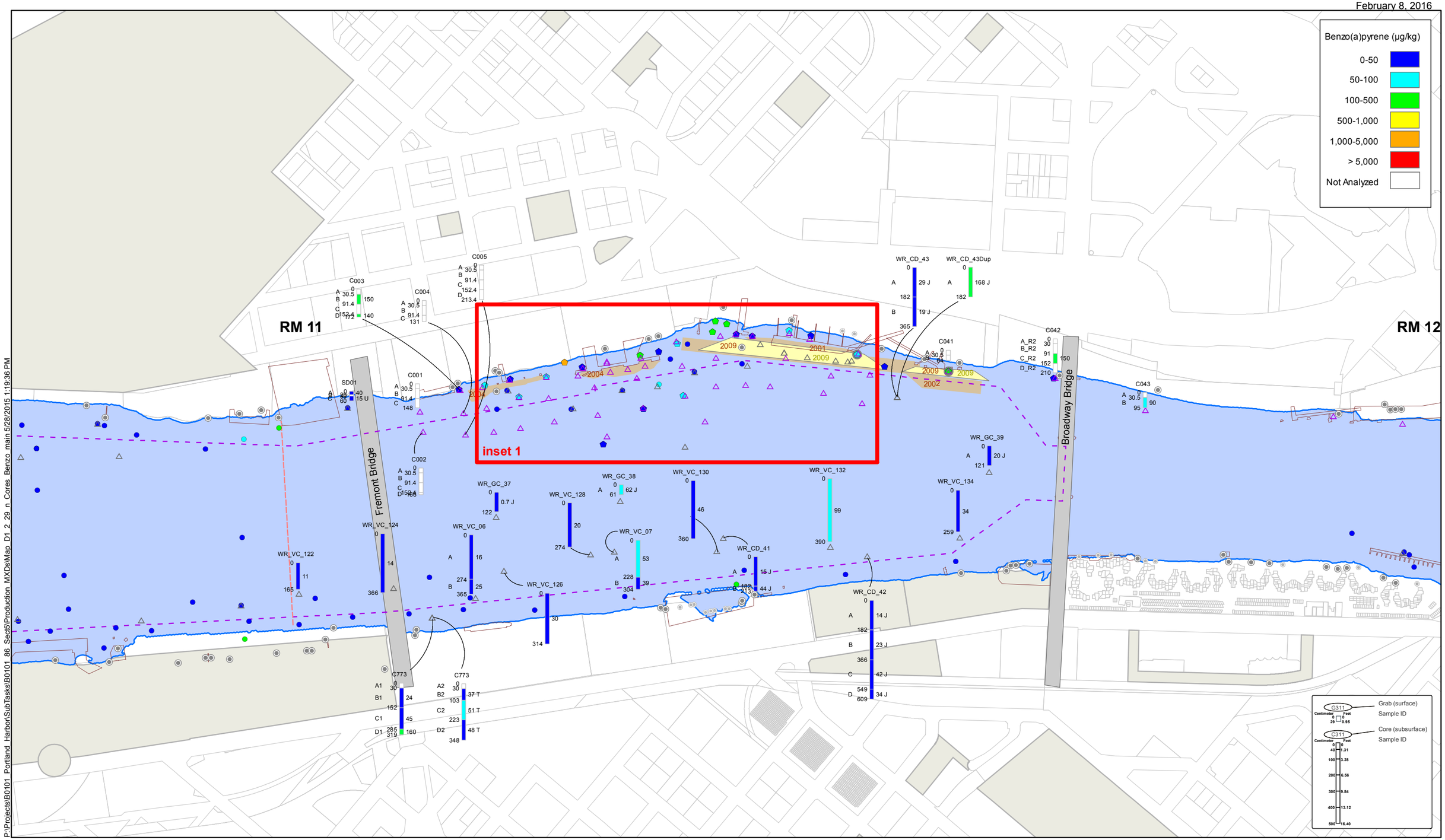
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-29 m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Benzo(a)pyrene (µg/kg)
River Mile 11 to 12




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

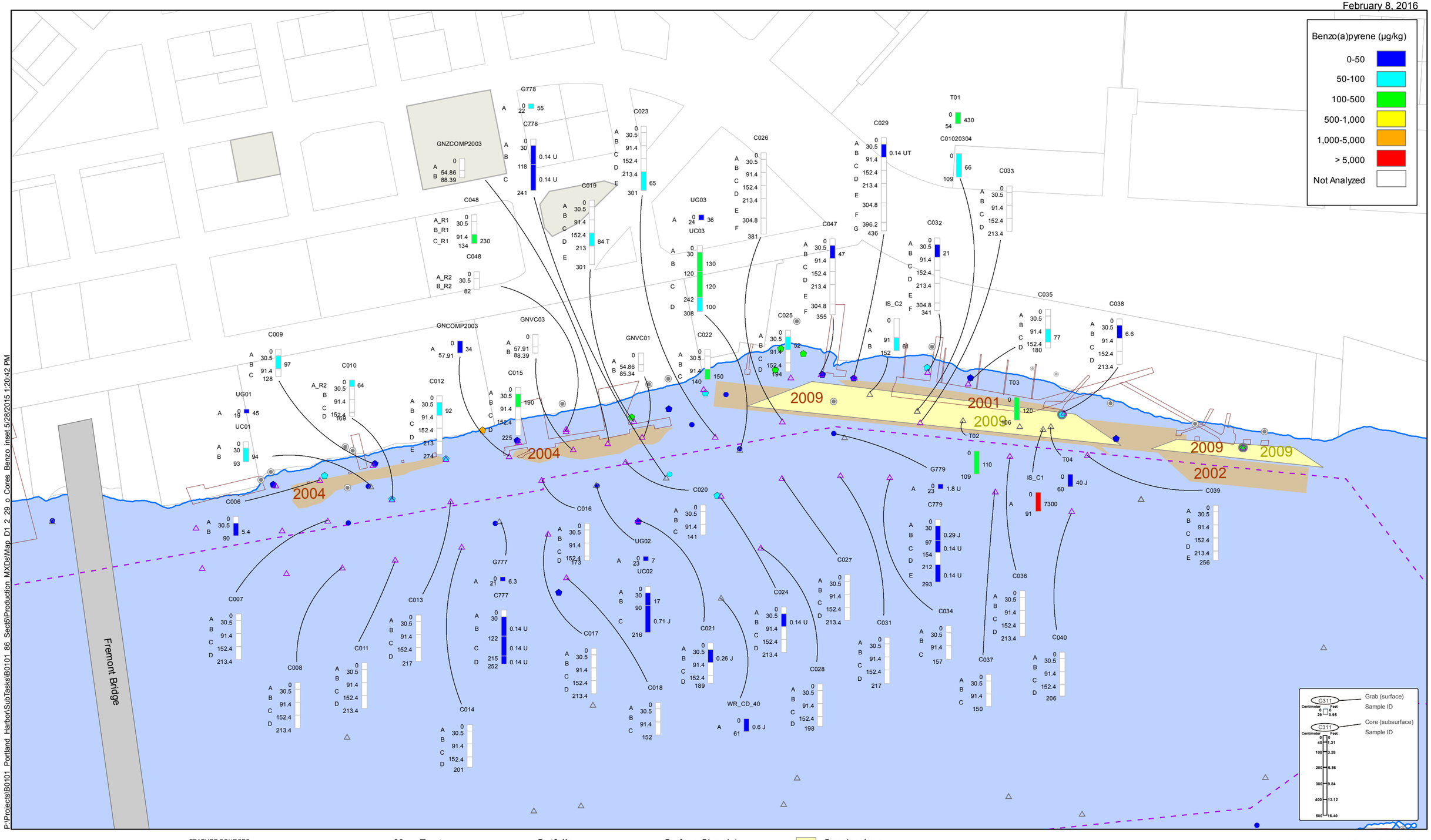
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-29n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Benzo(a)pyrene (µg/kg)

River Mile 11.0 - 11.8




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

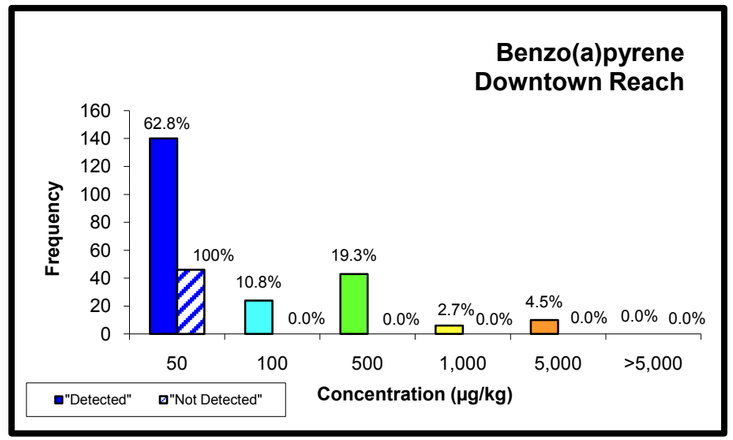
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

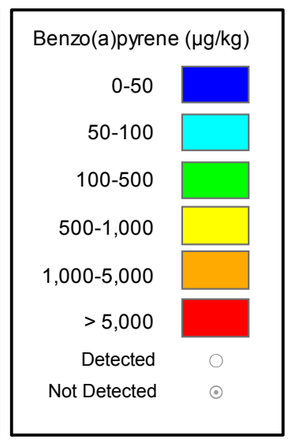
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

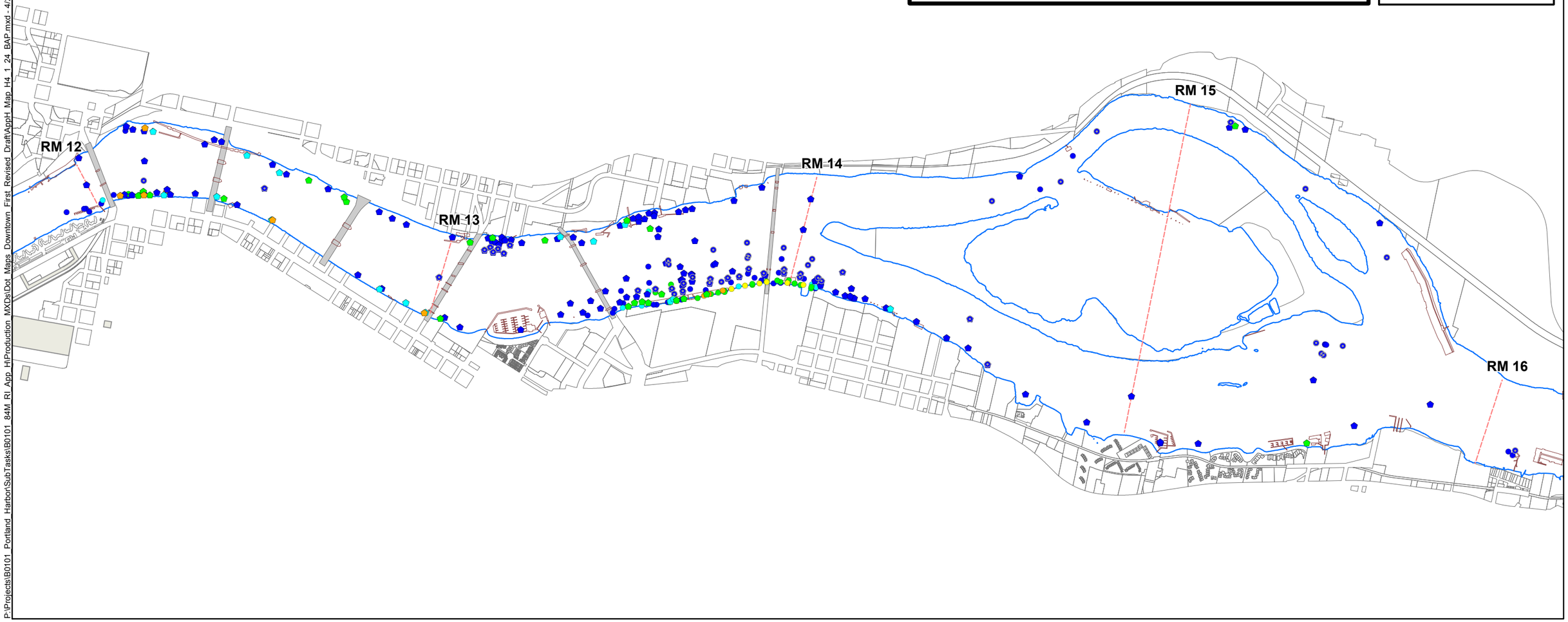
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-29o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Benzo(a)pyrene (µg/kg)

River Mile 11.0 - 11.8 - Inset 1

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

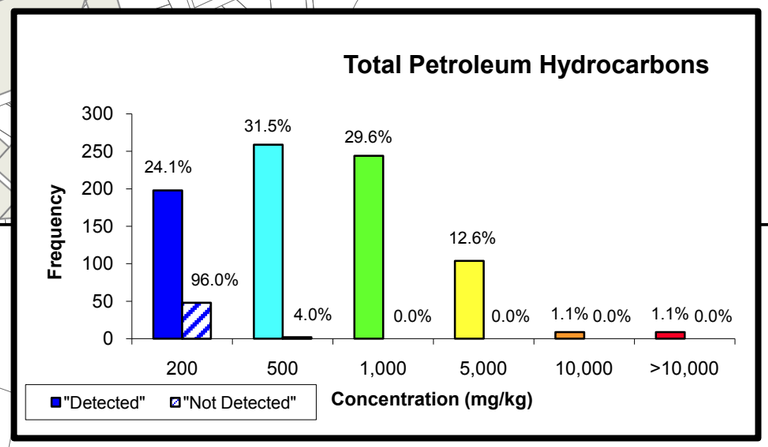
**Map Features**

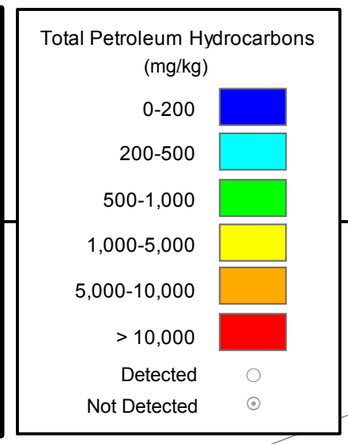
- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-30**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Benzo(a)pyrene (µg/kg)
Downtown Reach

P:\Projects\B0101 Portland Harbor\SubTasks\B0101 84M RI App H\Production MXDs\Dot Maps Second Revised Draft\AppH Map H3 1 49 Surface Sed TPH.mxd - 6/17/2011 @ 3:20:44 PM

RM 1
RM 2
RM 3
RM 4
RM 5
RM 6
RM 7
RM 8
RM 8
RM 9
RM 10
RM 11
RM 12




N

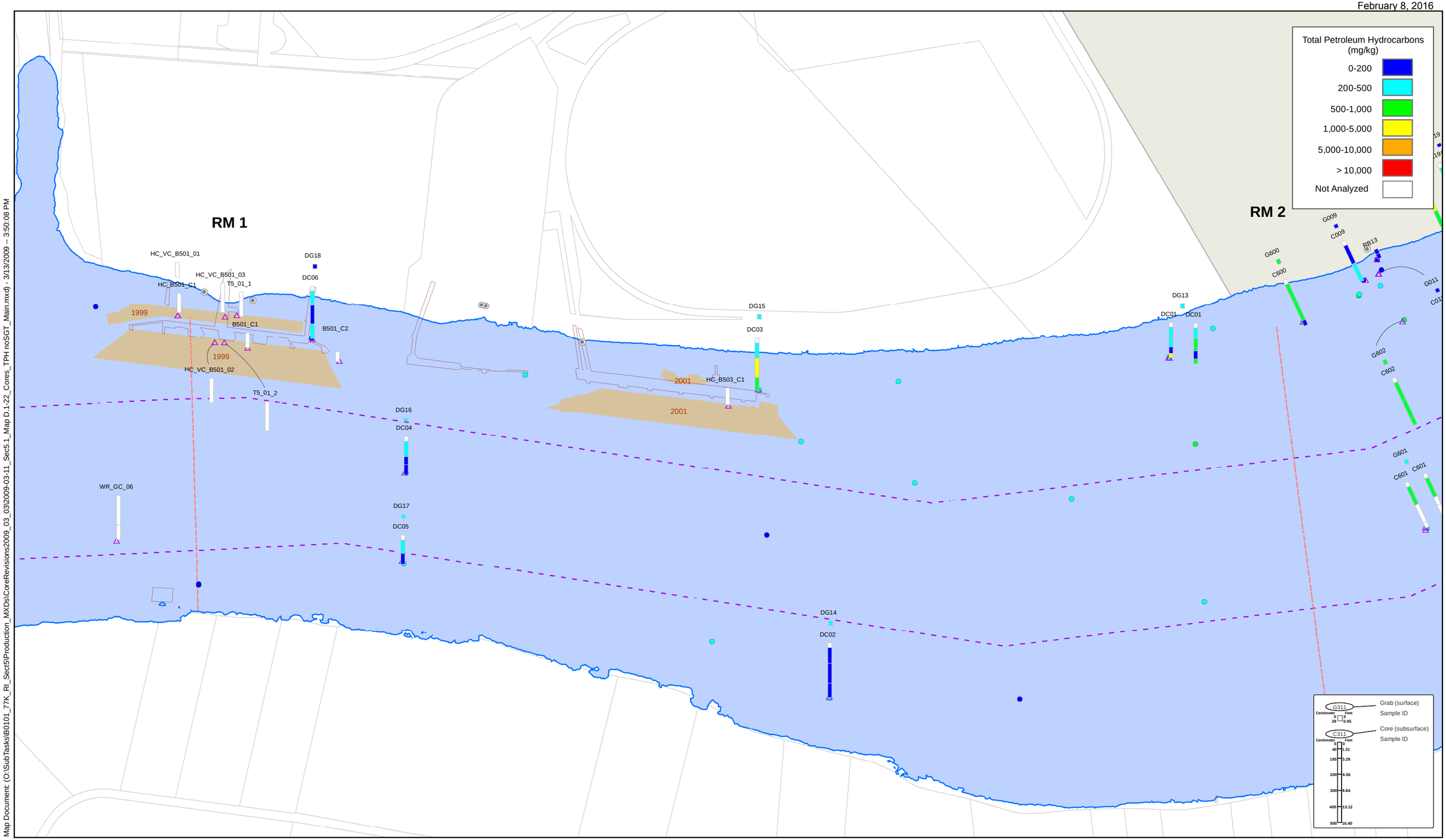
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

0 1,000 2,000 3,000 4,000 5,000 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-31**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Total Petroleum Hydrocarbons (mg/kg)




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-22_Cores_TPH noSGT_Main.mxd) - 3/13/2009 -- 3:50:08 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

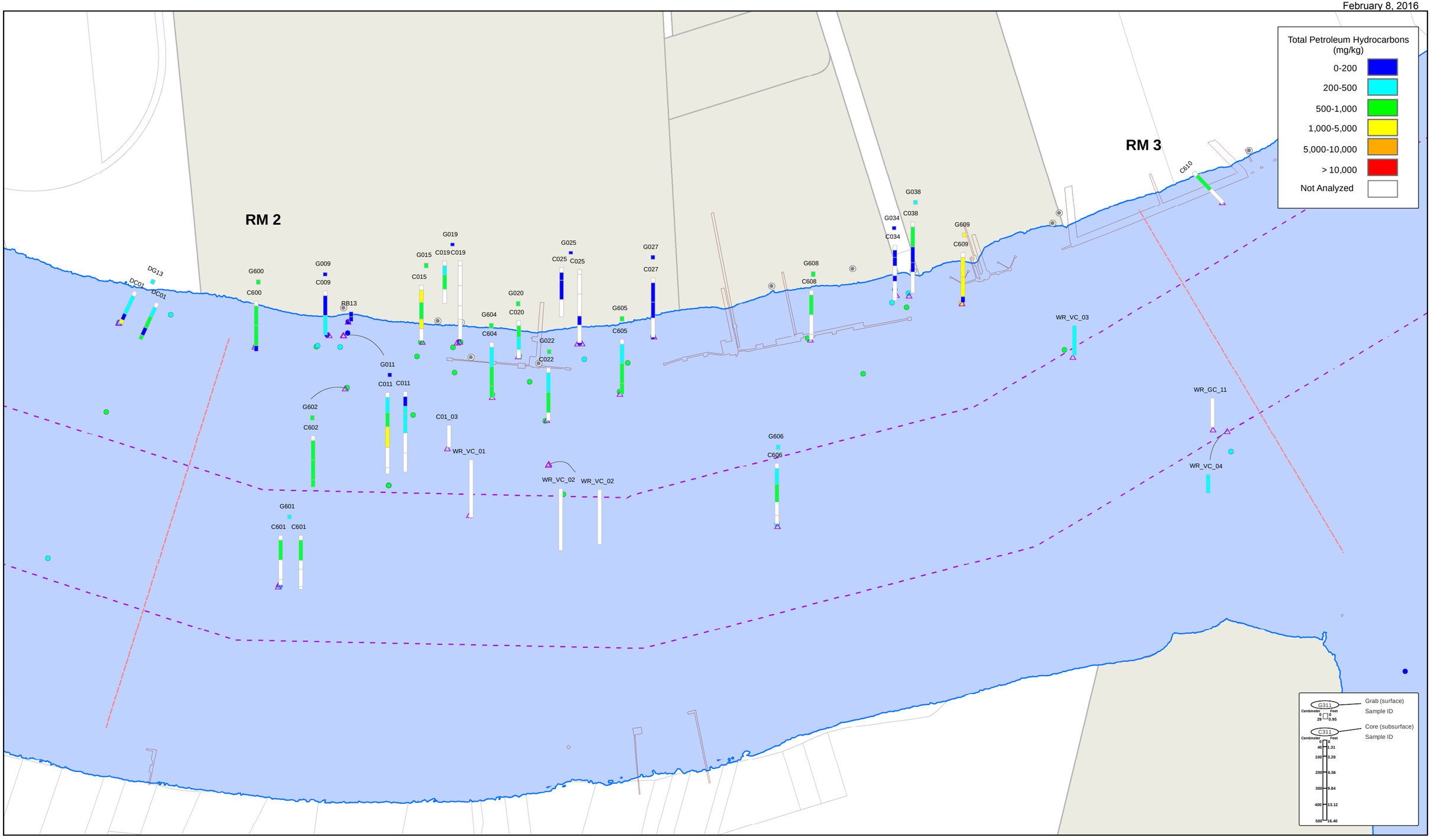
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-32a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons (mg/kg)

River Mile 01 to 02

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-22_Cores_TPH noSGT_Main.mxd) - 3/13/2009 -- 3:50:08 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

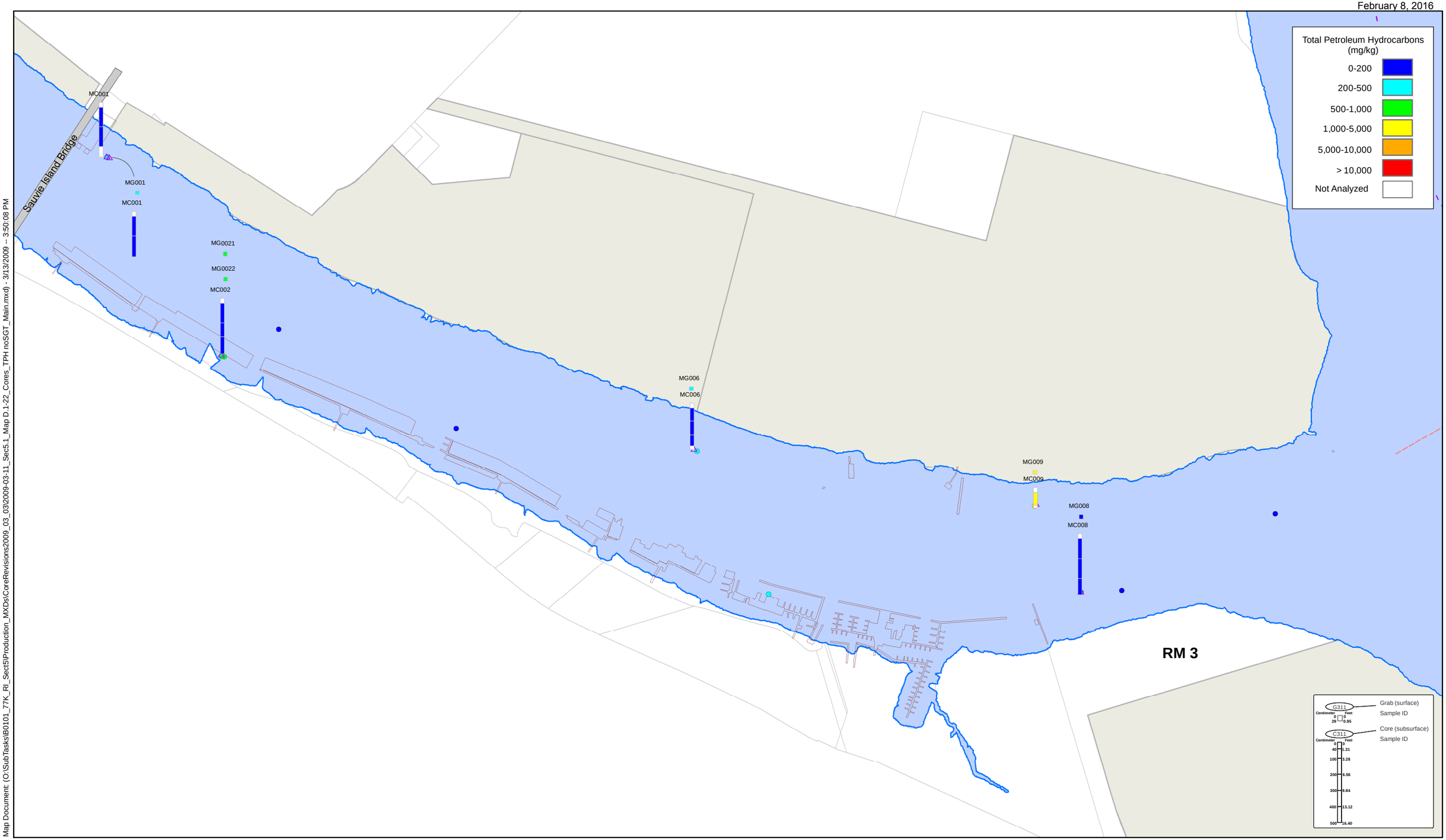
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-32b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons (mg/kg)

River Mile 02 to 03




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-22_Cores_TPH noSGT_Main.mxd) - 3/13/2009 -- 3:50:08 PM

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-32c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons (mg/kg)

River Mile 03 - Multnomah Channel

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-22_Cores_TPH noSGT_Main.mxd) - 3/13/2009 -- 3:50:08 PM

RM 3

RM 4

Total Petroleum Hydrocarbons (mg/kg)
- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

2004

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-32d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons (mg/kg)

River Mile 03 to 04

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-22_Cores_TPH noSGT_Main.mxd) - 3/13/2009 -- 3:50:08 PM

Total Petroleum Hydrocarbons (mg/kg)
- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

RM 4

RM 5

Inset 1

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-32e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons (mg/kg)

River Mile 04 to 05 - Slips

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-22_Cores_TPH noSGT_Insets.mxd) - 3/11/2009 -- 12:41:03 PM

Total Petroleum Hydrocarbons (mg/kg)
- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

T4_VC24, T4PI02, HC_S_11, HC_S_11, T4B41106, T4PI042, T4PI032, T4S301, T4PI01, T4B41104, T4B41103, T4PI03, T4PI04, T4_VC29, HC_S_07, HC_S_07, T4S302, T4_PS33, HC_S_18, HC_S_18, T4PI07, HC_S_13, HC_S_13, T4B41102, T4S303, T4B41101, T4S304, SD031, SD031, 2005, HC_S_22, HC_S_22, T4S308, T4S305, T4_VC03, T4PI08, T4_PS28, T4_VC28, T4_VC23, HC_S_32, HC_S_32, T4_3, T4S306, 1997, 2008, T4MD01, T4_VC32, T4_PS32, T4COMP, T4_VC_02, T4S307, T4_VC27, T4_2, 2005, T4_UP10, T4_VC22, HC_S_27, HC_S_27, T4_VC25, T4_UP09, 2008, T4_1, T4_VC26, T4_VC26, T4MD02, T4_PS22, 2008, 2002, T4_VC_01

Grab (surface) Sample ID — G311 (Centimeter 0, 29; Feet 0, 0.95)

Core (subsurface) Sample ID — C311

| Centimeter | Feet |
|---|---|
| 0 | 0 |
| 40 | 1.31 |
| 100 | 3.28 |
| 200 | 6.56 |
| 300 | 9.84 |
| 400 | 13.12 |
| 500 | 16.40 |

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

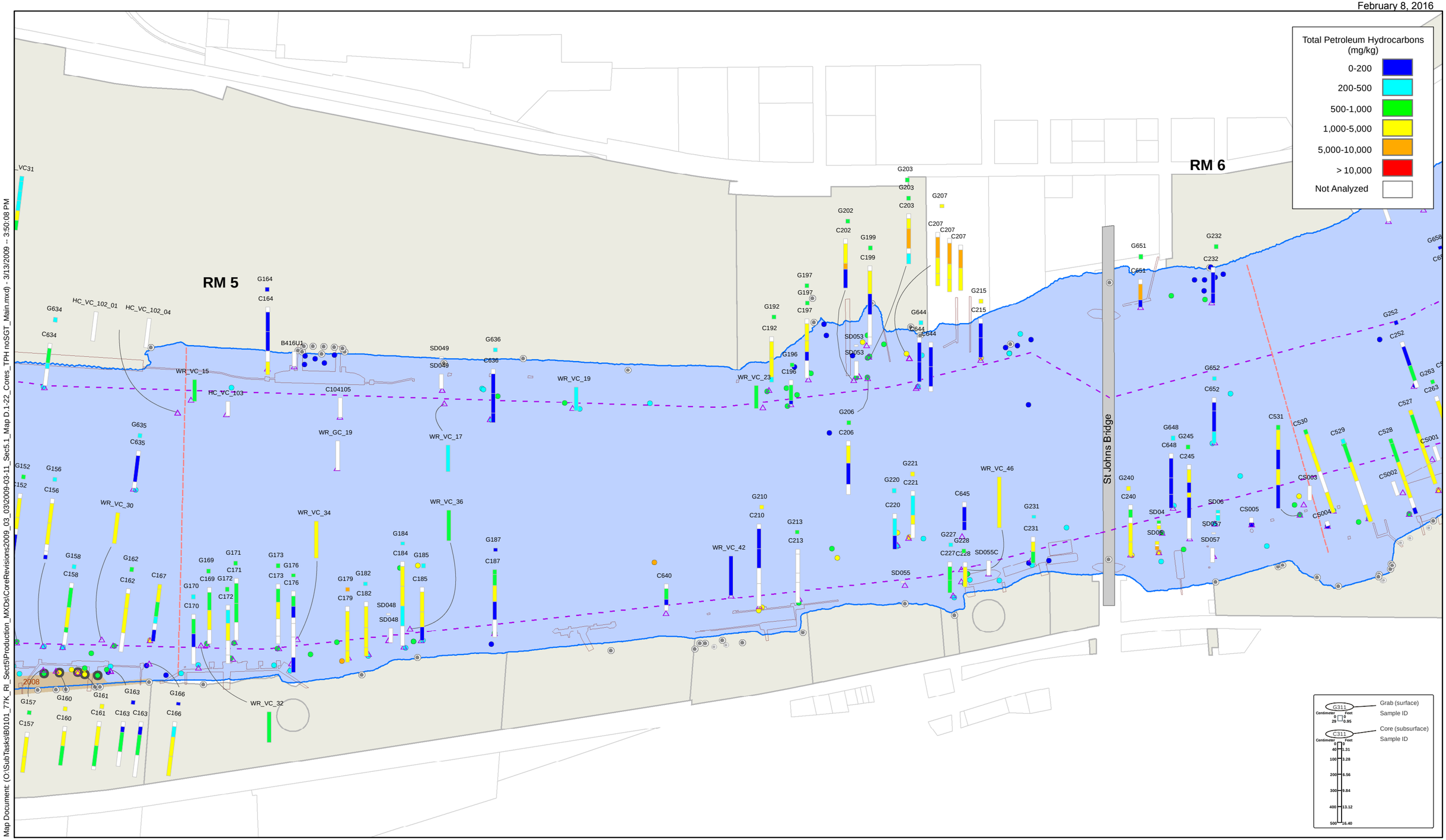
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-32e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons (mg/kg)

River Mile 04 to 05 - Slips - Inset 1




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-22_Cores_TPH noSGT_Main.mxd) - 3/13/2009 -- 3:50:08 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-32f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons (mg/kg)

River Mile 05 to 06

Total Petroleum Hydrocarbons (mg/kg)

- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

RM 6

RM 7

Railroad Bridge

Inset 1

Inset 2

Grab (surface) Sample ID

Core (subsurface) Sample ID

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-22_Cores_TPH noSGT_Main.mxd) - 3/13/2009 -- 3:50:08 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-32g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons (mg/kg)

River Mile 06 to 07

Total Petroleum Hydrocarbons (mg/kg)
- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

RAA_13 RAA_14 RAA_06 RAA_17 RAA_07 RAA_02 RAA_10 RAA_06 RAA_12 RAA_05 RAA_08 RAA_11 RAA_09 RAA_04 RAA_19 RAA_20

G311 Grab (surface) Sample ID
Centimeter 0 29 Feet 0 0.95

C311 Core (subsurface) Sample ID
Centimeter 0 40 100 200 300 400 500 Feet 0 1.31 3.28 6.56 9.84 13.12 16.40

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-22_Cores_TPH noSGT_Insets.mxd) - 3/11/2009 -- 12:41:03 PM

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-32 g1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons (mg/kg)

River Mile 06 to 07 - Inset 1

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-22_Cores_TPH noSGT_Insets.mxd) - 3/11/2009 -- 12:41:03 PM

Total Petroleum Hydrocarbons (mg/kg)
- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

GS09 GSD4 GSD5 AN_1_5 GS08 GSD2 GS07 GS06 GSC5 GS05 GS04 AN_2_5 GSC2 GSB2 GSB7 GSC7 AN_1_3 AN_1_2 AN_2_4 GSB5 AN_1_1 AN_2_3 AN_2_1 AN_2_2

G311 Grab (surface) Sample ID
Centimeter 0 29 Feet 0 0.95

C311 Core (subsurface) Sample ID
Centimeter 0 40 100 200 300 400 500 Feet 0 1.31 3.28 6.56 9.84 13.12 16.40

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-32g2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons (mg/kg)

River Mile 06 to 07 - Inset 2

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-22_Cores_TPH noSGT_Main.mxd) - 3/13/2009 -- 3:50:08 PM

RM 7

RM 8

Railroad Bridge

Total Petroleum Hydrocarbons (mg/kg)
- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

1997

2001

2001

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

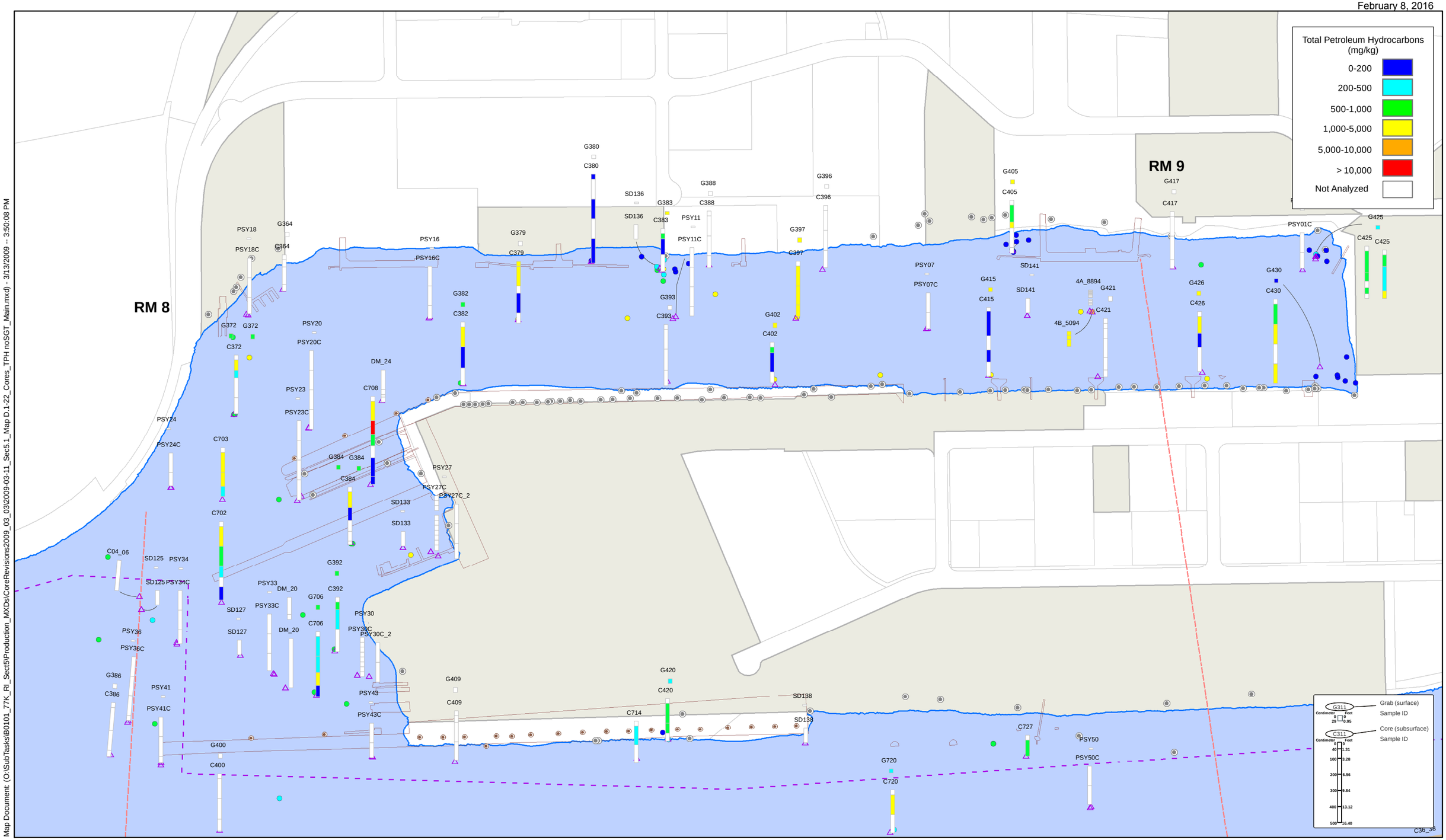
- Upland ECSI Sites (2008)
- Waterfront Taxlots

Grab (surface) Sample ID

Core (subsurface) Sample ID

**Map D1.2-32h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons (mg/kg)

River Mile 07 to 08




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-32i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons (mg/kg)

River Mile 08 to 09 - Swan Is. East

Total Petroleum Hydrocarbons (mg/kg)
- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

RM 8

RM 9

1997

Grab (surface) Sample ID

Core (subsurface) Sample ID

Map Document: (O:\Sub\Tasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-22_Cores_TPH noSGT_Main.mxd) - 3/13/2009 -- 3:50:08 PM

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-32j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons (mg/kg)

River Mile 08 to 09 - Swan Is. West

Total Petroleum Hydrocarbons (mg/kg)
- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

RM 10

RM 9

1997 2000 2002 2005

G454 C454 SD150 C733 WR_VC_33 WR_VC_35 WR_VC_37 WR_VC_39 WR_VC_41 WR_VC_43 WR_VC_45 G742 C742 G743 C743 SD04 G746 C746 C749 WR_GC_32 WR_GC_33 WR_GC_31 C33_35 C36_38 C39_41 WR_VC_04 C42_44 RC483 C45_47 WR_VC_03 WR_VC_05 C48_50 C51_52 WR_GC_34 WR_GC_35 G748 C748 G747 C747 WR_VC_106 G471 C471 G474 C474 G477 C477 G462 C462 G468 C468 G458 C458 G461 C461 SD151 G735 C735 G738 C738 G739 C739 G492 C492 HC_VC_53 T2_01_2 T2U1 T2U2 T2_01_1 G494 C494

Grab (surface) Sample ID
Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

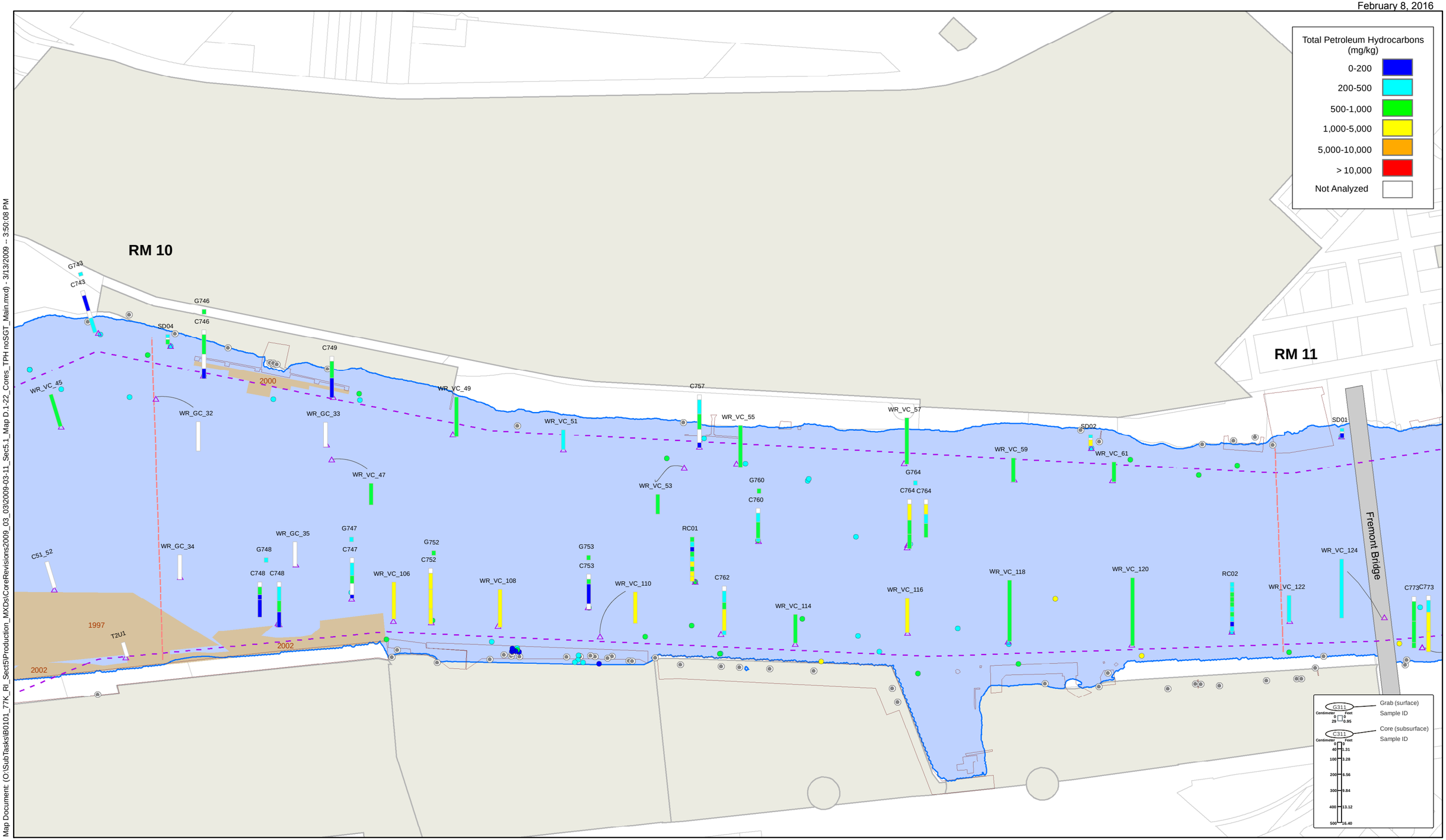
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-32k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons (mg/kg)

River Mile 09 to 10

Map Document: (O:\Sub\Tasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-22_Cores_TPH noSGT_Main.mxd) - 3/13/2009 -- 3:50:08 PM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

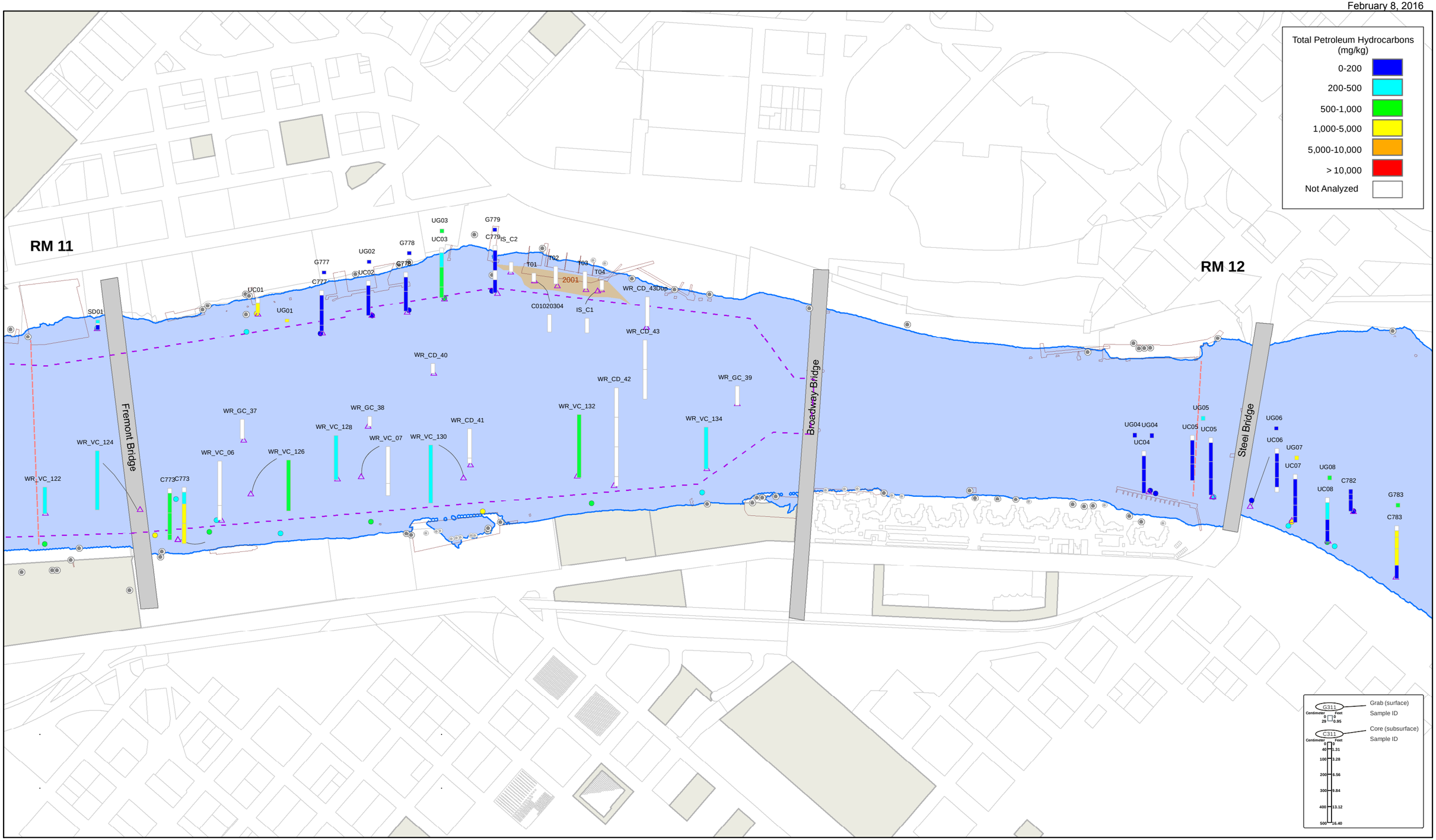
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-32I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons (mg/kg)

River Mile 10 to 11

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

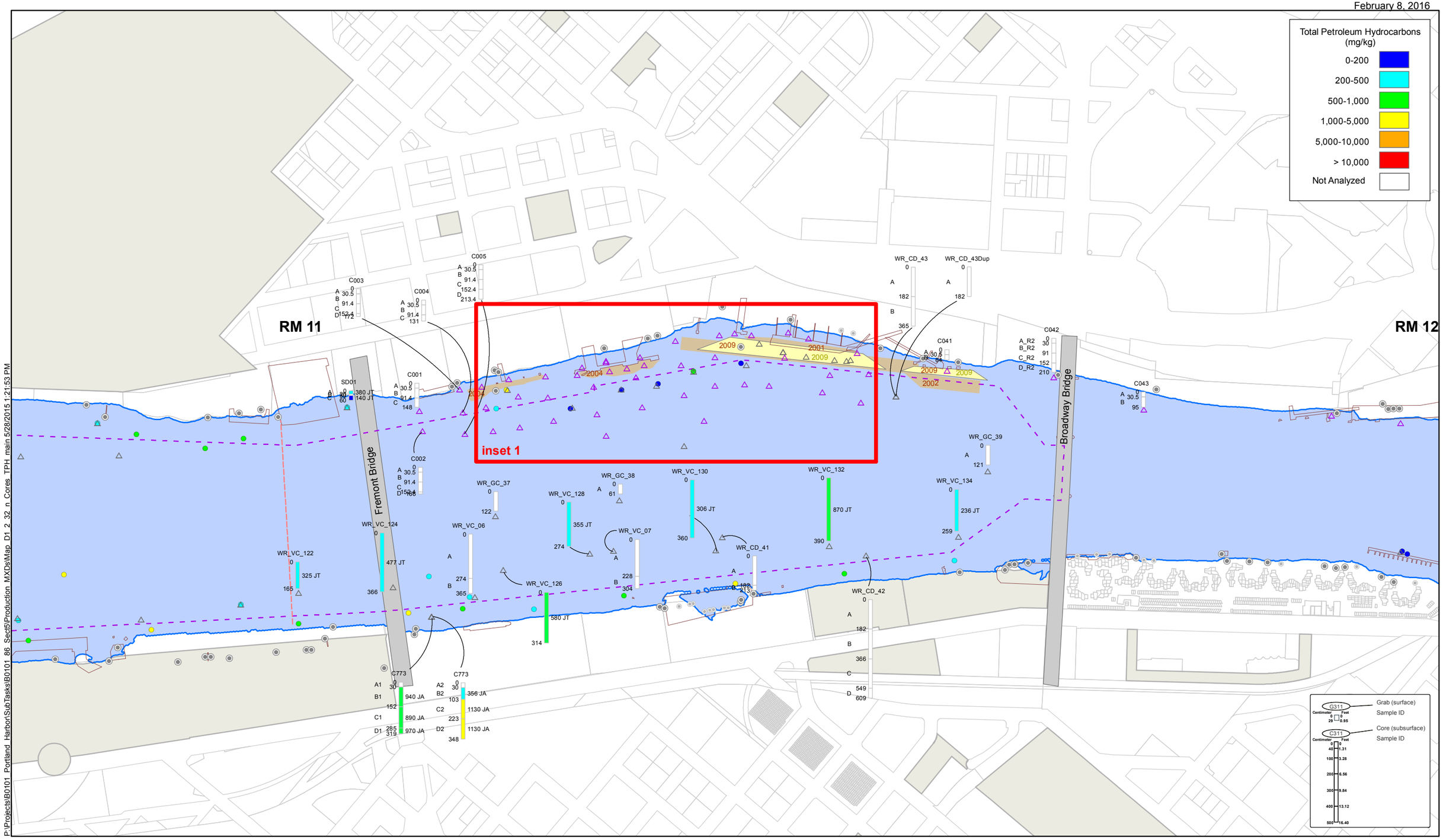
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-32 m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons (mg/kg)

River Mile 11 to 12

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

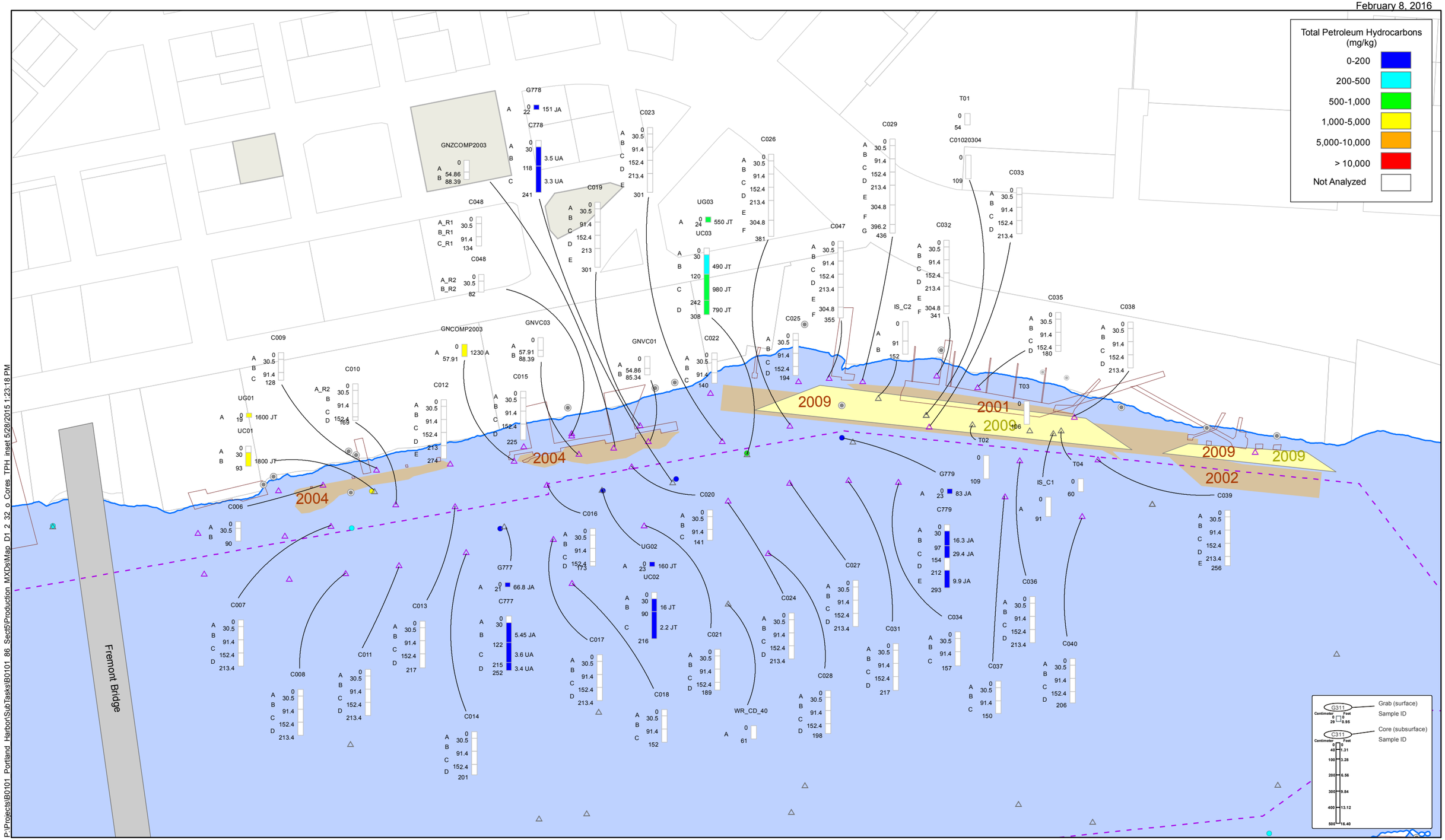
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-32n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons (mg/kg)

River Mile 11.0 - 11.8




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

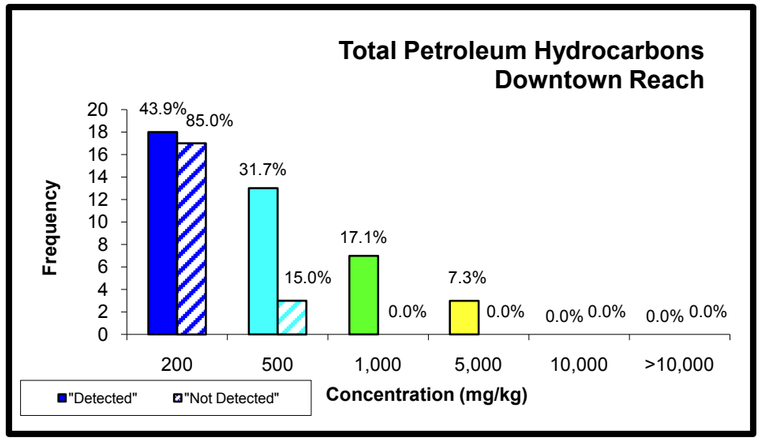
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

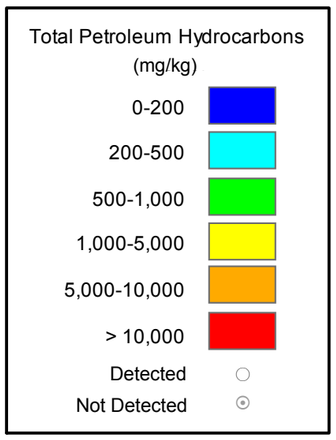
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

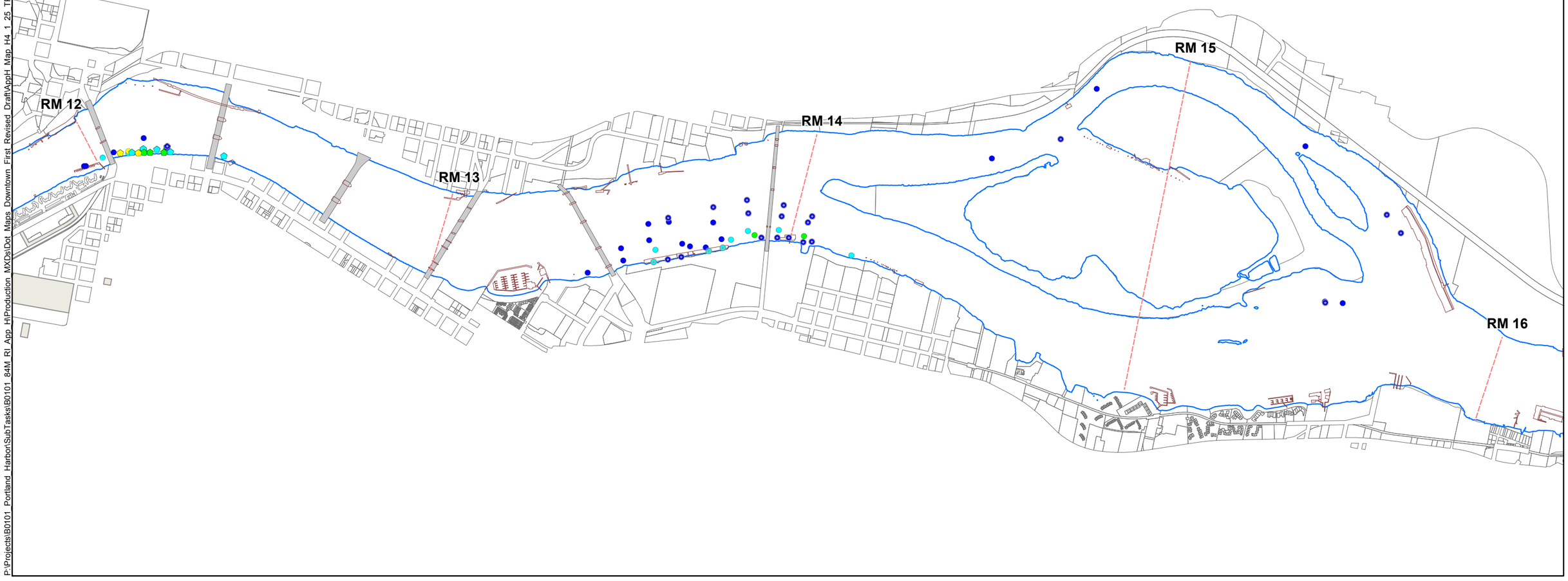
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-32o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons (mg/kg)

River Mile 11.0 - 11.8 - Inset 1

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-33**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Total Petroleum Hydrocarbons (mg/kg)
Downtown Reach

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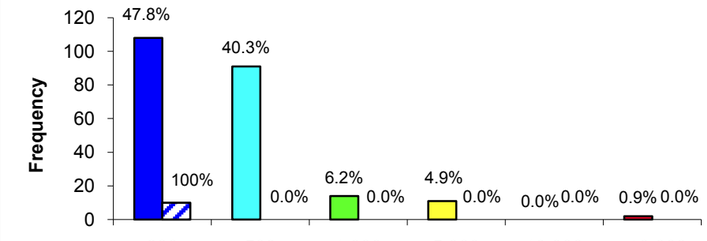
RM 1
RM 2
RM 3
RM 4
RM 5
RM 6
RM 7
RM 8
RM 8
RM 9
RM 10
RM 11
RM 12

**Total Petroleum Hydrocarbons**
**Silica Gel Method**




Total Petroleum Hydrocarbons
Silica Gel Method (mg/kg)

- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Detected
- Not Detected

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

0 1,000 2,000 3,000 4,000 5,000 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-34**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Total Petroleum Hydrocarbons - Silica Gel Method (mg/kg)

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-24_Cores_TPH SGT_Main.mxd) - 3/11/2009 -- 12:56:50 PM

Total Petroleum Hydrocarbons
Silica Gel Method
(mg/kg)

- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

RM 1

RM 2

HC_VC_B501_01
HC_VC_B501_03
HC_B501_C1
T5_01_1
DG18
DC06
1999
B501_C1
B501_C2
1999
HC_VC_B501_02
T5_01_2
DG15
DC03
2001
HC_B503_C1
2001
DG16
DC04
DG13
DC01
DC01
G009
C009
RB13
G600
C600
G011
C011
G602
C602
G601
C601
C601
WR_GC_06
DG17
DC05
DG14
DC02

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

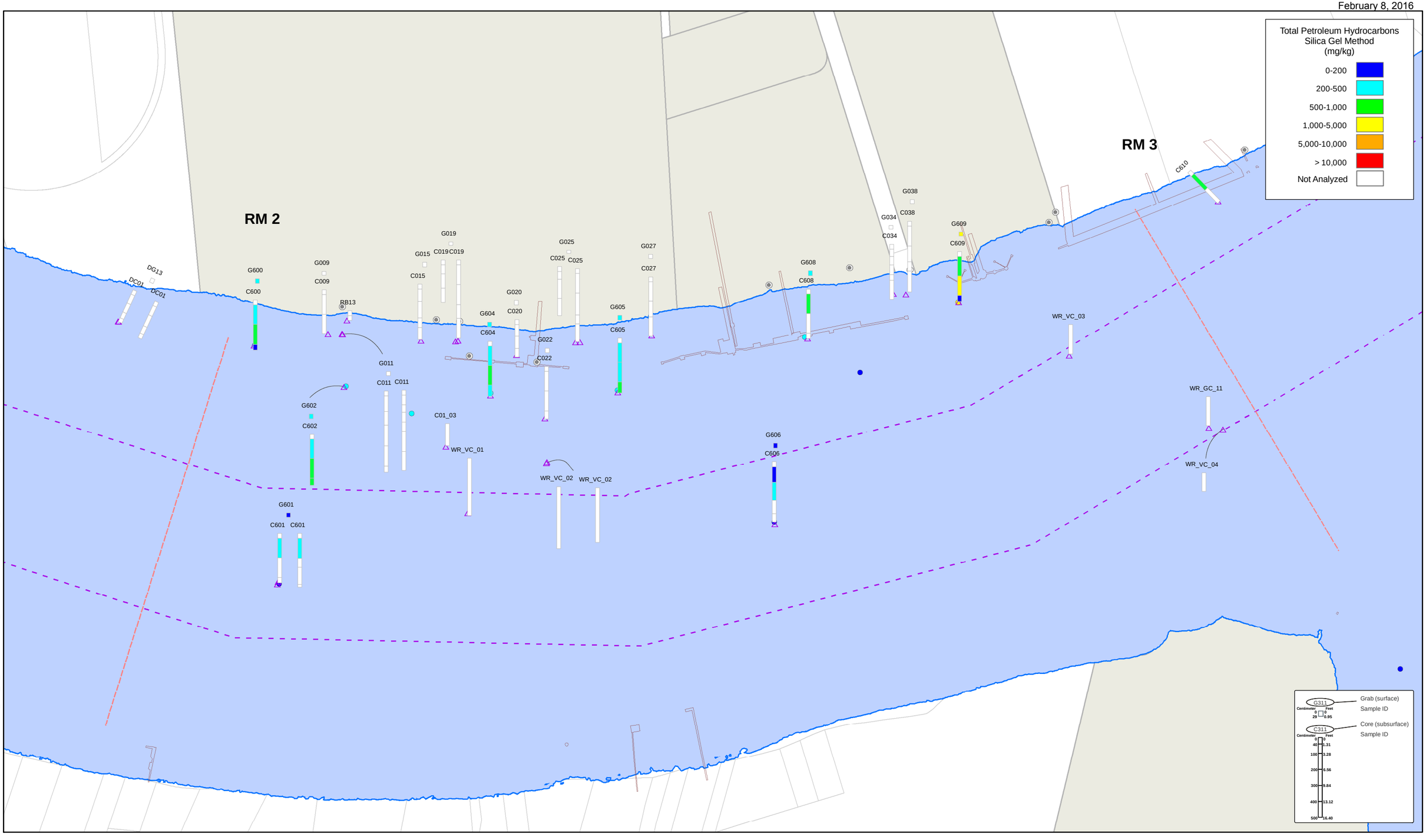
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-35a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons - Silica Gel Method (mg/kg)

River Mile 01 to 02




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-24_Cores_TPH SGT_Main.mxd) - 3/11/2009 -- 12:56:50 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

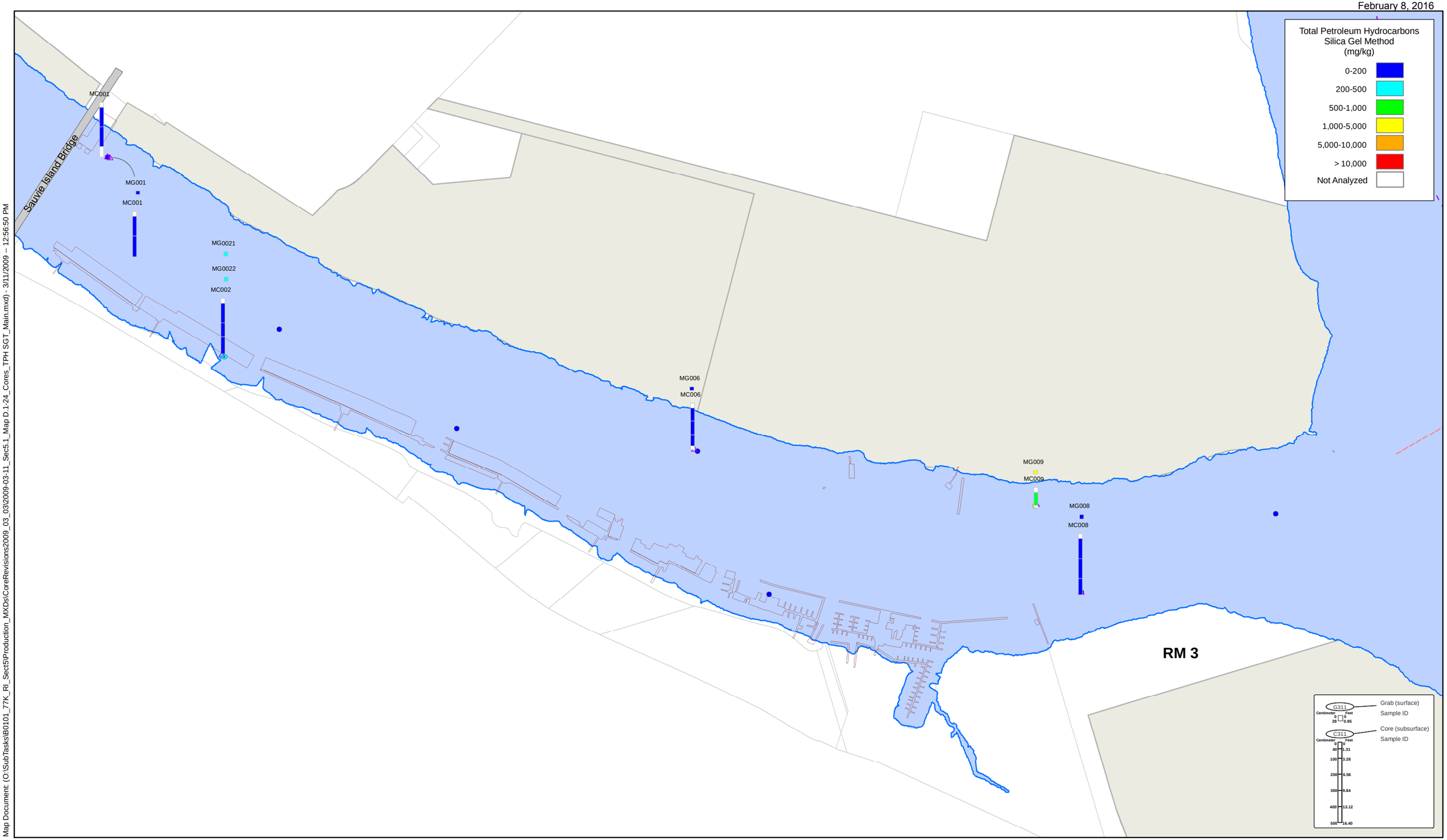
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-35b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons - Silica Gel Method (mg/kg)

River Mile 02 to 03




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-24_Cores_TPH SGT_Main.mxd) - 3/11/2009 -- 12:56:50 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

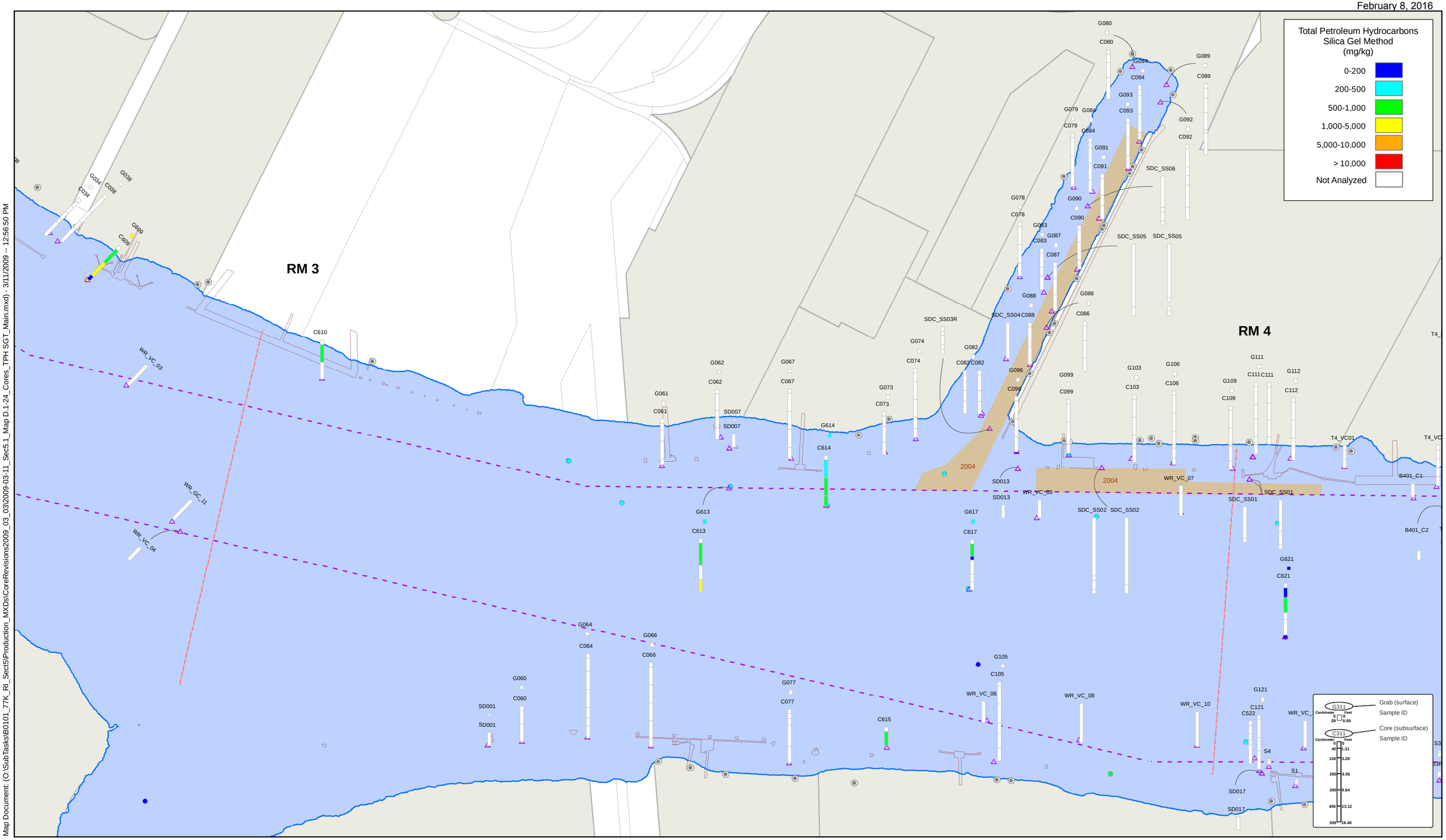
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-35c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons - Silica Gel Method (mg/kg)

River Mile 03 - Multnomah Channel

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_032009-03-11_Sec5.1_Map D.1-24_Cores_TPH SGT_Main.mxd) - 3/11/2009 -- 12:56:50 PM




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

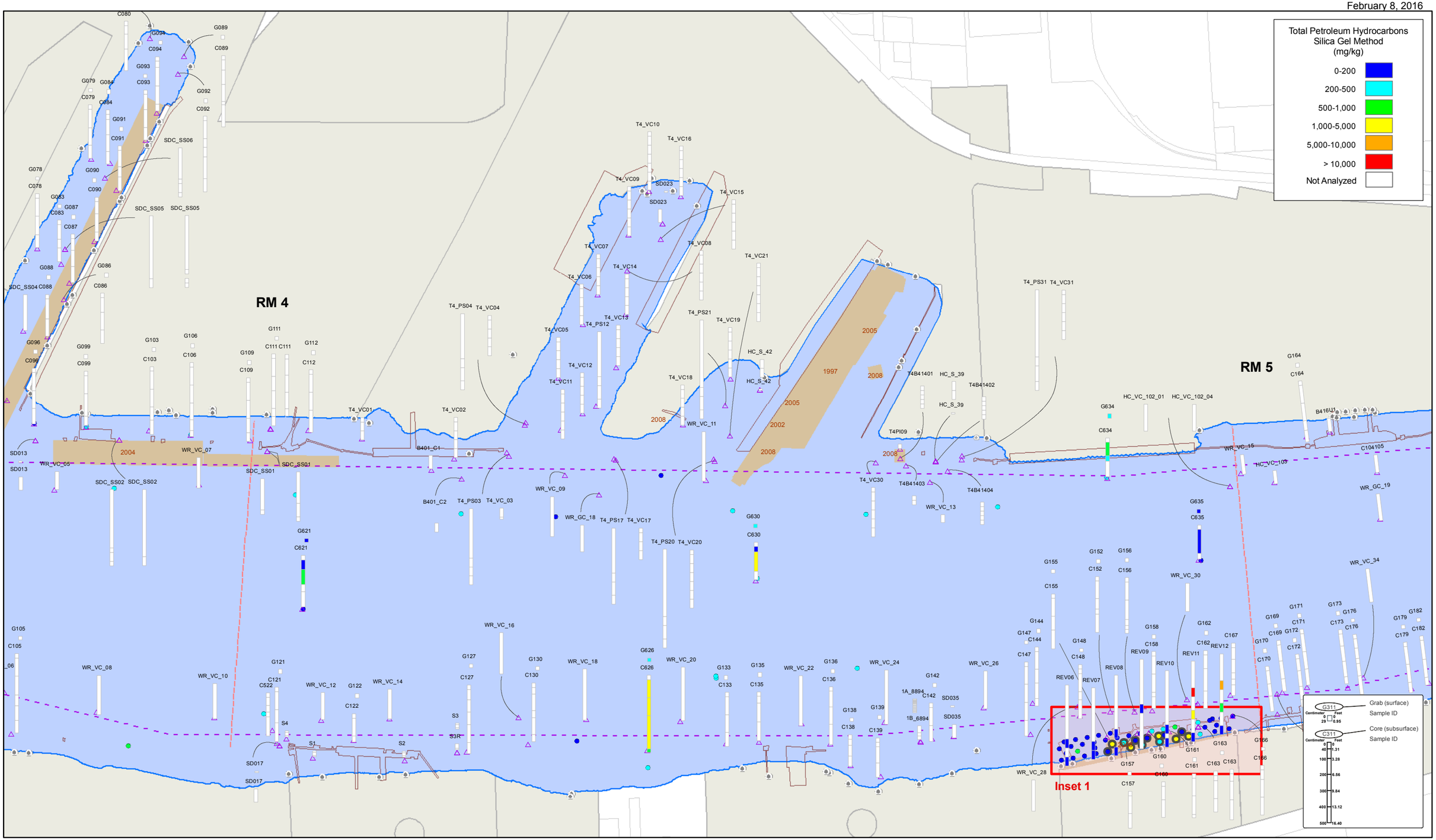
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-35d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons - Silica Gel Method (mg/kg)

River Mile 03 to 04

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-24_Cores_TPH SGT_Main.mxd) - 3/11/2009 -- 12:56:50 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-35e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons - Silica Gel Method (mg/kg)

River Mile 04 to 05 - Slips

Total Petroleum Hydrocarbons
Silica Gel Method
(mg/kg)

- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

SGP08
SGP10
SGP17
SGP13
SGP14
SGP06
SGP12
SGP20
SGP15
SGP22
SGP24
SGP23
SGP21
SGP16
SGP18
2008
SGP05
SGP03
SGP19
SGP04
SGP09
SGP01
SGP07
SGP02

G311 — Grab (surface) Sample ID
C311 — Core (subsurface) Sample ID

| Centimeter | Feet |
|---|---|
| 0 | 0 |
| 29 | 0.95 |
| 40 | 1.31 |
| 100 | 3.28 |
| 200 | 6.56 |
| 300 | 9.84 |
| 400 | 13.12 |
| 500 | 16.40 |

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-24_Cores_TPH SGT_Insets.mxd)
3/11/2009 -- 1:06:27 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 130 260 520 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-35e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons - Silica Gel Method (mg/kg)

River Mile 04 to 05 - Slips - Inset 1

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-24_Cores_TPH SGT_Main.mxd) - 3/11/2009 -- 12:56:50 PM

Total Petroleum Hydrocarbons
Silica Gel Method
(mg/kg)

- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

RM 5

RM 6

St Johns Bridge

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-35f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons - Silica Gel Method (mg/kg)

River Mile 05 to 06

Total Petroleum Hydrocarbons
Silica Gel Method
(mg/kg)

- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

RM 6

RM 7

Railroad Bridge

Grab (surface) Sample ID

Core (subsurface) Sample ID

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-24_Cores_TPH SGT_Main.mxd) - 3/11/2009 -- 12:56:50 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

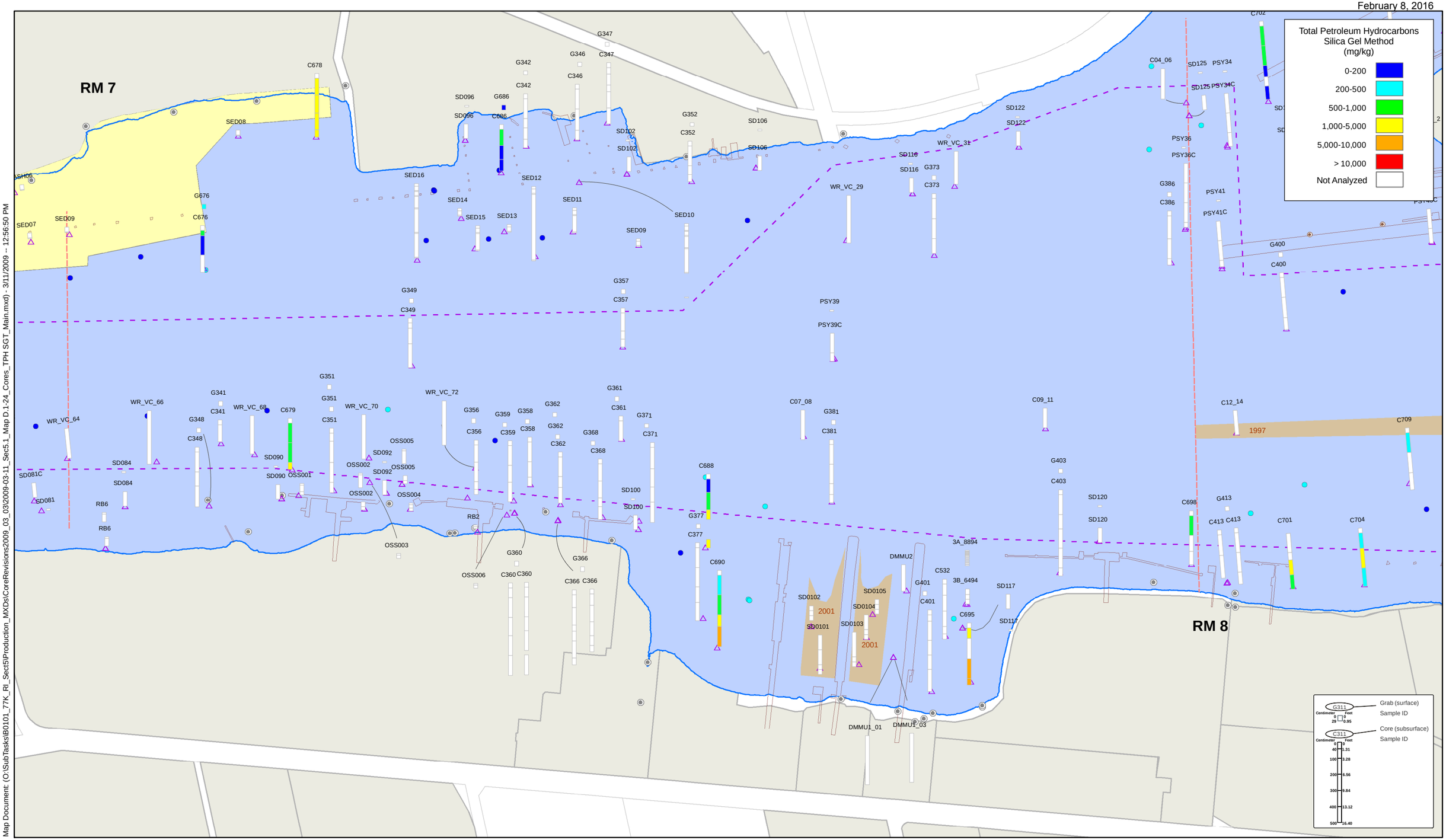
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-35g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons - Silica Gel Method (mg/kg)

River Mile 06 to 07

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

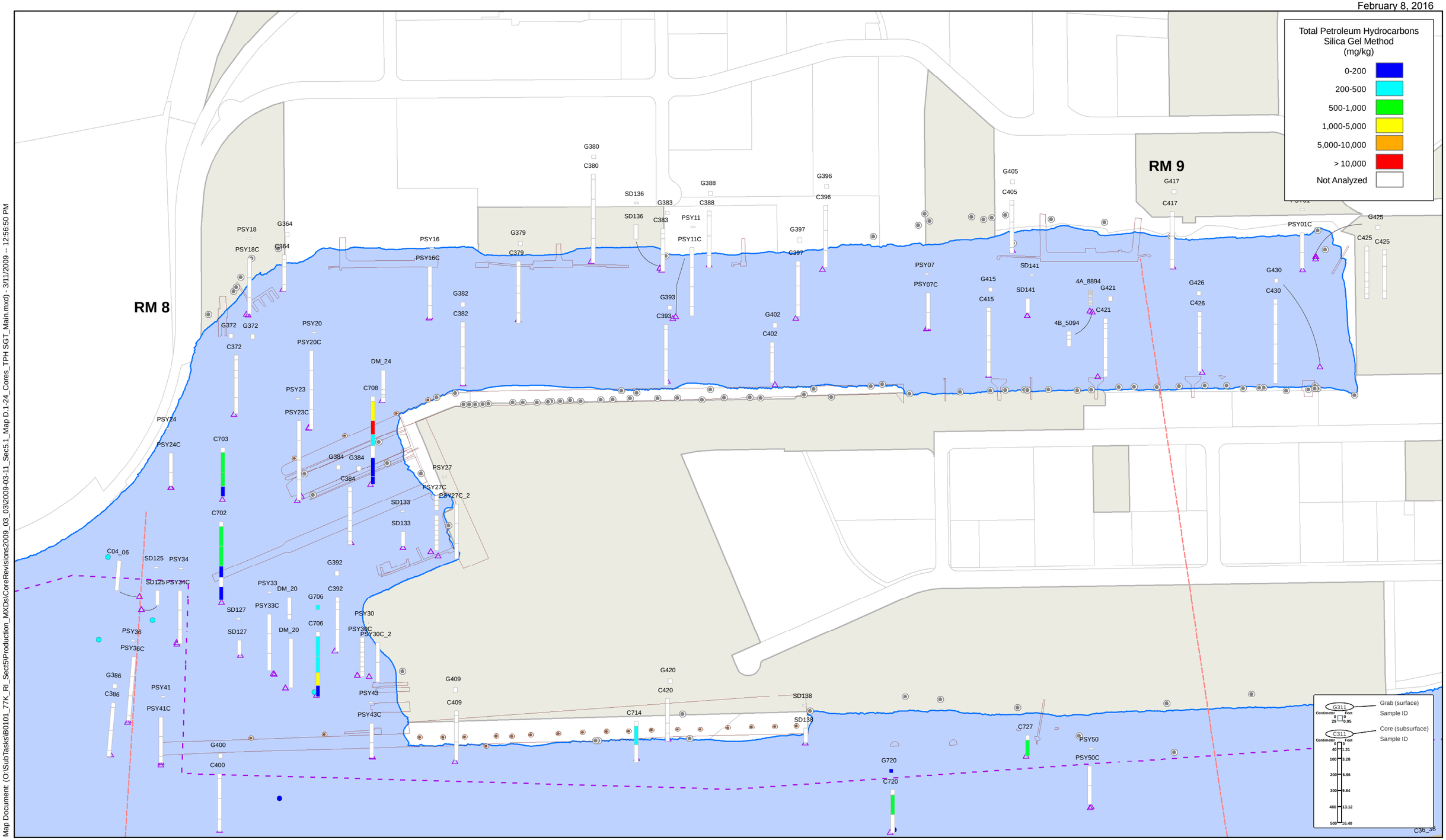
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-35h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons - Silica Gel Method (mg/kg)

River Mile 07 to 08

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_0312009-03-11_Sec5.1_Map D.1-24_Cores_TPH SGT_Main.mxd) - 3/11/2009 -- 12:56:50 PM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

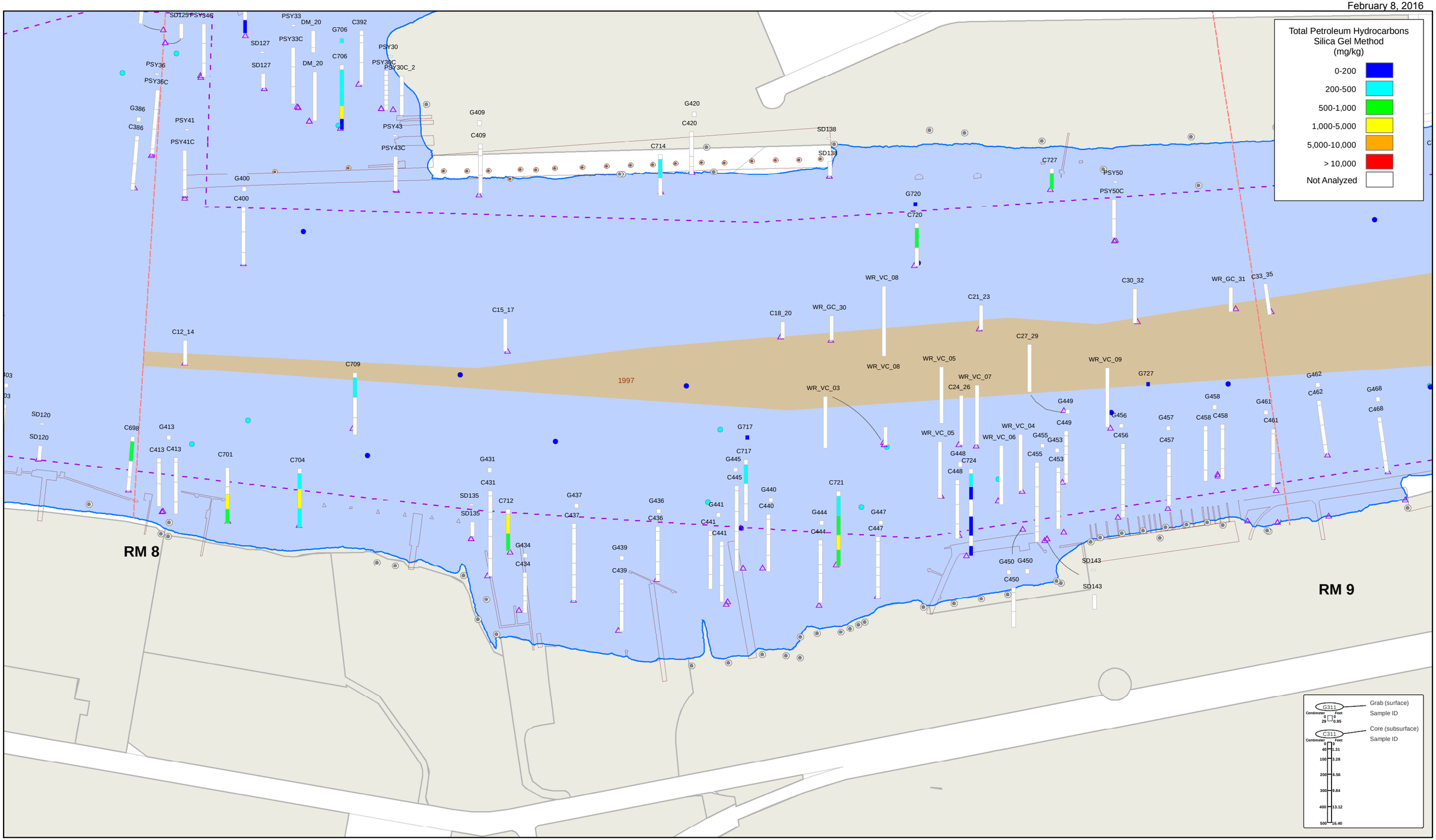
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-35i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons - Silica Gel Method (mg/kg)

River Mile 08 to 09 - Swan Is. East



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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-35j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons - Silica Gel Method (mg/kg)

River Mile 08 to 09 - Swan Is. West

Total Petroleum Hydrocarbons
Silica Gel Method
(mg/kg)

- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

RM 9

RM

G454 C454 SD150 C733 WR_VC_33 WR_VC_35 WR_VC_37 WR_VC_39 WR_VC_41 WR_VC_43 WR_VC_45 G742 C742 G743 C743 G746 C746 SD04 C749 WR_GC_32 WR_GC_33 WR_GC_31 C33_35 C36_38 C39_41 WR_VC_04 C42_44 RC483 C45_47 WR_VC_03 WR_VC_05 C48_50 C51_52 WR_GC_34 WR_GC_35 G748 C748 G747 C747 WR_VC_106 G471 C471 G474 C474 G477 C477 SD151 G462 C462 G468 C468 G458 C458 G461 C461 G735 C735 G738 C738 G739 C739 G492 C492 HC_VC_53 T2_01_2 T2U1 T2U2 T2_01_1 G494 C494 1997 2000 2002 2005

Grab (surface) Sample ID
Core (subsurface) Sample ID

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-24_Cores_TPH SGT_Main.mxd) - 3/11/2009 -- 12:56:50 PM

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

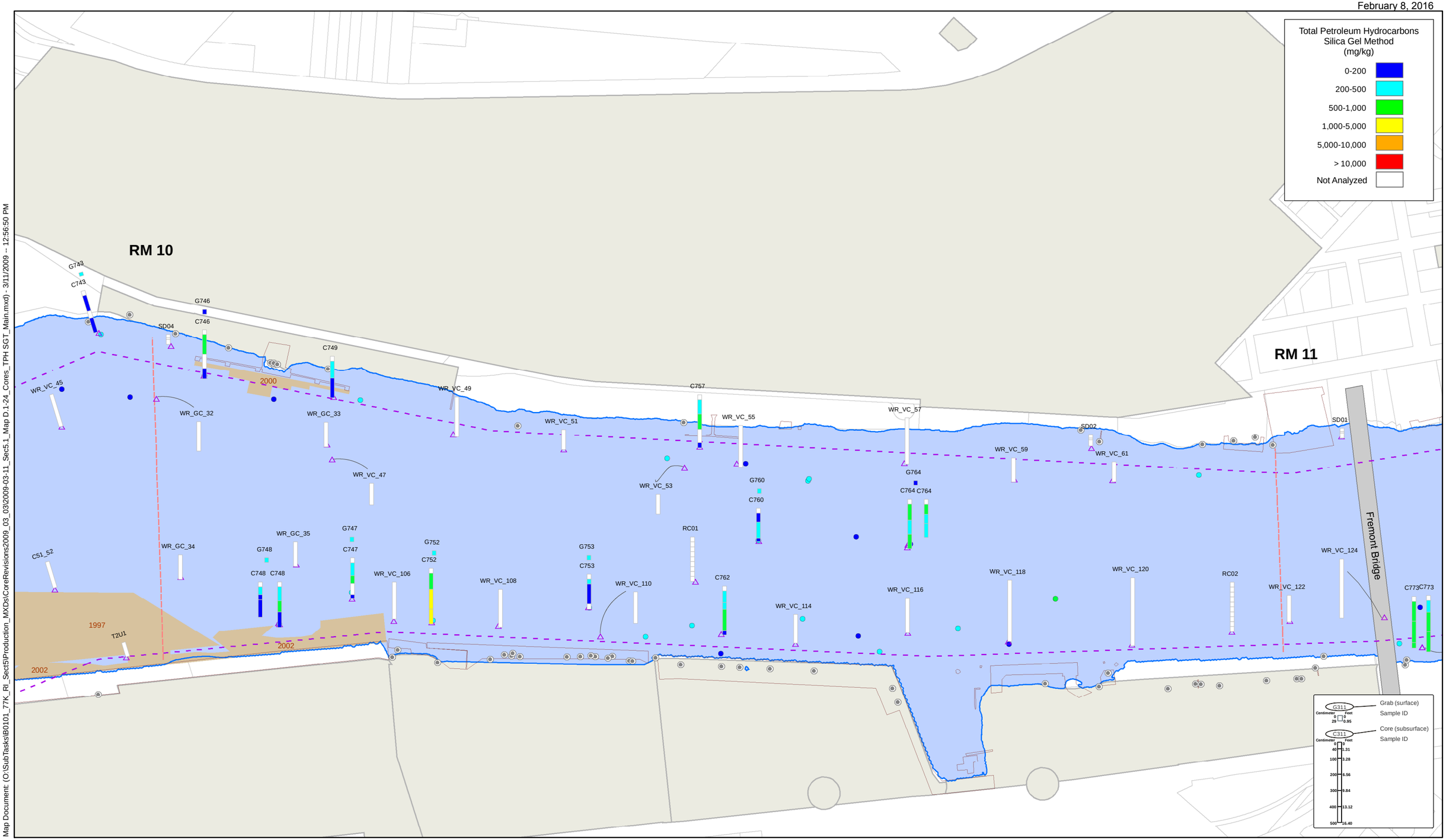
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-35k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons - Silica Gel Method (mg/kg)

River Mile 09 to 10

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-24_Cores_TPH SGT_Main.mxd) - 3/11/2009 -- 12:56:50 PM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

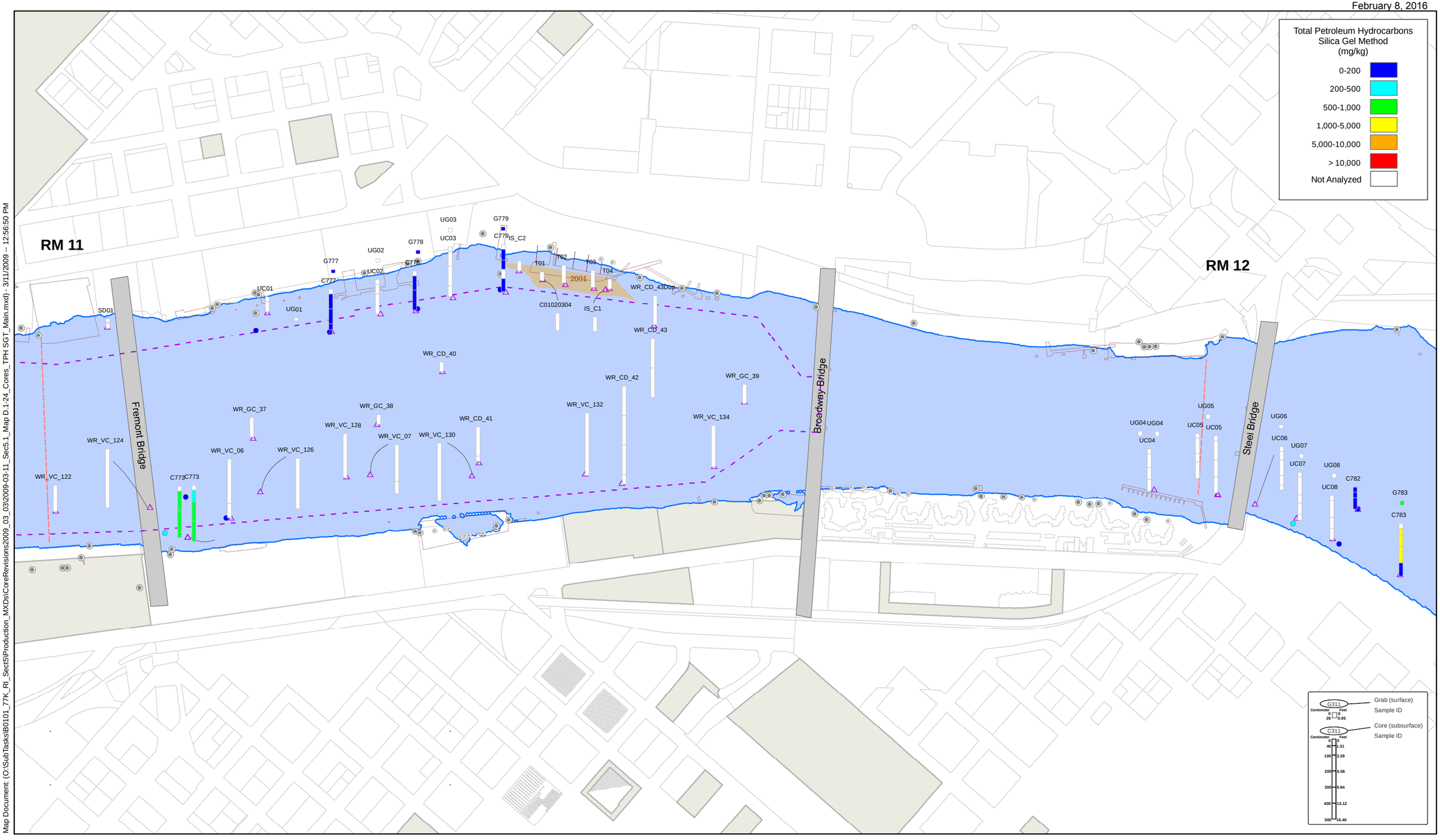
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-35I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons - Silica Gel Method (mg/kg)

River Mile 10 to 11

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-24_Cores_TPH SGT_Main.mxd) - 3/11/2009 -- 12:56:50 PM




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

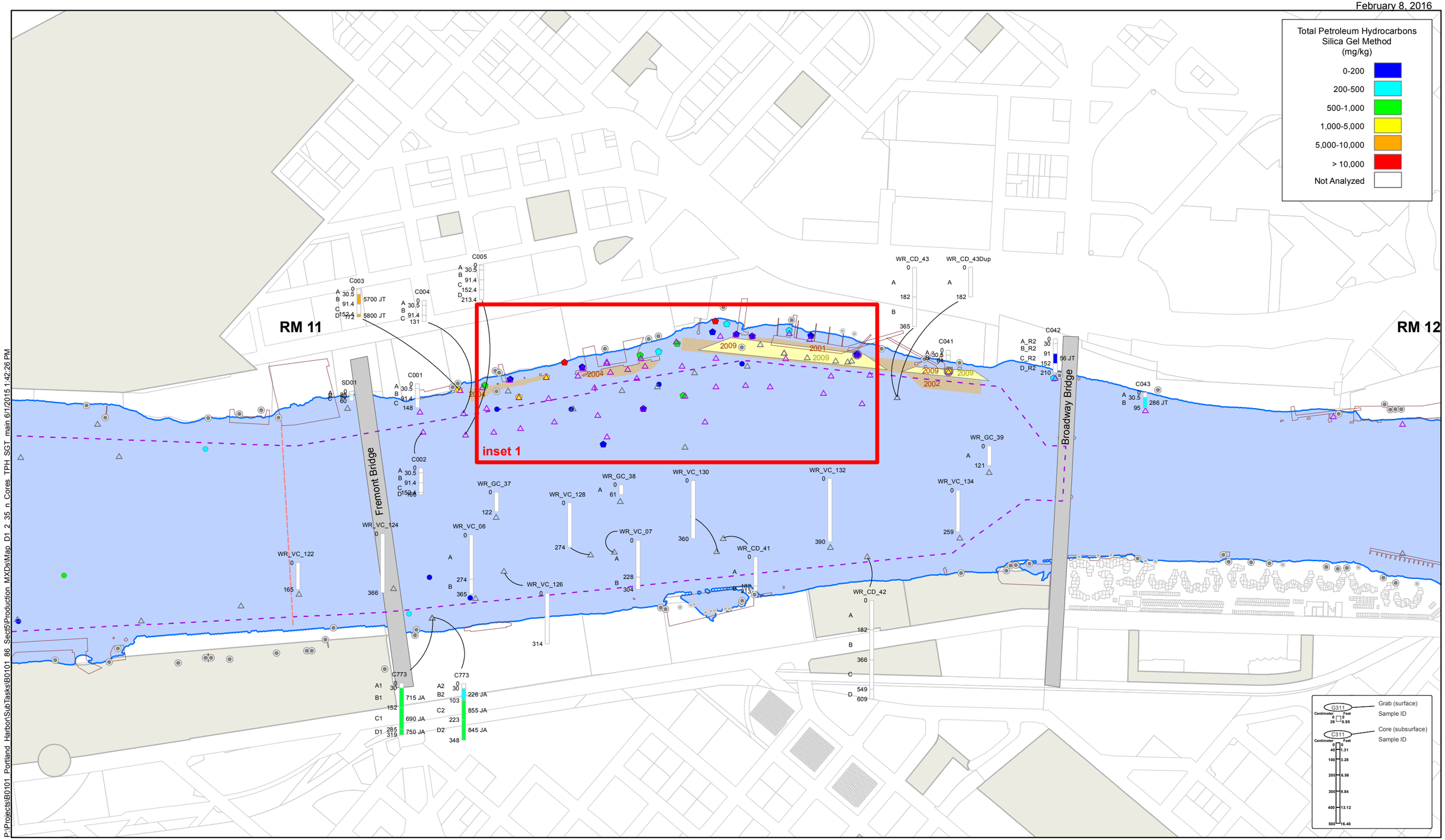
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-35m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons - Silica Gel Method (mg/kg)

River Mile 11 to 12

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-35n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons - Silica Gel Method (mg/kg)

River Mile 11.0 - 11.8

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Total Petroleum Hydrocarbons
Silica Gel Method
(mg/kg)

- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

Fremont Bridge

2004 2004 2009 2001 2009 2009 2009 2002

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

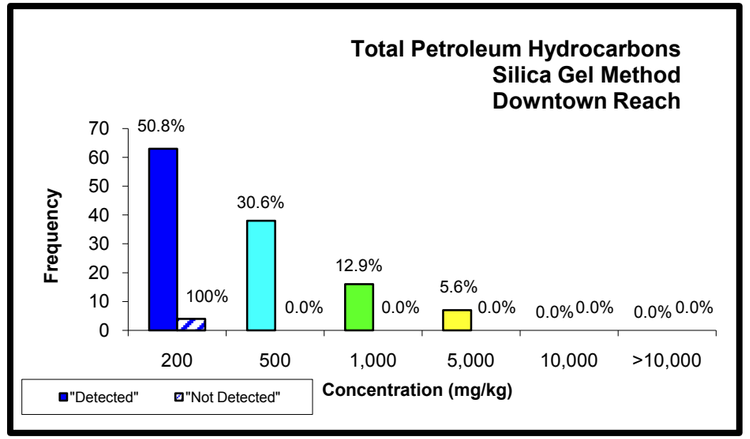
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

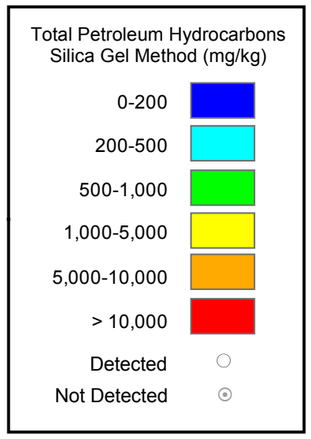
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

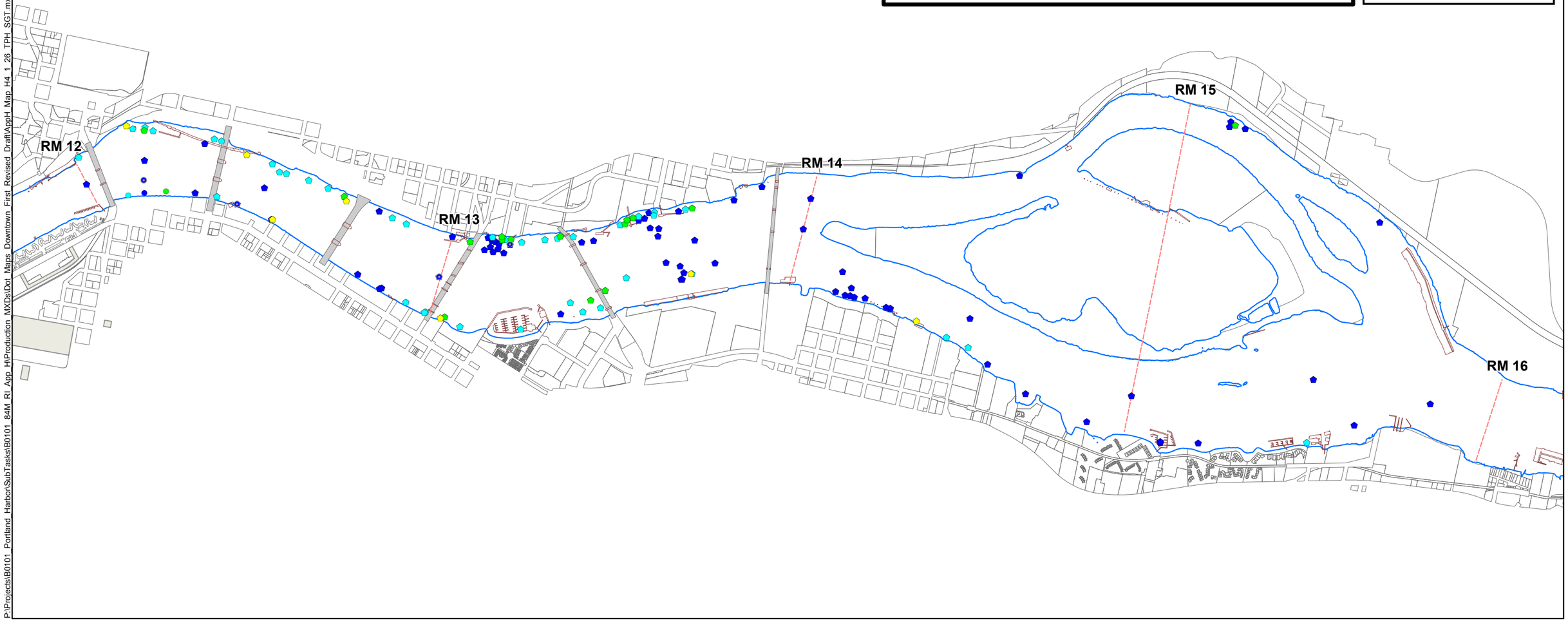
Grab (surface) Sample ID
Core (subsurface) Sample ID

**Map D1.2-35o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Petroleum Hydrocarbons - Silica Gel Method (mg/kg)

River Mile 11.0 - 11.8 - Inset 1

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N

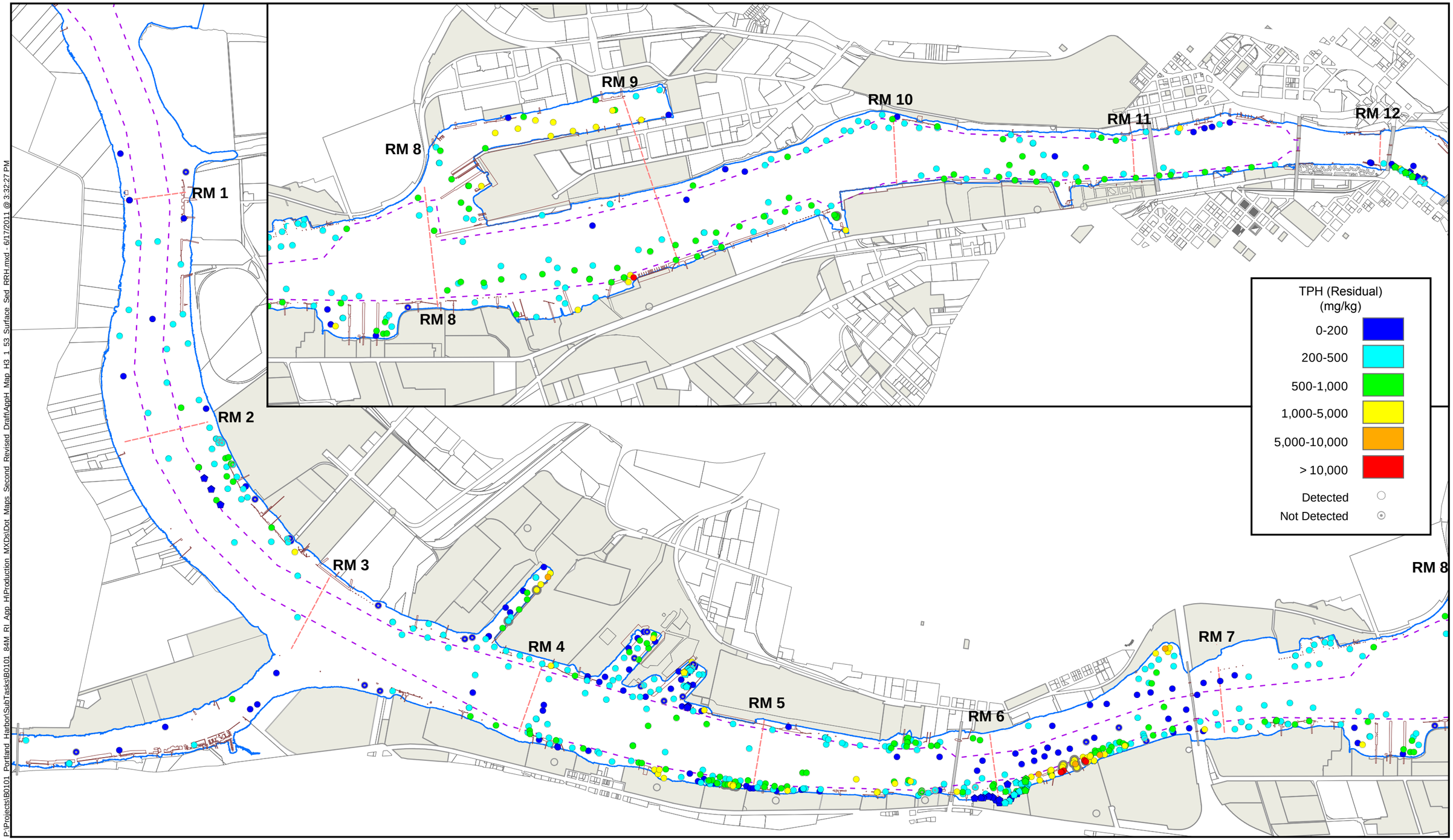
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-36**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Total Petroleum Hydrocarbons - Silica Gel Method (mg/kg)
Downtown Reach

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N

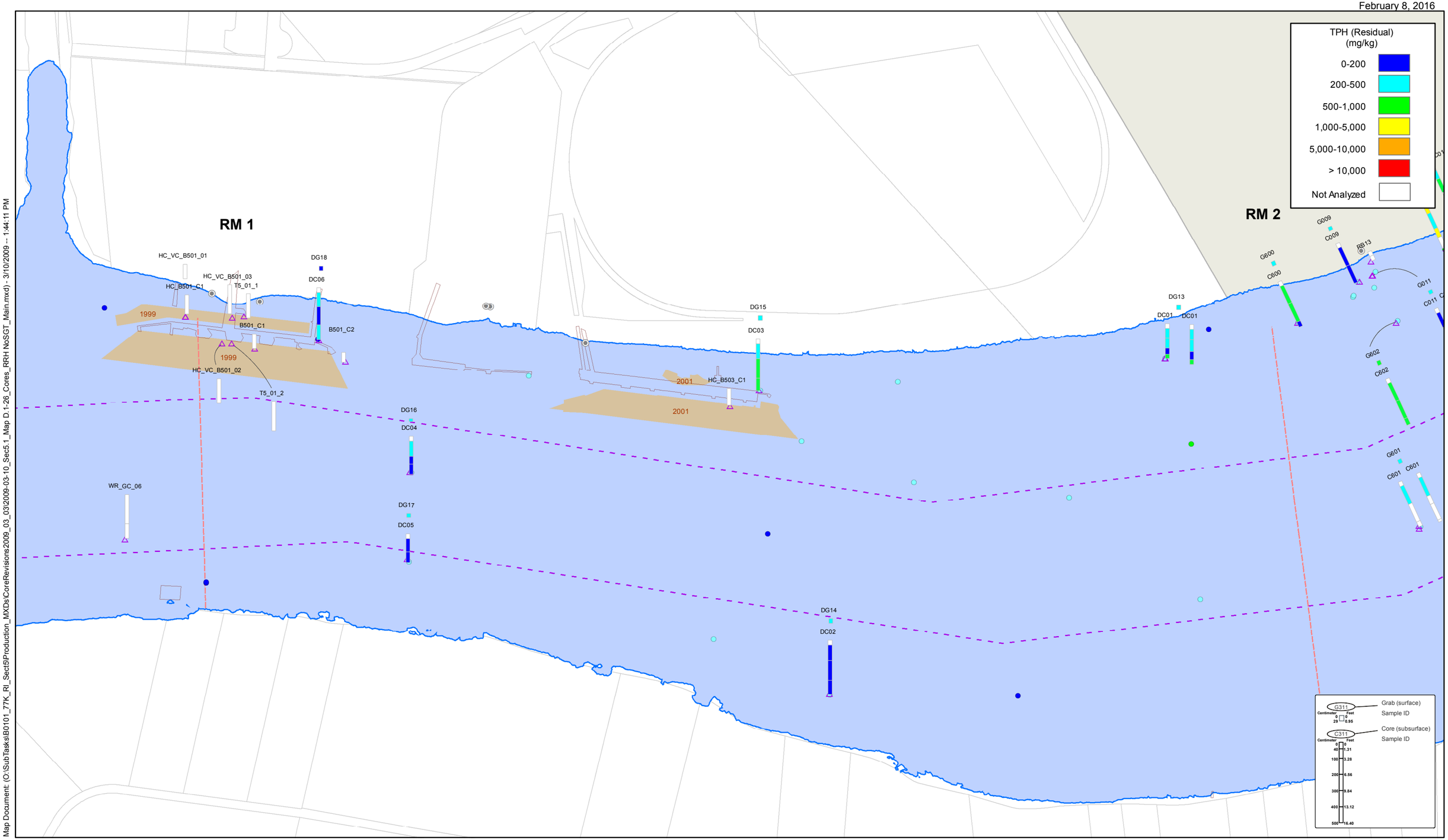
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

0 1,000 2,000 3,000 4,000 5,000 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-37**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
TPH (Residual) (mg/kg)




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-26_Cores_RRH NoSGT_Main.mxd) - 3/10/2009 -- 1:44:11 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

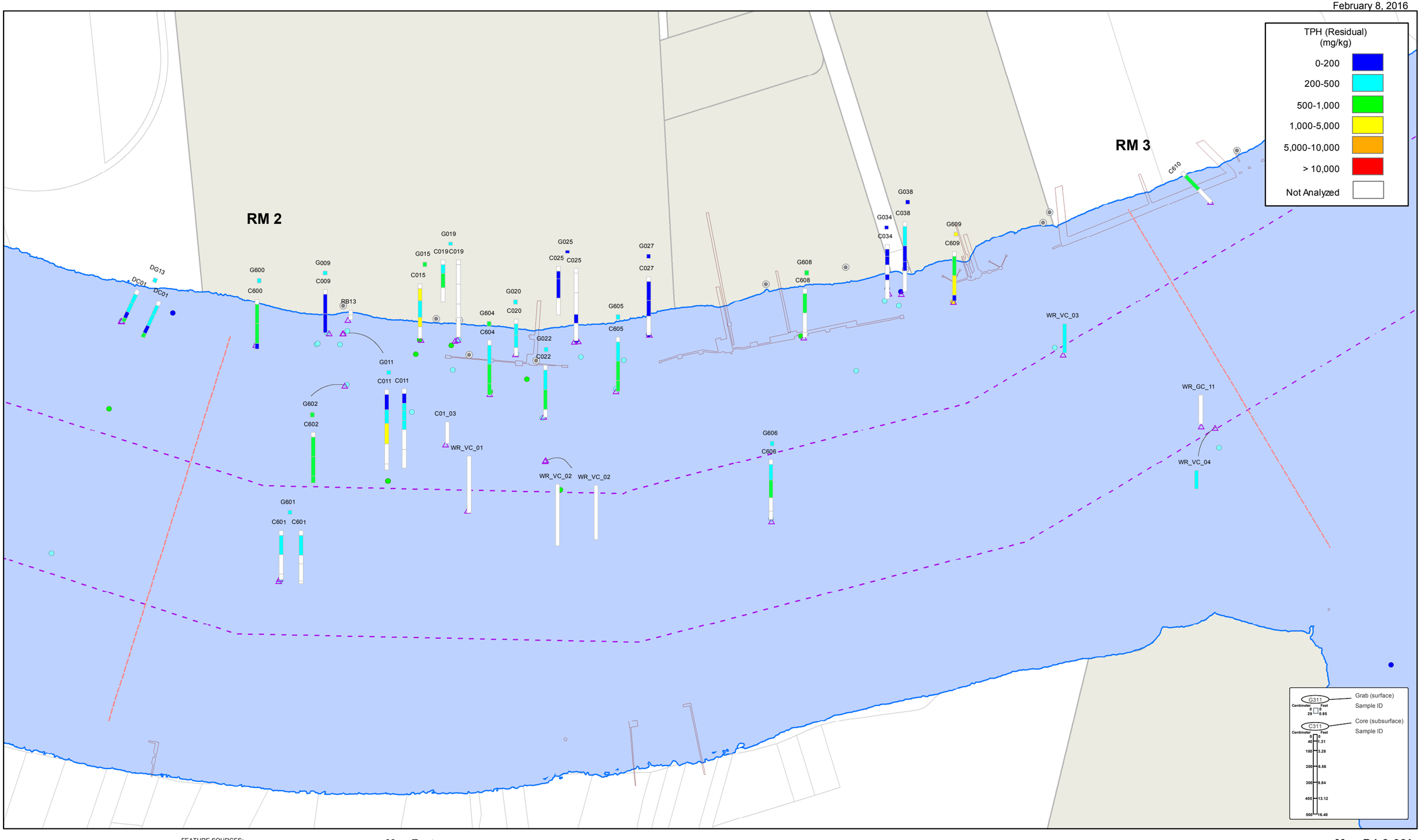
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-38a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) (mg/kg)
River Mile 01 to 02




Map Document: (O:\SubTask\tB0101_7TK_RI_Sect5\Production_MXDs\CoreRevisions\2009_03_03\2009-03-10_Sec5.1_Map D.1-26_Cores_RRH NoSGT_Main.mxd) - 3/10/2009 -- 1:44:11 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

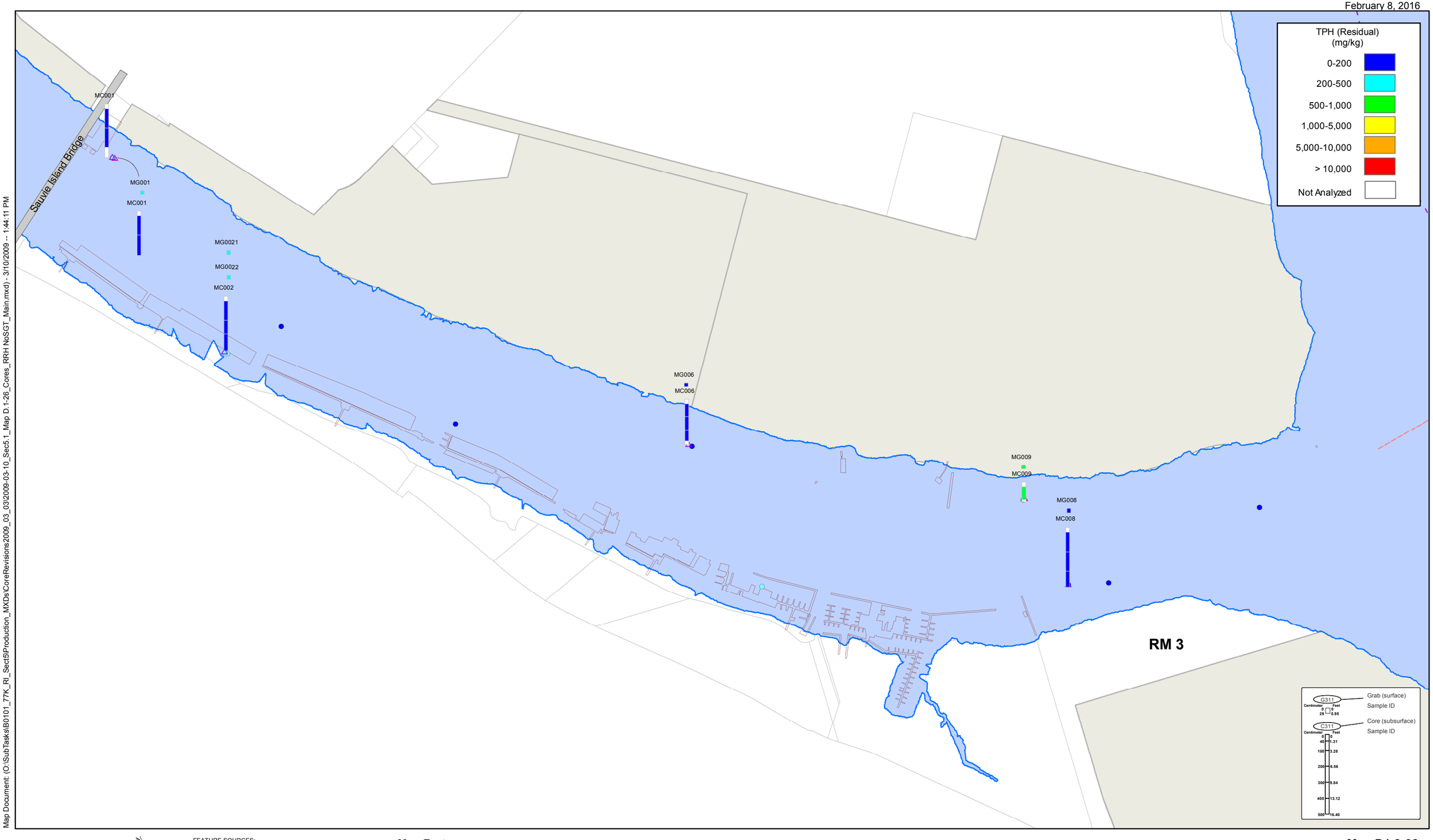
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-38b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) (mg/kg)
River Mile 02 to 03




Map Document: (O:\SubTasks\B0101_7TK_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-26_Cores_RRH NoSGT_Main.mxd) - 3/10/2009 -- 1:44:11 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

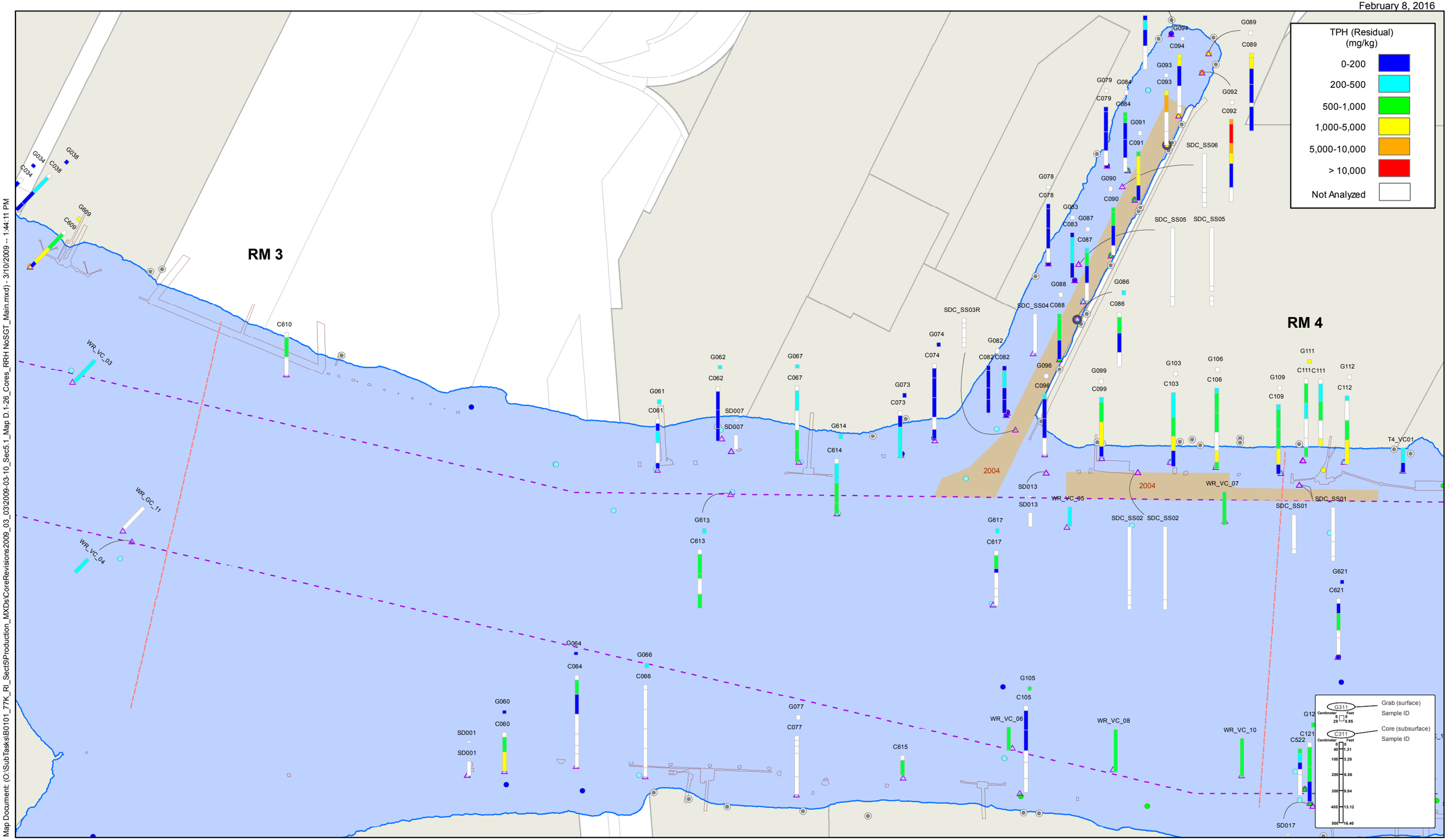
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-38c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) (mg/kg)
River Mile 03 - Multnomah Channel




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-26_Cores_RRH NoSGT_Main.mxd) - 3/10/2009 -- 1:44:11 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

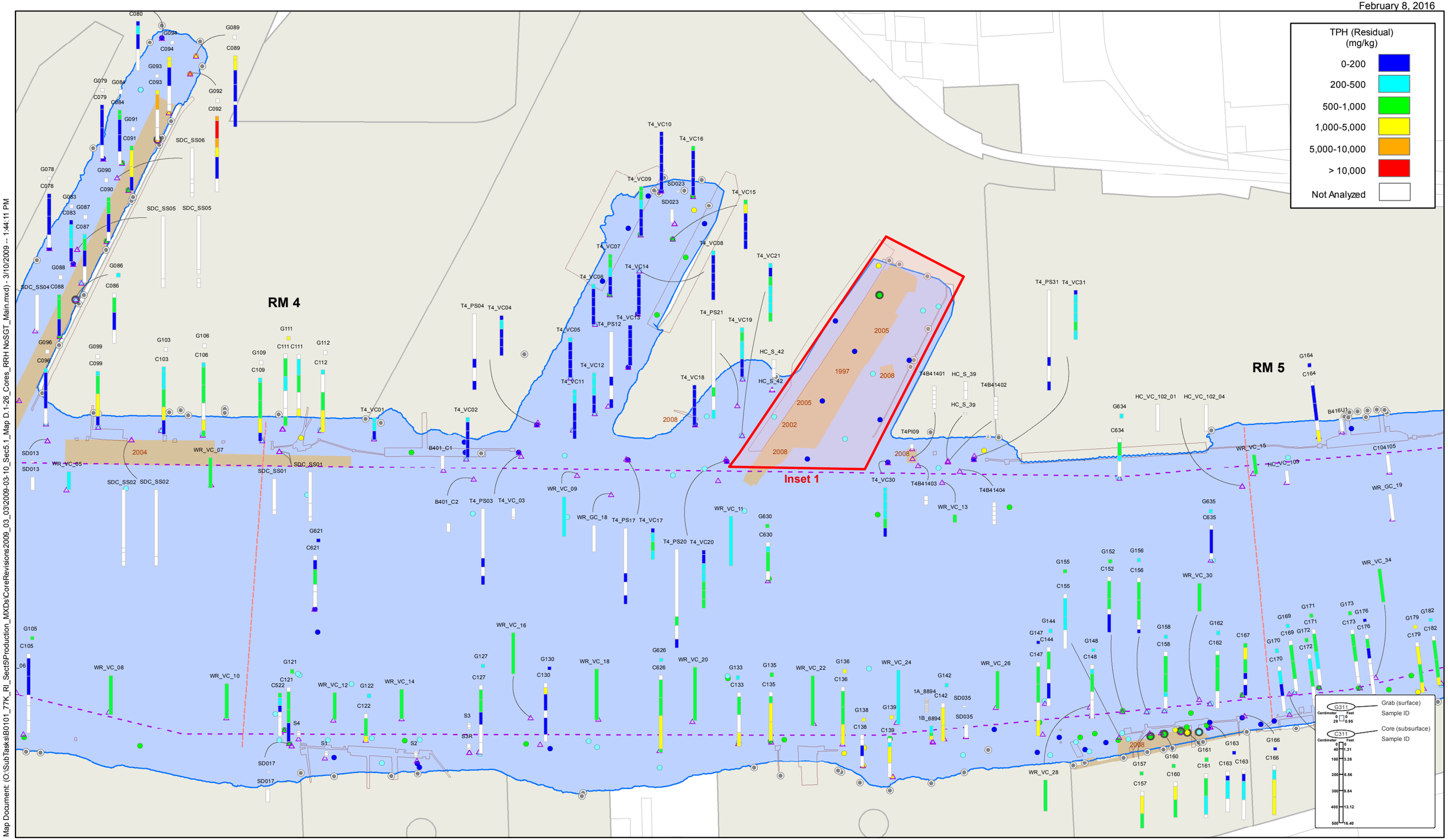
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-38d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) (mg/kg)
River Mile 03 to 04

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

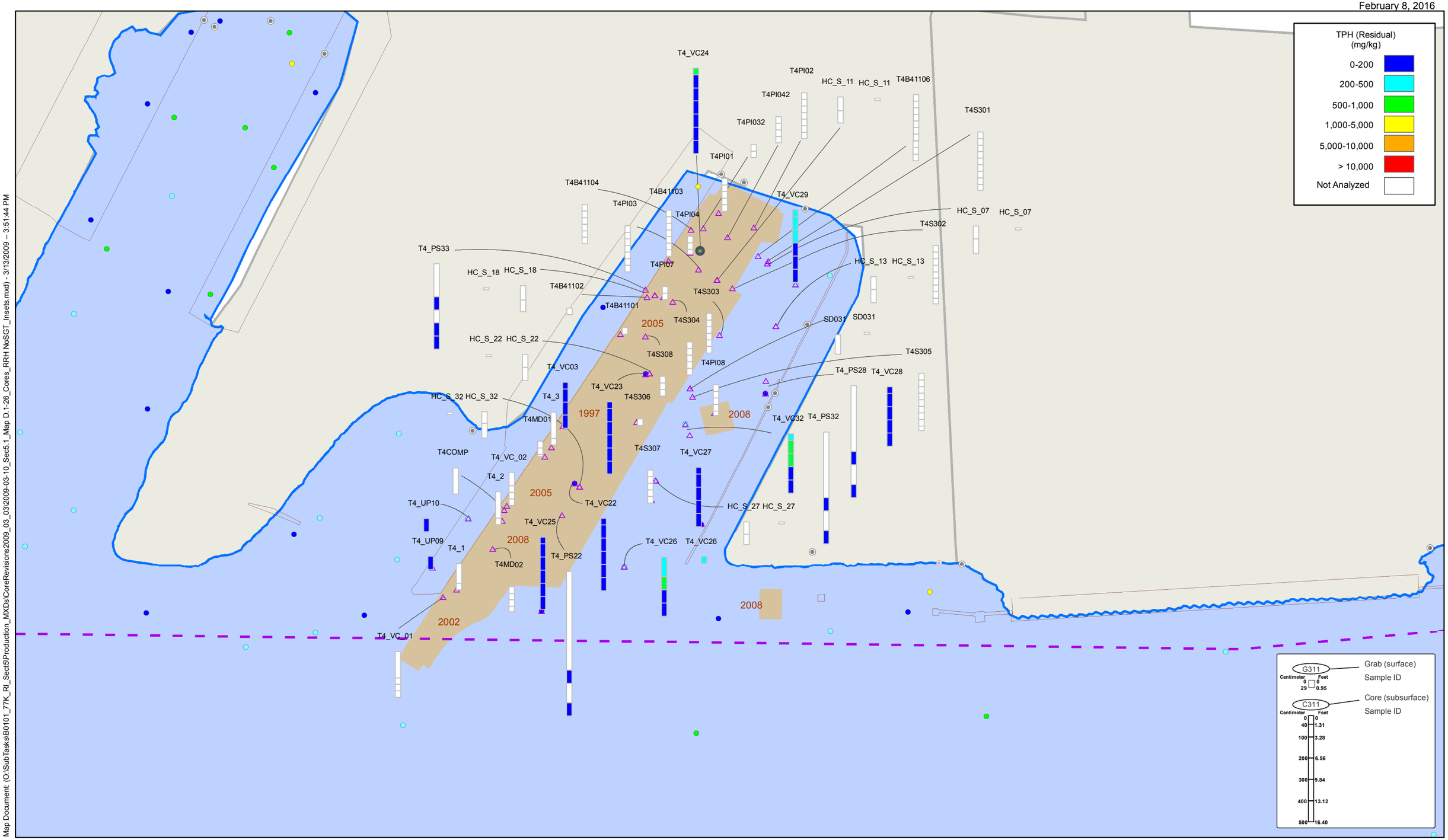
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-38e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) (mg/kg)
River Mile 04 to 05 - Slips




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-26_Cores_RRH NoSGT_Insets.mxd) - 3/13/2009 -- 3:51:44 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 120 240 480 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

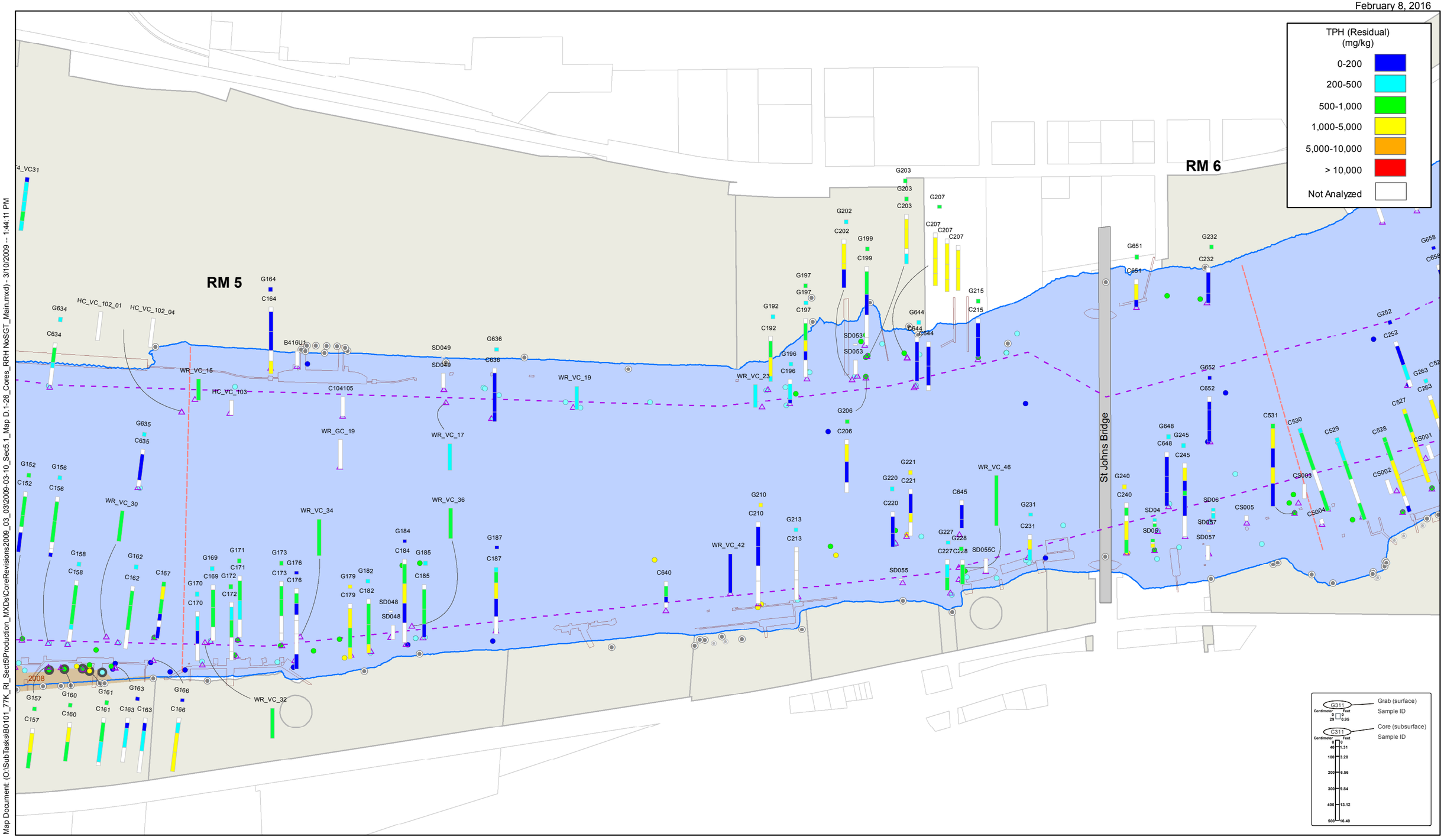
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-38 e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) (mg/kg)
River Mile 04 to 05 - Slips - Inset 1

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

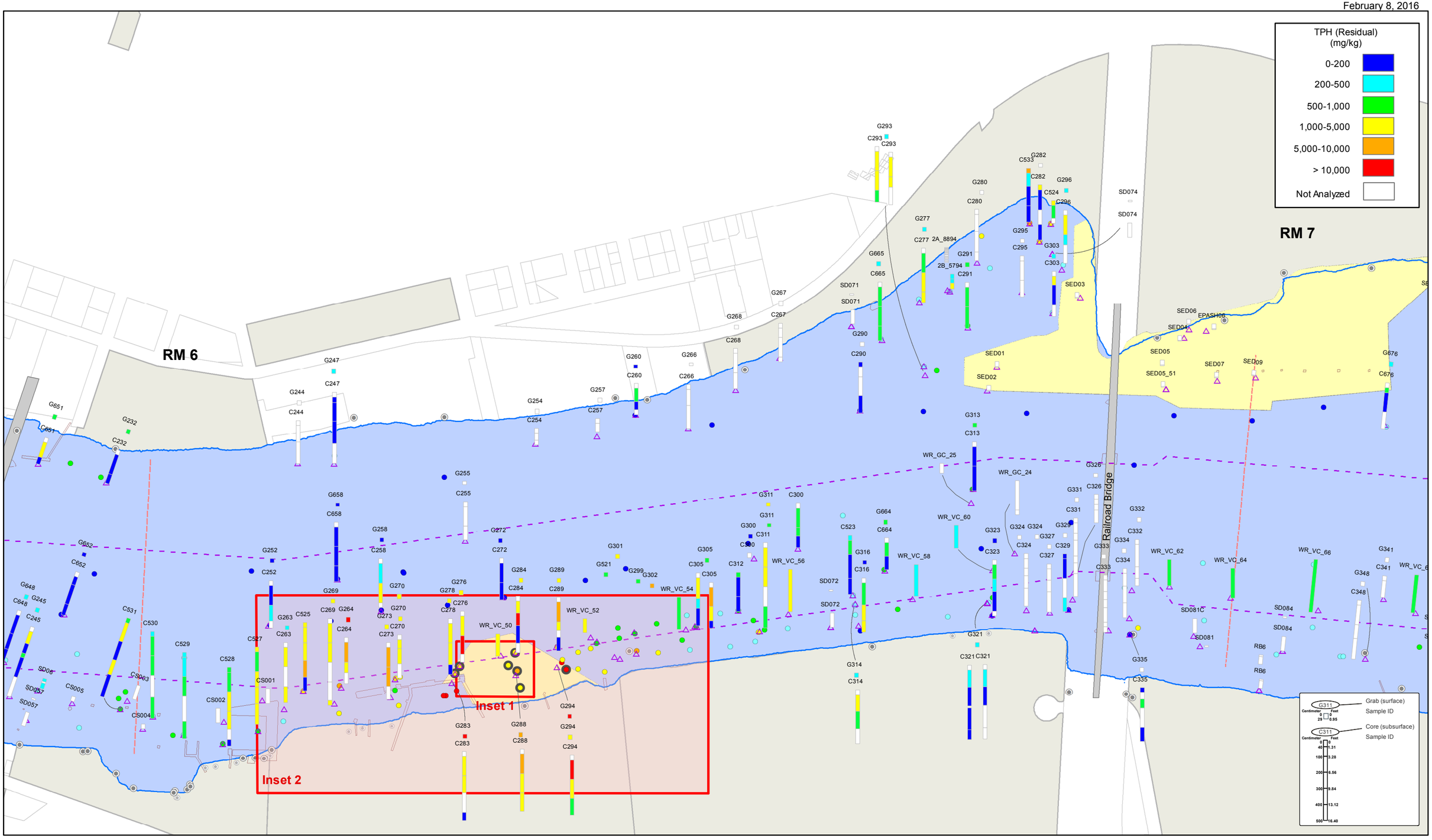
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-38f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) (mg/kg)
River Mile 05 to 06




Map Document: (O:\SubTask\st\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-26_Cores_RRH NoSGT_Main.mxd) - 3/10/2009 -- 1:44:11 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

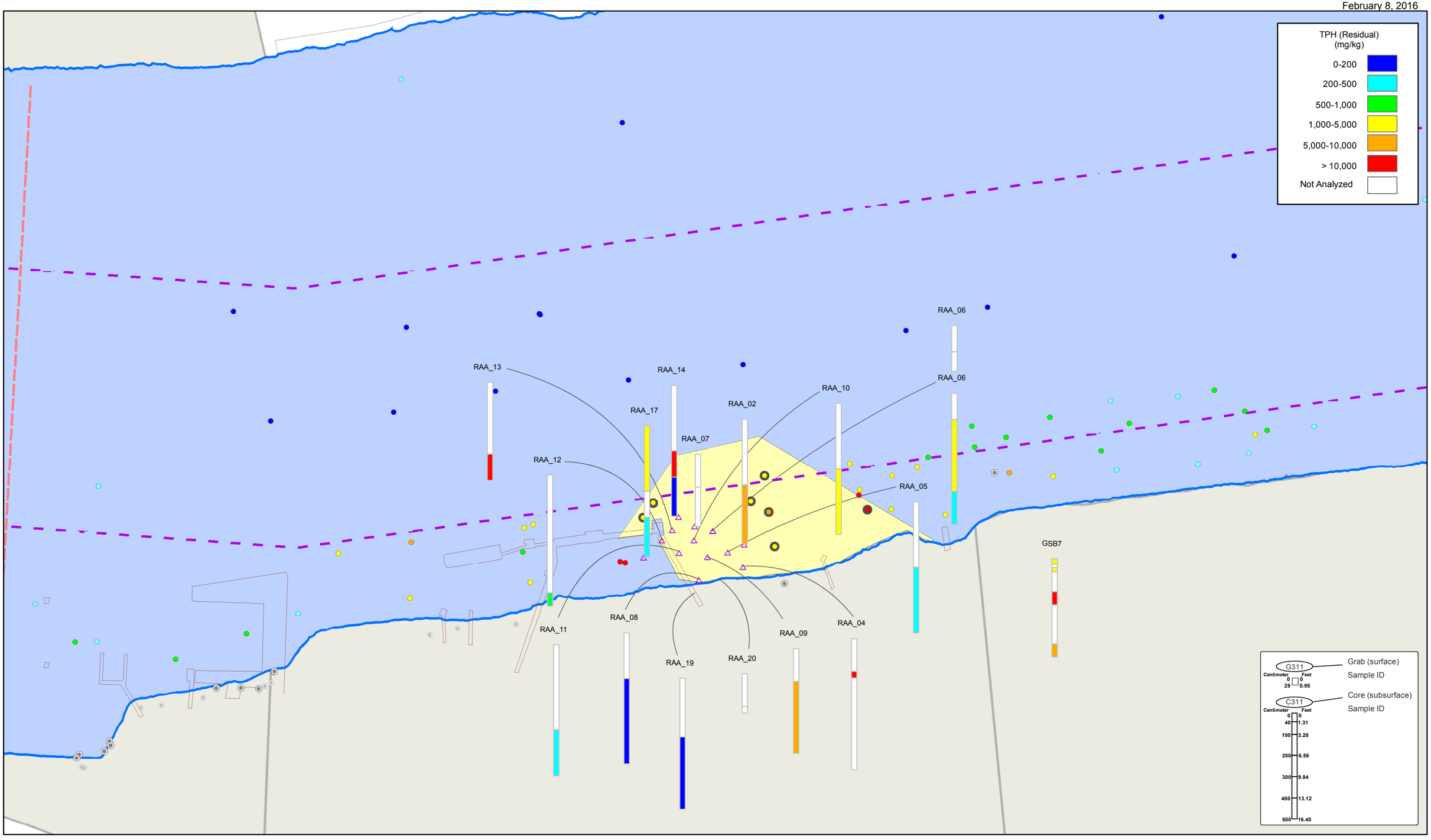
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-38g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) (mg/kg)
River Mile 06 to 07

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-26_Cores_RRH NoSGT_Insets.mxd) - 3/13/2009 -- 3:51:44 PM




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 120 240 480 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-38 g1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) (mg/kg)
River Mile 06 to 07 - Inset 1

TPH (Residual) (mg/kg)
- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

GS09 GSD2 GS07 AN_1_5 GS08 GSD4 GSD5 GS05 GS06 GSC5 GS04 RAA_14 AN_2_5 RAA_17 GSC2 GSB2 RAA_07 GSB7 GSC7 AN_1_3 AN_1_2 AN_2_4 GSB5 AN_1_1 AN_2_3 AN_2_1 AN_2_2

G311 Grab (surface) Sample ID
Centimeter 0 29 Feet 0 0.95

C311 Core (subsurface) Sample ID
Centimeter 0 40 100 200 300 400 500 Feet 0 1.31 3.28 6.56 9.84 13.12 16.40

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-26_Cores_RRH NoSGT_Insets.mxd) - 3/13/2009 -- 3:51:44 PM

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 120 240 480 Feet

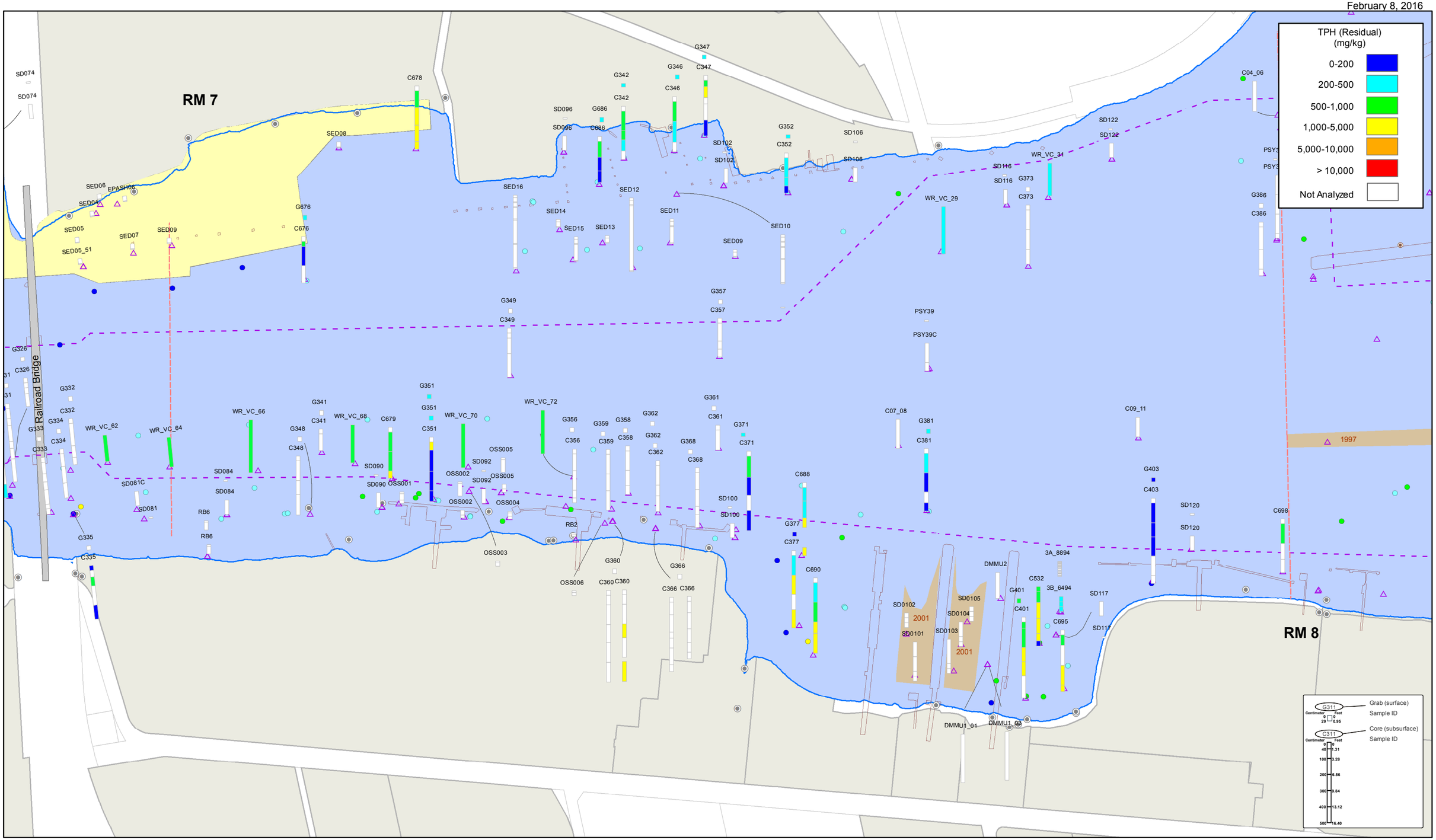
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-38 g2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) (mg/kg)
River Mile 06 to 07 - Inset 2

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

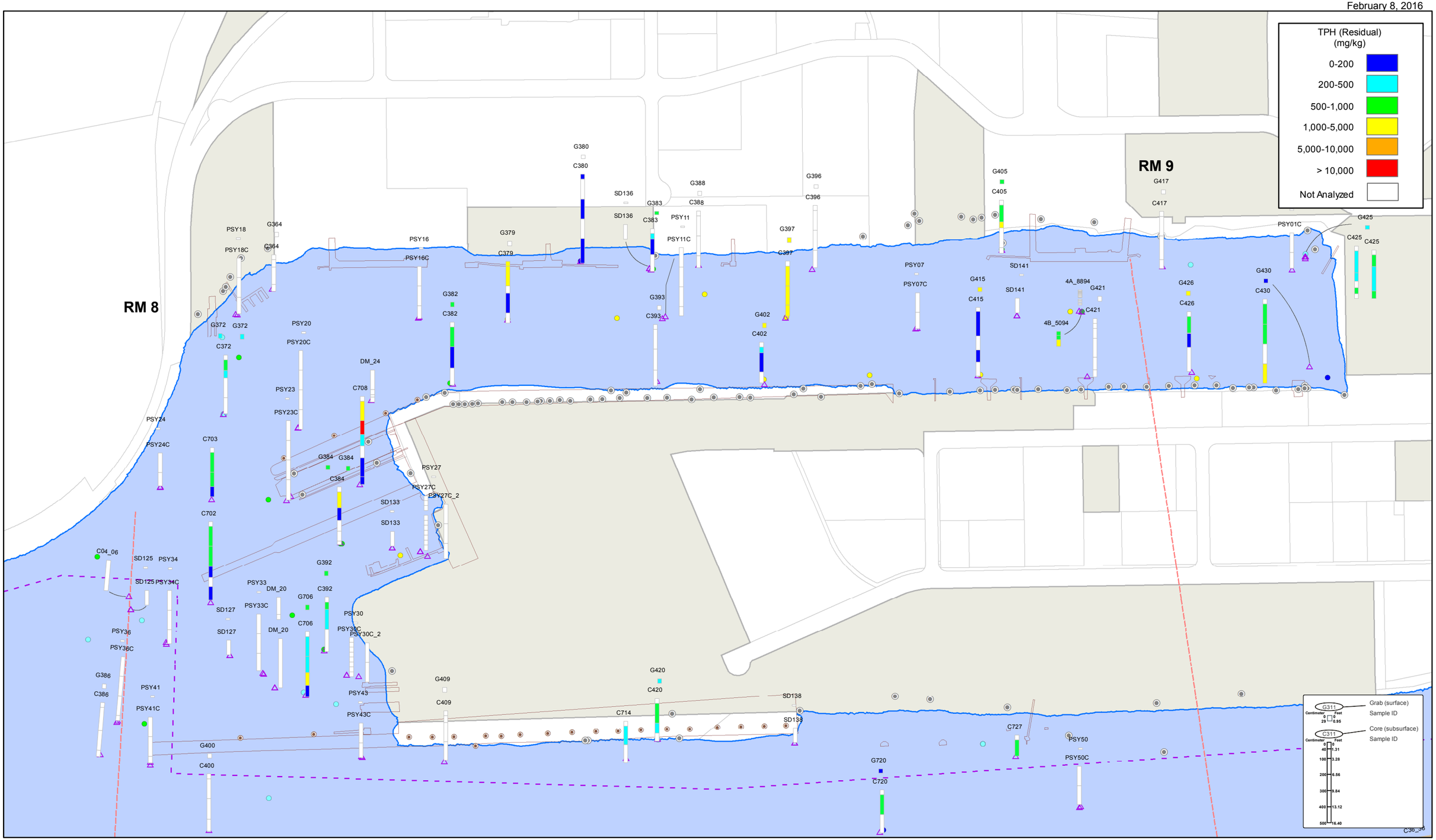
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-38h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) (mg/kg)
River Mile 07 to 08

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-26_Cores_RRH NoSGT_Main.mxd) - 3/10/2009 - 1:44:11 PM




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

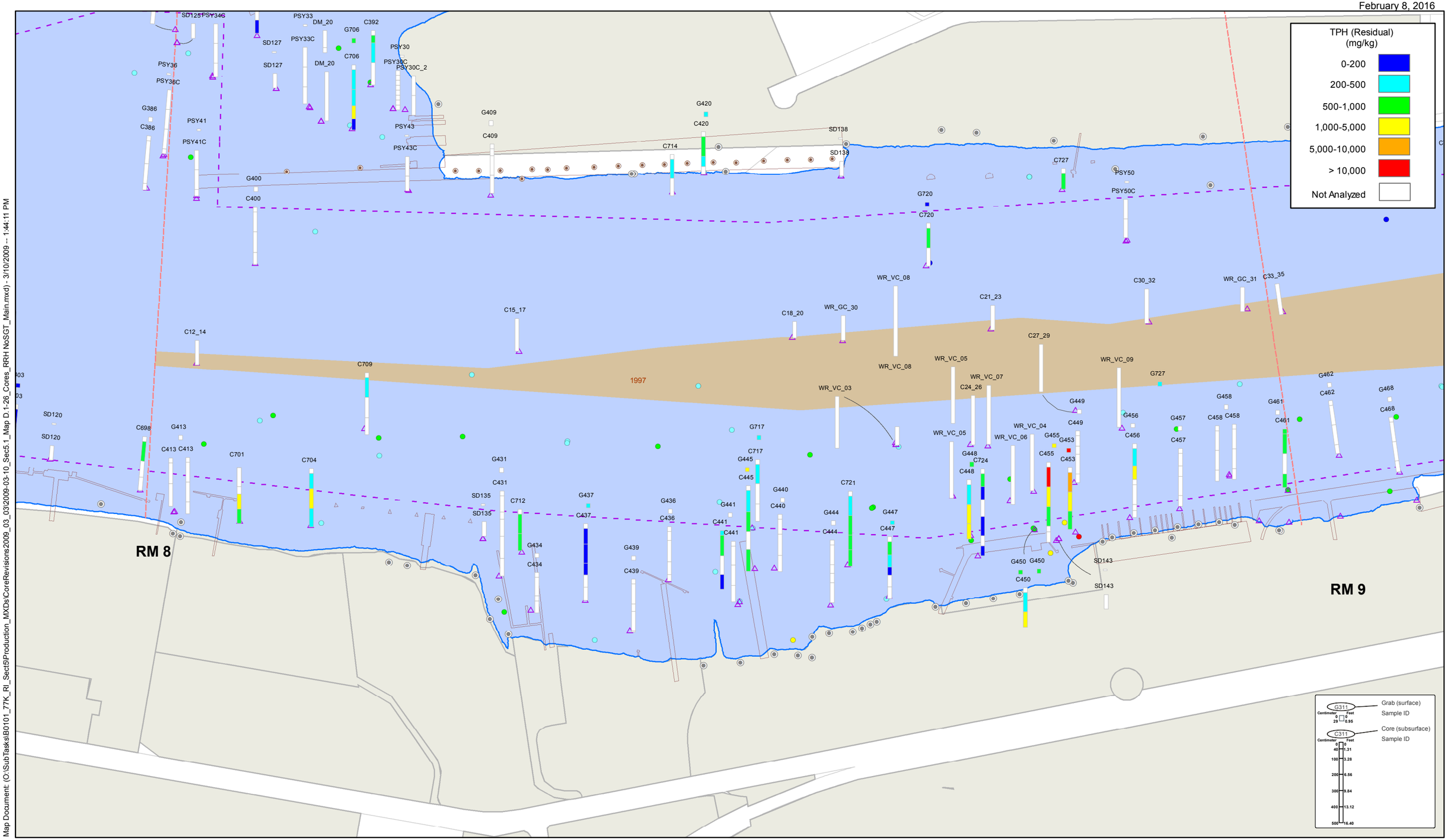
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-38i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) (mg/kg)
River Mile 08 to 09 - Swan Is. East

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-38j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) (mg/kg)
River Mile 08 to 09 - Swan Is. West

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-26_Cores_RRH NoSGT_Main.mxd) - 3/10/2009 -- 1:44:11 PM

TPH (Residual) (mg/kg)
- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

RM 10

RM 9

1997 2002 2092 2000 2005

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-38k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) (mg/kg)
River Mile 09 to 10

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-26_Cores_RRH NoSGT_Main.mxd) - 3/10/2009 -- 1:44:11 PM

TPH (Residual)
(mg/kg)

- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

RM 10

RM 11

G743 C743 G746 C746 SD04 C749 WR_VC_45 WR_GC_32 WR_GC_33 WR_VC_49 WR_VC_51 C757 WR_VC_55 WR_VC_57 G764 C764 C764 WR_VC_59 SD02 WR_VC_61 SD01 Fremont Bridge WR_GC_34 WR_GC_35 G748 C748 C748 G747 C747 G752 C752 WR_VC_106 WR_VC_108 G753 C753 WR_VC_110 RC01 G760 C760 C762 WR_VC_114 WR_VC_116 WR_VC_118 WR_VC_120 RC02 WR_VC_122 WR_VC_124 C773 C773 C51_52 T2U1 2000 1997 2002 2002

Grab (surface) Sample ID

Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

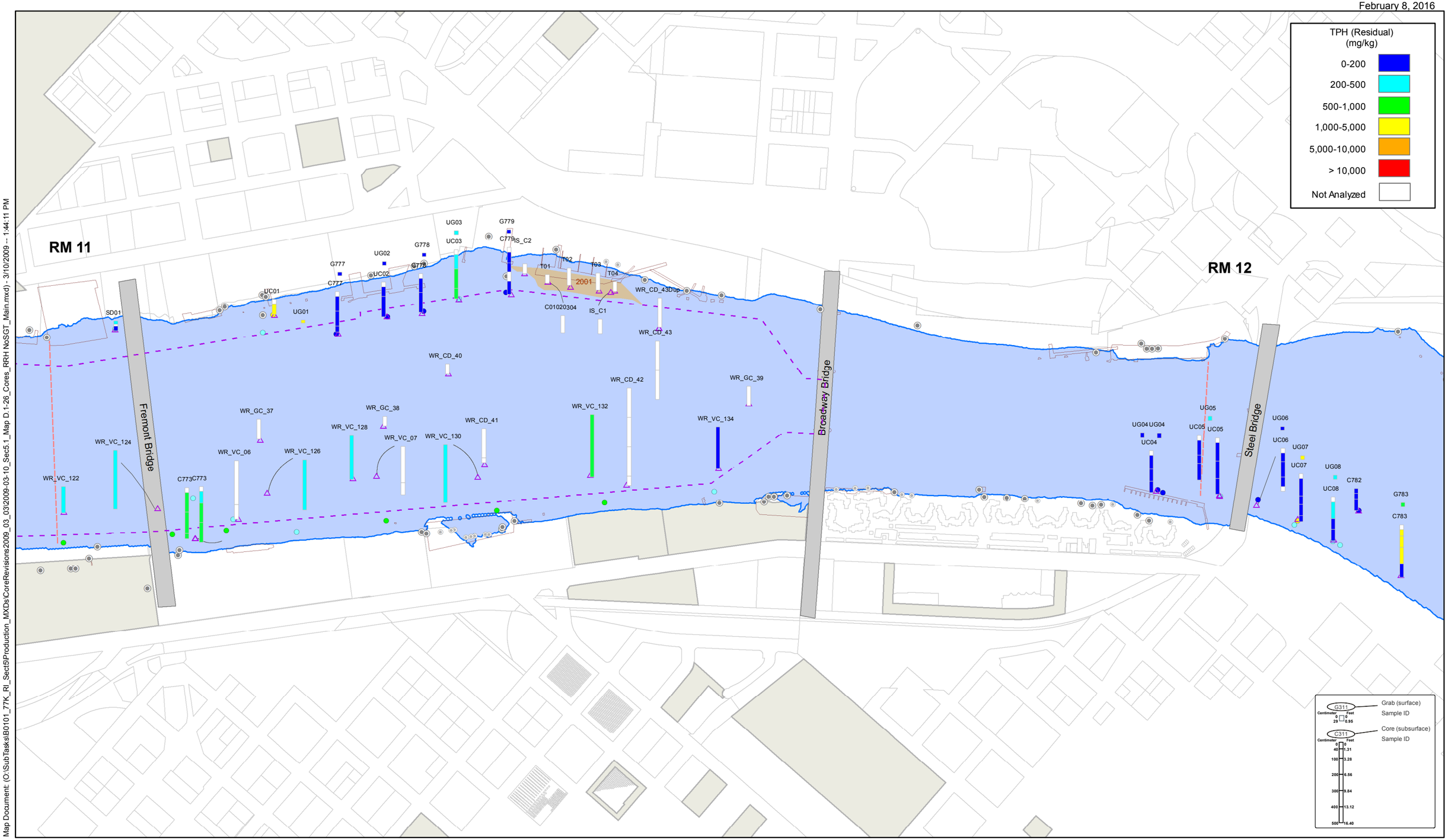
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-38I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) (mg/kg)
River Mile 10 to 11

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

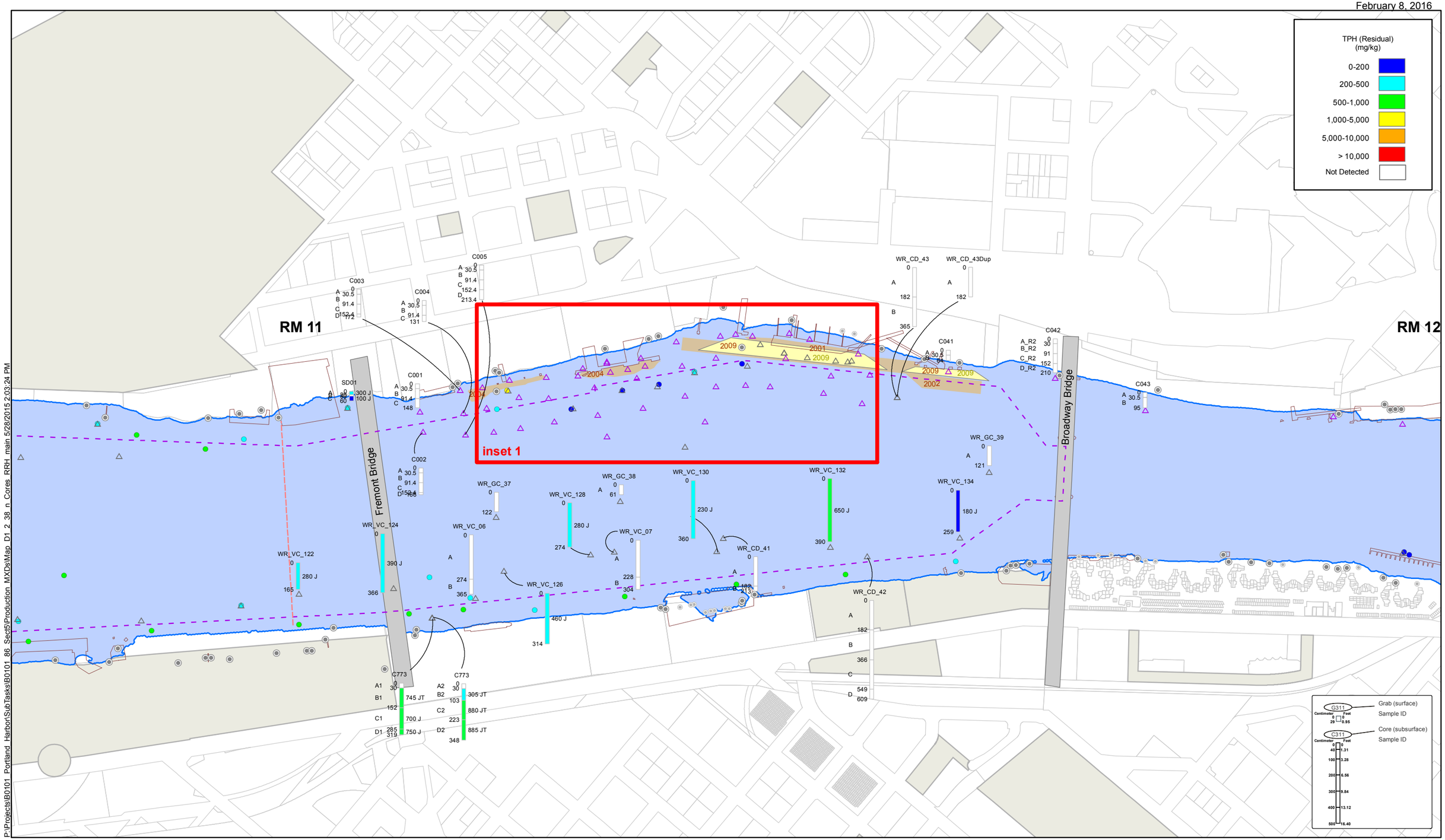
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-38m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) (mg/kg)
River Mile 11 to 12

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-38n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) (mg/kg)

River Mile 11.0 - 11.8

P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_86_Sect5\Production_MXDs\Map_D1_2_38_o_Cores_RRH_inset 5/28/2015 2:04:37 PM

TPH (Residual) (mg/kg)
0-200
200-500
500-1,000
1,000-5,000
5,000-10,000
> 10,000
Not Detected

Fremont Bridge

2009
2001
2009
2004
2004
2009
2009
2002

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
River MIles
Navigation Channel
Bridges
Docks and Structures
River Edge +13 ft NAVD

**Outfalls**
Outfall
Dock Drain
Roof Drain

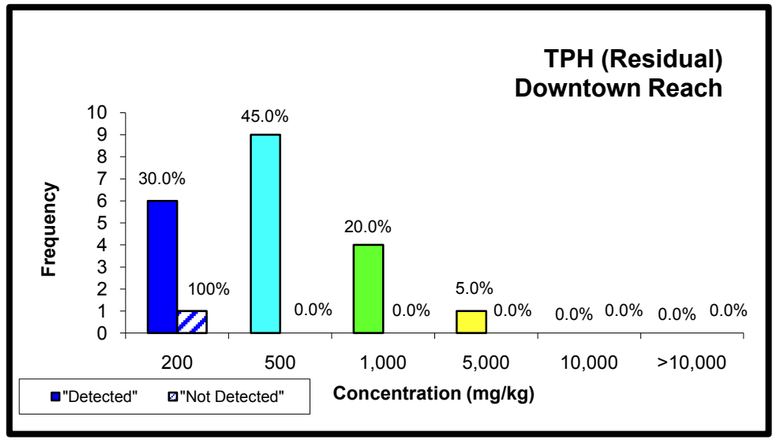
Surface Chemistry (Updated 2010 RI Data Set)
Surface Chemistry (2008 RI Data Set)
Core Locations (Updated 2010 RI Data Set)
Core Locations (2008 RI Data Set)

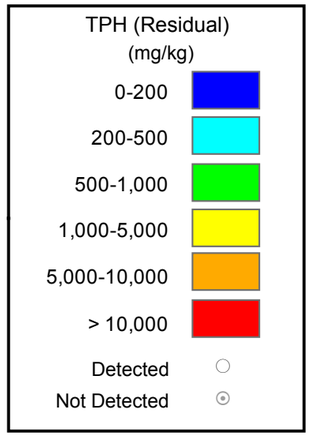
Capping Areas
Dredging Areas
Surface Dredge/Cap Locations
Upland ECSI Sites (2008)
Waterfront Taxlots

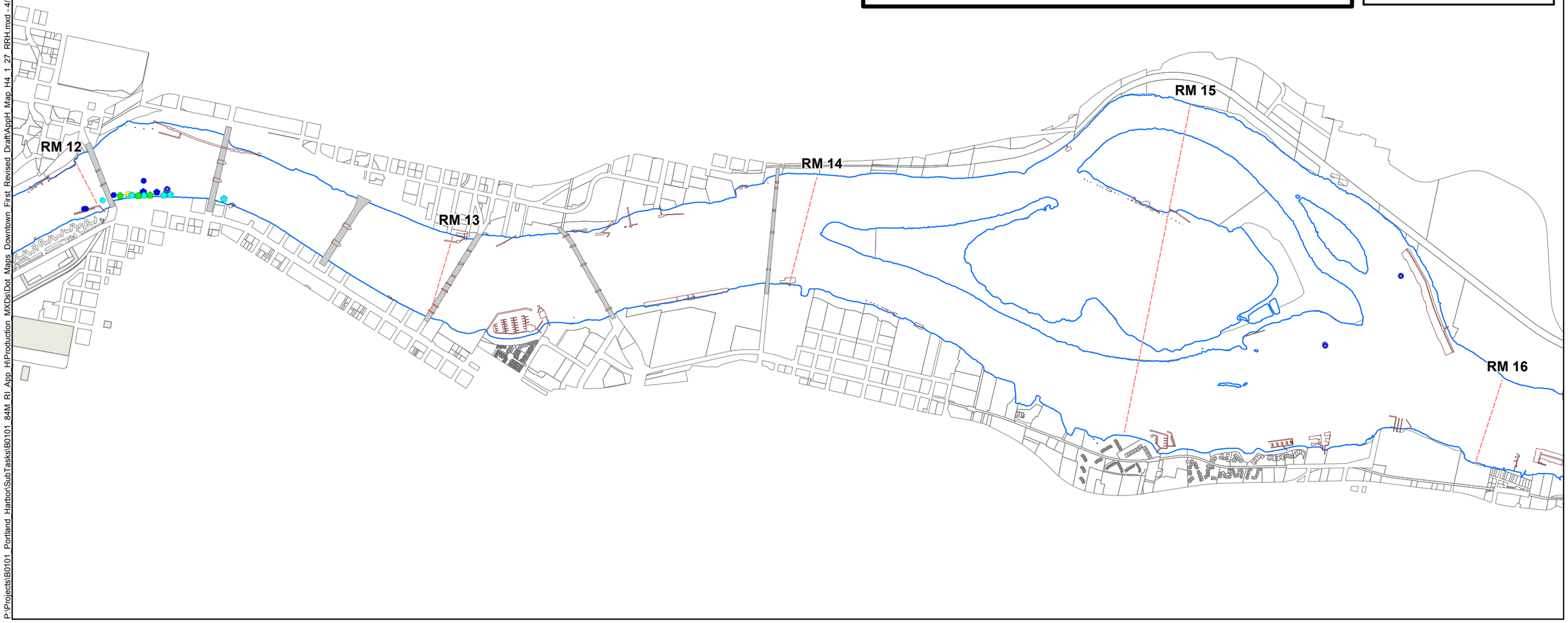
Grab (surface) Sample ID
Core (subsurface) Sample ID

**Map D1.2-38o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) (mg/kg)

River Mile 11.0 - 11.8 - Inset 1

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N

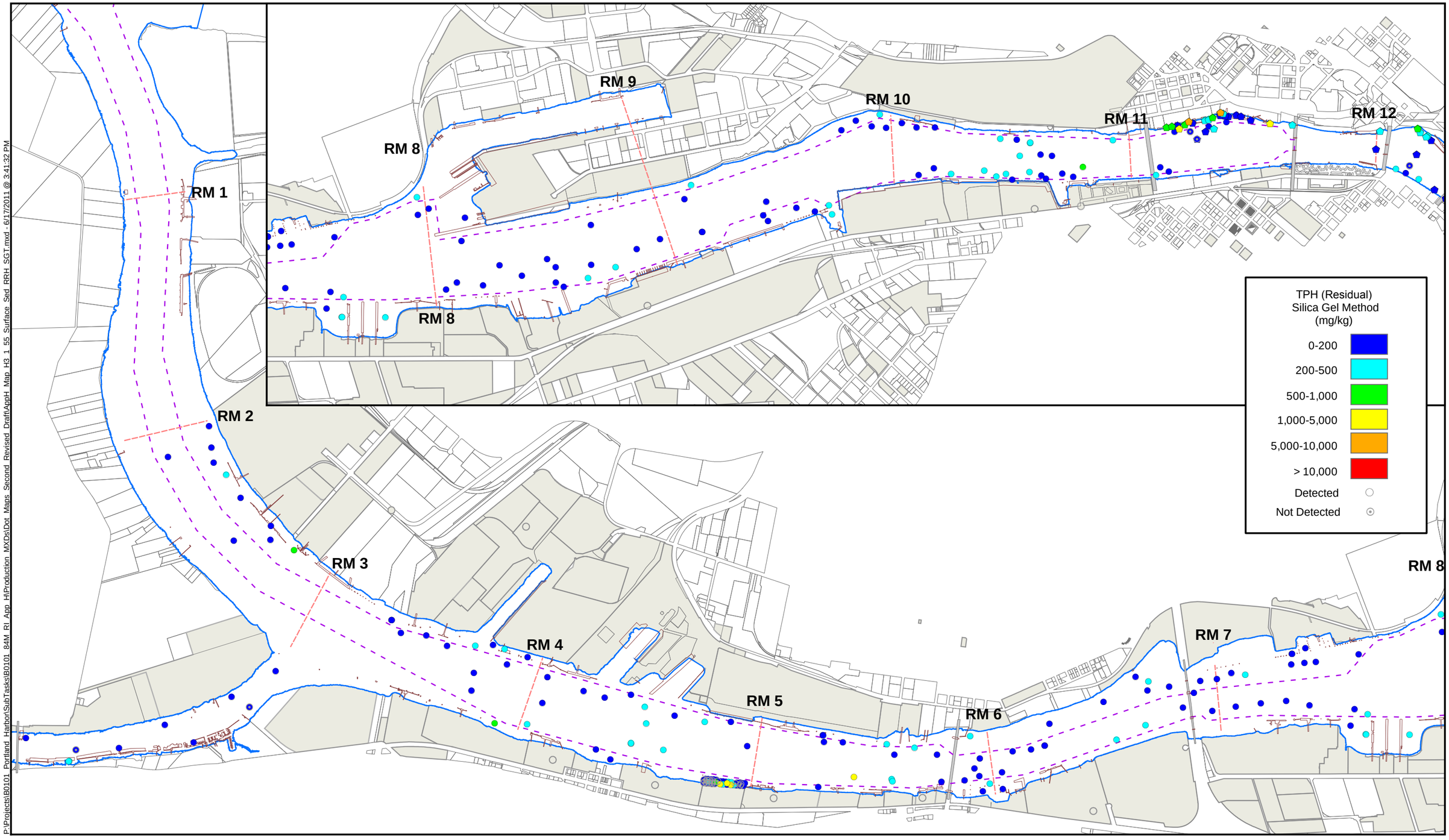
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-39**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
TPH (Residual) (mg/kg)
Downtown Reach

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N

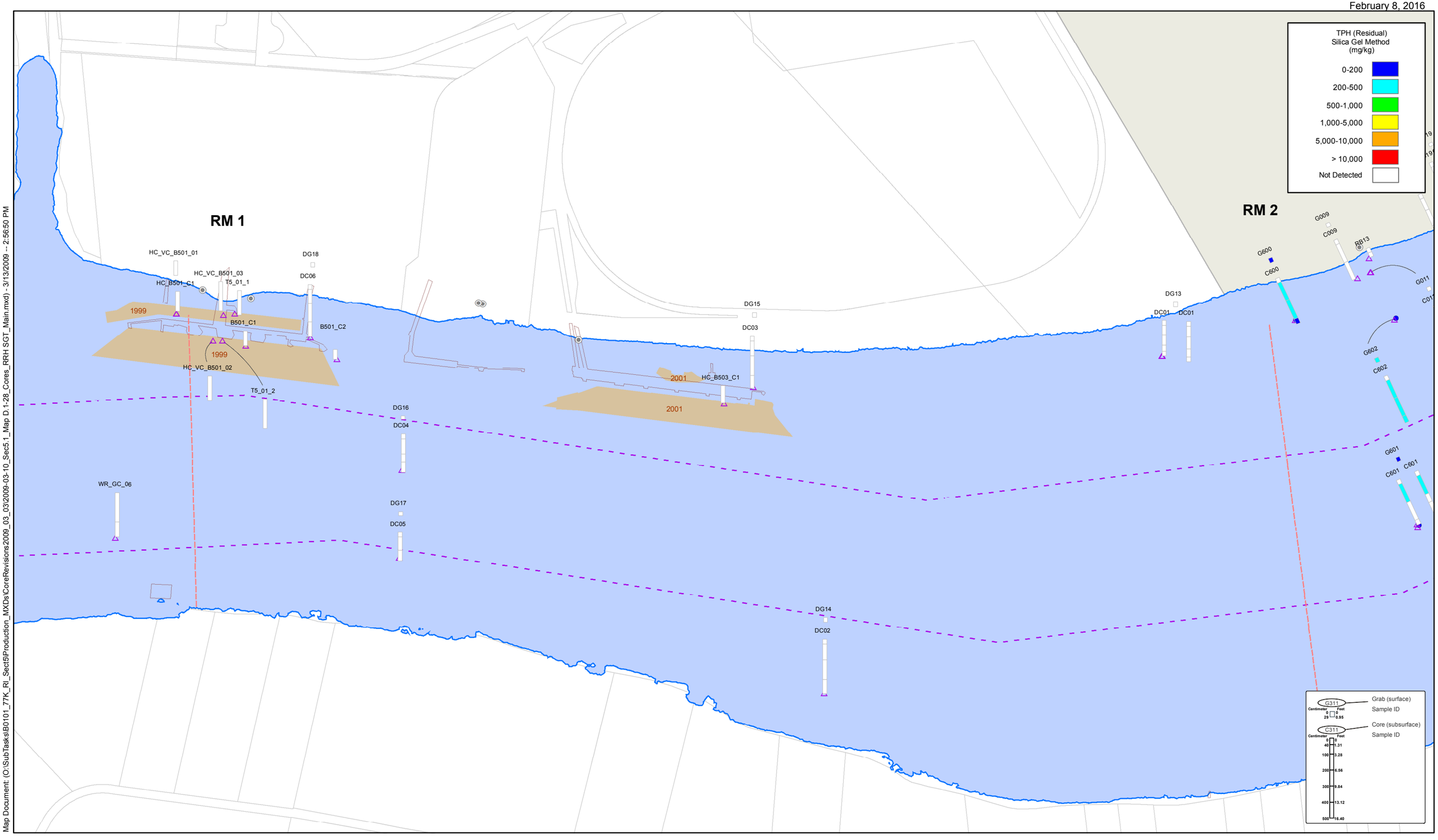
0 1,000 2,000 3,000 4,000 5,000 Feet

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ESRI Sites (2008)
- Waterfront Taxlots

**Map D1.2-40**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
TPH (Residual) - Silica Gel Method (mg/kg)




Map Document: (O:\SubTask\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-28_Cores_RRH SGT_Main.mxd) - 3/13/2009 -- 2:56:50 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

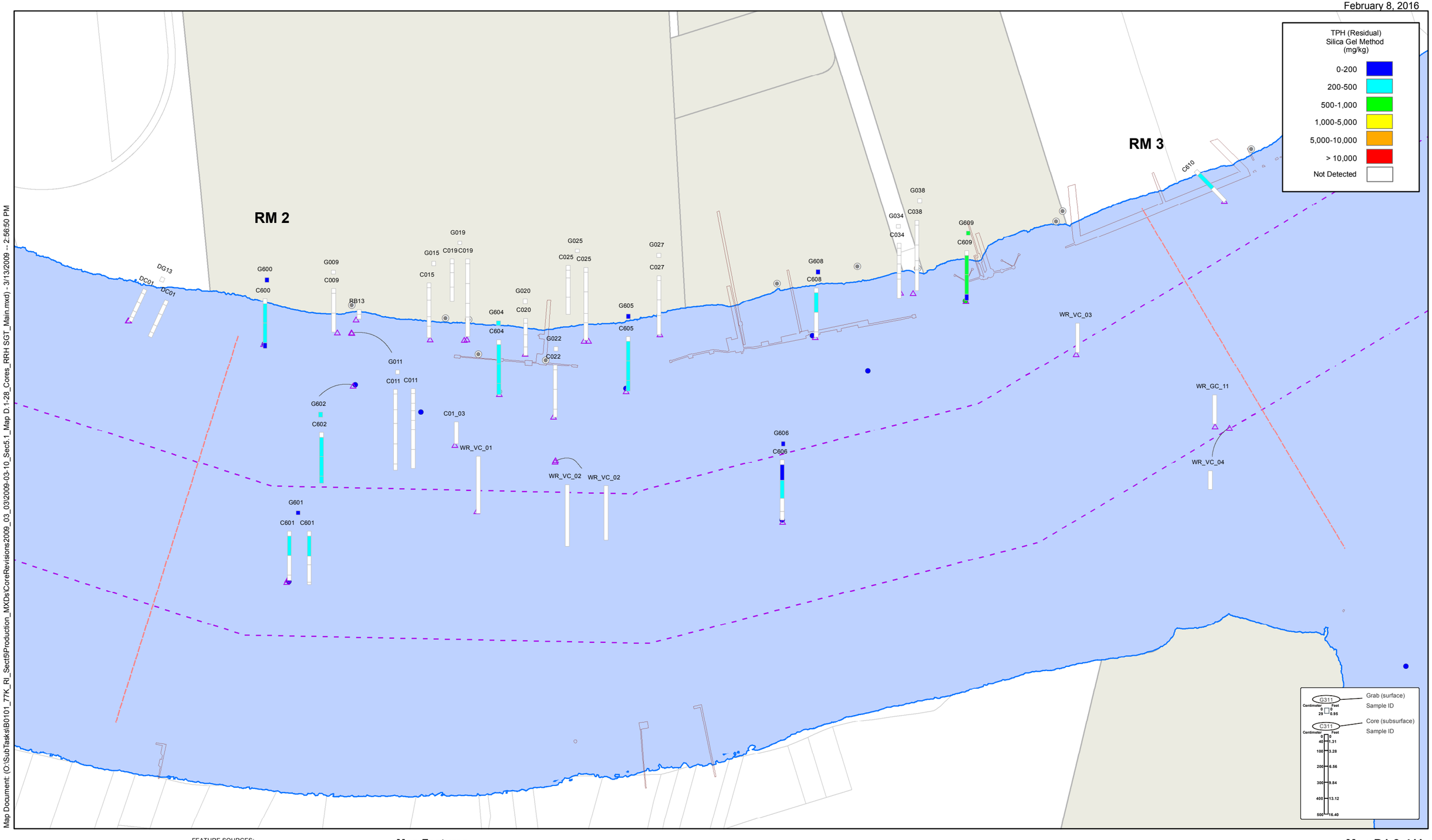
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-41a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) - Silica Gel Method (mg/kg)
River Mile 01 to 02

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

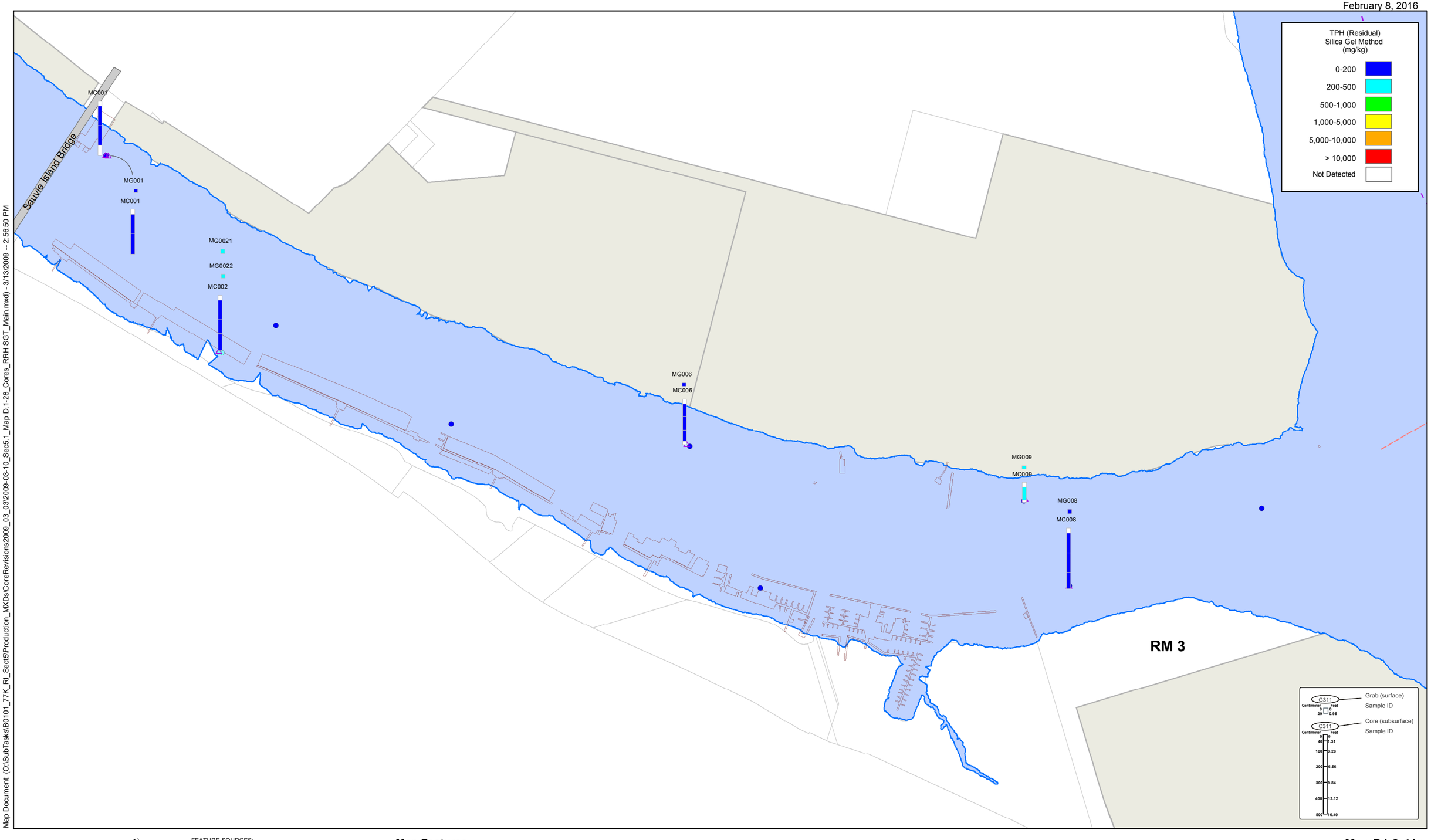
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-41 b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) - Silica Gel Method (mg/kg)
River Mile 02 to 03

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

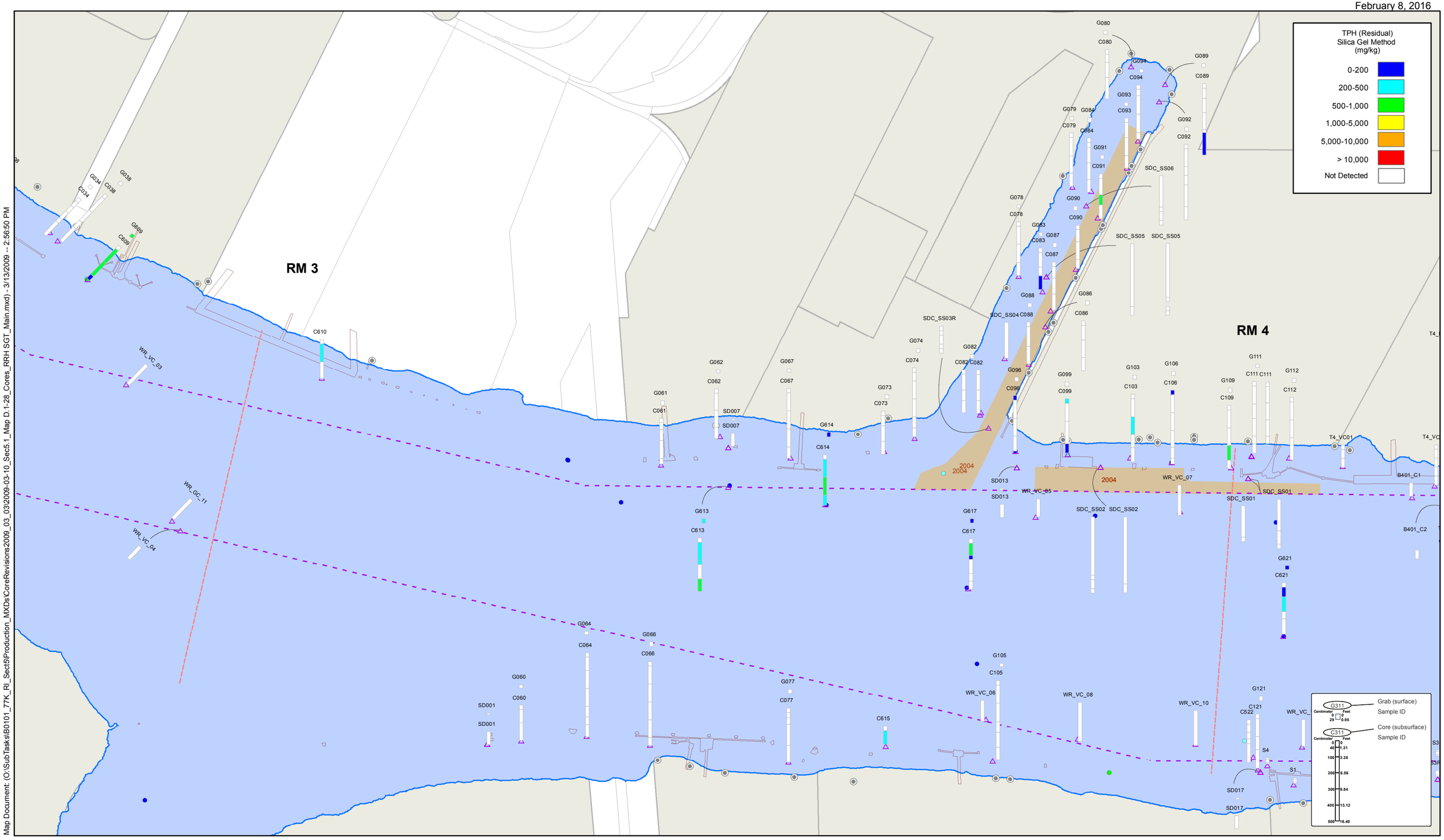
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-41c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) - Silica Gel Method (mg/kg)
River Mile 03 - Multnomah Channel

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-41 d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) - Silica Gel Method (mg/kg)
River Mile 03 to 04

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-28_Cores_RRH SGT_Main.mxd) - 3/13/2009 -- 2:56:50 PM

TPH (Residual)
Silica Gel Method
(mg/kg)

- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Detected

RM 4

RM 5

Inset 1

Grab (surface) Sample ID

Core (subsurface) Sample ID

N

0 150 300 450 600 750 Feet

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-41e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) - Silica Gel Method (mg/kg)
River Mile 04 to 05 - Slips

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-28_Cores_RRH SGT_Insets.mxd) - 3/10/2009 -- 3:15:56 PM

TPH (Residual)
Silica Gel Method
(mg/kg)

- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Detected

SGP08
SGP17
SGP10
SGP13
SGP14
SGP06
SGP12
SGP20
SGP15
SGP22
SGP24
SGP21
SGP23
SGP16
SGP18
2008
SGP05
SGP03
SGP04
SGP09
SGP19
SGP01
SGP07
SGP02

G311 Grab (surface) Sample ID
Centimeter 0 29 Feet 0 0.95

C311 Core (subsurface) Sample ID

| Centimeter | Feet |
|---|---|
| 0 | 0 |
| 40 | 1.31 |
| 100 | 3.28 |
| 200 | 6.56 |
| 300 | 9.84 |
| 400 | 13.12 |
| 500 | 16.40 |

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 120 240 480 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

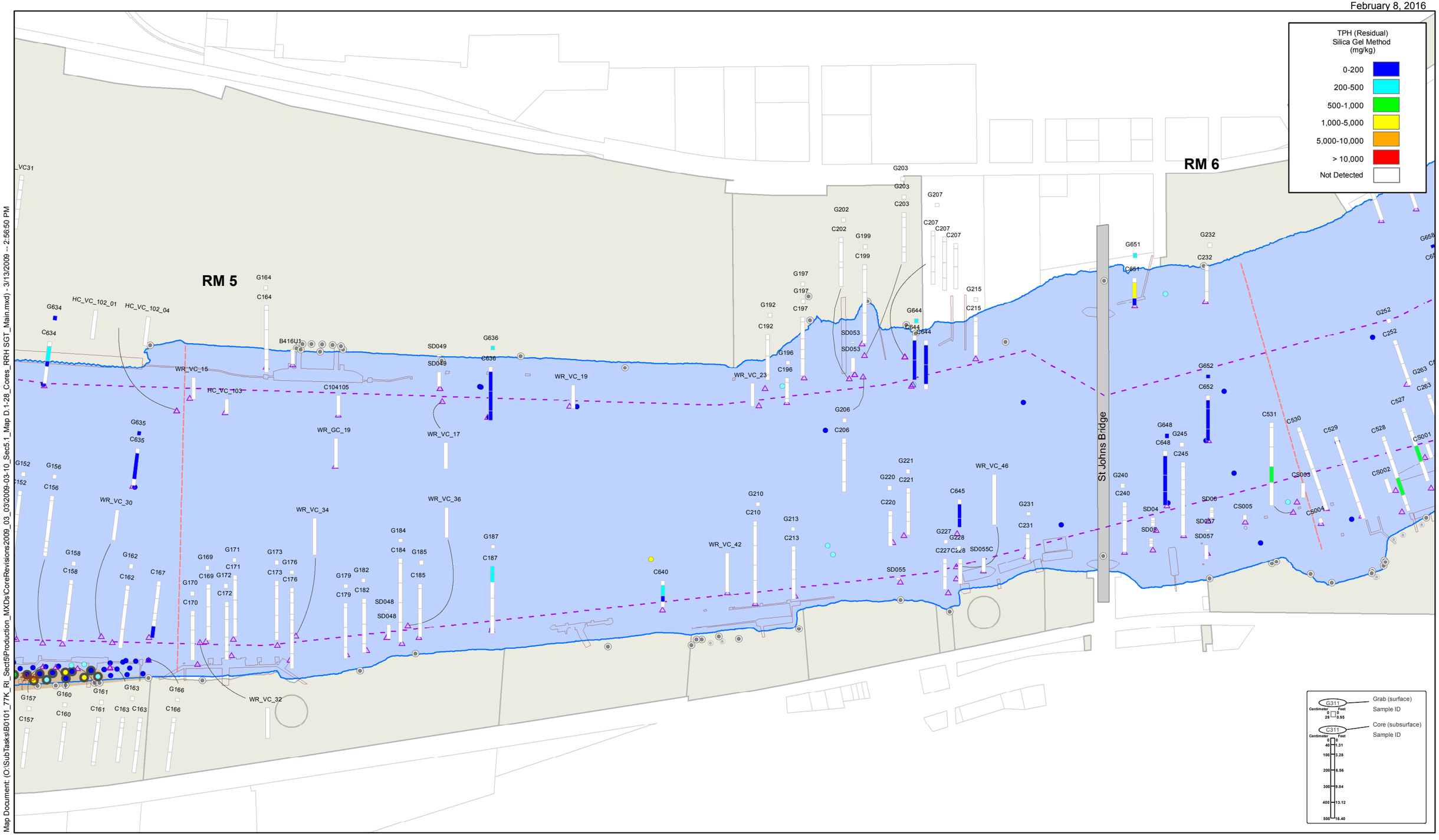
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-41e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) - Silica Gel Method (mg/kg)
River Mile 04 to 05 - Slips - Inset 1

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-41 f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) - Silica Gel Method (mg/kg)
River Mile 05 to 06

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-28_Cores_RRH SGT_Main.mxd) - 3/13/2009 -- 2:56:50 PM

TPH (Residual)
Silica Gel Method
(mg/kg)

- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Detected

RM 6

RM 7

Railroad Bridge

Grab (surface) Sample ID

Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

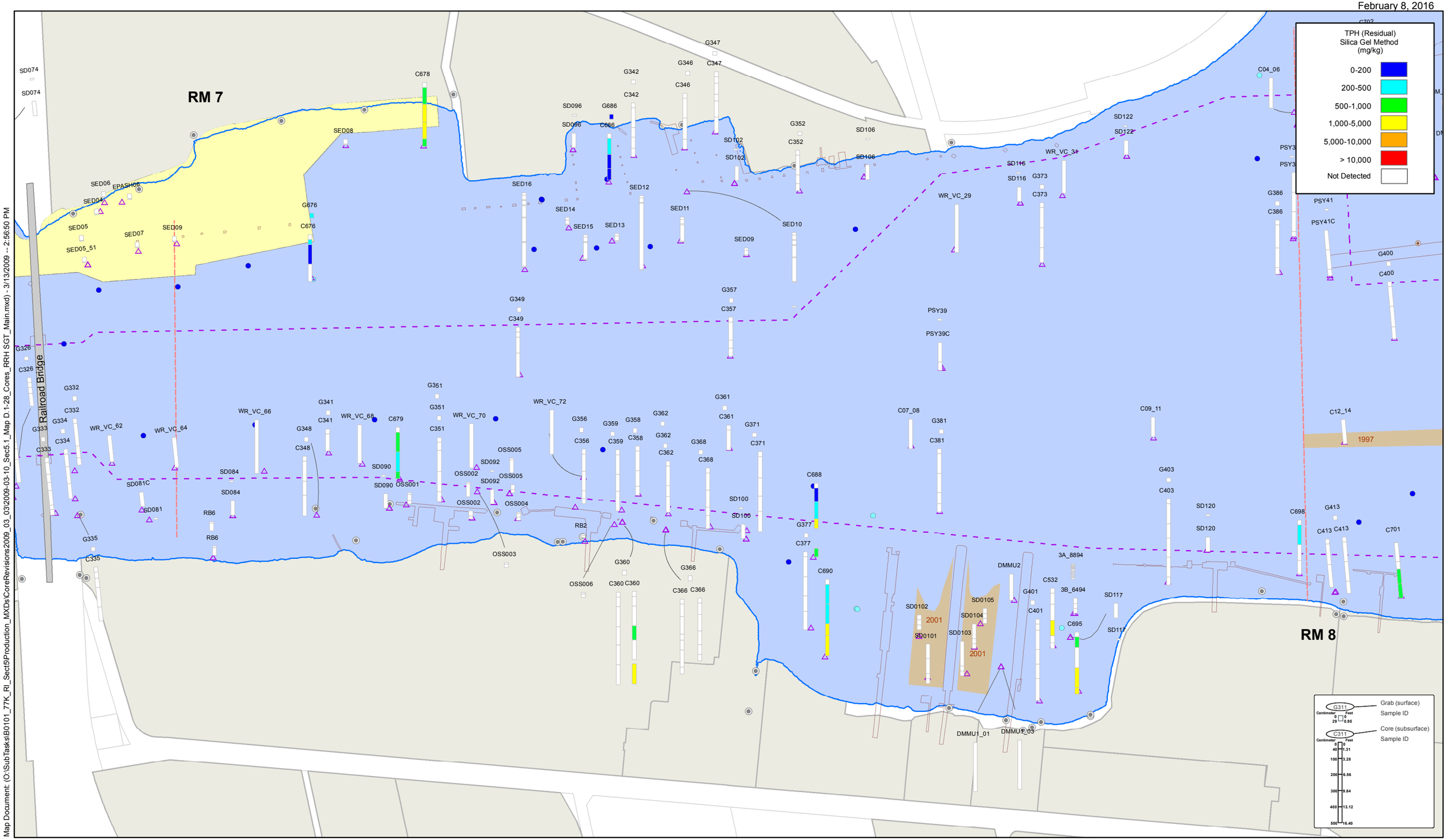
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-41 g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) - Silica Gel Method (mg/kg)
River Mile 06 to 07




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-28_Cores_RRH SGT_Main.mxd) - 3/13/2009 -- 2:56:50 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-41 h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) - Silica Gel Method (mg/kg)
River Mile 07 to 08

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-28_Cores_RRH SGT_Main.mxd) - 3/13/2009 -- 2:56:50 PM

RM 8

RM 9

TPH (Residual)
Silica Gel Method
(mg/kg)

- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Detected

PSY18 PSY18C G364 C364 PSY16 PSY16C G379 C379 G380 C380 SD136 SD136 G383 C383 G388 C388 PSY11 PSY11C G396 C396 G397 C397 G405 C405 PSY07 PSY07C SD141 G415 C415 SD141 4A_8894 G421 C421 4B_5094 G417 C417 PSY01 PSY01C G425 C425 C425 G426 C426 G430 C430 G382 C382 G393 C393 G402 C402 G372 G372 C372 PSY20 PSY20C DM_24 C708 PSY23 PSY23C PSY24 PSY24C C703 G384 G384 C384 PSY27 PSY27C PSY27C_2 SD133 SD133 C702 C04_06 SD125 PSY34 SD125 PSY34C PSY33 DM_20 G706 C706 C392 G392 SD127 PSY33C SD127 DM_20 PSY30 PSY30C PSY30C_2 PSY36 PSY36C G386 C386 PSY41 PSY41C PSY43 PSY43C G409 C409 G420 C420 C714 SD138 SD138 G400 C400 G720 C720 C727 PSY50 PSY50C

Grab (surface) Sample ID

Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

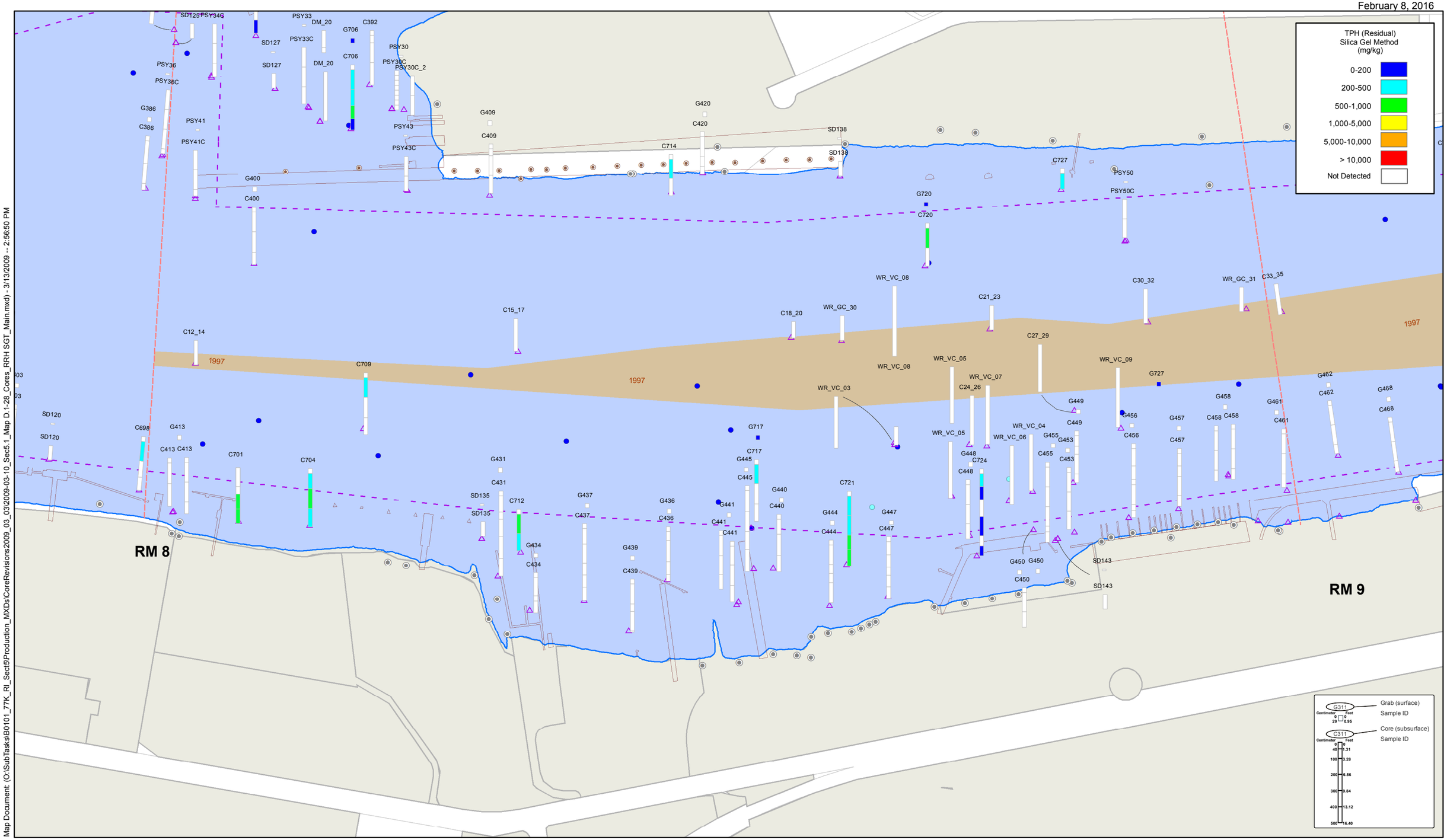
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-41 i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) - Silica Gel Method (mg/kg)
River Mile 08 to 09 - Swan Is. East

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

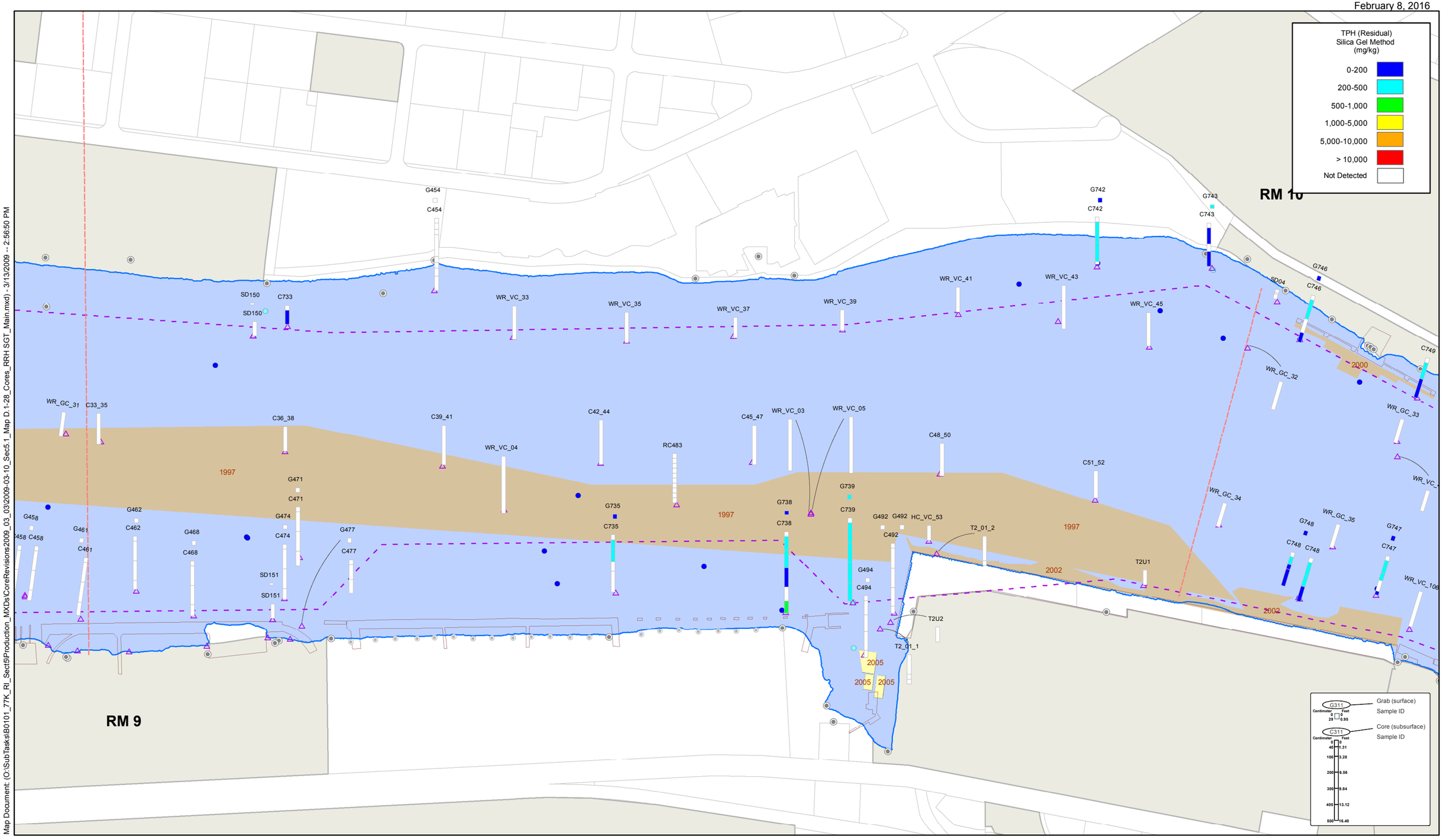
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-41j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) - Silica Gel Method (mg/kg)
River Mile 08 to 09 - Swan Is. West

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-41k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) - Silica Gel Method (mg/kg)
River Mile 09 to 10

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-28_Cores_RRH SGT_Main.mxd) - 3/13/2009 -- 2:56:50 PM

TPH (Residual)
Silica Gel Method
(mg/kg)

- 0-200
- 200-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Detected

RM 10

RM 11

G743 C743 G746 C746 SD04 C749 2000 WR_VC_45 WR_GC_32 WR_GC_33 WR_VC_47 WR_VC_49 WR_VC_51 C757 WR_VC_53 WR_VC_55 G760 C760 WR_VC_57 G764 C764 C764 WR_VC_59 SD02 WR_VC_61 SD01 Fremont Bridge C51_52 WR_GC_34 WR_GC_35 G748 C748 C748 G747 C747 WR_VC_106 G752 C752 WR_VC_108 G753 C753 WR_VC_110 RC01 C762 WR_VC_114 WR_VC_116 WR_VC_118 WR_VC_120 RC02 WR_VC_122 WR_VC_124 C773 C773 1997 2002 2002 T2U1

G311 Grab (surface) Sample ID
C311 Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

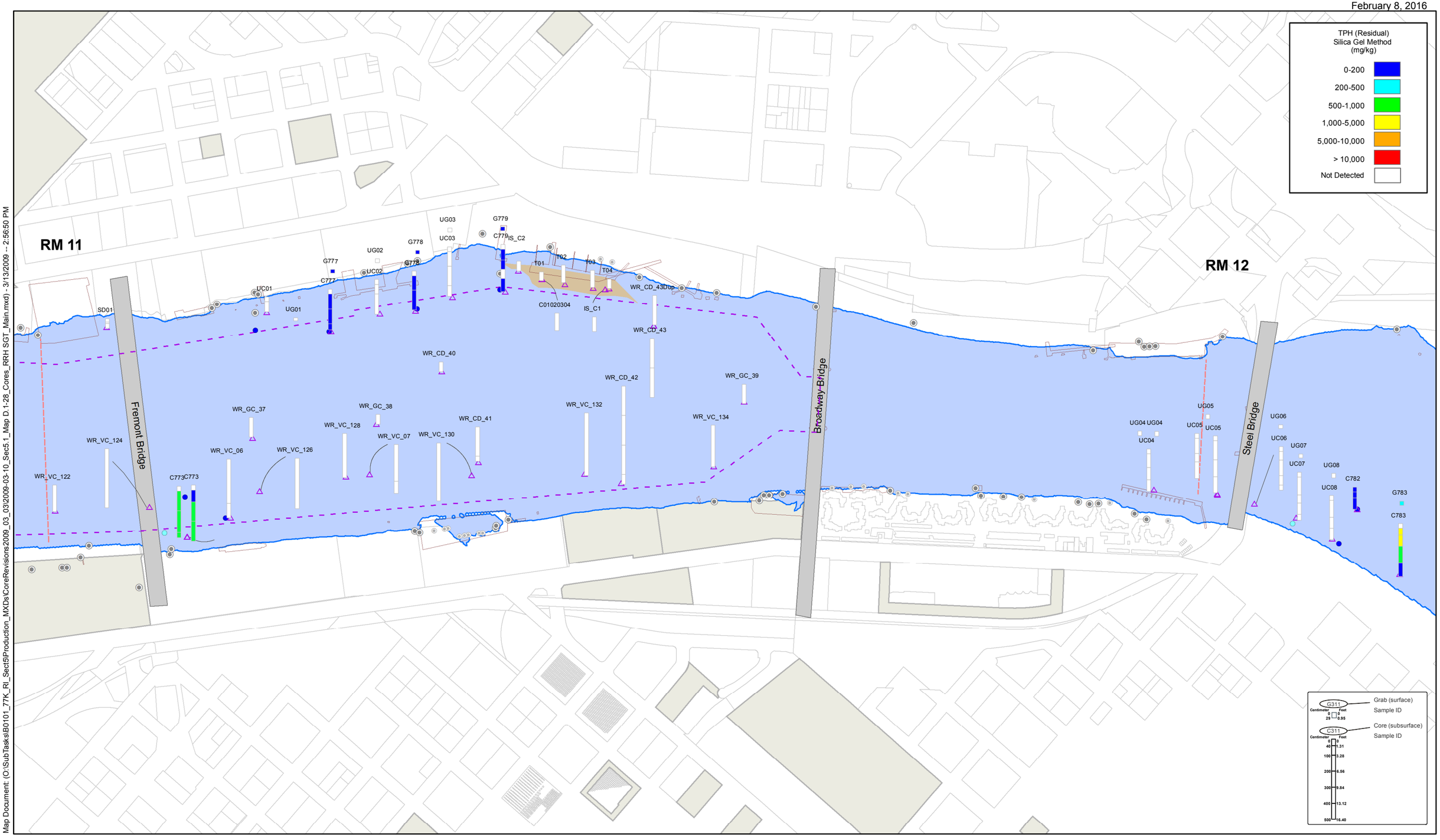
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-41I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) - Silica Gel Method (mg/kg)
River Mile 10 to 11

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-28_Cores_RRH SGT_Main.mxd) - 3/13/2009 -- 2:56:50 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

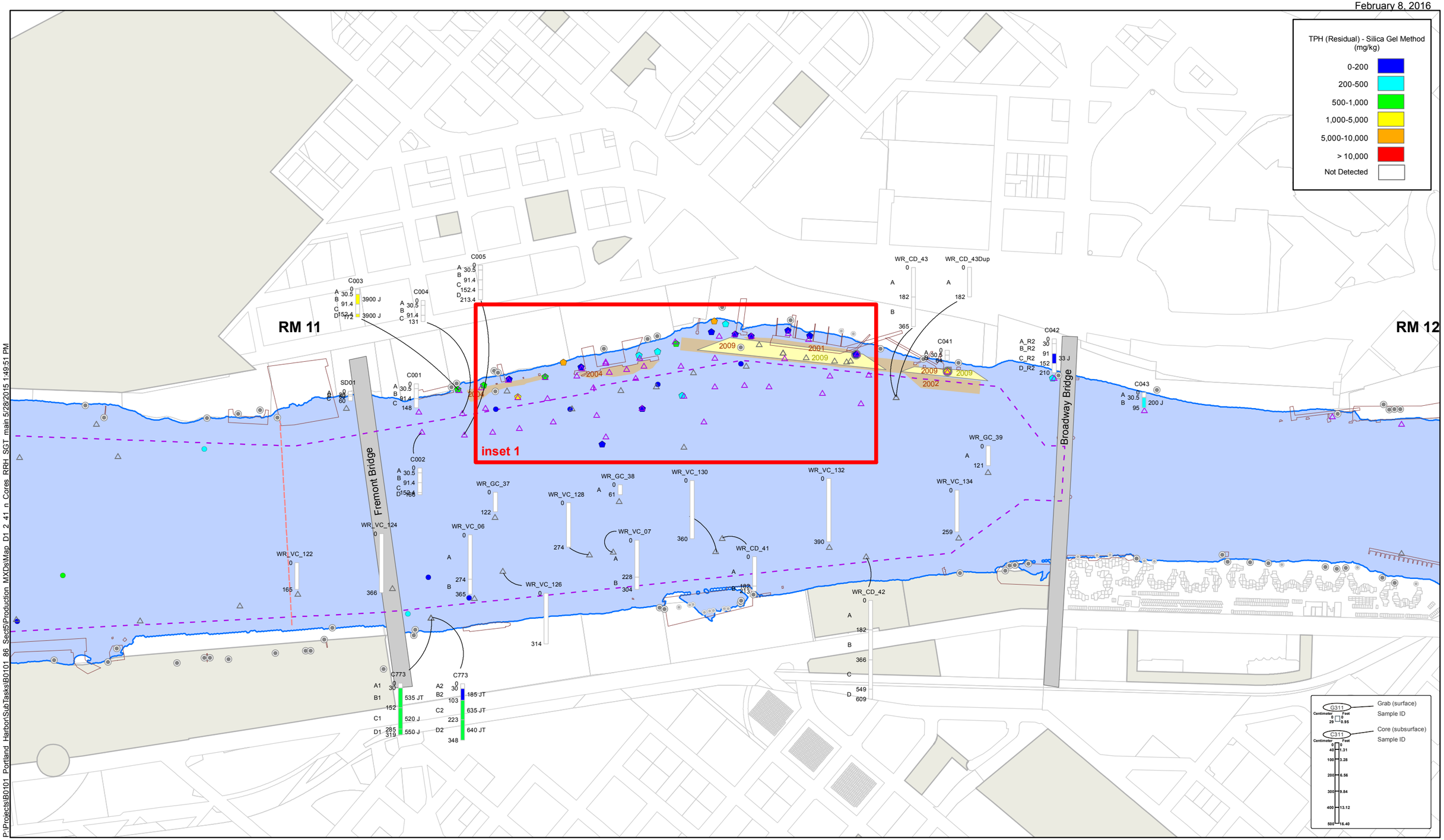
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-41 m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) - Silica Gel Method (mg/kg)
River Mile 11 to 12

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

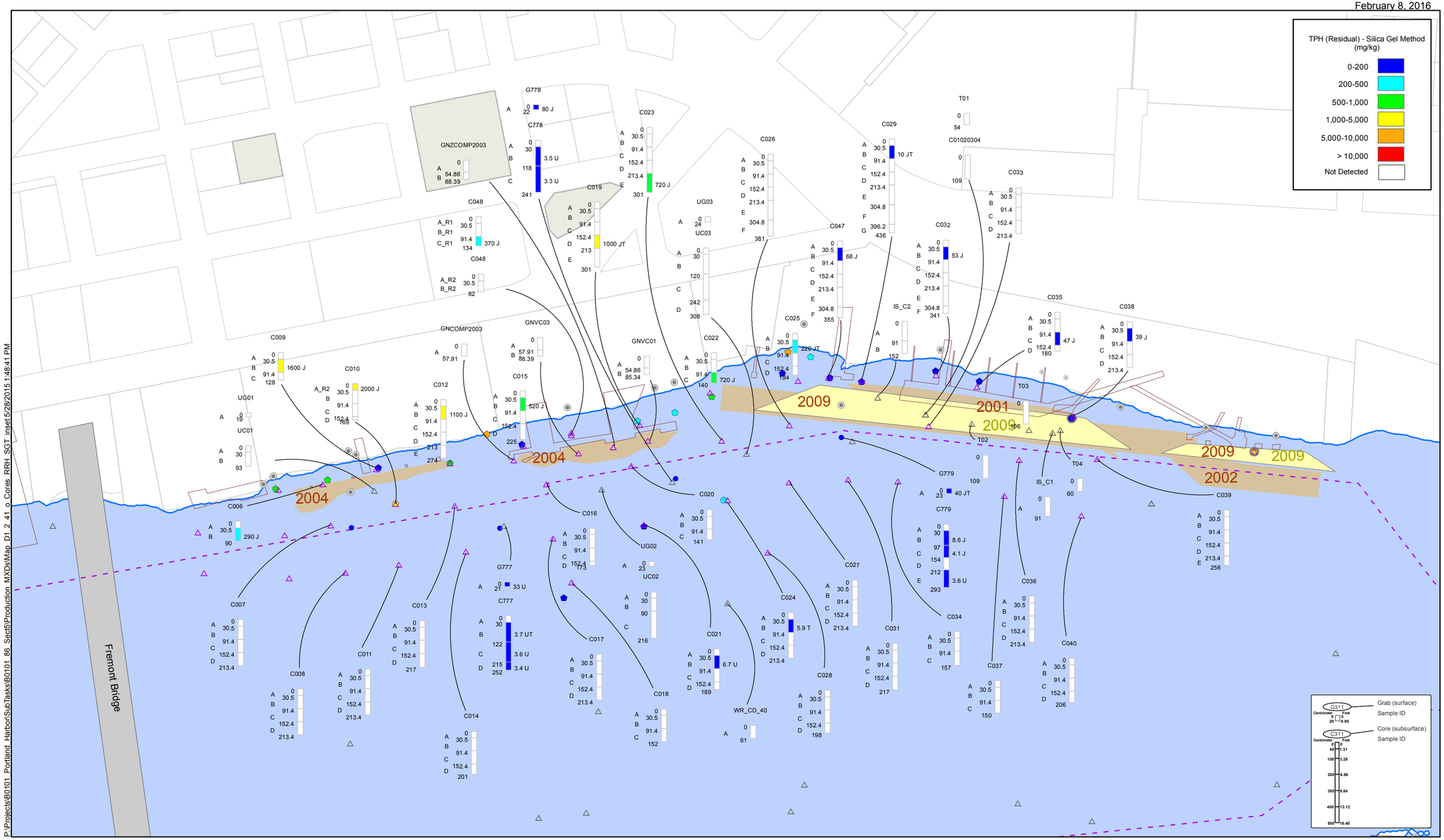
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-41n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) - Silica Gel Method (mg/kg)

River Mile 11.0 - 11.8

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

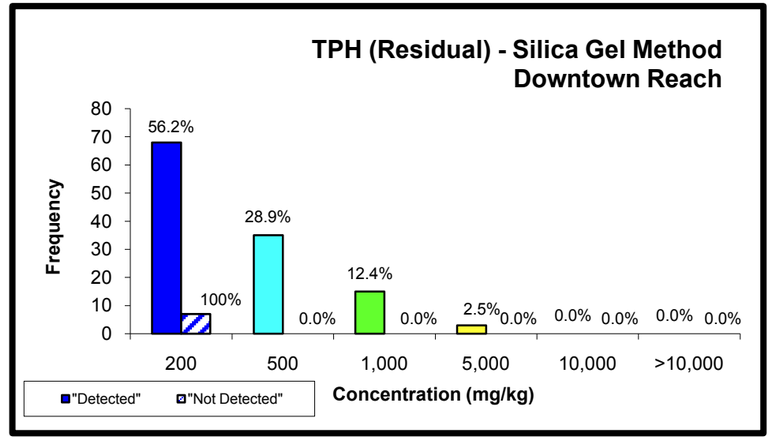
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

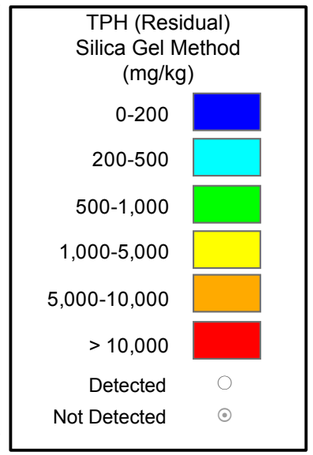
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

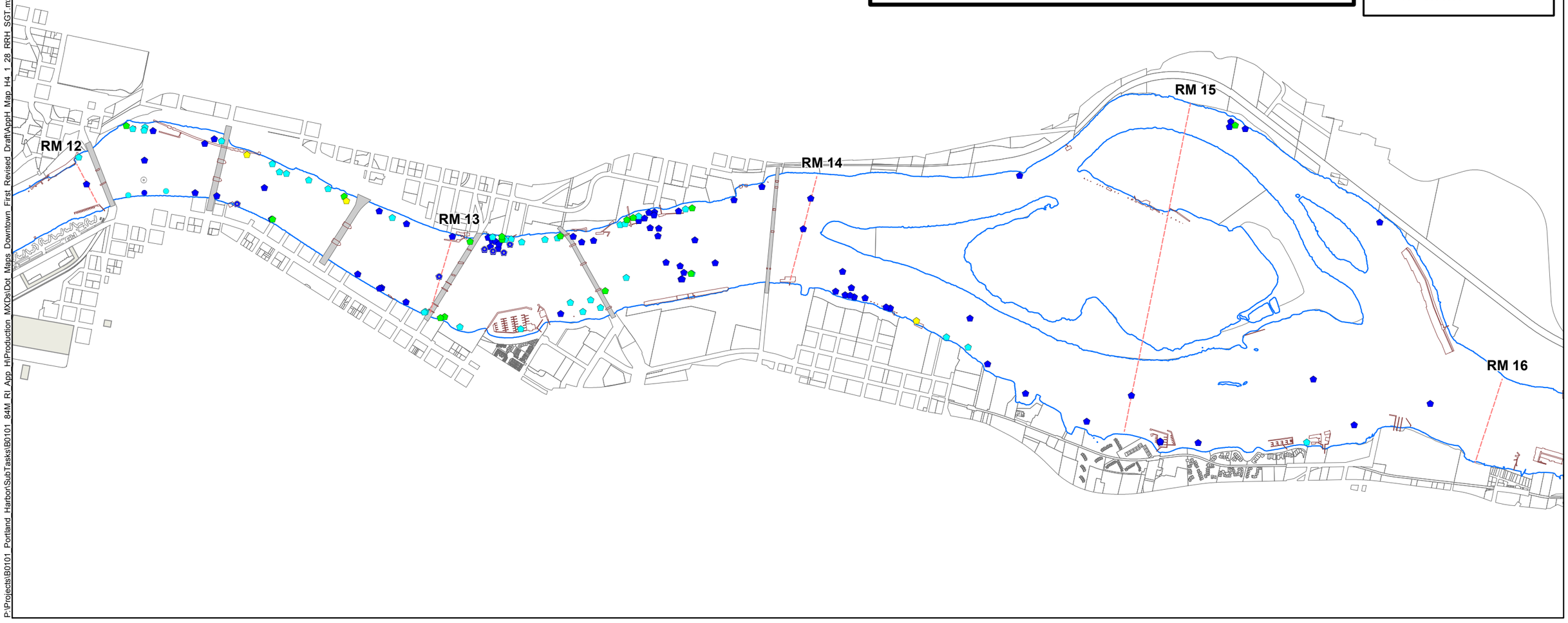
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-41o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Residual) - Silica Gel Method (mg/kg)

River Mile 11.0 - 11.8 - Inset 1

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N

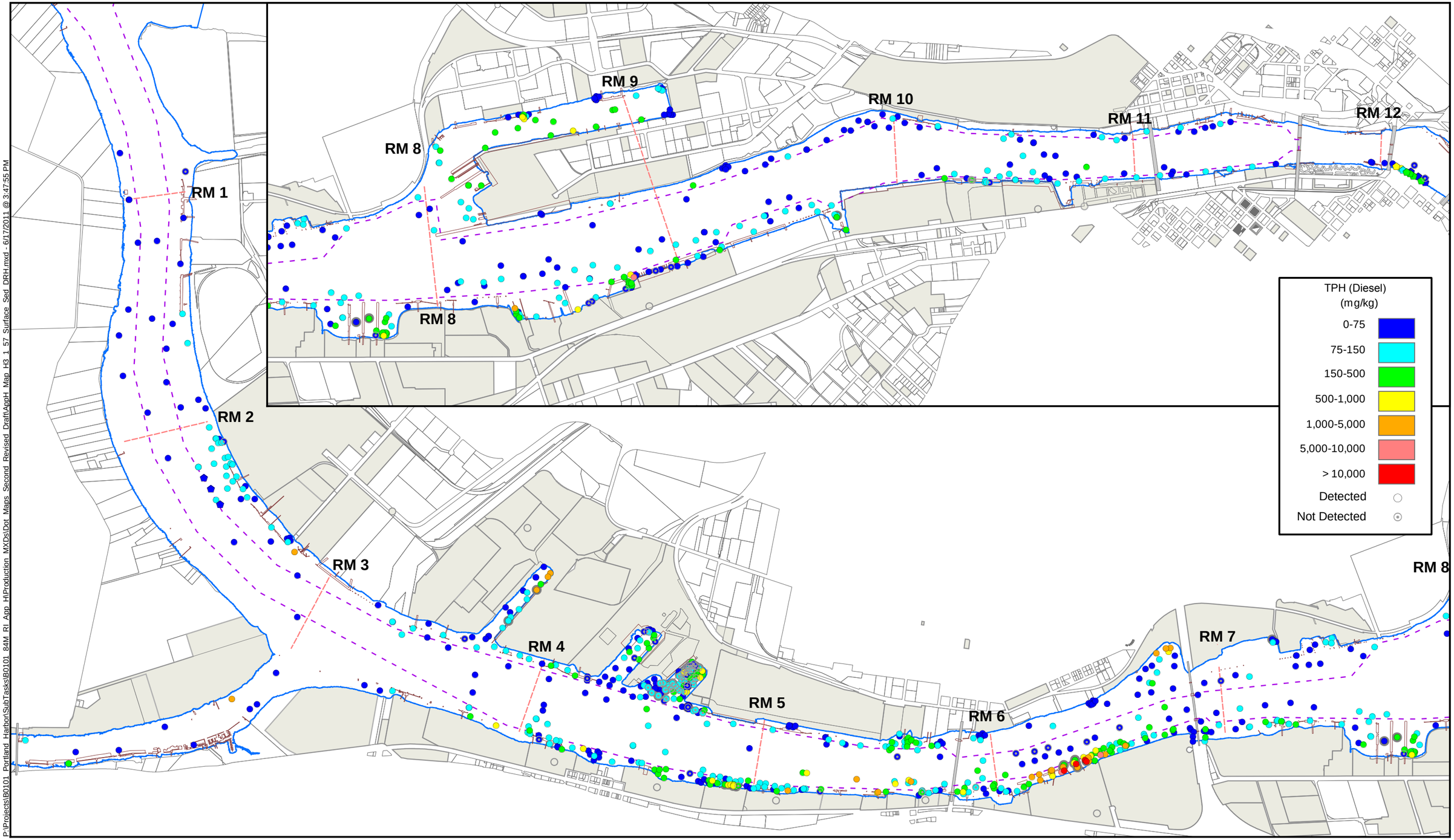
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-42**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
TPH (Residual) - Silica Gel Method (mg/kg)
Downtown Reach

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N

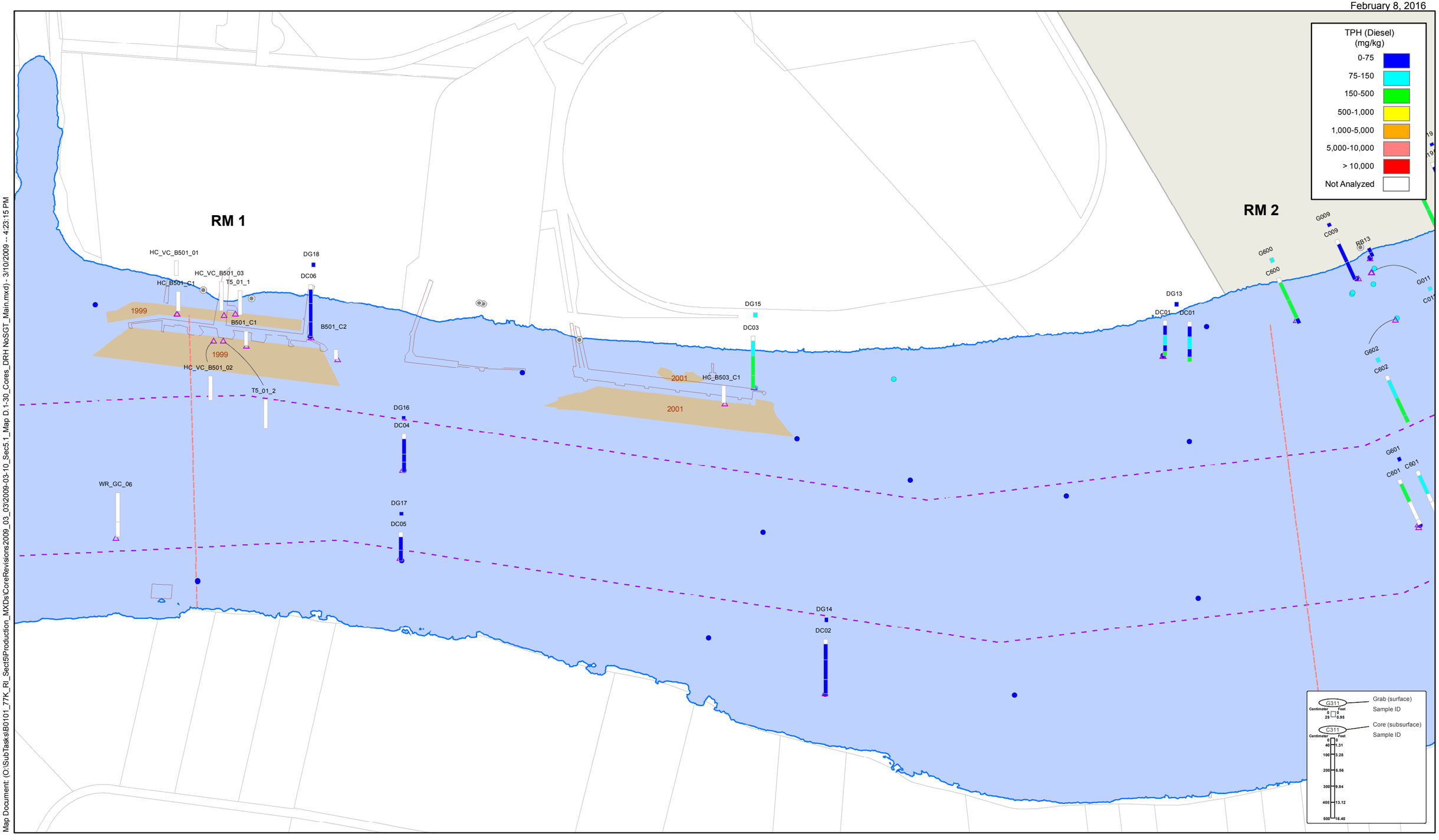
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

0 1,000 2,000 3,000 4,000 5,000 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-43**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
TPH (Diesel) (mg/kg)

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

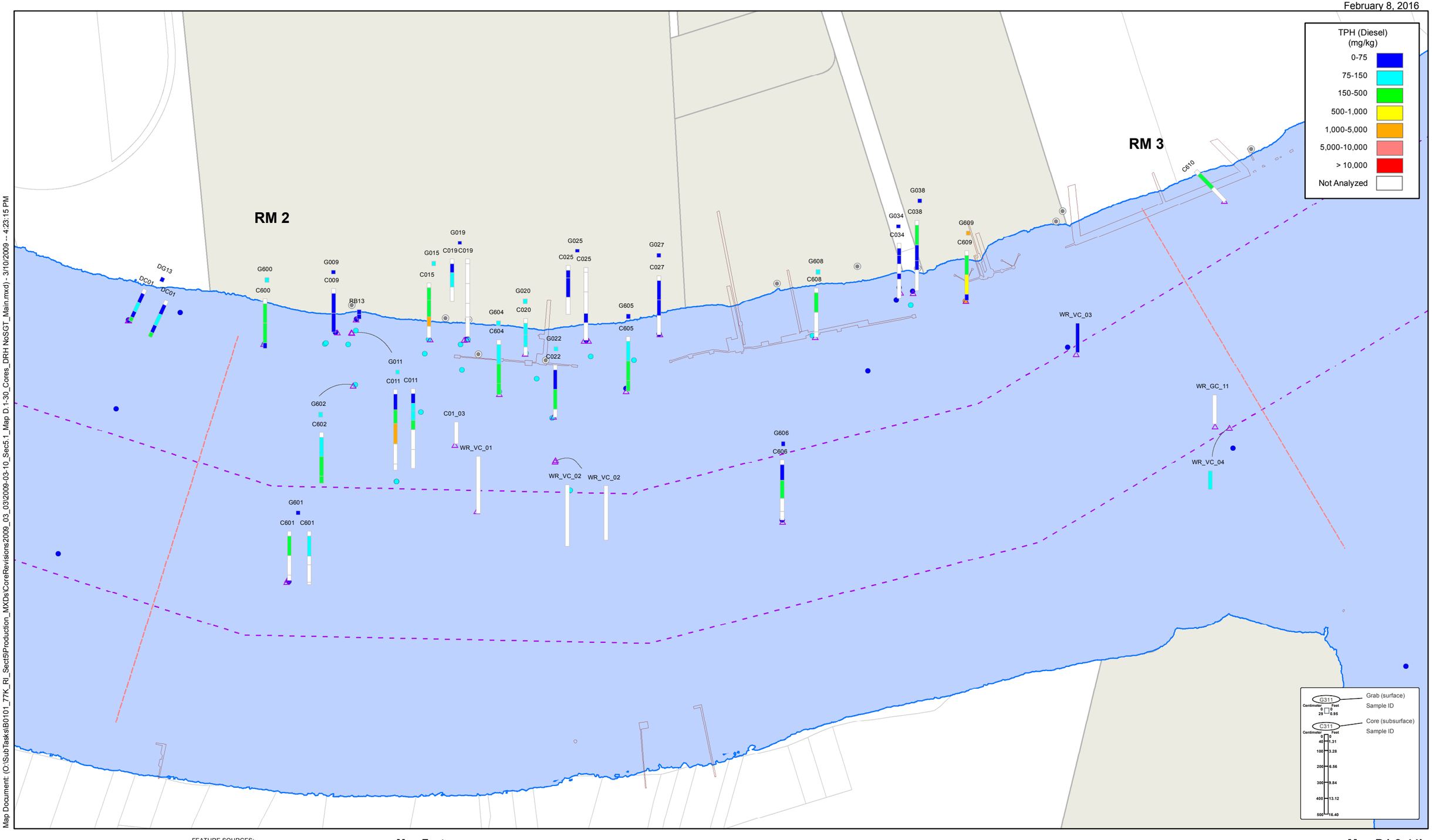
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-44a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) (mg/kg)
River Mile 01 to 02

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

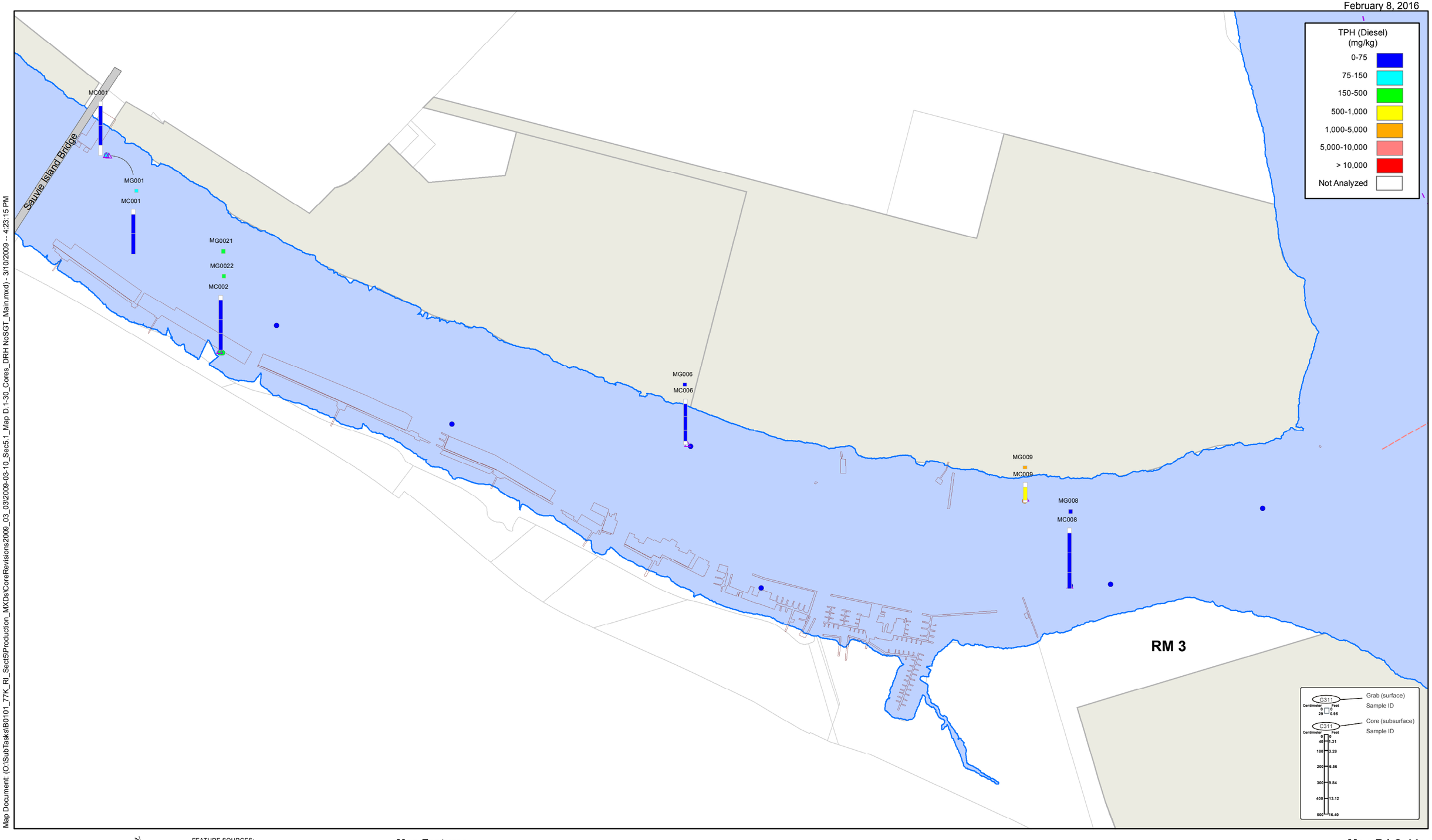
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-44b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) (mg/kg)
River Mile 02 to 03

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-44c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) (mg/kg)
River Mile 03 - Multnomah Channel

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-30_Cores_DRH NoSGT_Main.mxd) - 3/10/2009 -- 4:23:15 PM

RM 3

RM 4

TPH (Diesel) (mg/kg)
- 0-75
- 75-150
- 150-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

Grab (surface) Sample ID

Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-44d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) (mg/kg)
River Mile 03 to 04

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-30_Cores_DRH NoSGT_Main.mxd) - 3/10/2009 -- 4:23:15 PM

TPH (Diesel) (mg/kg)
- 0-75
- 75-150
- 150-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

RM 4

RM 5

Inset 1

Grab (surface) Sample ID

Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

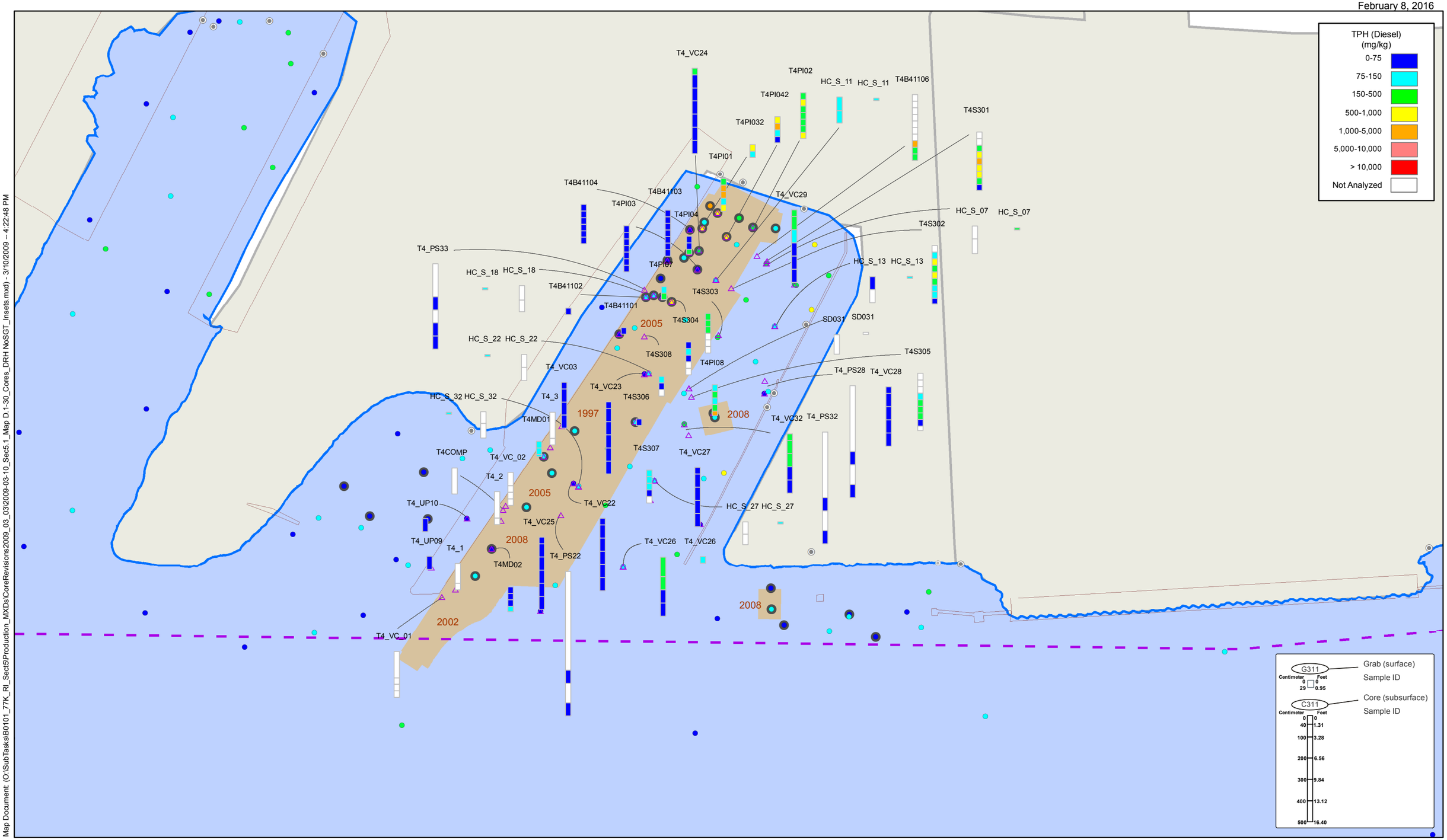
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-44e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) (mg/kg)
River Mile 04 to 05 - Slips

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 120 240 480 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

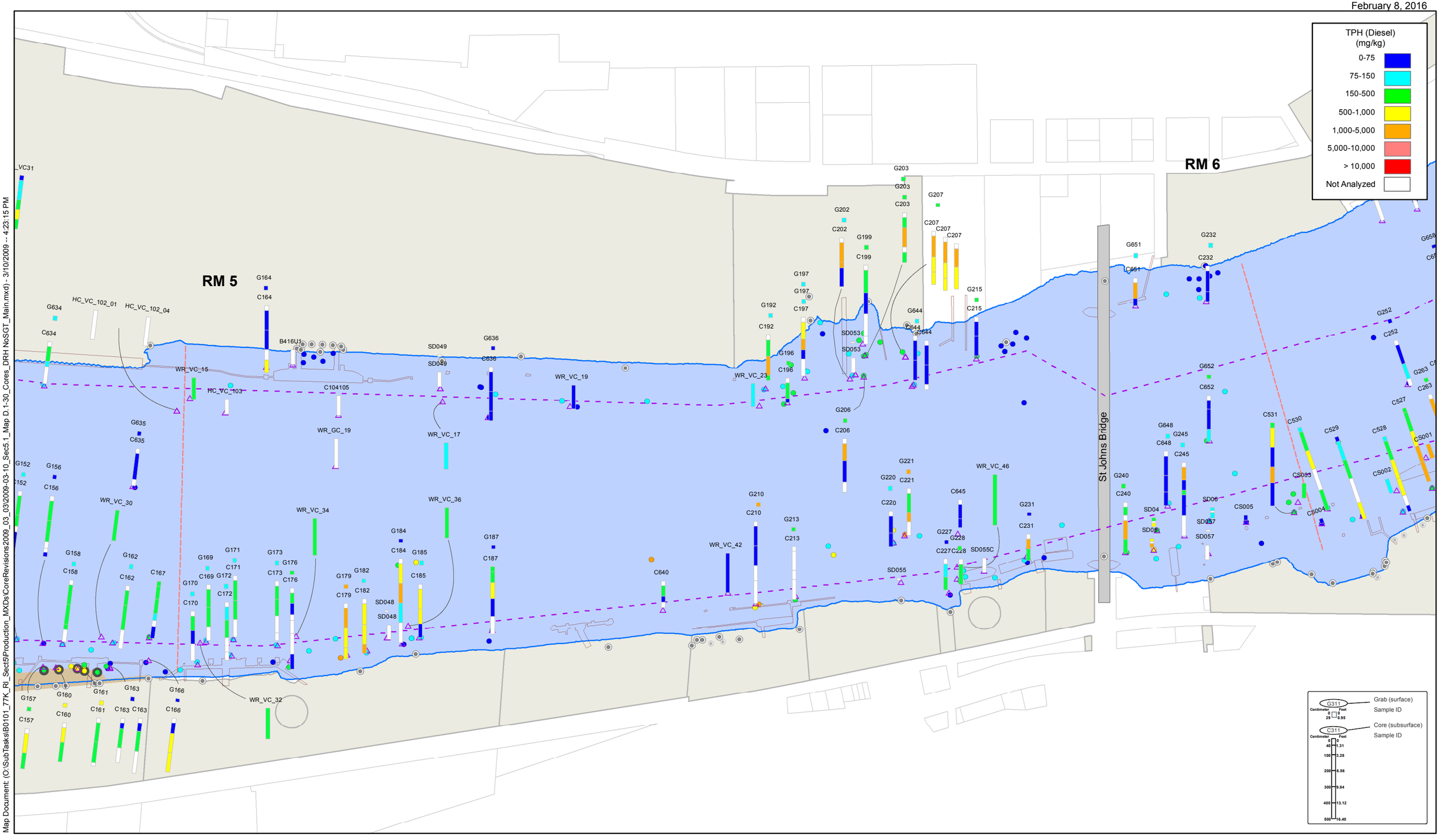
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-44e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) (mg/kg)
River Mile 04 to 05 - Slips - Inset 1




Map Document: (O:\SubTasks\B0101_7TK_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-30_Cores_DRH NoSGT_Main.mxd) - 3/10/2009 -- 4:23:15 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

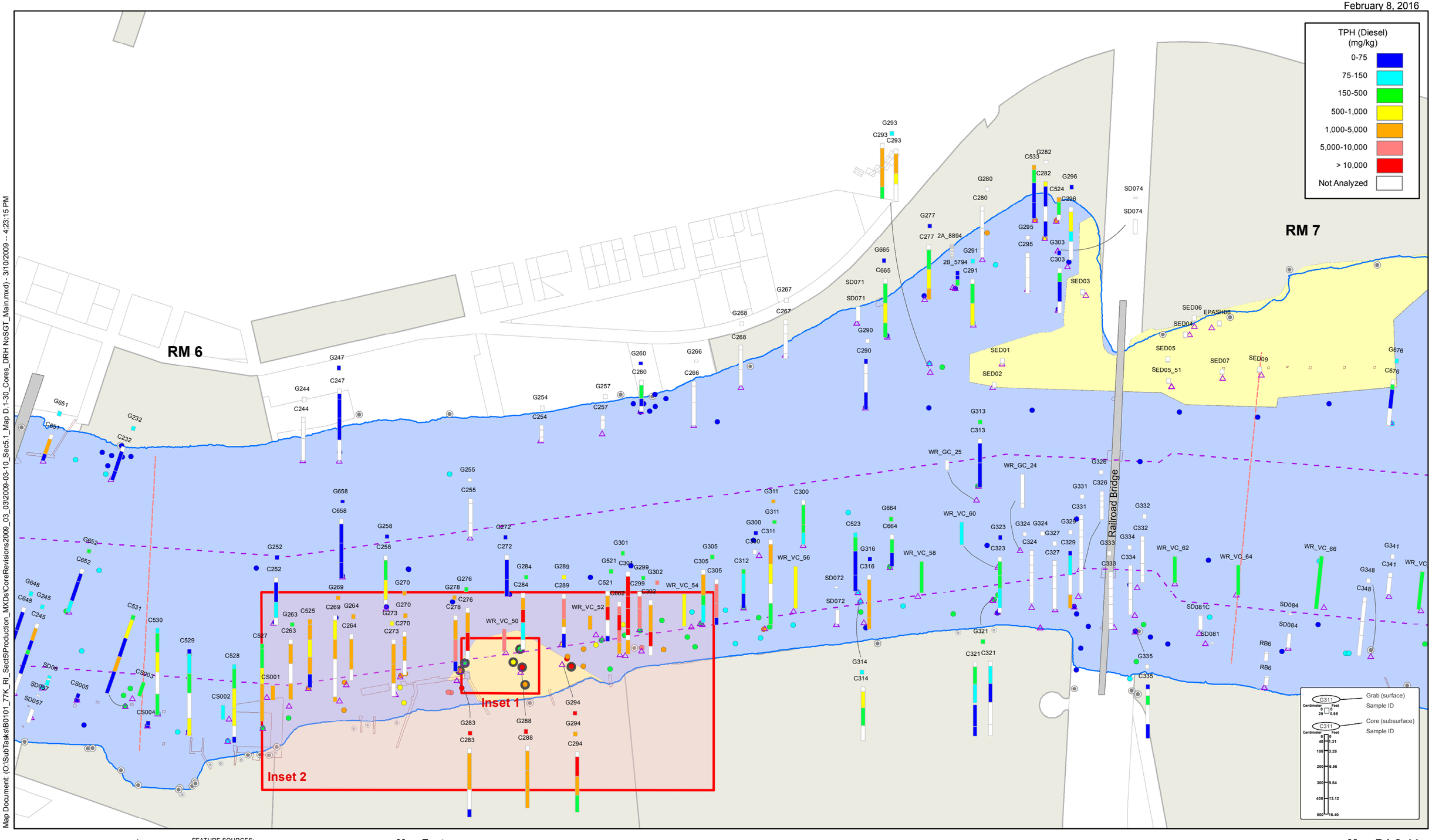
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-44f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) (mg/kg)
River Mile 05 to 06

Map Document: (O:\SubTasks\B0101_7TK_RI_Sect5\Production_MXDs\CoreRevisions2009_03_032009-03-10_Sec5.1_Map D.1-30_Cores_DRH NoSGT_Main.mxd) - 3/10/2009 -- 4:23:15 PM




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-44g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) (mg/kg)
River Mile 06 to 07

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-30_Cores_DRH NoSGT_Insets.mxd) - 3/10/2009 -- 4:22:48 PM

TPH (Diesel)
(mg/kg)

- 0-75
- 75-150
- 150-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

RAA_13
RAA_14
RAA_17
RAA_07
RAA_02
RAA_10
RAA_06
RAA_06
RAA_12
RAA_05
RAA_11
RAA_08
RAA_19
RAA_20
RAA_09
RAA_04

- Grab (surface) Sample ID — G311 (Centimeter 0 29 / Feet 0 0.95)
- Core (subsurface) Sample ID — C311

| Centimeter | Feet |
|---|---|
| 0 | 0 |
| 40 | 1.31 |
| 100 | 3.28 |
| 200 | 6.56 |
| 300 | 9.84 |
| 400 | 13.12 |
| 500 | 16.40 |

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 120 240 480 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-44g1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) (mg/kg)
River Mile 06 to 07 - Inset 1

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-30_Cores_DRH NoSGT_Insets.mxd) - 3/10/2009 -- 4:22:48 PM

TPH (Diesel) (mg/kg)
- 0-75
- 75-150
- 150-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

GS09
GSD5
GSD4
GS08
AN_1_5
GSD2
GS07
GSC5
GS06
GS05
GS04
AN_2_5
GSC2
GSB2
GSB7
GSC7
AN_1_3
AN_1_2
AN_1_1
GSB5
AN_2_4
AN_2_3
AN_2_1
AN_2_2

G311 — Grab (surface) Sample ID
C311 — Core (subsurface) Sample ID

| Centimeter | Feet |
|---|---|
| 0 | 0 |
| 40 | 1.31 |
| 100 | 3.28 |
| 200 | 6.56 |
| 300 | 9.84 |
| 400 | 13.12 |
| 500 | 16.40 |

N

0 120 240 480 Feet

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

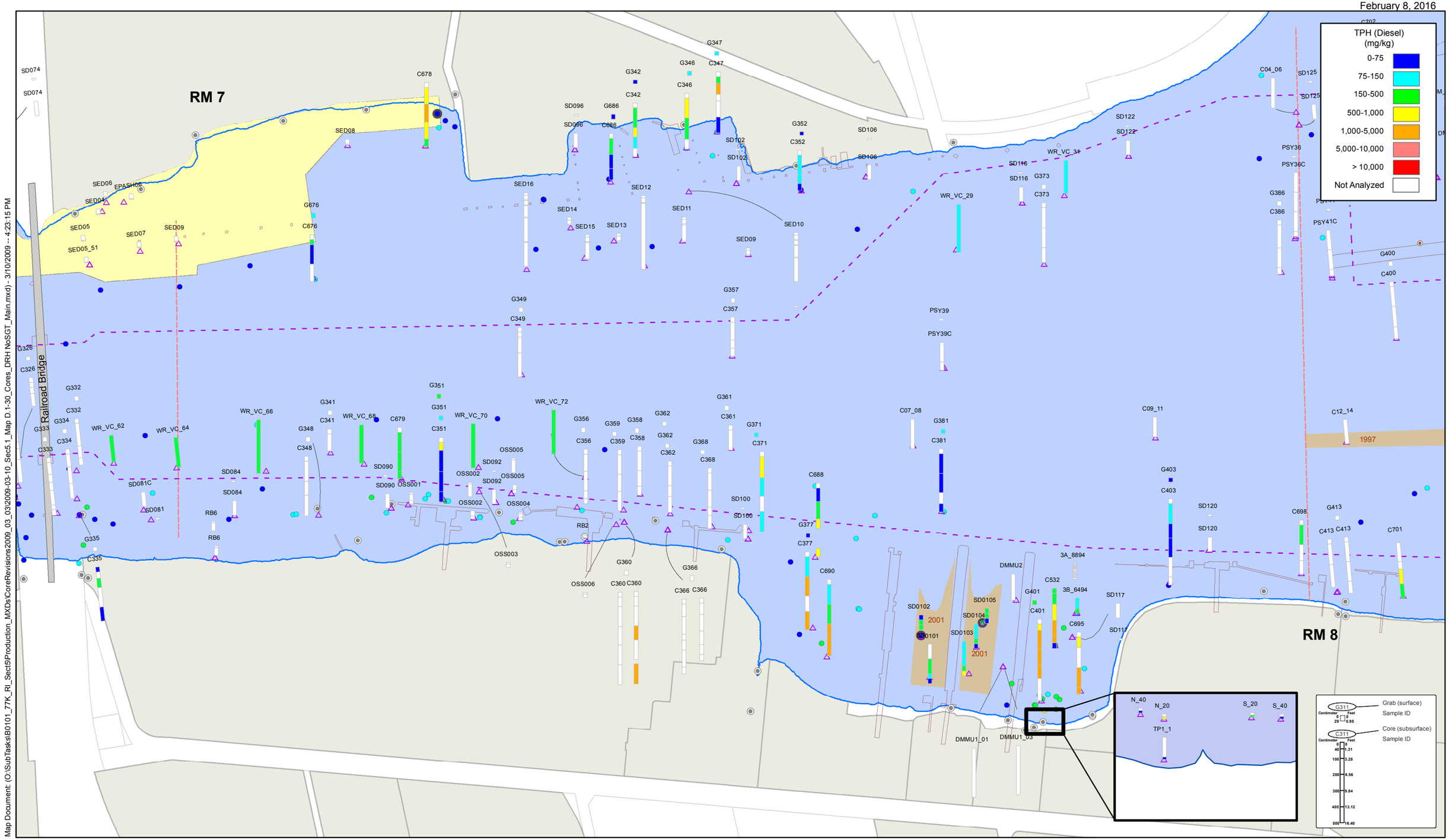
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-44g2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) (mg/kg)
River Mile 06 to 07 - Inset 2

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

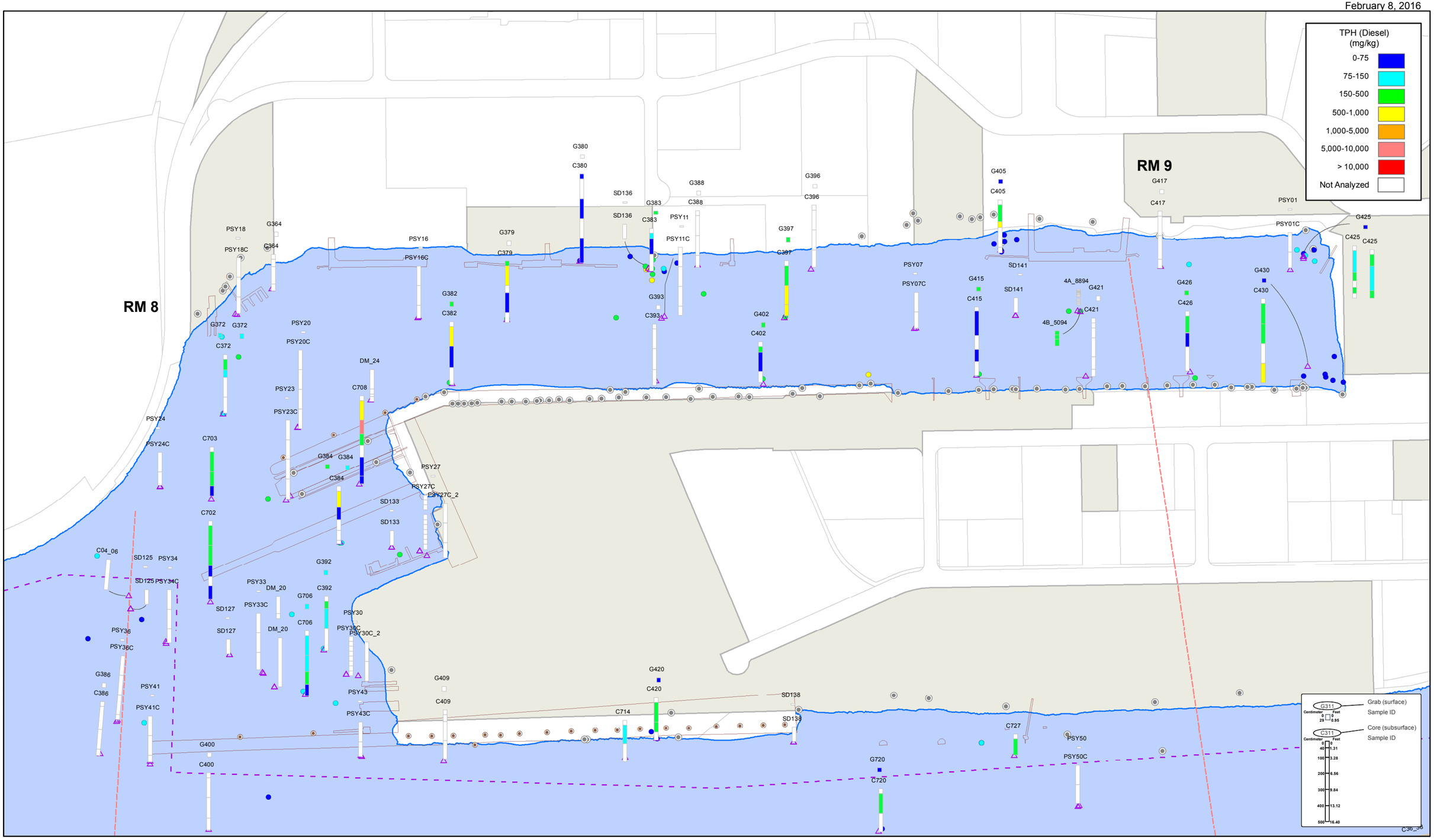
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-44h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) (mg/kg)
River Mile 07 to 08

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_032009-03-10_Sec5.1_Map D.1-30_Cores_DRH NoSGT_Main.mxd) - 3/10/2009 -- 4:23:15 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

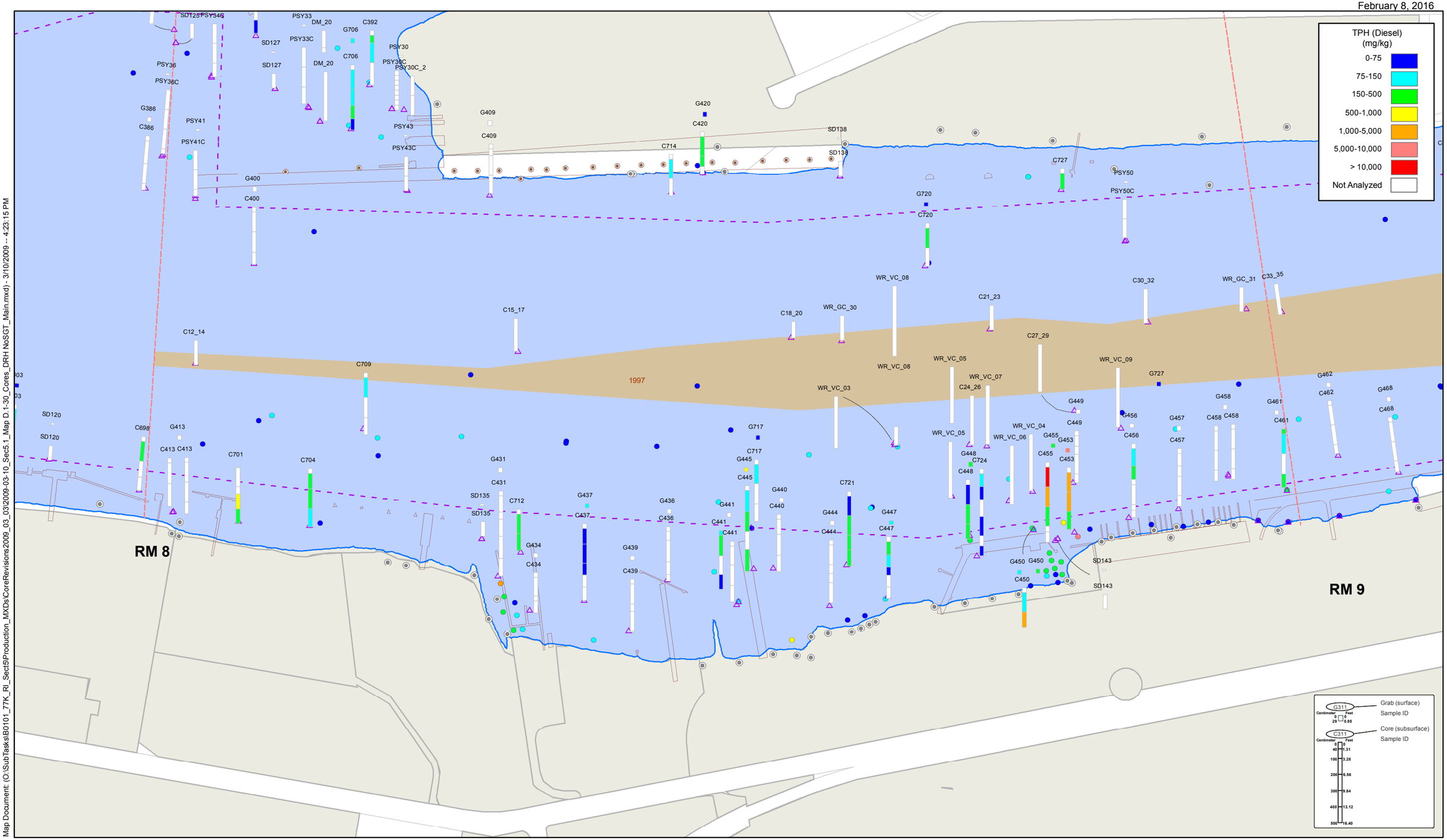
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-44i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) (mg/kg)
River Mile 08 to 09 - Swan Is. East




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-30_Cores_DRH NoSGT_Main.mxd) - 3/10/2009 -- 4:23:15 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-44j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) (mg/kg)
River Mile 08 to 09 - Swan Is. West

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-30_Cores_DRH NoSGT_Main.mxd) - 3/10/2009 -- 4:23:15 PM

TPH (Diesel) (mg/kg)
- 0-75
- 75-150
- 150-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

**RM 10**

**RM 9**

G454 C454 SD150 SD150 C733 WR_VC_33 WR_VC_35 WR_VC_37 WR_VC_39 WR_VC_41 WR_VC_43 WR_VC_45 G742 C742 G743 C743 SD04 G746 C746 C749 WR_GC_32 WR_GC_33 WR_GC_31 C33_35 C36_38 C39_41 WR_VC_04 C42_44 RC483 C45_47 WR_VC_03 WR_VC_05 C48_50 C51_52 WR_GC_34 WR_GC_35 G748 C748 C748 G747 C747 WR_VC_10 G471 C471 G474 C474 G477 C477 SD151 SD151 G458 C458 C458 G461 C461 G462 C462 G468 C468 G735 C735 G738 C738 G739 C739 G492 G492 HC_VC_53 C492 T2_01_2 T2U1 G494 C494 T2U2 T2_01_1

Grab (surface) Sample ID
Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

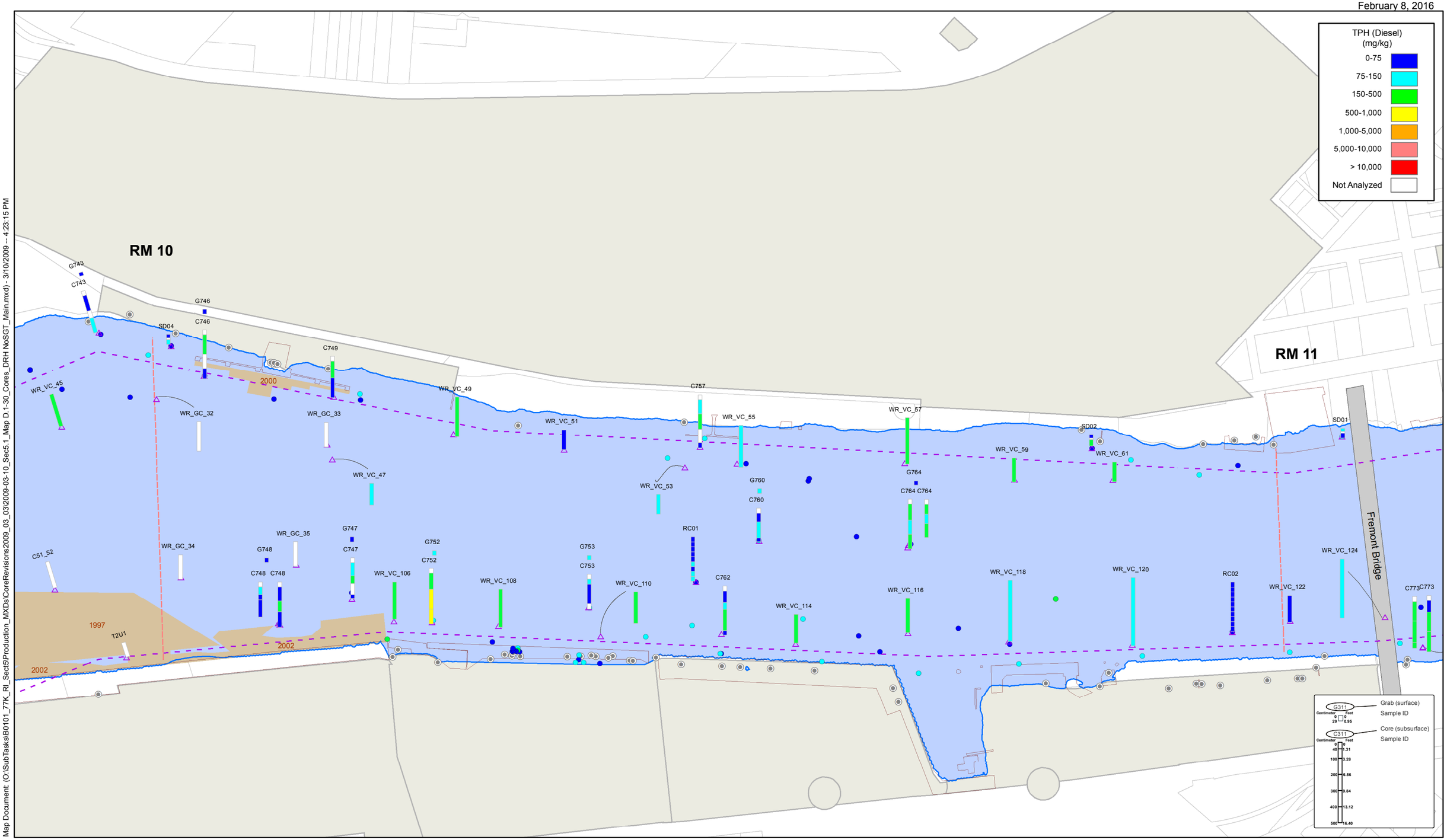
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-44k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) (mg/kg)
River Mile 09 to 10

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-30_Cores_DRH NoSGT_Main.mxd) - 3/10/2009 -- 4:23:15 PM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

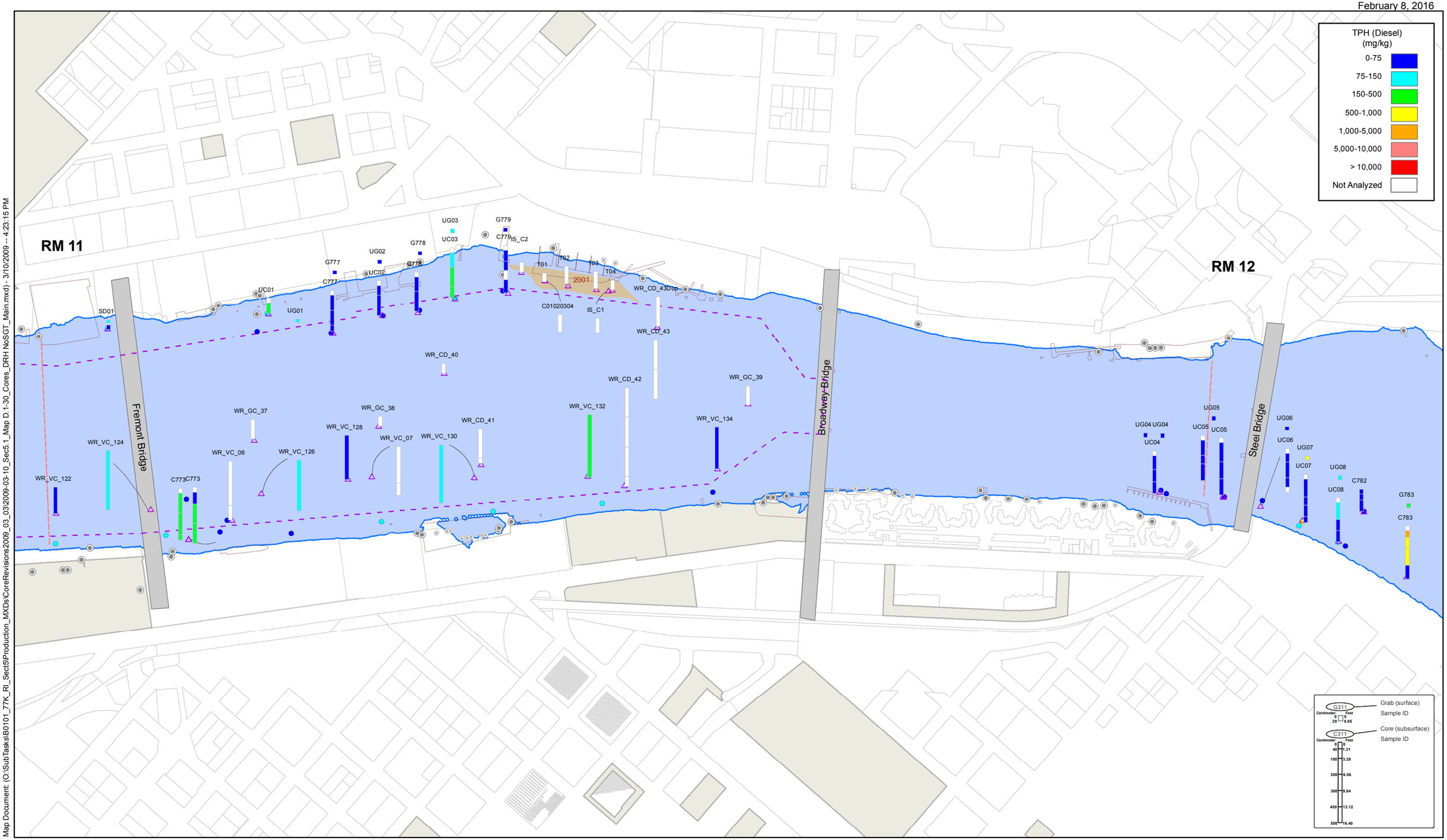
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-44l**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) (mg/kg)
River Mile 10 to 11

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-30_Cores_DRH NoSGT_Main.mxd) - 3/10/2009 -- 4:23:15 PM




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-44m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) (mg/kg)
River Mile 11 to 12

TPH (Diesel)
(mg/kg)

- 0-75
- 75-150
- 150-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

RM 11

RM 12

inset 1

Fremont Bridge

Broadway Bridge

C005 A 0 B 30.5 C 91.4 D 152.4 213.4

C003 A 0 B 30.5 C 91.4 D 152.4 172

C004 A 0 B 30.5 C 91.4 131

C001 A 0 B 30.5 C 91.4 148

C002 A 0 B 30.5 C 91.4 D 152.4 166

SD01 A 30 B 60 80 C 40 J

WR_CD_43 A 0 182 B 365

WR_CD_43Dup A 0 182

C041 A 0 B 30.5 64

C042 A_R2 0 B_R2 30 C_R2 91 D_R2 152 210

C043 A 0 B 30.5 95

WR_GC_39 A 0 121

WR_VC_134 0 56 J 259

WR_VC_132 0 220 J 390

WR_VC_130 0 76 J 360

WR_GC_38 A 0 61

WR_VC_128 0 75 J 274

WR_GC_37 0 122

WR_VC_124 0 87 J 366

WR_VC_122 0 45 J 165

WR_VC_06 A 0 274 B 365

WR_VC_126 0 120 J 314

WR_VC_07 A 0 228 B 304

WR_CD_41 A 0 182 B 213

WR_CD_42 A 0 182 B 366 C 549 D 609

C773 A1 0 30 B1 152 195 JT C1 190 J D1 285 319 220 J

C773 A2 0 30 B2 103 51 JT C2 245 JT D2 223 240 JT 348

2009 2001 2009 2004 2009 2009 2002

Grab (surface) Sample ID

Core (subsurface) Sample ID

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

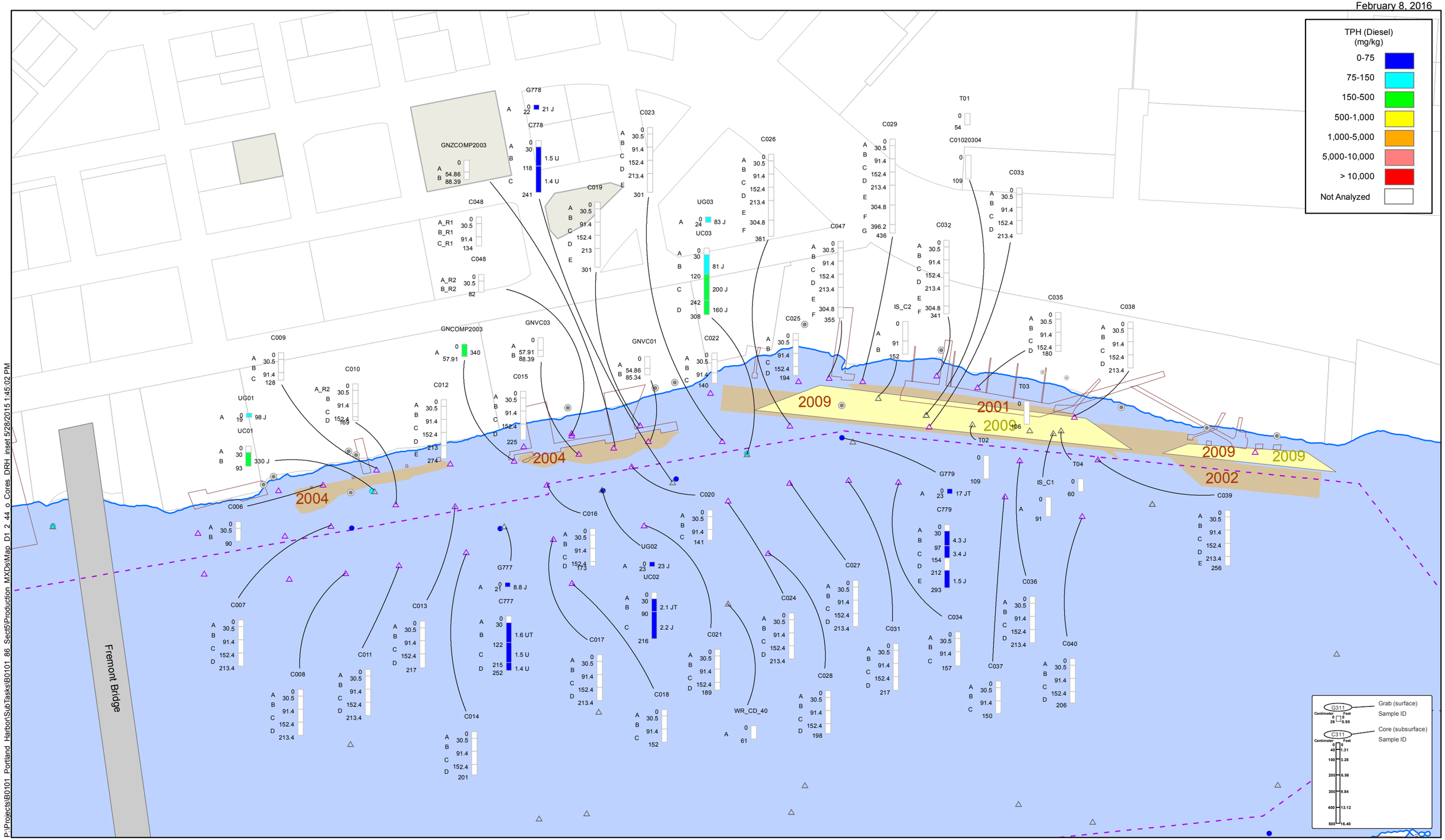
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-44n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) (mg/kg)

River Mile 11.0 - 11.8




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

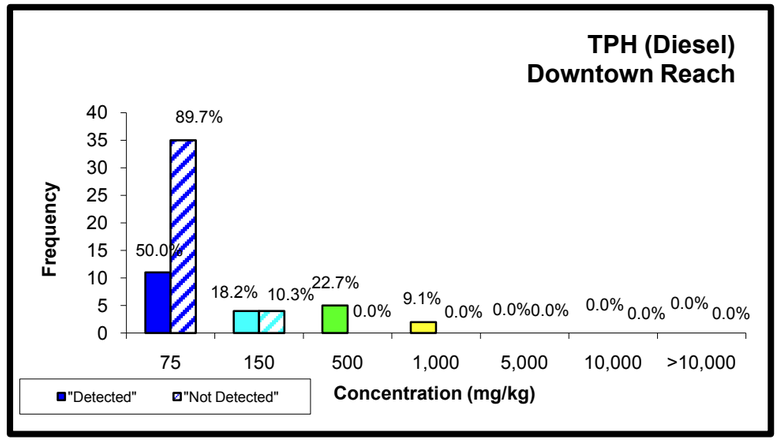
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

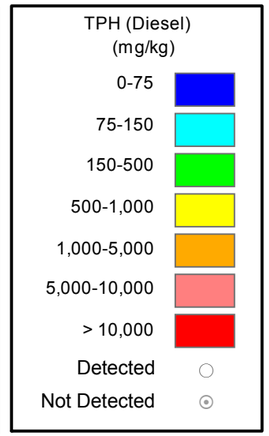
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

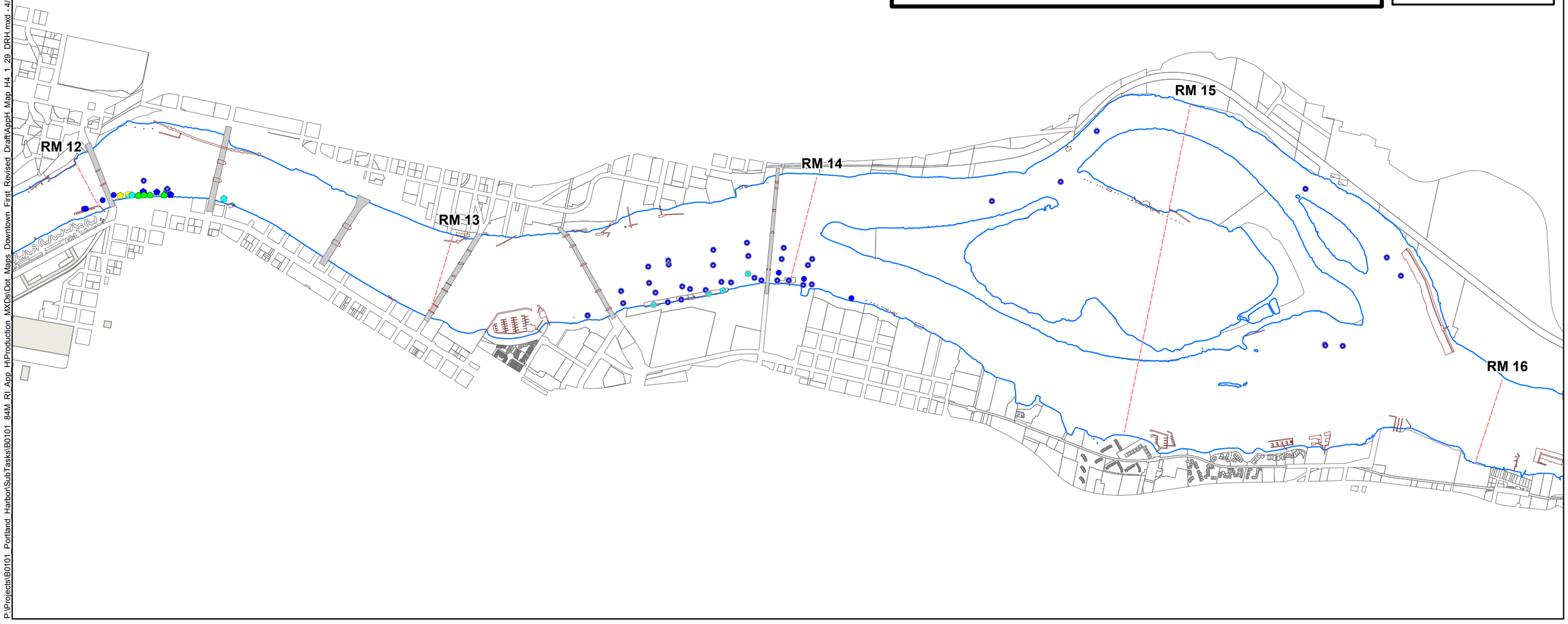
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-44o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) (mg/kg)

River Mile 11.0 - 11.8 - Inset 1

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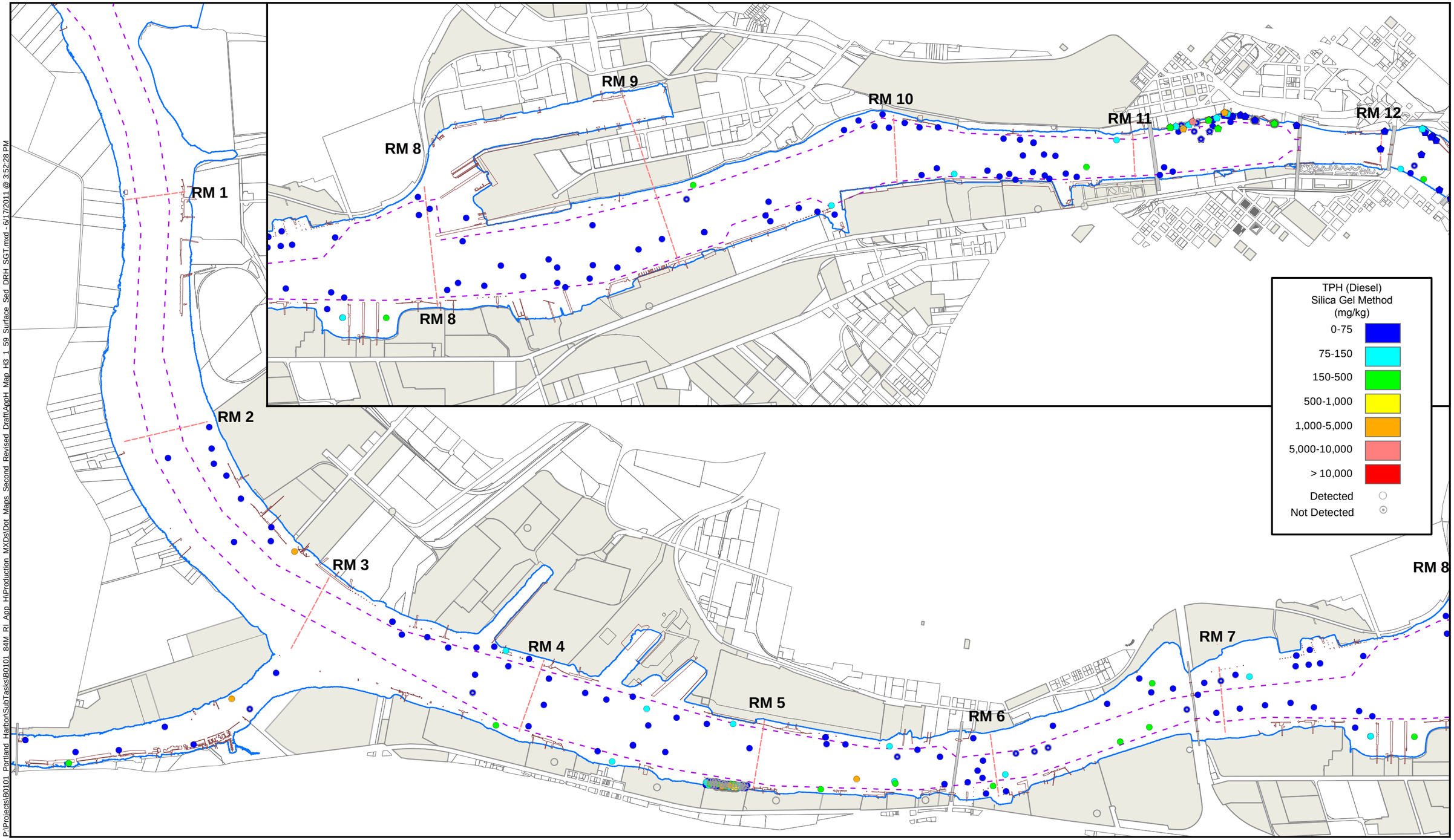
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-45**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
TPH (Diesel) (mg/kg)
Downtown Reach

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

N

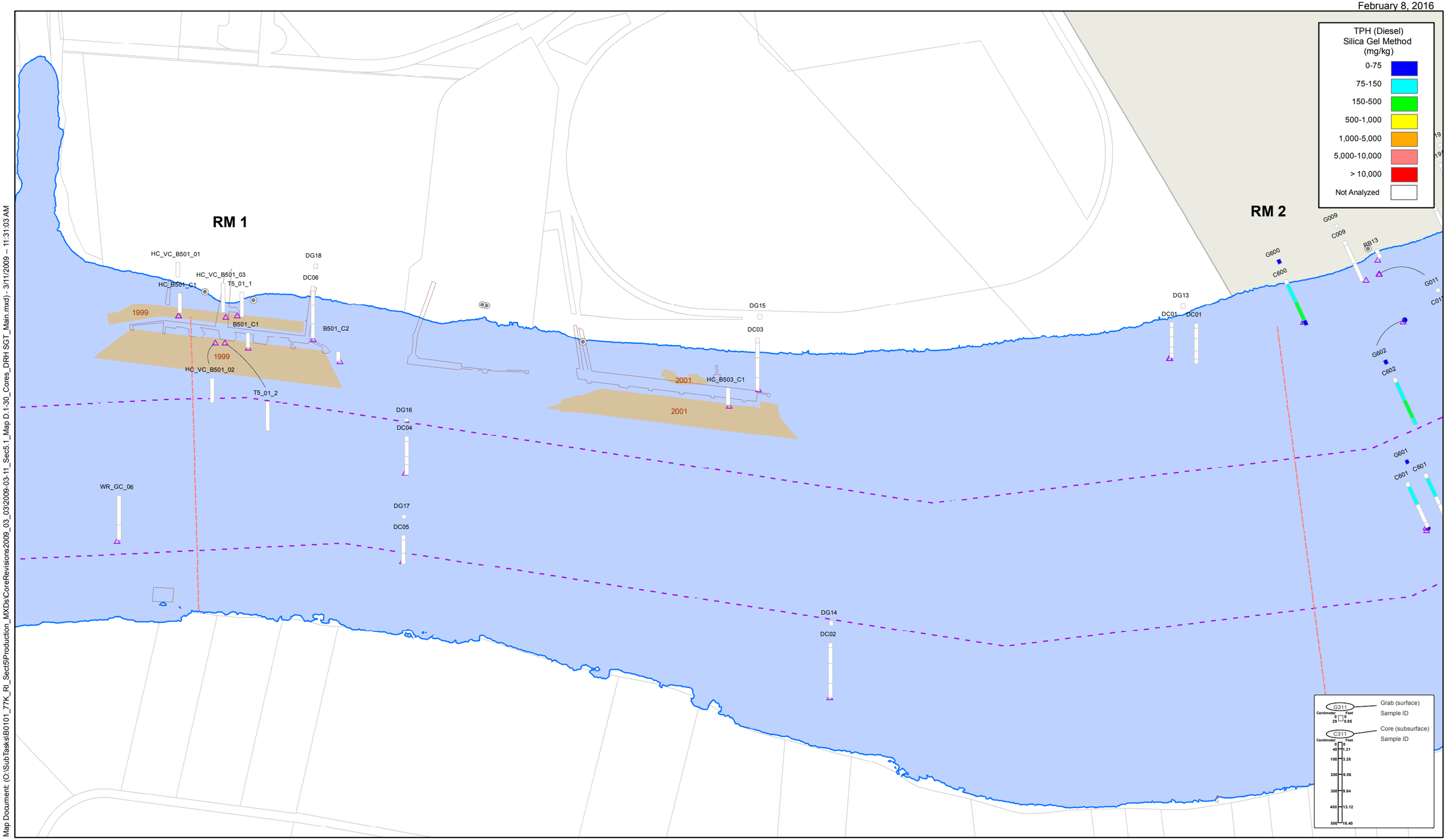
0 1,000 2,000 3,000 4,000 5,000 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-46**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
TPH (Diesel) - Silica Gel Method (mg/kg)

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-30_Cores_DRH SGT_Main.mxd) - 3/11/2009 -- 11:31:03 AM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

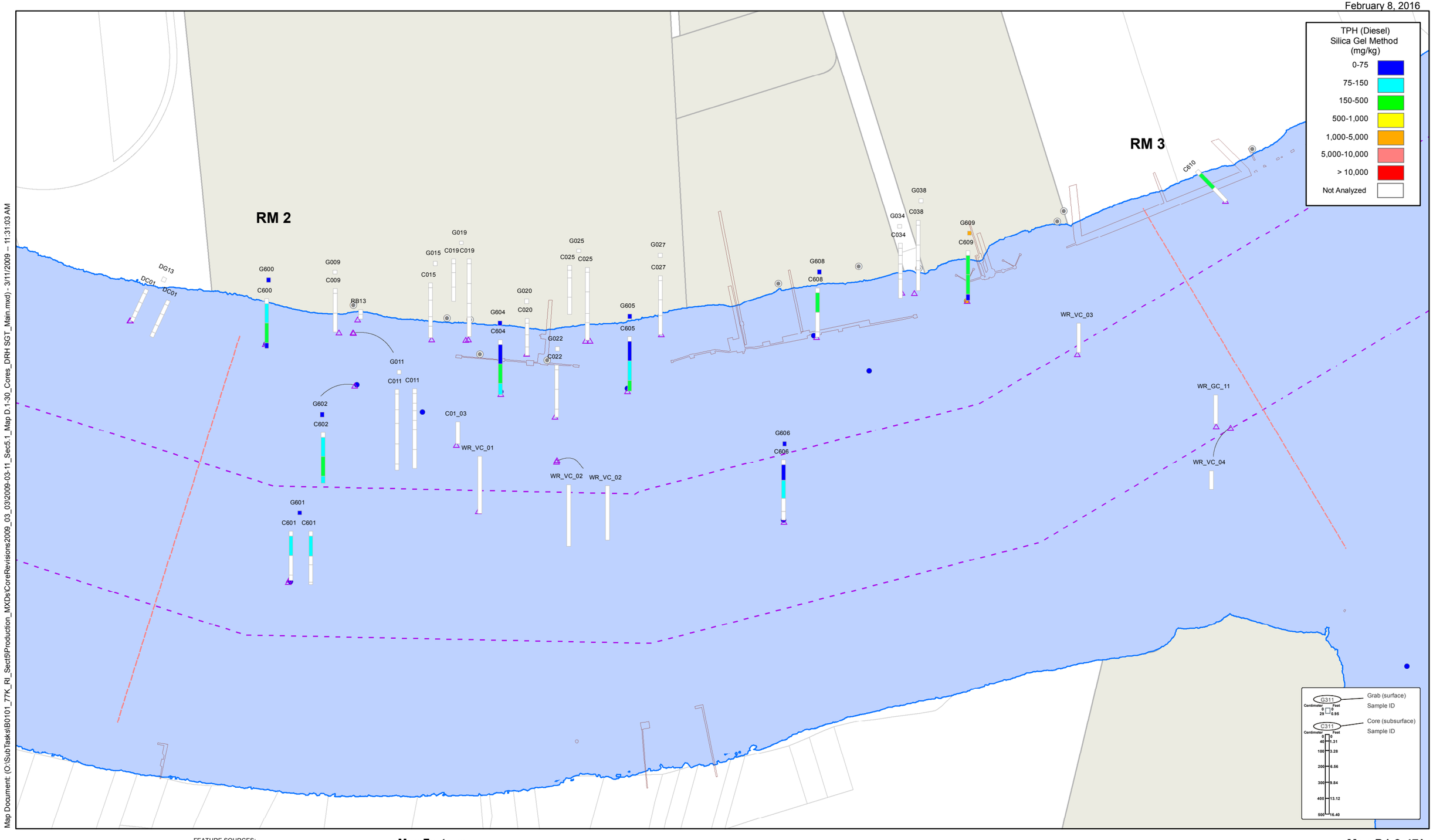
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-47a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) - Silica Gel Method (mg/kg)
River Mile 01 to 02

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

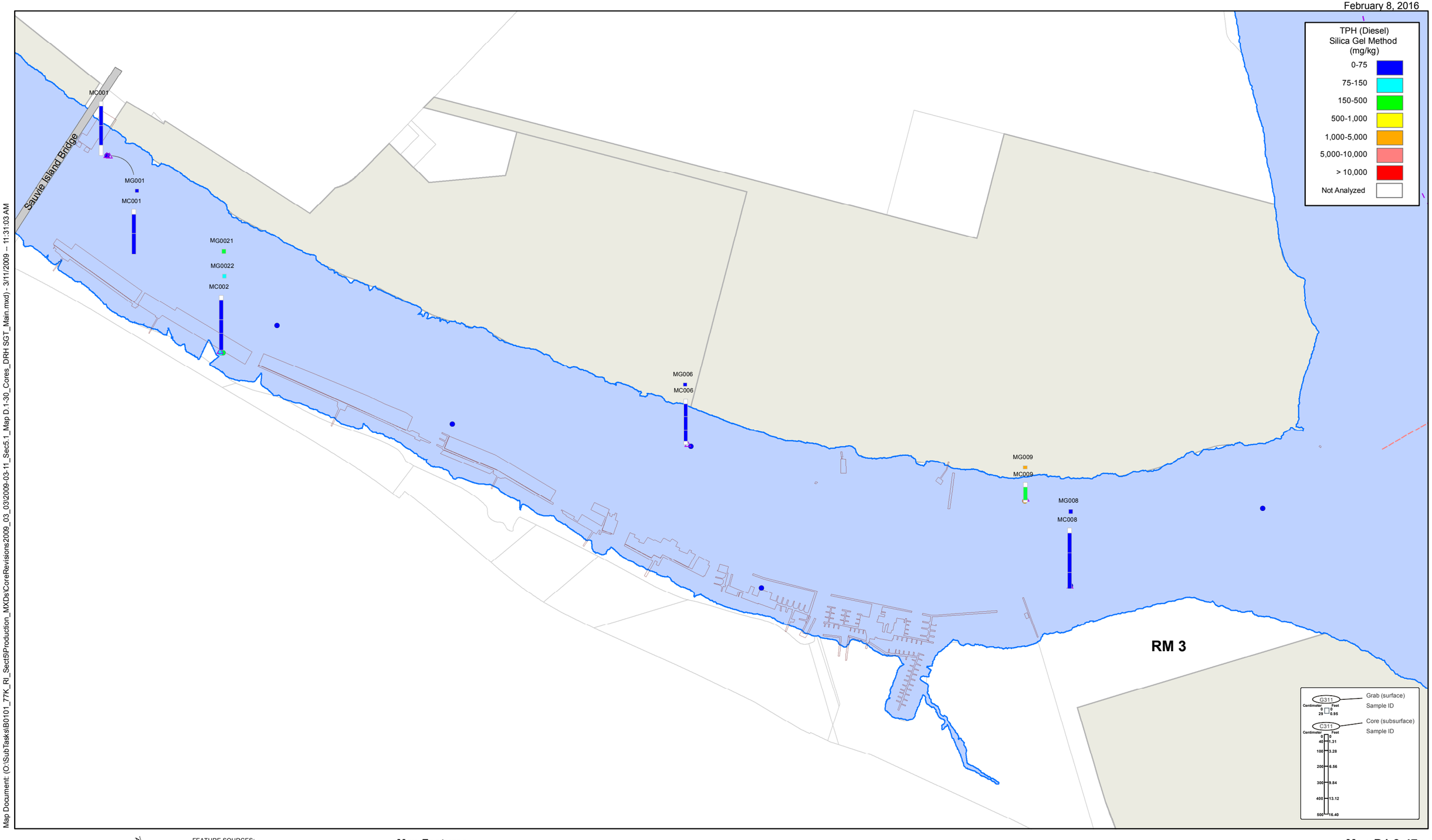
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-47 b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) - Silica Gel Method (mg/kg)
River Mile 02 to 03

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-47c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) - Silica Gel Method (mg/kg)
River Mile 03 - Multnomah Channel

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-30_Cores_DRH SGT_Main.mxd) - 3/11/2009 -- 11:31:03 AM

RM 3

RM 4

TPH (Diesel)
Silica Gel Method
(mg/kg)

- 0-75
- 75-150
- 150-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

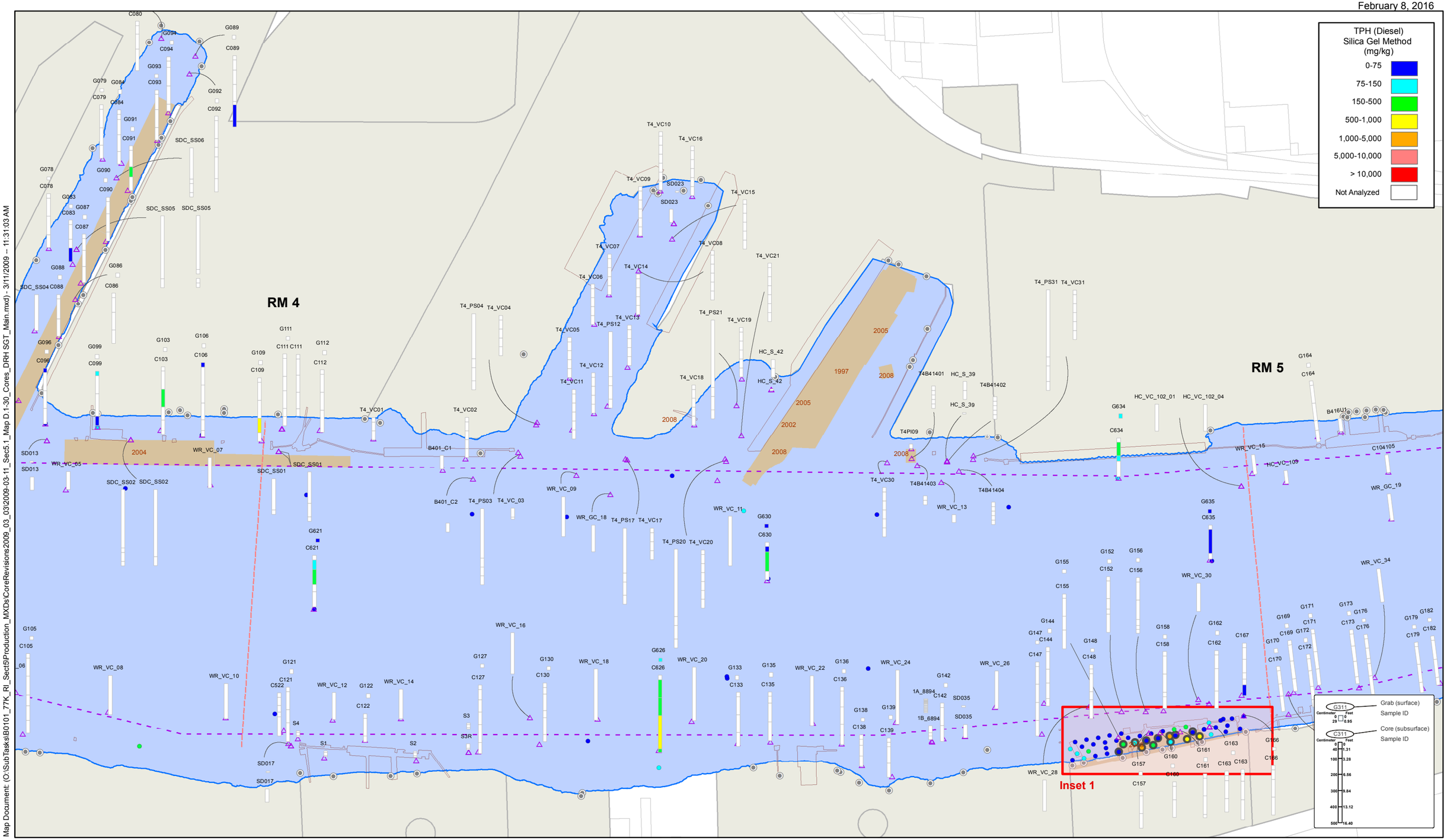
- Upland ECSI Sites (2008)
- Waterfront Taxlots

Grab (surface) Sample ID

Core (subsurface) Sample ID

**Map D1.2-47 d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) - Silica Gel Method (mg/kg)
River Mile 03 to 04

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-30_Cores_DRH SGT_Main.mxd) - 3/11/2009 -- 11:31:03 AM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

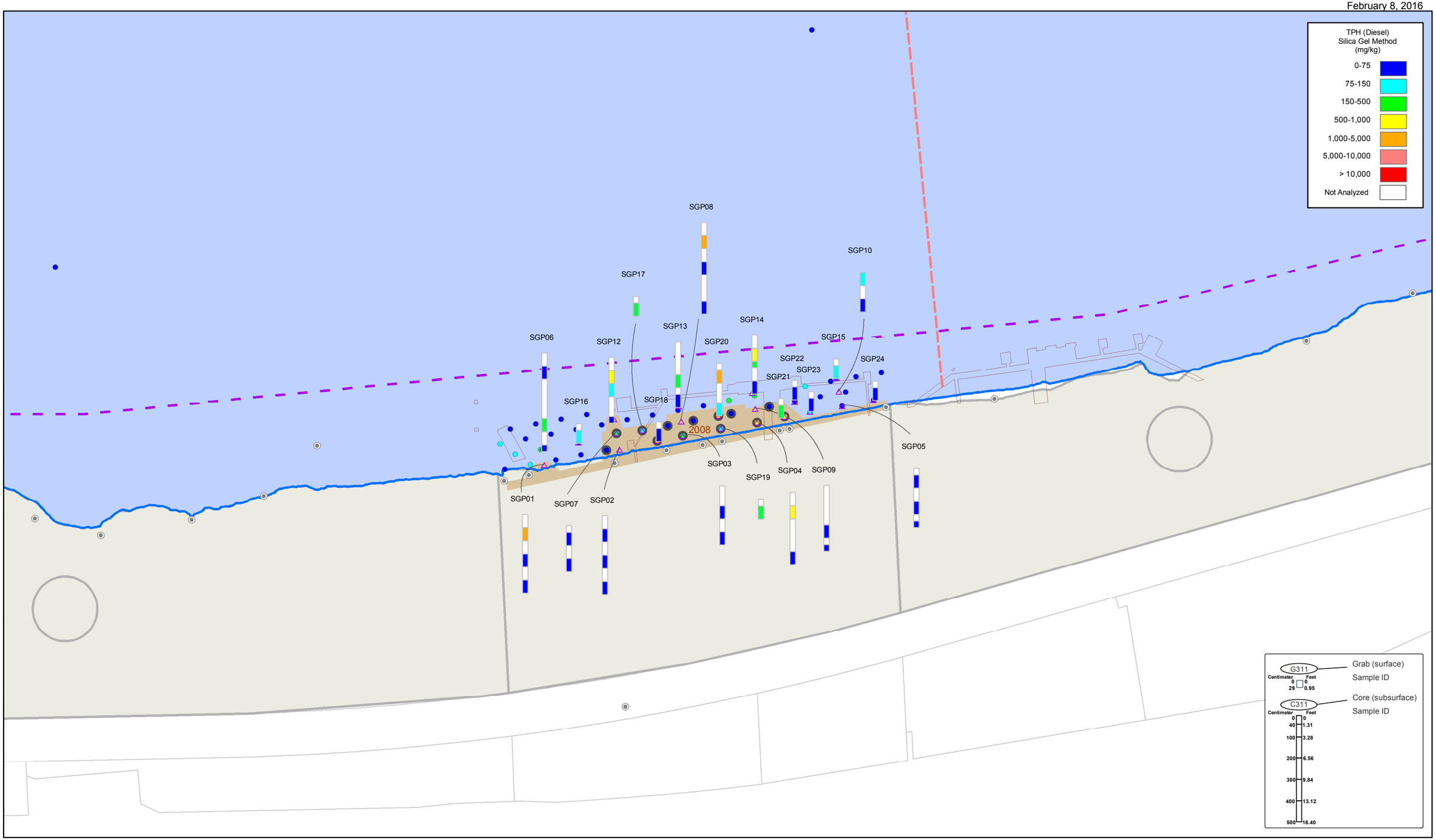
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-47e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) - Silica Gel Method (mg/kg)
River Mile 04 to 05 - Slips

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 115 230 460 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

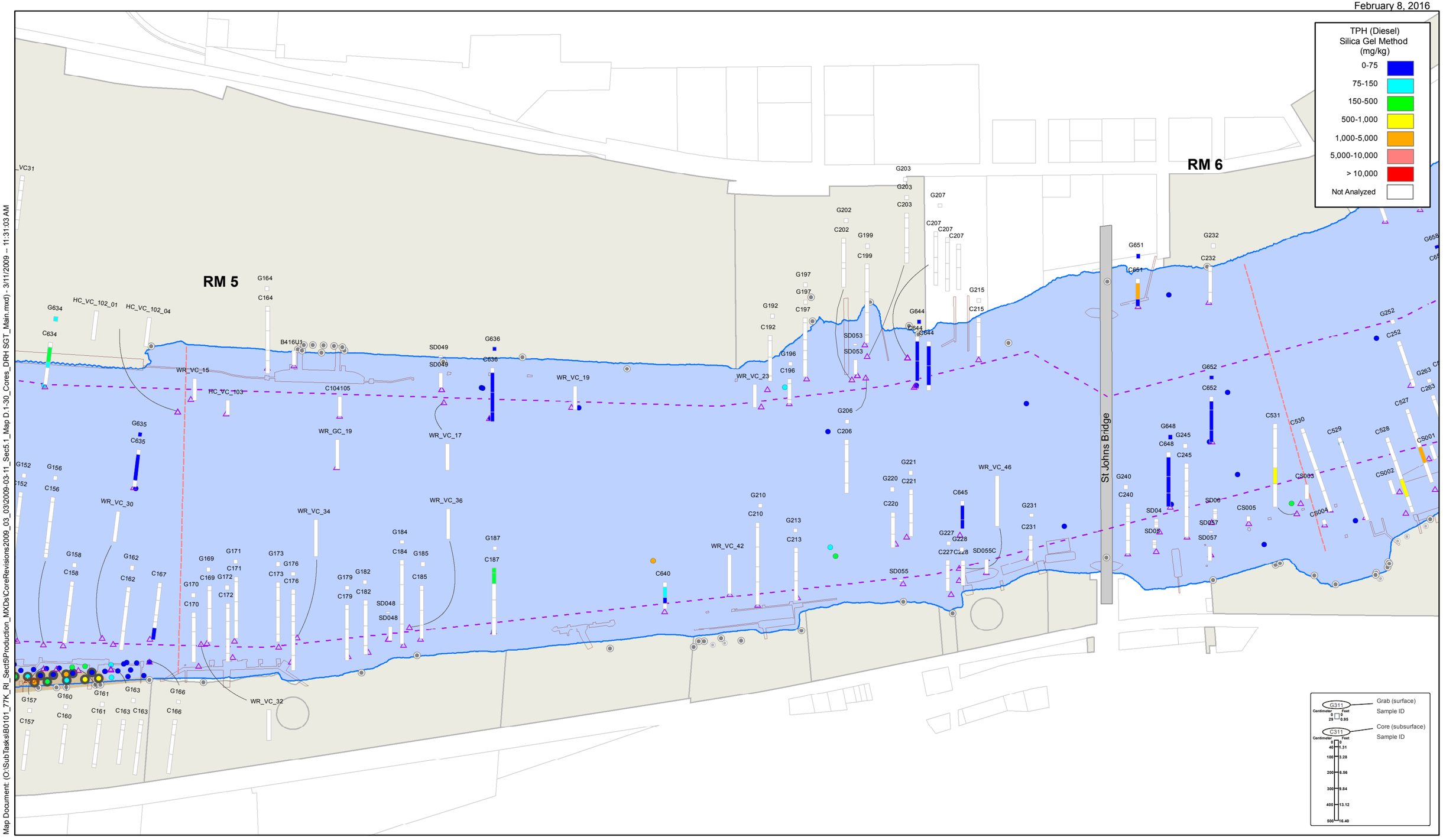
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-47e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) - Silica Gel Method (mg/kg)
River Mile 04 to 05 - Slips - Inset 1

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-47 f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) - Silica Gel Method (mg/kg)
River Mile 05 to 06

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-30_Cores_DRH SGT_Main.mxd) - 3/11/2009 -- 11:31:03 AM

TPH (Diesel)
Silica Gel Method
(mg/kg)

- 0-75
- 75-150
- 150-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

RM 6

RM 7

Railroad Bridge

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

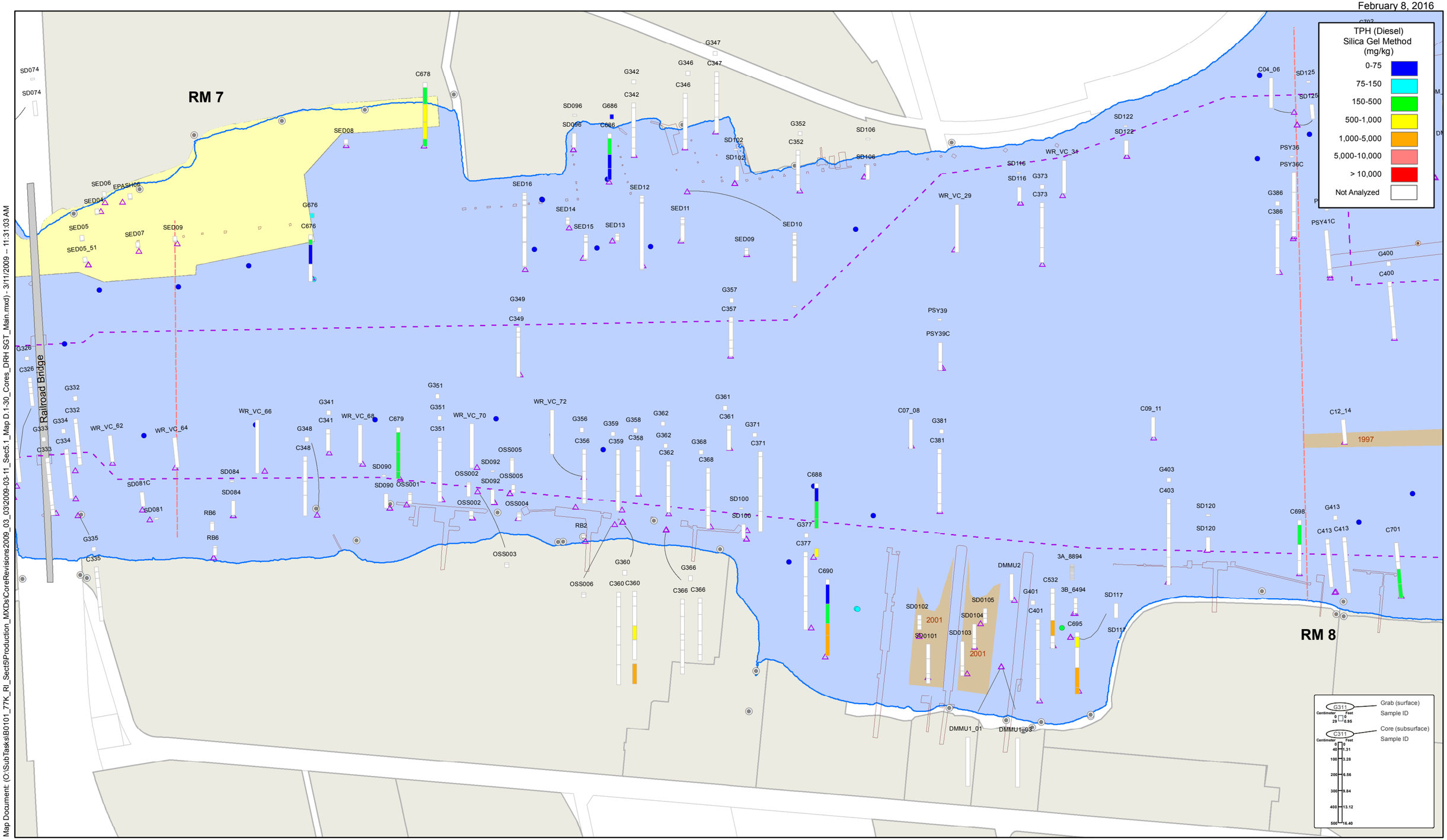
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-47 g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) - Silica Gel Method (mg/kg)
River Mile 06 to 07

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

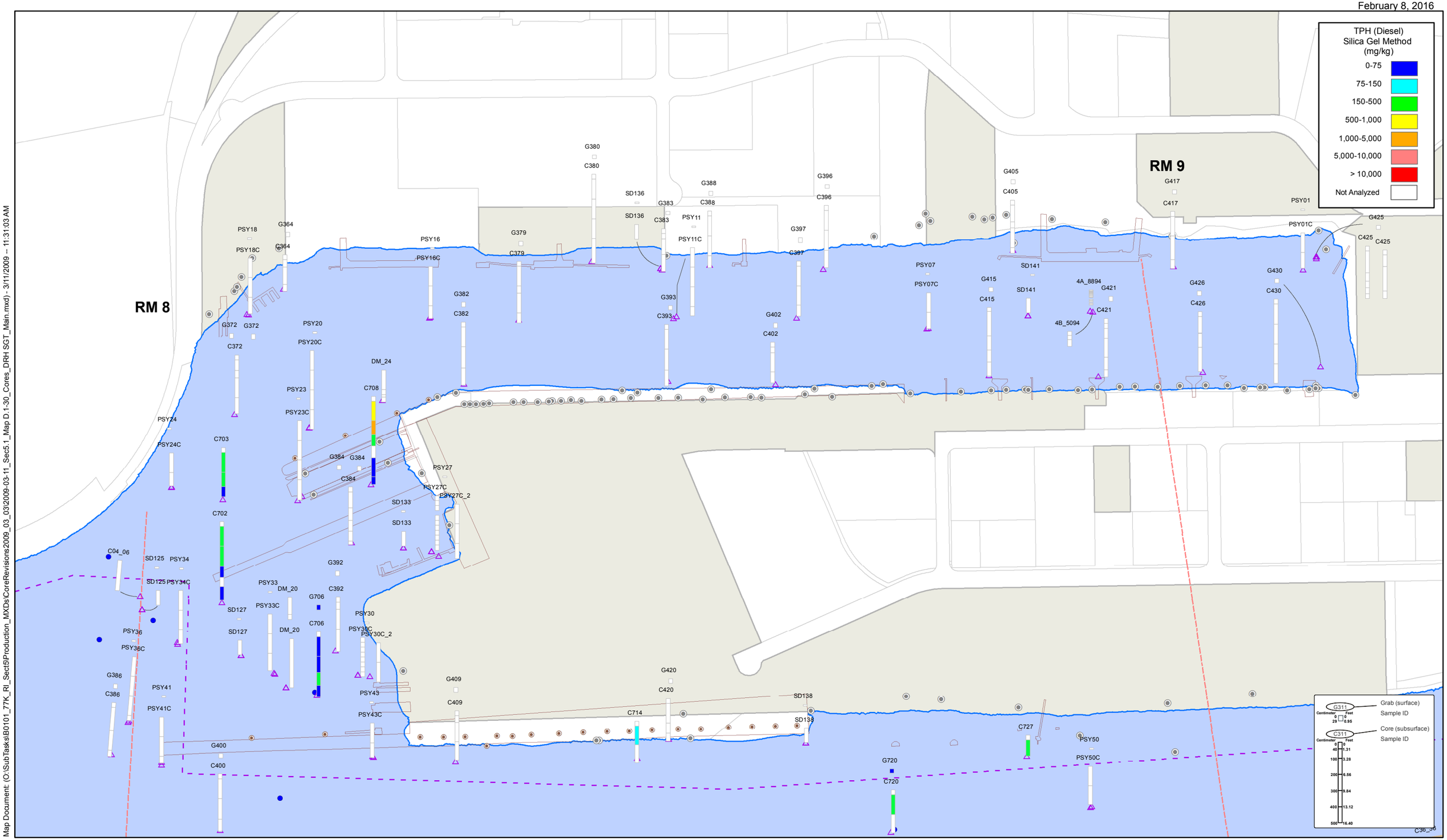
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-47 h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) - Silica Gel Method (mg/kg)
River Mile 07 to 08

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-30_Cores_DRH SGT_Main.mxd) - 3/11/2009 -- 11:31:03 AM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

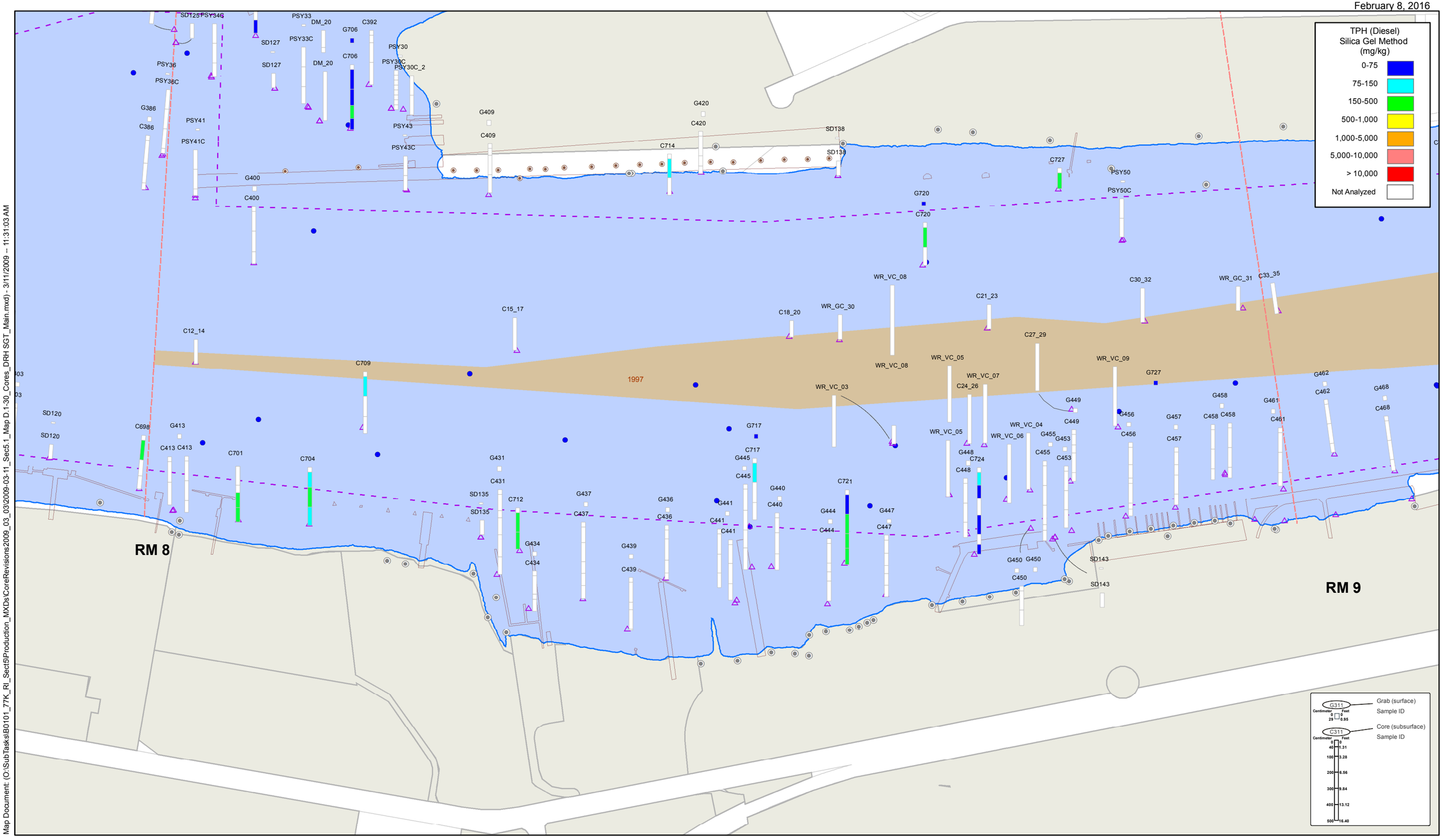
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-47 i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) - Silica Gel Method (mg/kg)
River Mile 08 to 09 - Swan Is. East

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-47j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) - Silica Gel Method (mg/kg)
River Mile 08 to 09 - Swan Is. West

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-30_Cores_DRH SGT_Main.mxd) - 3/11/2009 -- 11:31:03 AM

TPH (Diesel)
Silica Gel Method
(mg/kg)

- 0-75
- 75-150
- 150-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

**RM 10**

**RM 9**

G454 C454 SD150 C733 WR_VC_33 WR_VC_35 WR_VC_37 WR_VC_39 WR_VC_41 WR_VC_43 WR_VC_45 G742 C742 G743 C743 SD04 G746 C746 C749 WR_GC_32 WR_GC_33 WR_GC_31 C33_35 C36_38 C39_41 WR_VC_04 C42_44 RC483 C45_47 WR_VC_03 WR_VC_05 C48_50 C51_52 WR_GC_34 WR_GC_35 G748 C748 G747 C747 WR_VC_106 G458 C458 G461 C461 G462 C462 G468 C468 G471 C471 G474 C474 G477 C477 SD151 G735 C735 G738 C738 G739 C739 G492 HC_VC_53 C492 T2_01_2 T2U1 G494 C494 T2U2 T2_01_1 1997 2000 2002 2005

Grab (surface) Sample ID
Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-47k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) - Silica Gel Method (mg/kg)
River Mile 09 to 10

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-11_Sec5.1_Map D.1-30_Cores_DRH SGT_Main.mxd) - 3/11/2009 -- 11:31:03 AM

TPH (Diesel)
Silica Gel Method
(mg/kg)

- 0-75
- 75-150
- 150-500
- 500-1,000
- 1,000-5,000
- 5,000-10,000
- > 10,000
- Not Analyzed

RM 10

RM 11

Fremont Bridge

G743 C743 G746 C746 SD04 C749 2000 WR_VC_45 WR_GC_32 WR_GC_33 WR_VC_47 WR_VC_49 WR_VC_51 C757 WR_VC_55 WR_VC_57 G764 C764 C764 WR_VC_59 SD02 WR_VC_61 SD01 WR_VC_53 G760 C760 C51_52 WR_GC_34 WR_GC_35 G748 C748 C748 G747 C747 WR_VC_106 G752 C752 WR_VC_108 G753 C753 WR_VC_110 RC01 C762 WR_VC_114 WR_VC_116 WR_VC_118 WR_VC_120 RC02 WR_VC_122 WR_VC_124 C773 C773 1997 T2U1 2002 2002

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

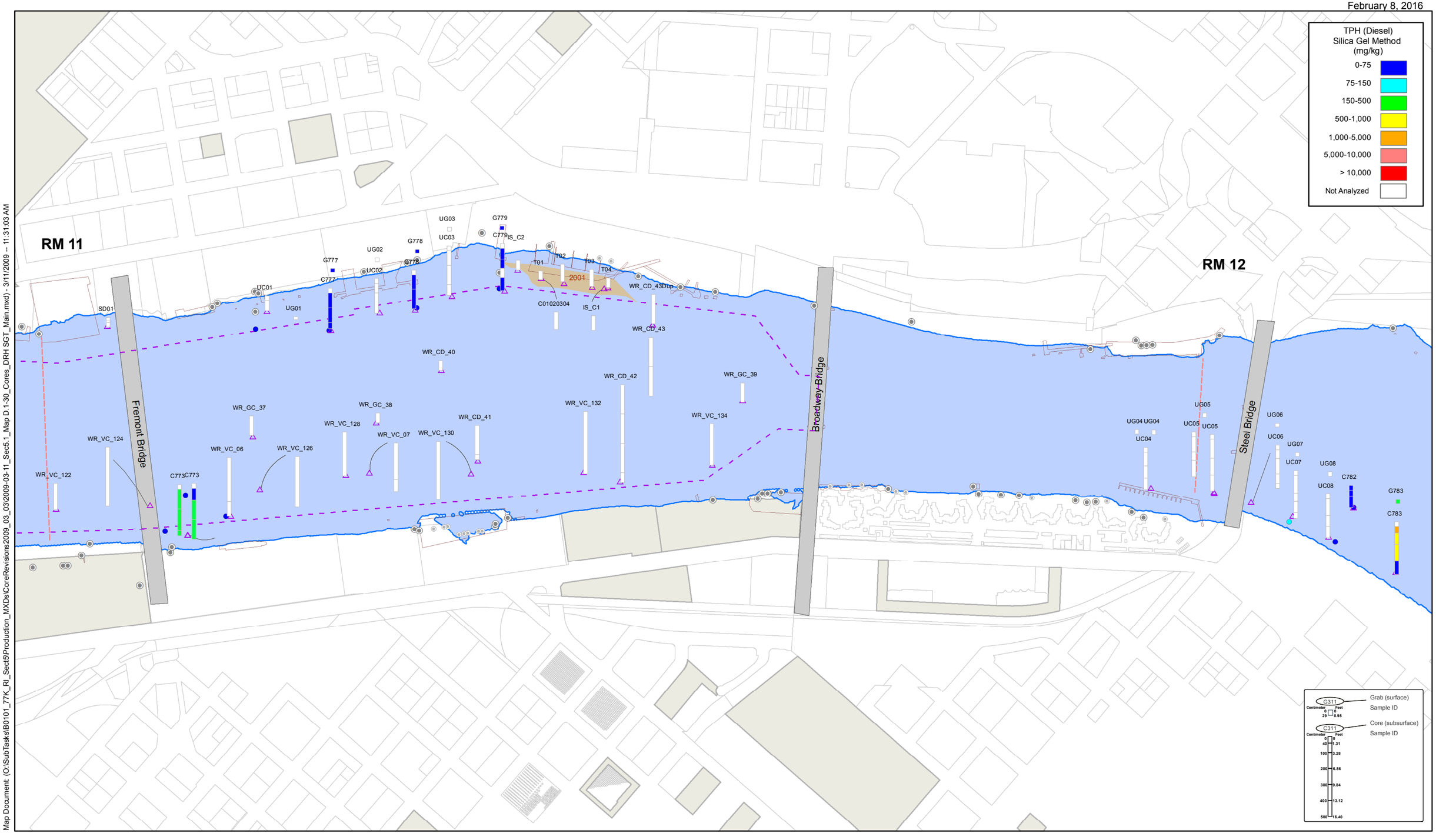
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-47I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) - Silica Gel Method (mg/kg)
River Mile 10 to 11

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

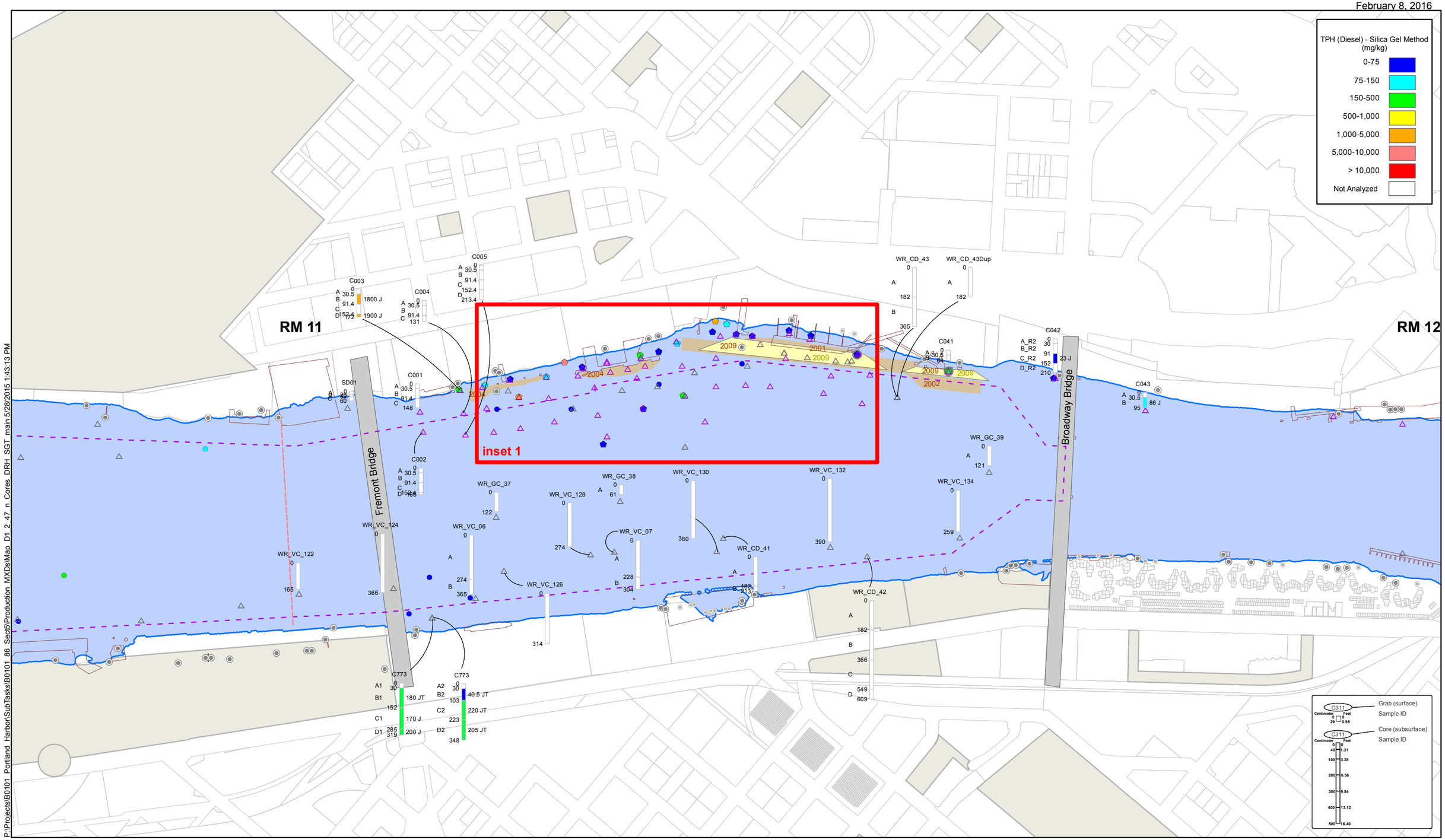
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-47m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) - Silica Gel Method (mg/kg)
River Mile 11 to 12

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

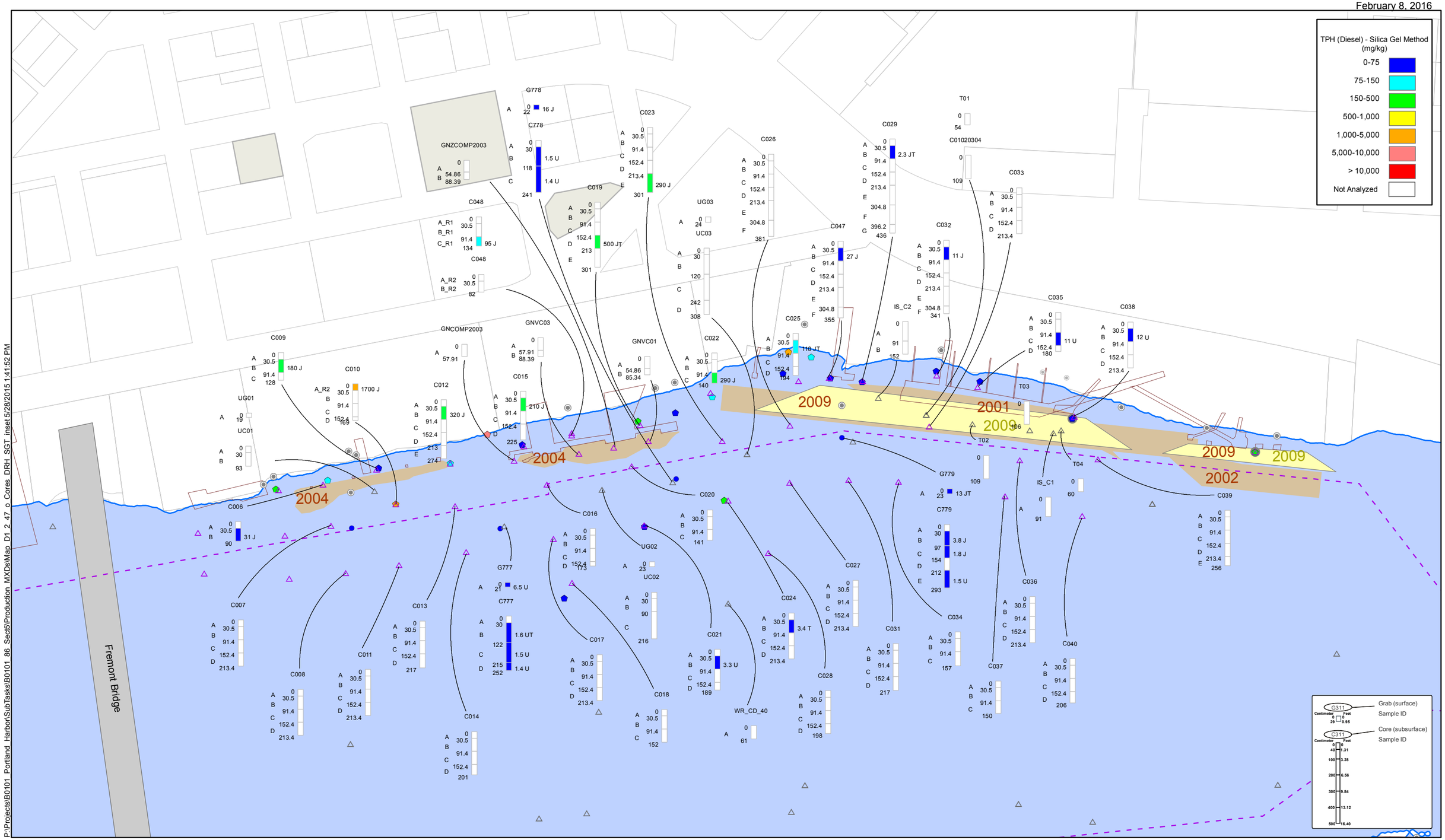
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-47n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) - Silica Gel Method (mg/kg)

River Mile 11.0 - 11.8

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

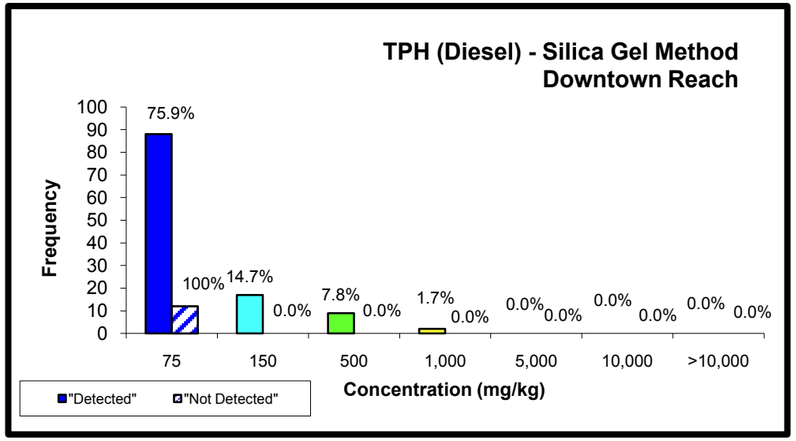
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

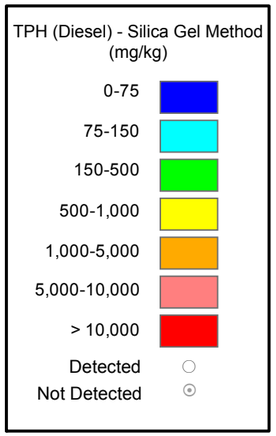
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

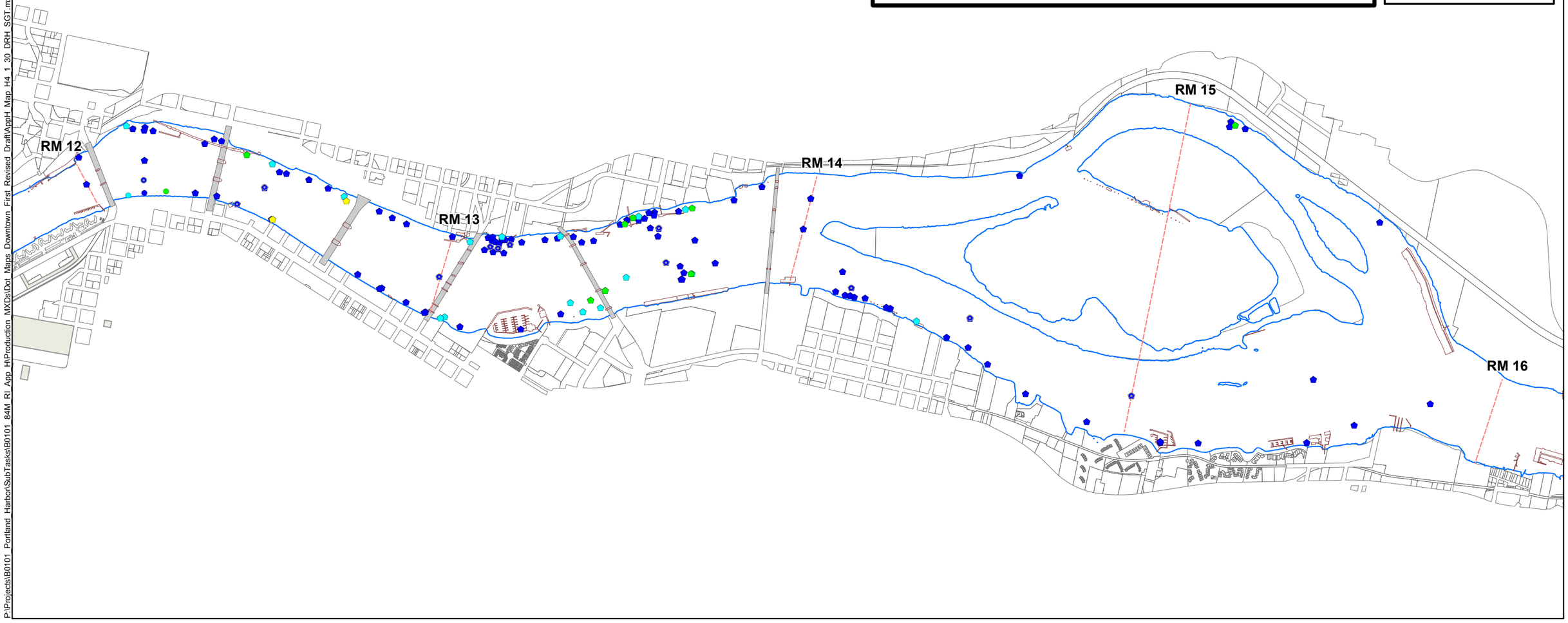
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-47o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
TPH (Diesel) - Silica Gel Method (mg/kg)

River Mile 11.0 - 11.8 - Inset 1

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N

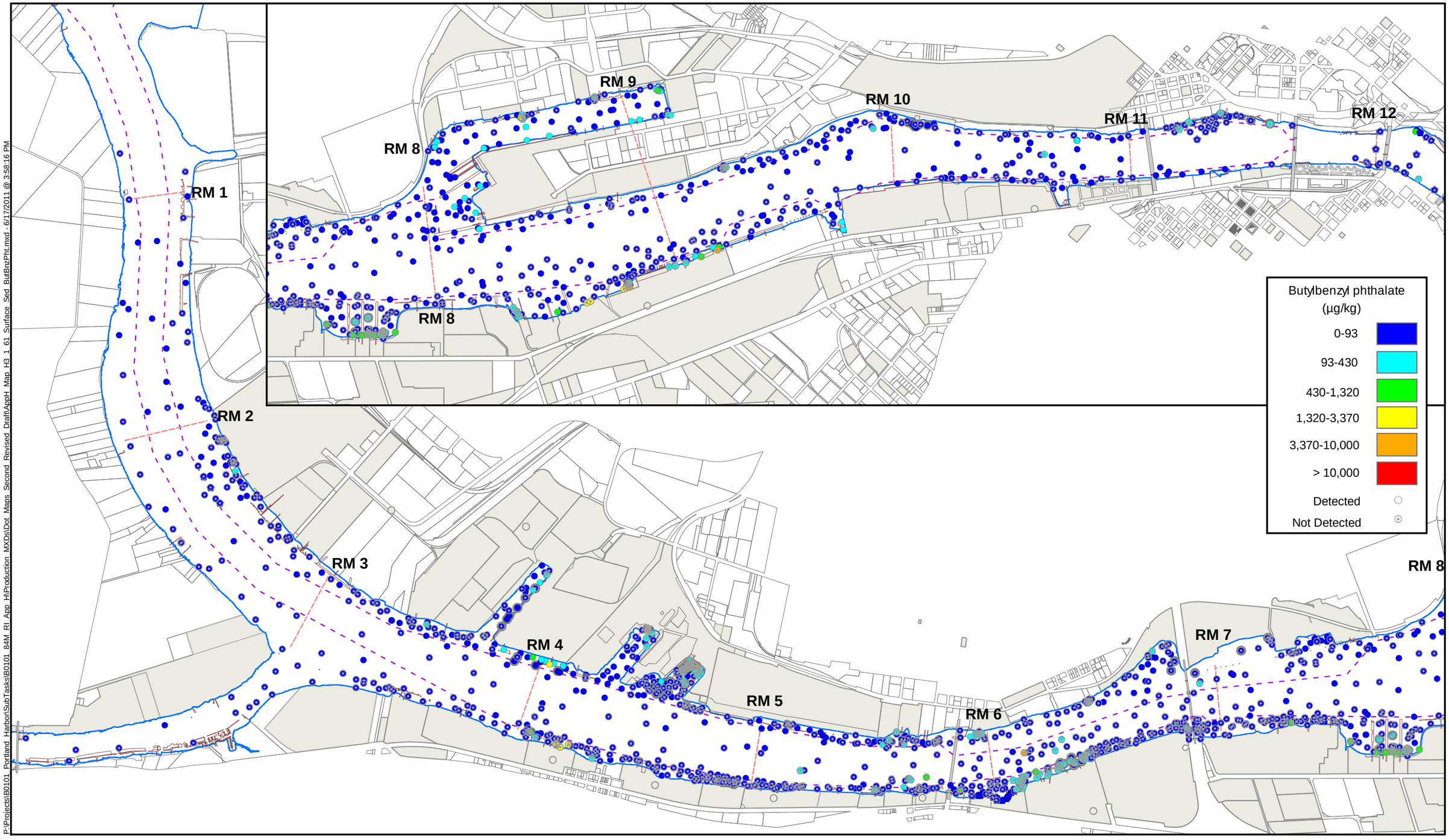
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-48**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
TPH (Diesel) - Silica Gel Method (mg/kg)
Downtown Reach




**Map D1.2-49**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Butylbenzyl phthalate (µg/kg)

Butylbenzyl phthalate (µg/kg)
- 0-93
- 93-430
- 430-1,320
- 1,320-3,370
- 3,370-10,000
- > 10,000
- Not Analyzed

RM 1

RM 2

HC_VC_B501_01
HC_VC_B501_03
HC_B501_C1
T5_01_1
DG18
DC06
1999
B501_C1
B501_C2
1999
HC_VC_B501_02
T5_01_2
DG16
DC04
WR_GC_06
DG17
DC05
DG15
DC03
2001
HC_B503_C1
2001
DG14
DC02
DG13
DC01
DC01
G600
C600
G009
C009
RB13
G011
C011
G602
C602
G601
C601
C601

G311 Grab (surface) Sample ID
C311 Core (subsurface) Sample ID

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-35_Cores_ButBnzPht_Main.mxd) - 3/12/2009 -- 9:08:38 AM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

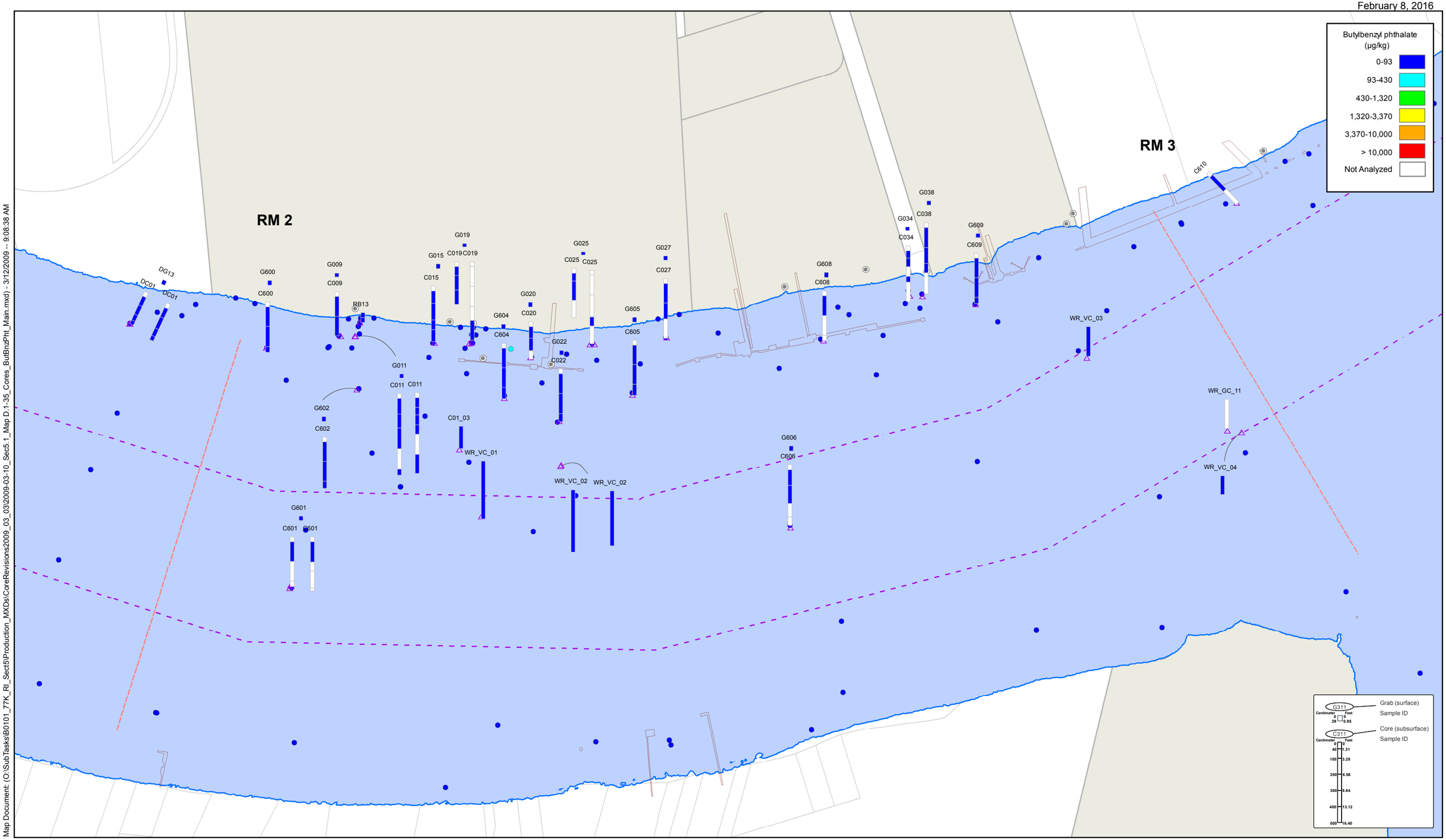
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-50a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Butylbenzyl phthalate (µg/kg)
River Mile 01 to 02




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-35_Cores_ButBnzPht_Main.mxd) - 3/12/2009 -- 9:08:38 AM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

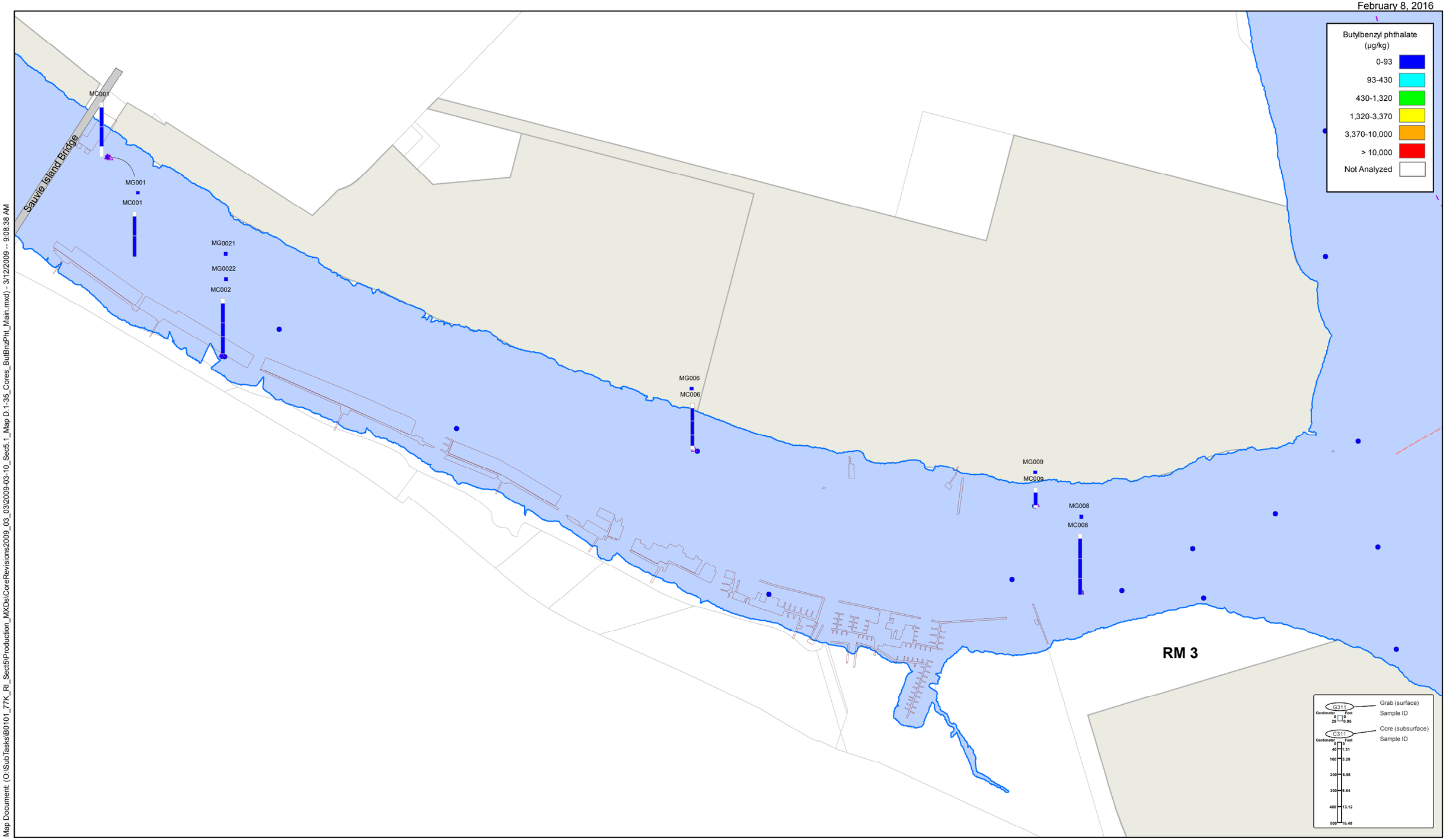
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-50 b**

Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Butylbenzyl phthalate (µg/kg)

River Mile 02 to 03

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

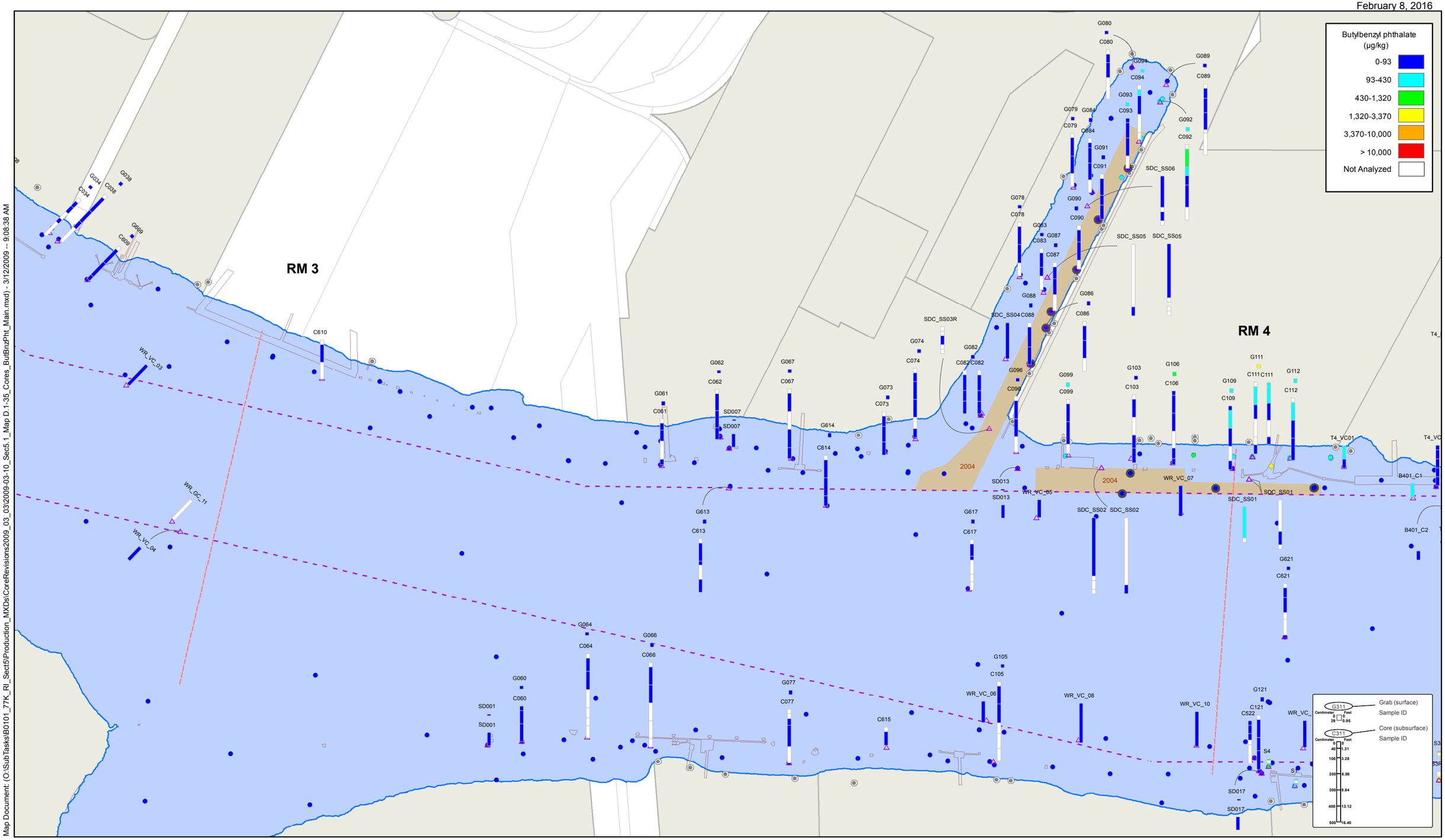
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-50c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Butylbenzyl phthalate (µg/kg)
River Mile 03 - Multnomah Channel

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

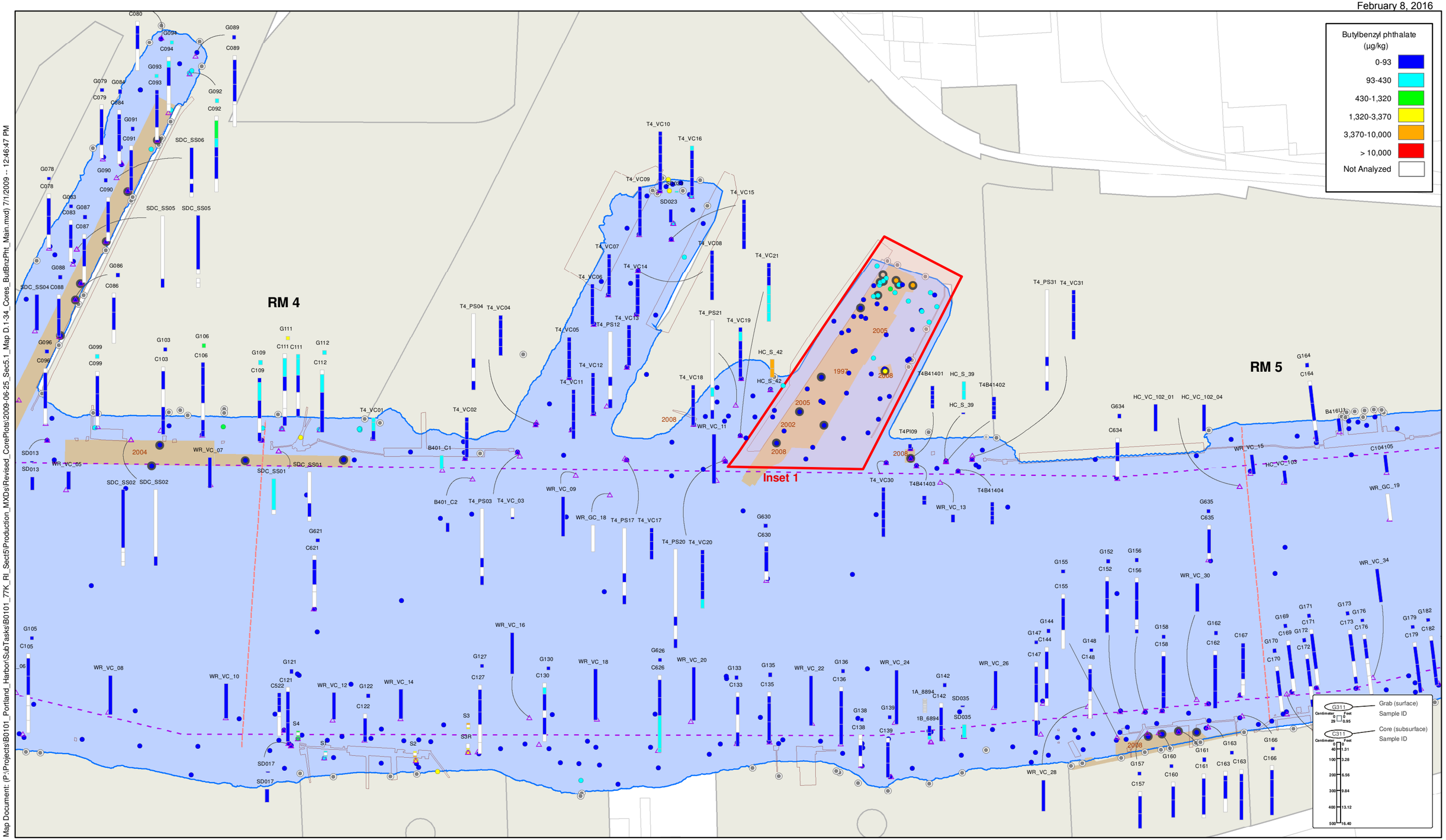
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-50 d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Butylbenzyl phthalate (µg/kg)
River Mile 03 to 04

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-34_Cores_ButBnzPht_Main.mxd) 7/1/2009 -- 12:46:47 PM

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0 150 300 450 600 750 Feet

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-50e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Butylbenzyl phthalate (µg/kg)

River Mile 04 to 05 - Slips

Butylbenzyl phthalate (µg/kg)
- 0-93
- 93-430
- 430-1,320
- 1,320-3,370
- 3,370-10,000
- > 10,000
- Not Analyzed

T4_VC24 T4PI02 HC_S_11 HC_S_11 T4B41106 T4PI042 T4PI032 T4S301 T4PI01 T4B41104 T4B41103 T4PI03 T4PI04 T4_VC29 HC_S_07 HC_S_07 T4S302 T4_PS33 HC_S_18 HC_S_18 T4PI07 HC_S_13 HC_S_13 T4B41102 T4S303 T4B41101 T4S304 SD031 SD031 2005 HC_S_22 HC_S_22 T4S308 T4S305 T4_VC03 T4PI08 T4_PS28 T4_VC28 T4_VC23 HC_S_32 HC_S_32 T4_3 T4S306 1997 2008 T4MD01 T4_VC32 T4_PS32 T4COMP T4_VC_02 T4S307 T4_VC27 T4_2 2005 T4_VC22 T4_UP10 HC_S_27 HC_S_27 T4_VC25 T4_UP09 2008 T4_1 T4_PS22 T4_VC26 T4_VC26 T4MD02 2008 2002 T4_VC_01

G311 Grab (surface) Sample ID
C311 Core (subsurface) Sample ID

| Centimeter | Feet |
|---|---|
| 0 | 0 |
| 40 | 1.31 |
| 100 | 3.28 |
| 200 | 6.56 |
| 300 | 9.84 |
| 400 | 13.12 |
| 500 | 16.40 |

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-34_Cores_ButBnzPht_Insets.mxd) 7/1/2009 -- 12:43:22 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 125 250 500 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

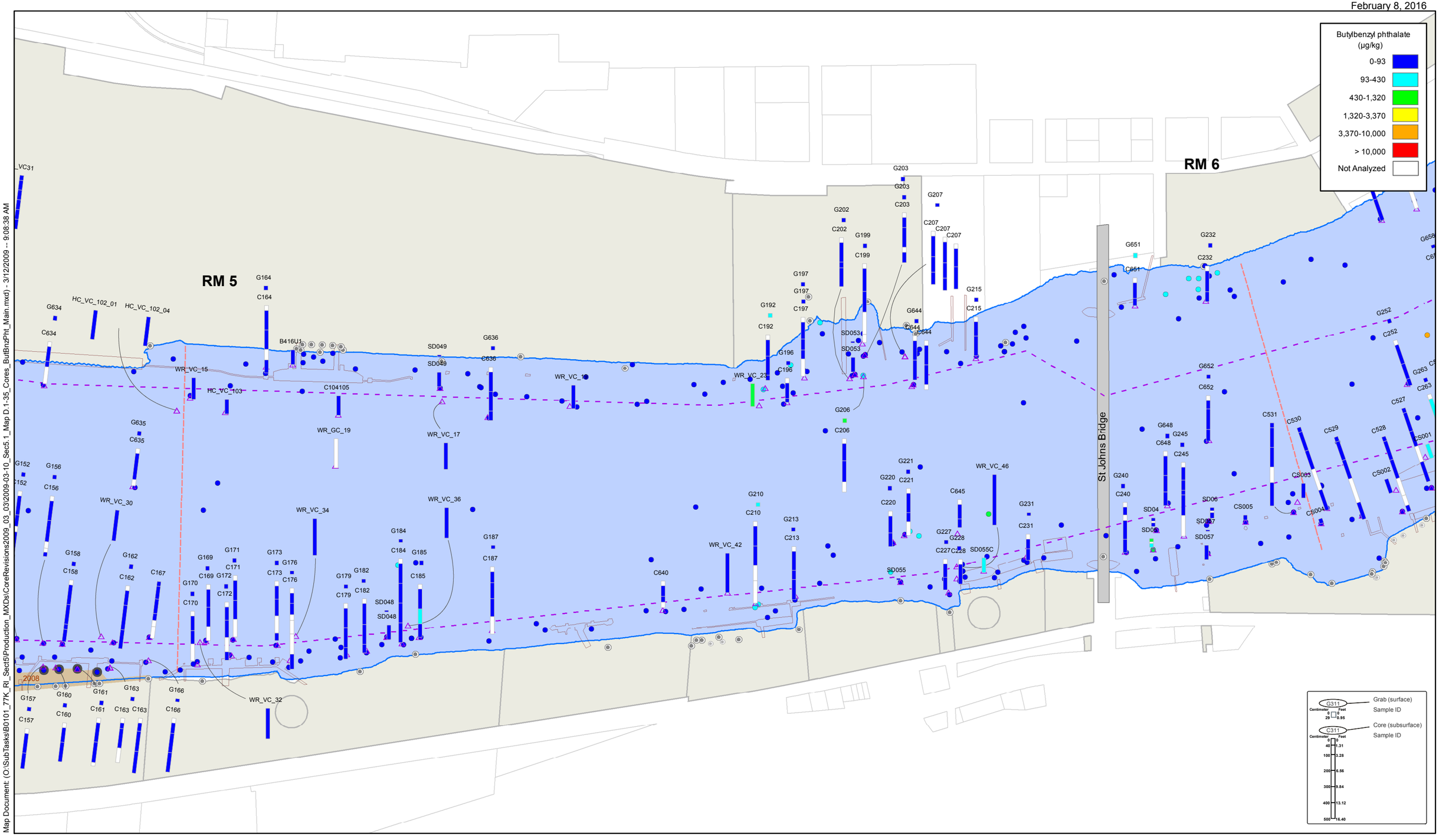
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-50e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Butylbenzyl phthalate (µg/kg)

River Mile 04 to 05 - Slips - Inset 1

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

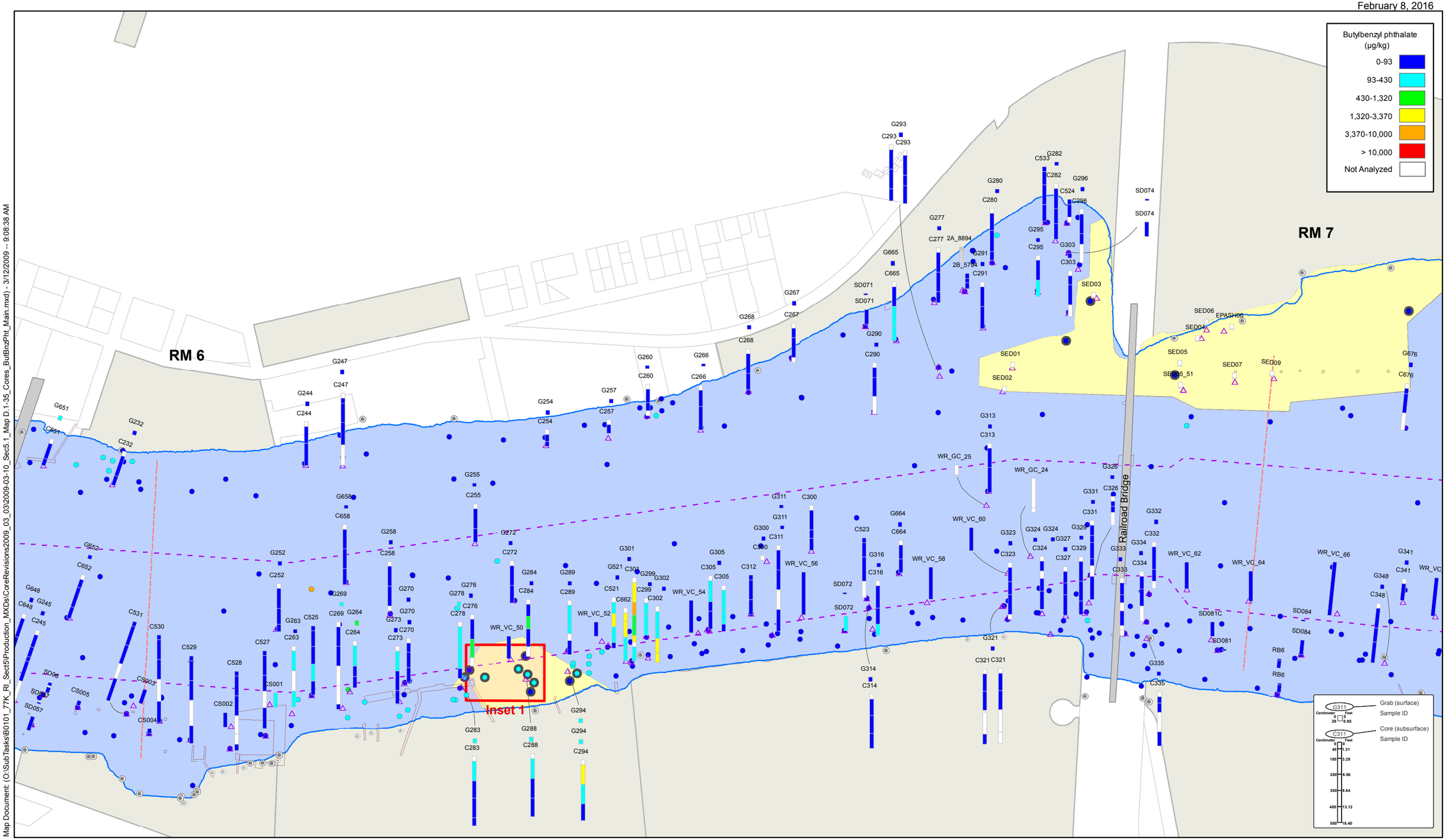
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-50f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Butylbenzyl phthalate (µg/kg)

River Mile 05 to 06

Map Document: (O:\SubTasks\B0101_7TK_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-35_Cores_ButBnzPht_Main.mxd) - 3/12/2009 -- 9:08:38 AM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

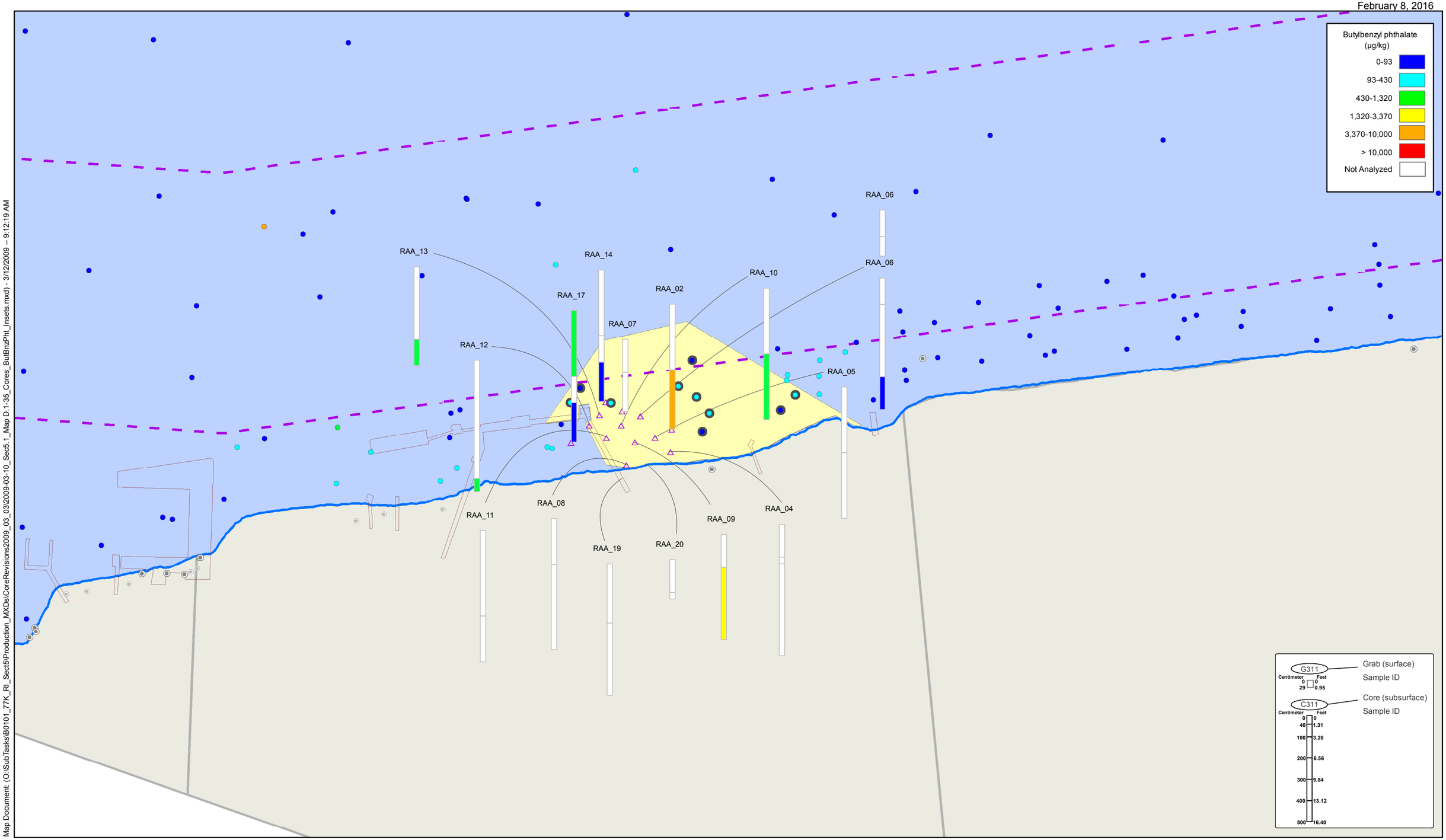
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-50g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Butylbenzyl phthalate (µg/kg)
River Mile 06 to 07




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-35_Cores_ButBnzPht_Insets.mxd) - 3/12/2009 – 9:12:19 AM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

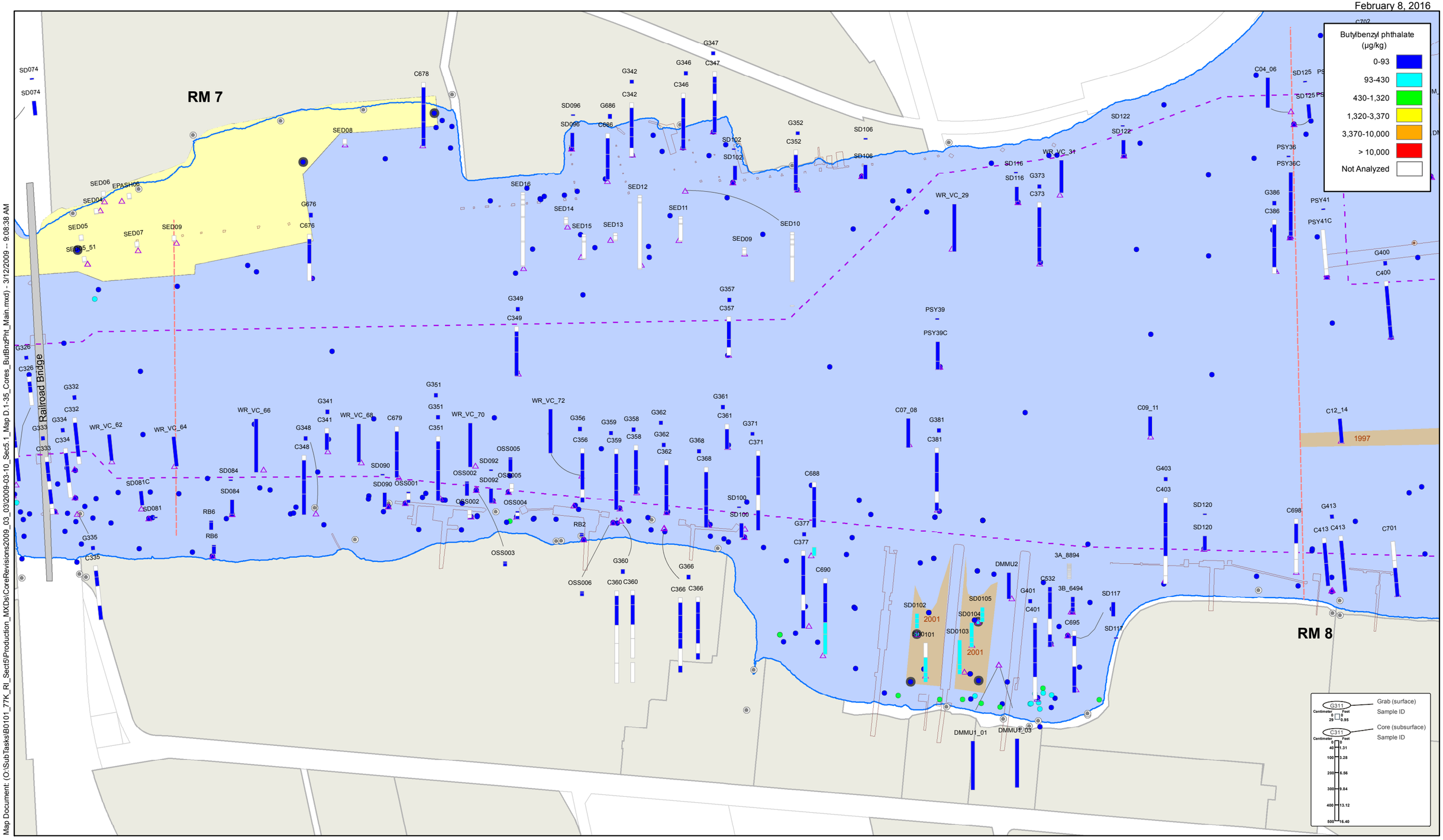
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-50 g1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Butylbenzyl phthalate (µg/kg)

River Mile 06 to 07 - Inset 1




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-35_Cores_ButBnzPht_Main.mxd) - 3/12/2009 -- 9:08:38 AM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

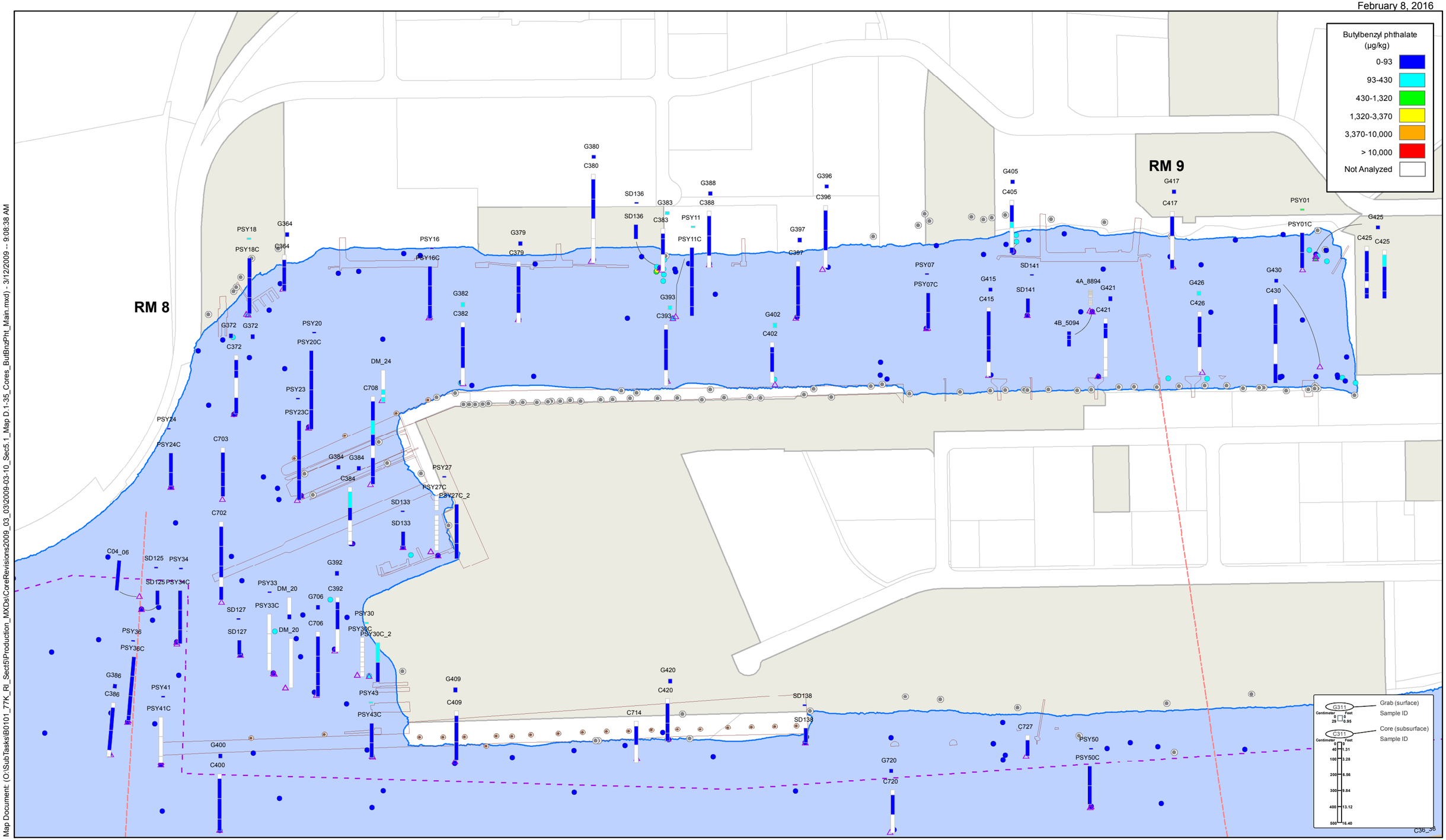
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-50h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Butylbenzyl phthalate (µg/kg)
River Mile 07 to 08

Map Document: (O:\SubTasks\B0101_7TK_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-35_Cores_ButBnzPht_Main.mxd) - 3/12/2009 -- 9:08:38 AM




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-50i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Butylbenzyl phthalate (µg/kg)

River Mile 08 to 09 - Swan Is. East

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-35_Cores_ButBnzPht_Main.mxd) - 3/12/2009 -- 9:08:38 AM

Butylbenzyl phthalate (µg/kg)
- 0-93
- 93-430
- 430-1,320
- 1,320-3,370
- 3,370-10,000
- > 10,000
- Not Analyzed

RM 8

RM 9

1997

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-50j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Butylbenzyl phthalate (µg/kg)

River Mile 08 to 09 - Swan Is. West

Butylbenzyl phthalate (µg/kg)
- 0-93
- 93-430
- 430-1,320
- 1,320-3,370
- 3,370-10,000
- > 10,000
- Not Analyzed

RM 10

RM 9

1997
2000
2002
2005

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

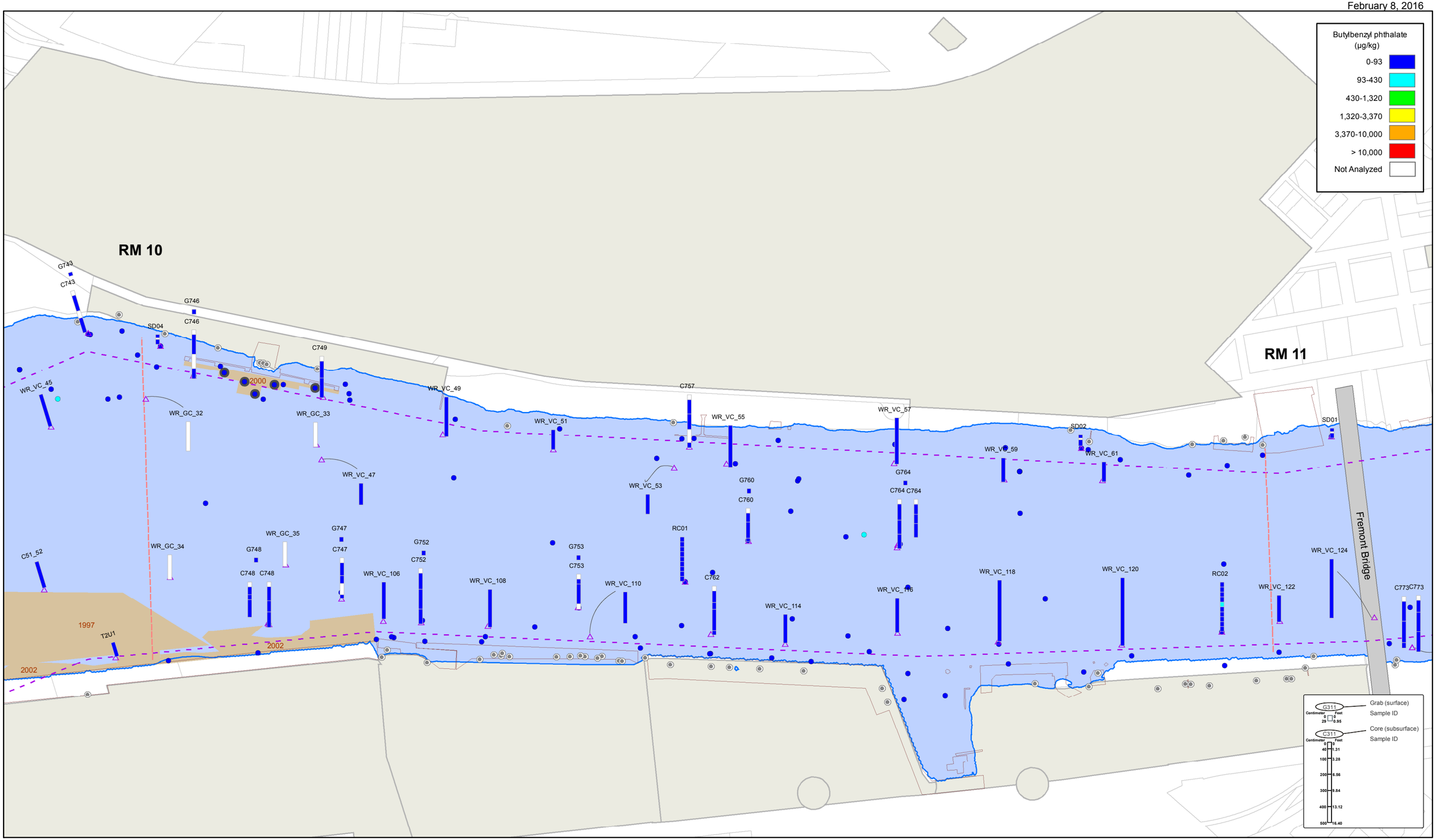
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-50k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Butylbenzyl phthalate (µg/kg)
River Mile 09 to 10

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-35_Cores_ButBnzPht_Main.mxd) - 3/12/2009 -- 9:08:38 AM

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-10_Sec5.1_Map D.1-35_Cores_ButBnzPht_Main.mxd) - 3/12/2009 - 9:08:38 AM




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

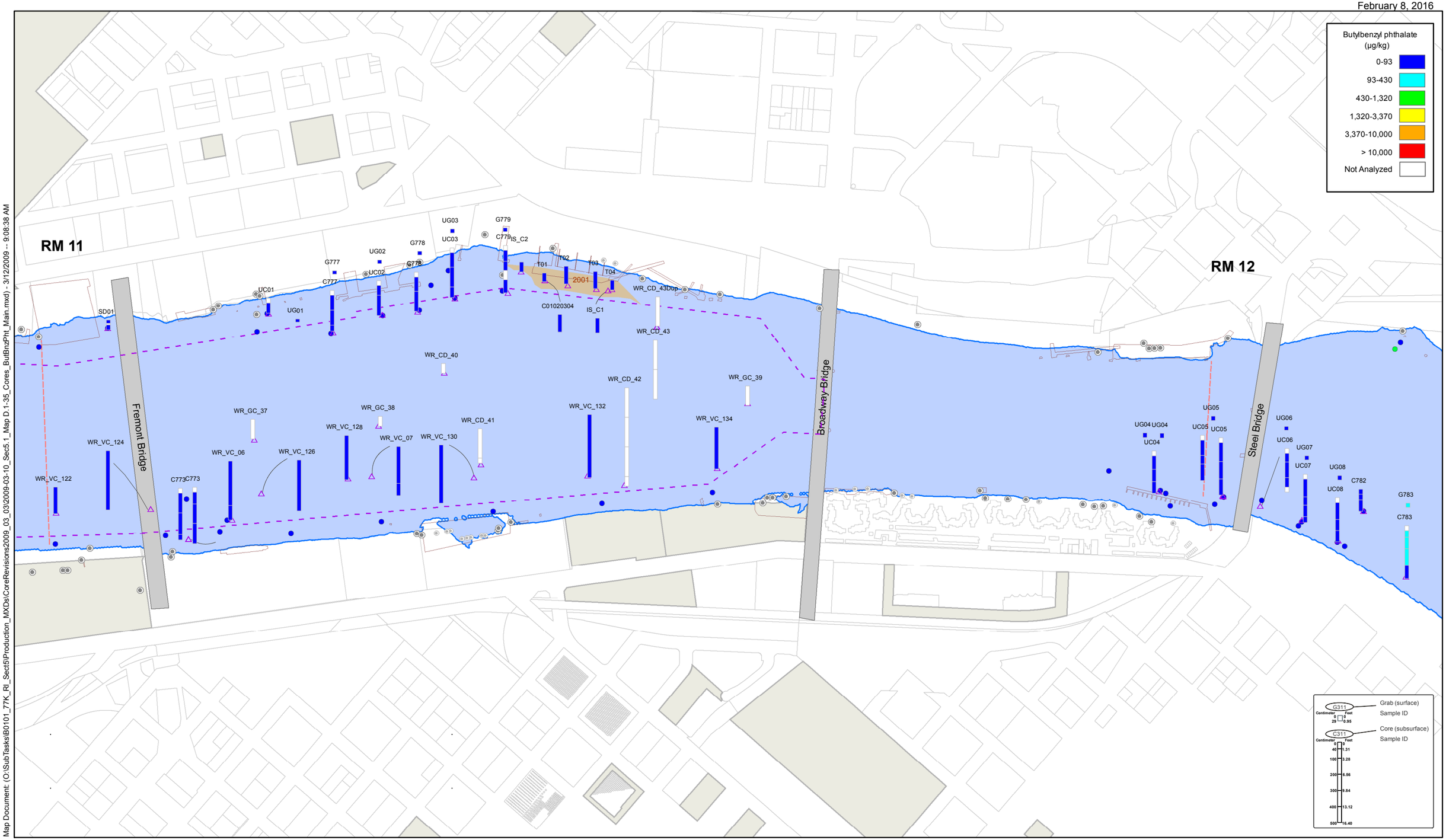
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-50I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Butylbenzyl phthalate (µg/kg)

River Mile 10 to 11

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

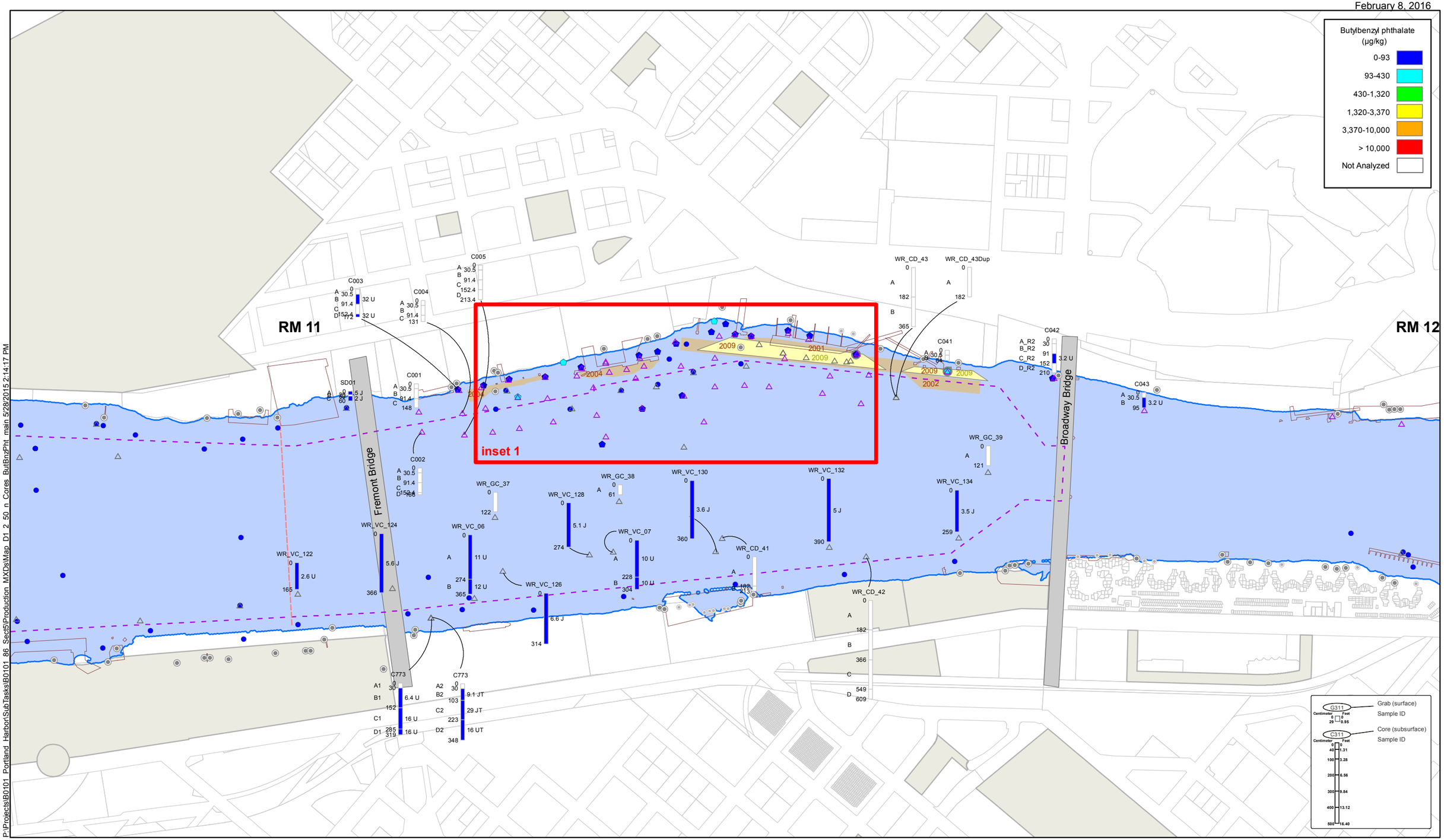
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-50m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Butylbenzyl phthalate (µg/kg)
River Mile 11 to 12

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

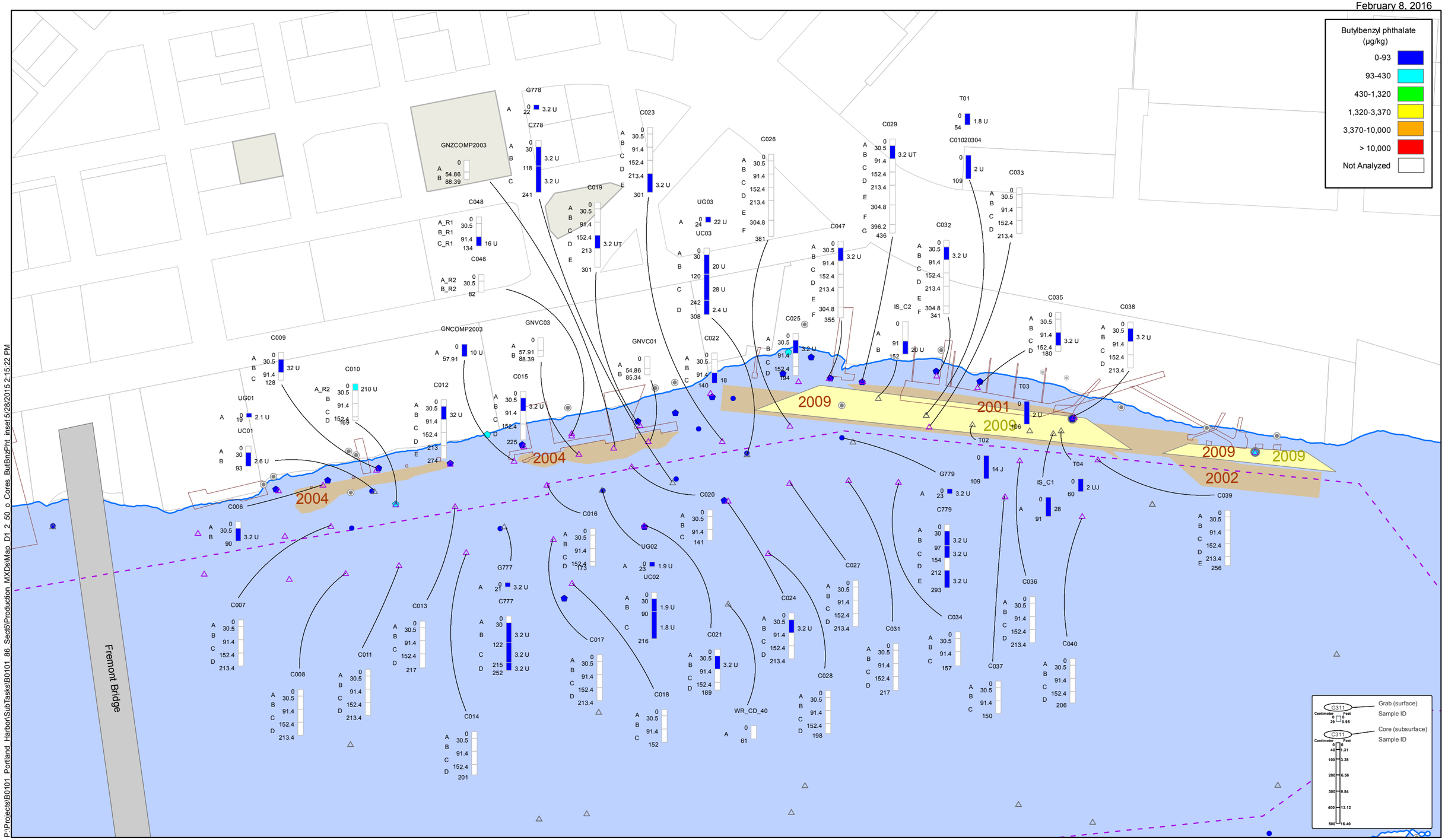
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-50n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Butylbenzyl phthalate (µg/kg)

River Mile 11.0 - 11.8

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

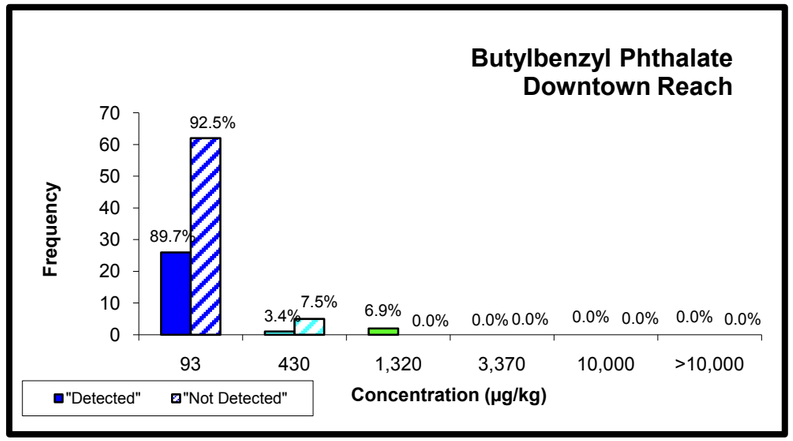
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

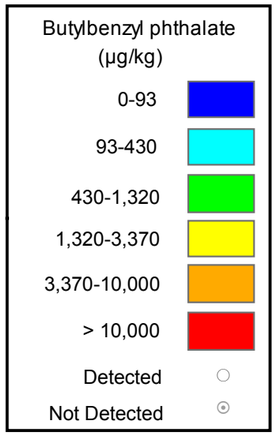
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

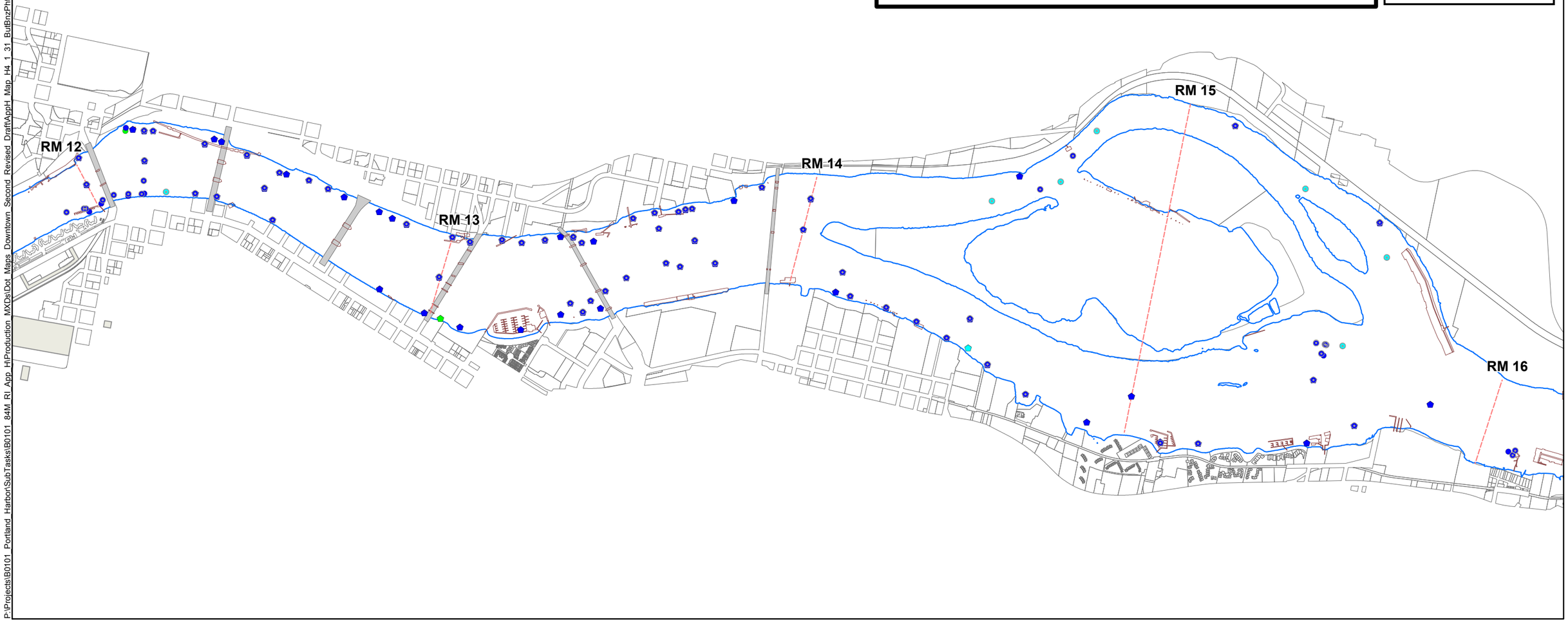
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-50o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Butylbenzyl phthalate (µg/kg)

River Mile 11.0 - 11.8 - Inset 1

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N

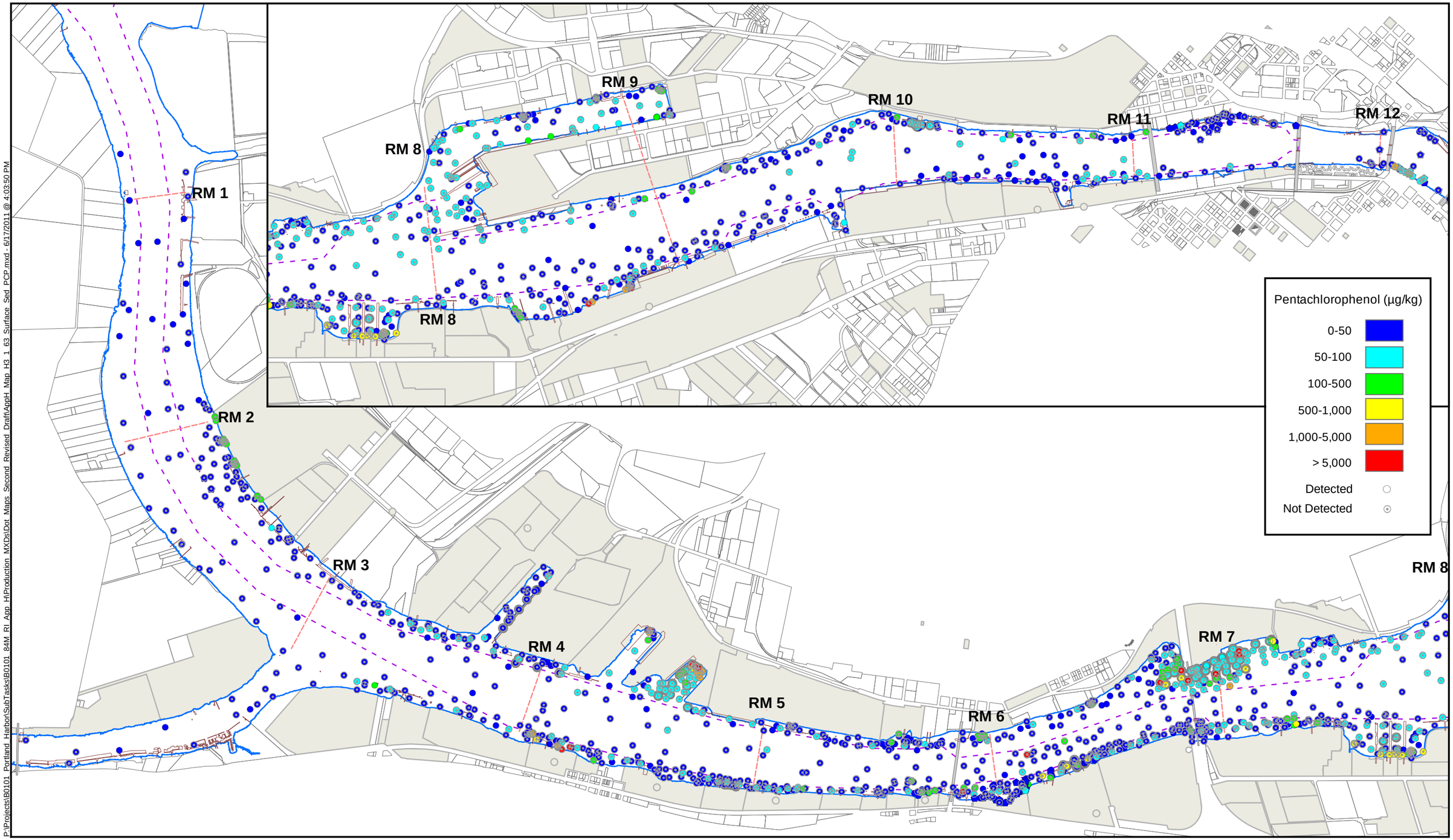
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-51**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Butylbenzyl phthalate (µg/kg)
Downtown Reach

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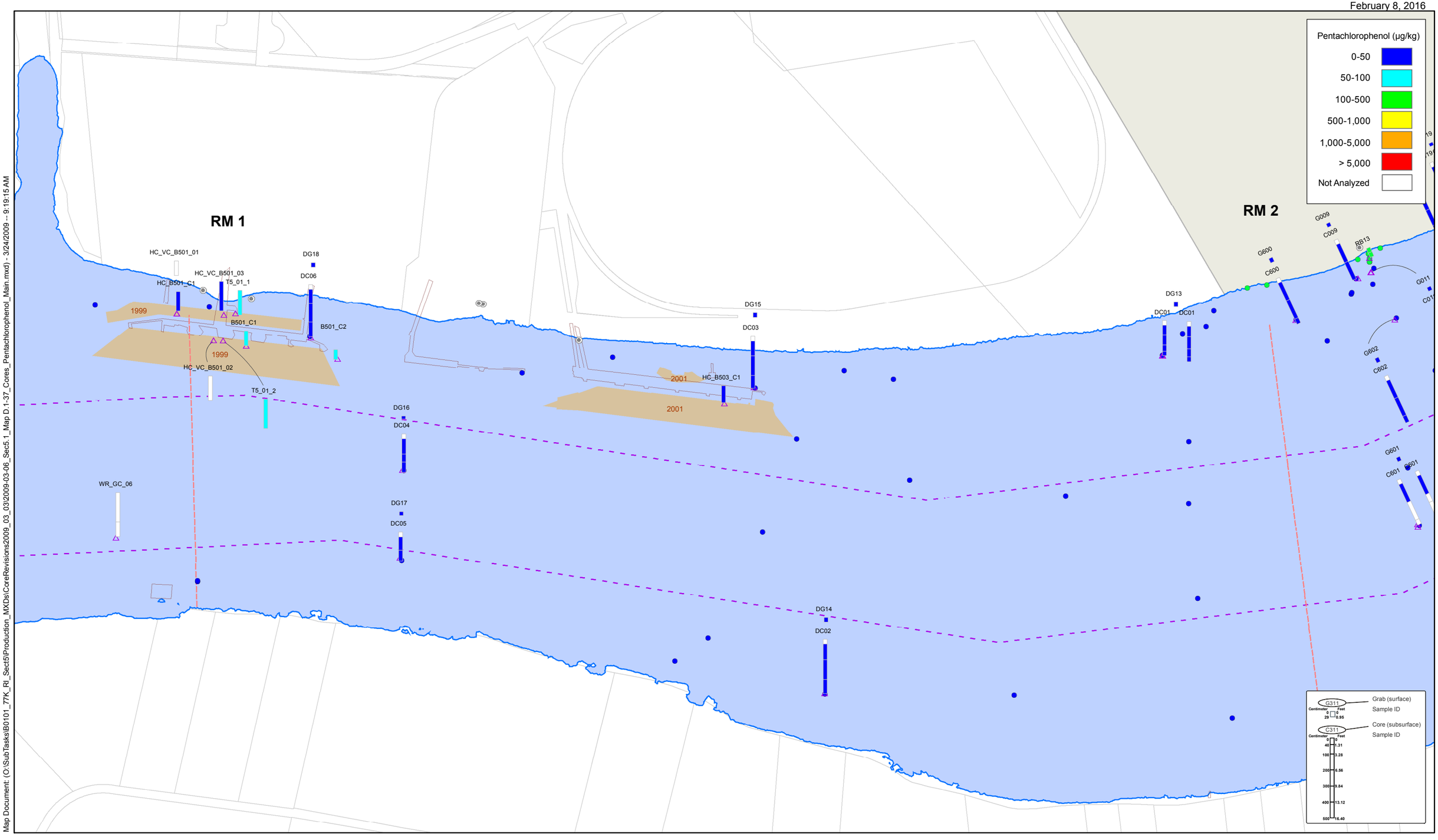
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

0 1,000 2,000 3,000 4,000 5,000 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-52**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Pentachlorophenol (µg/kg)

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

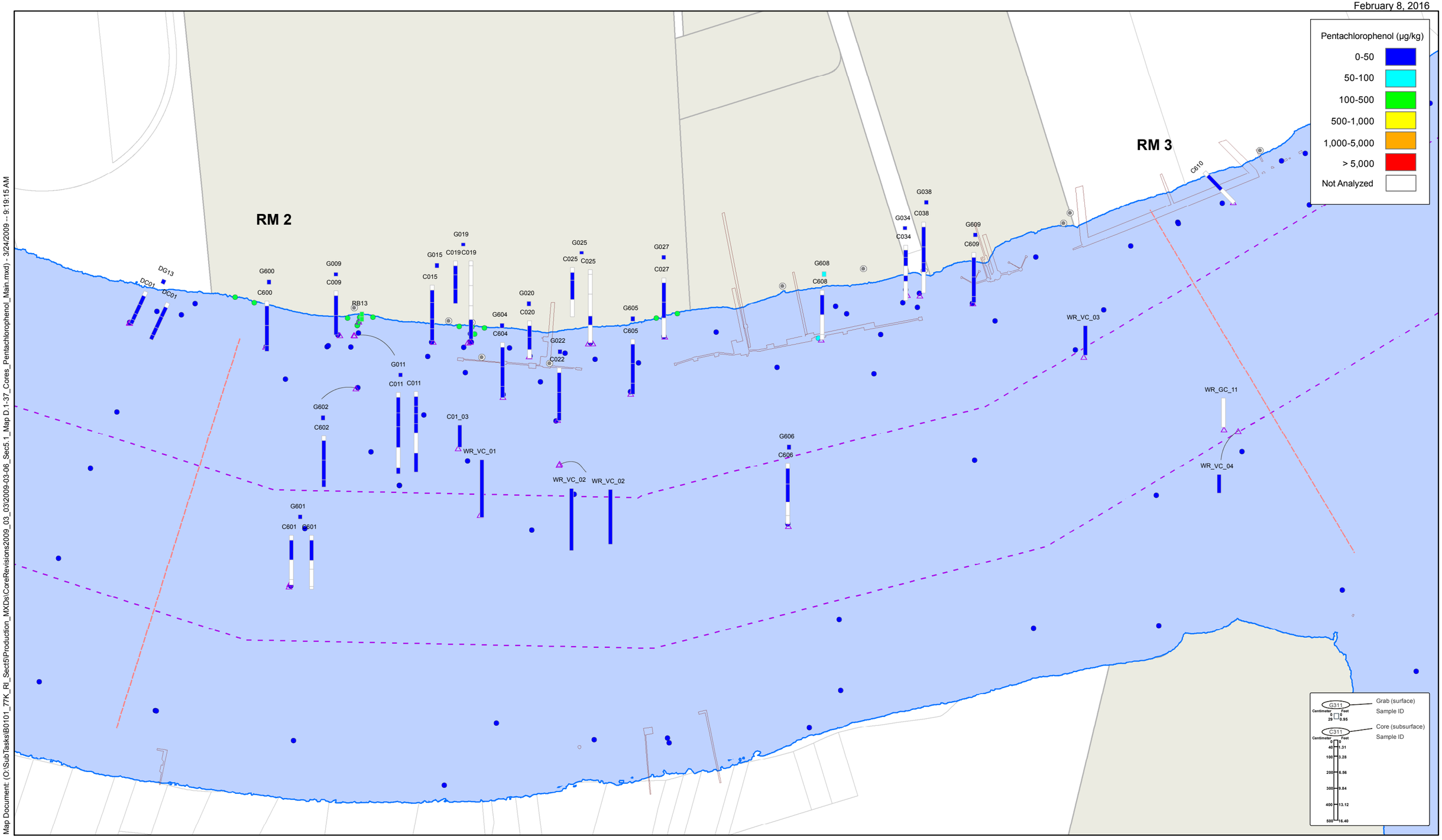
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-53a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Pentachlorophenol (µg/kg)

River Mile 01 to 02

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-37_Cores_Pentachlorophenol_Main.mxd) - 3/24/2009 -- 9:19:15 AM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

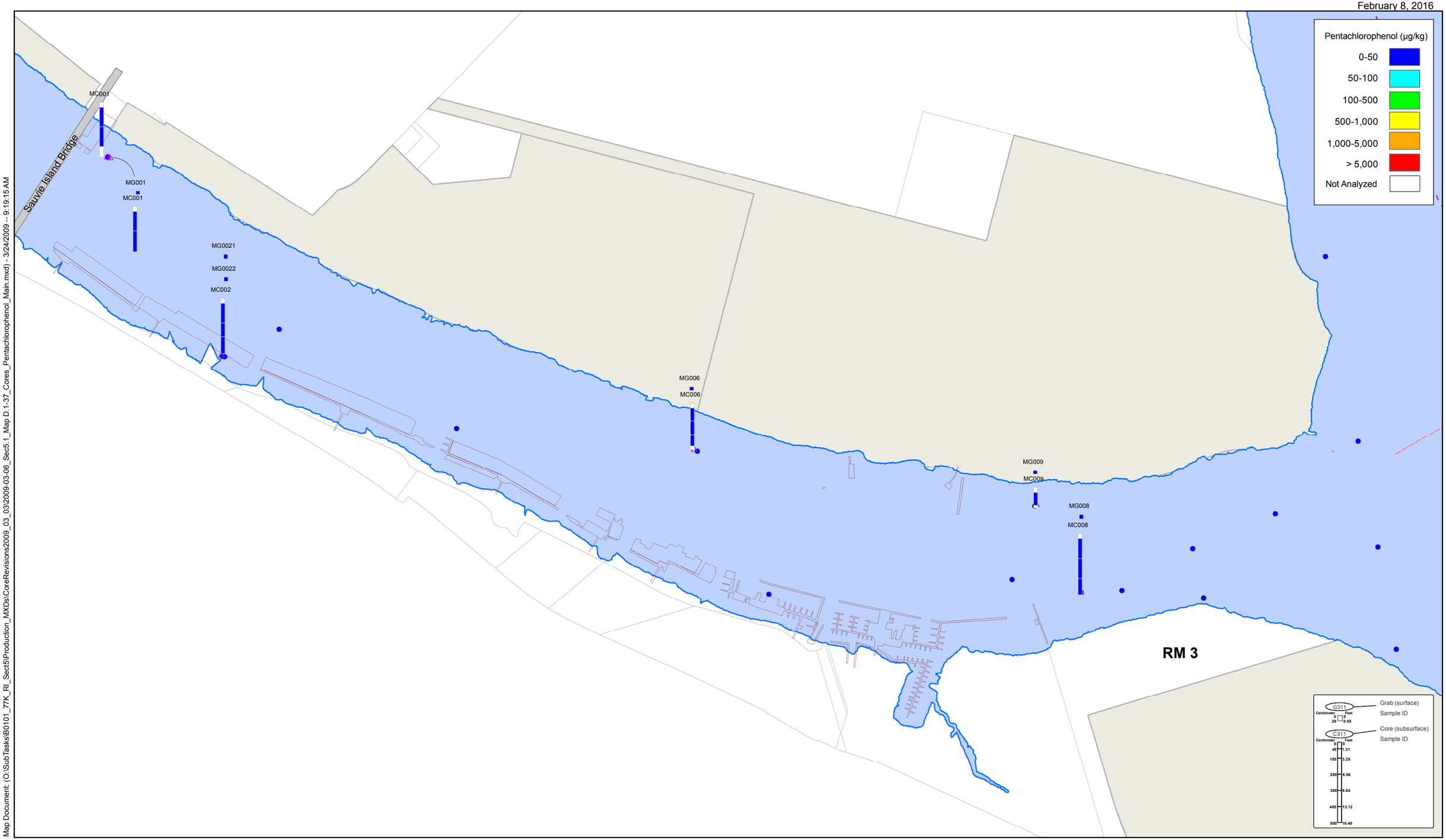
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-53 b**

Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Pentachlorophenol (µg/kg)

River Mile 02 to 03

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

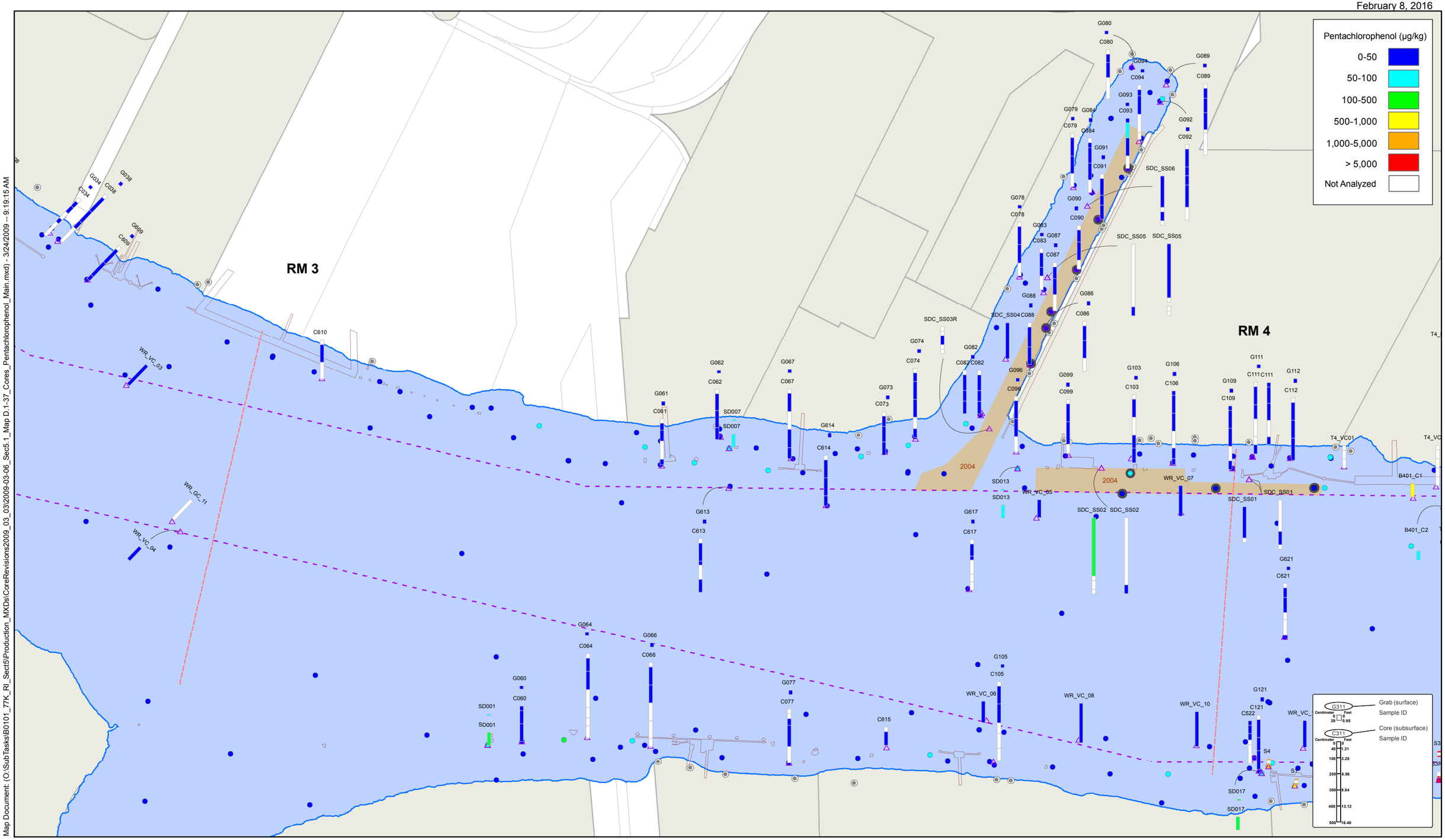
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-53c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Pentachlorophenol (µg/kg)

River Mile 03 - Multnomah Channel

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-53 d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Pentachlorophenol (µg/kg)

River Mile 03 to 04

Pentachlorophenol (µg/kg)
0-50
50-100
100-500
500-1,000
1,000-5,000
> 5,000
Not Analyzed

RM 4
RM 5
Inset 1

Map Document: (O:\SubTasks\B0101_77K_RI_Sec5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-37_Cores_Pentachlorophenol_Main.mxd) - 3/24/2009 -- 9:19:15 AM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

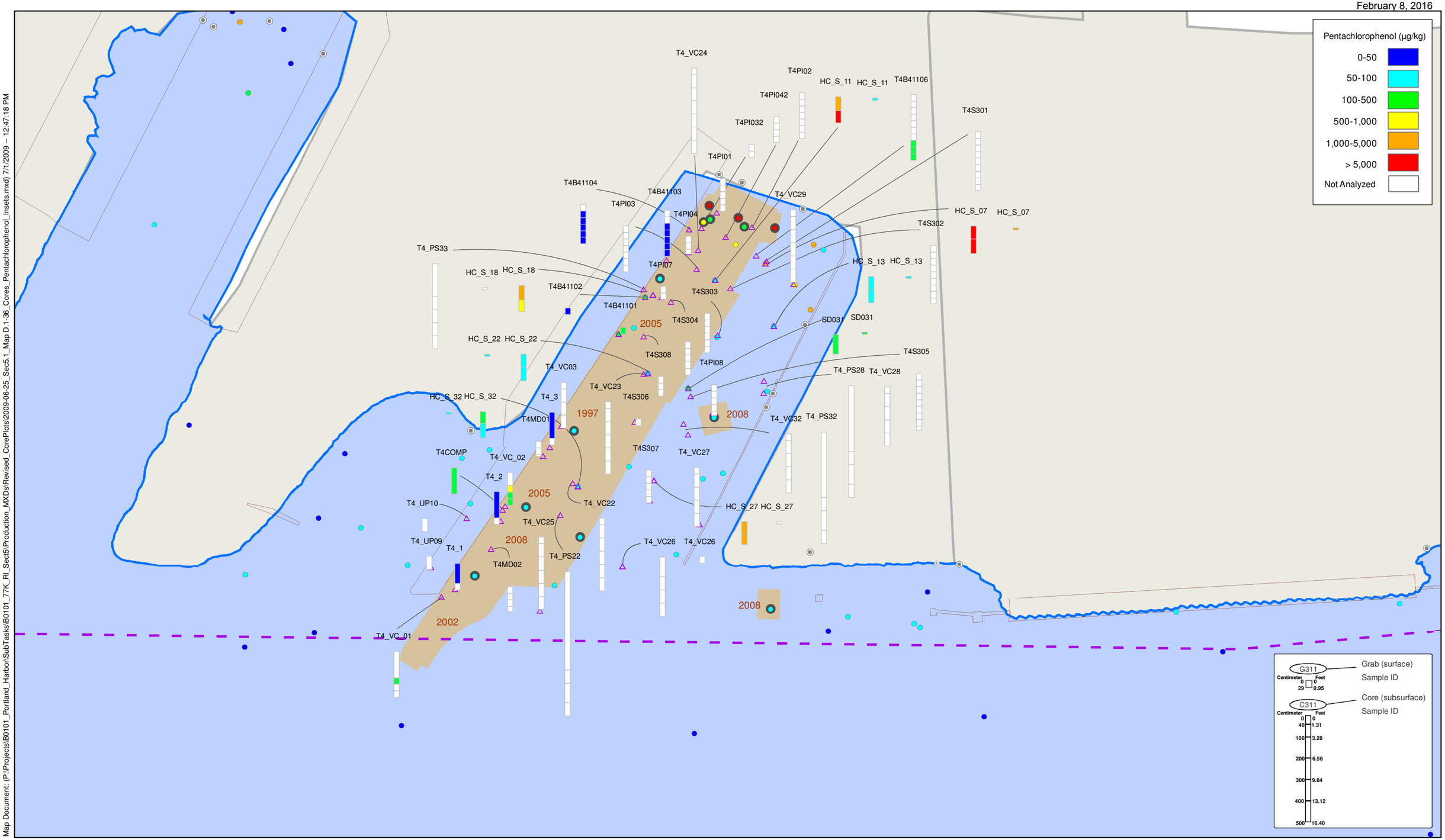
- Upland ECSI Sites (2008)
- Waterfront Taxlots

Grab (surface) Sample ID
Core (subsurface) Sample ID

**Map D1.2-53e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Pentachlorophenol (µg/kg)

River Mile 04 to 05 - Slips

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-36_Cores_Pentachlorophenol_Insets.mxd) 7/1/2009 -- 12:47:18 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

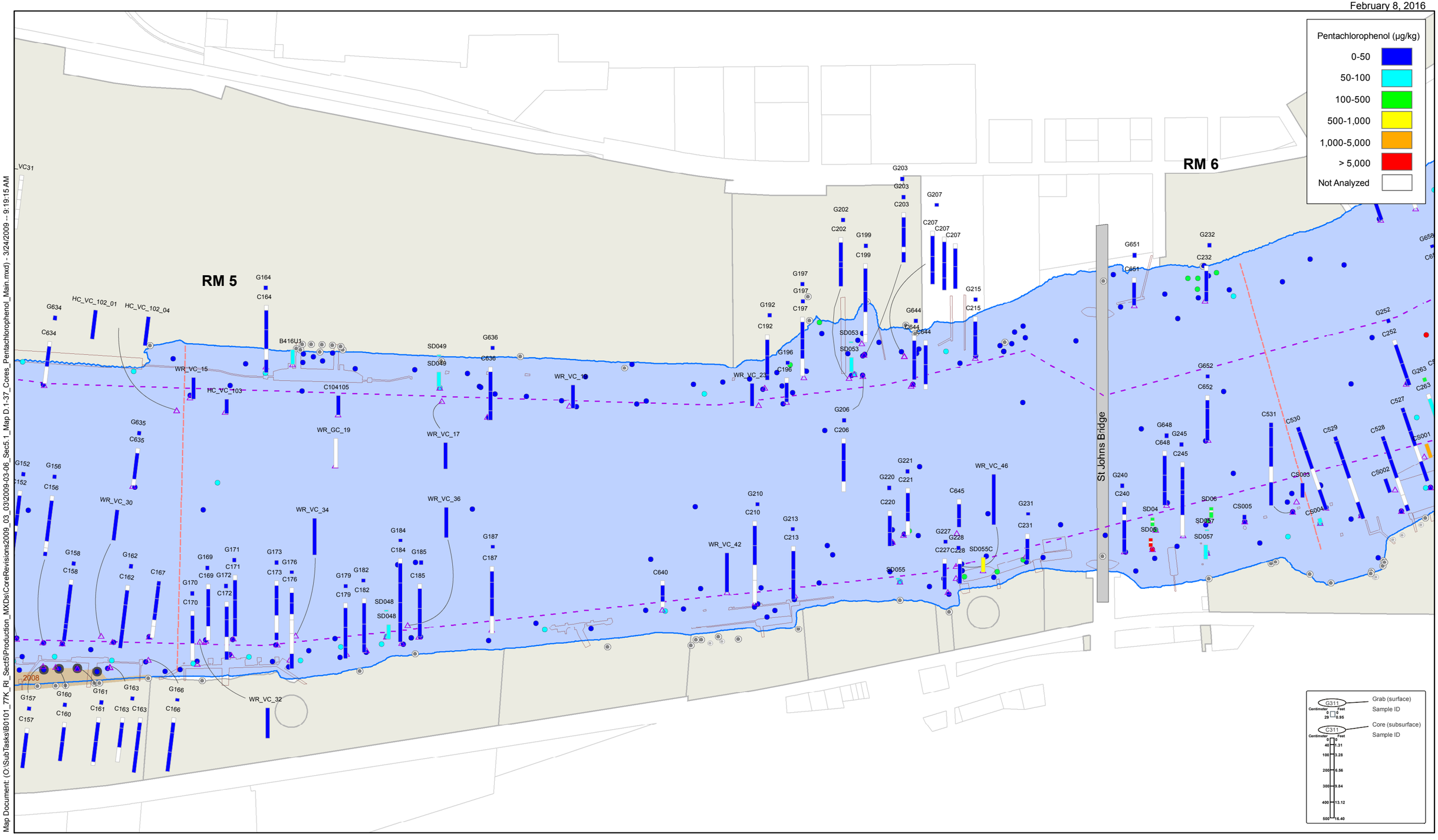
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-53e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Pentachlorophenol (µg/kg)
River Mile 04 to 05 - Slips - Inset 1

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

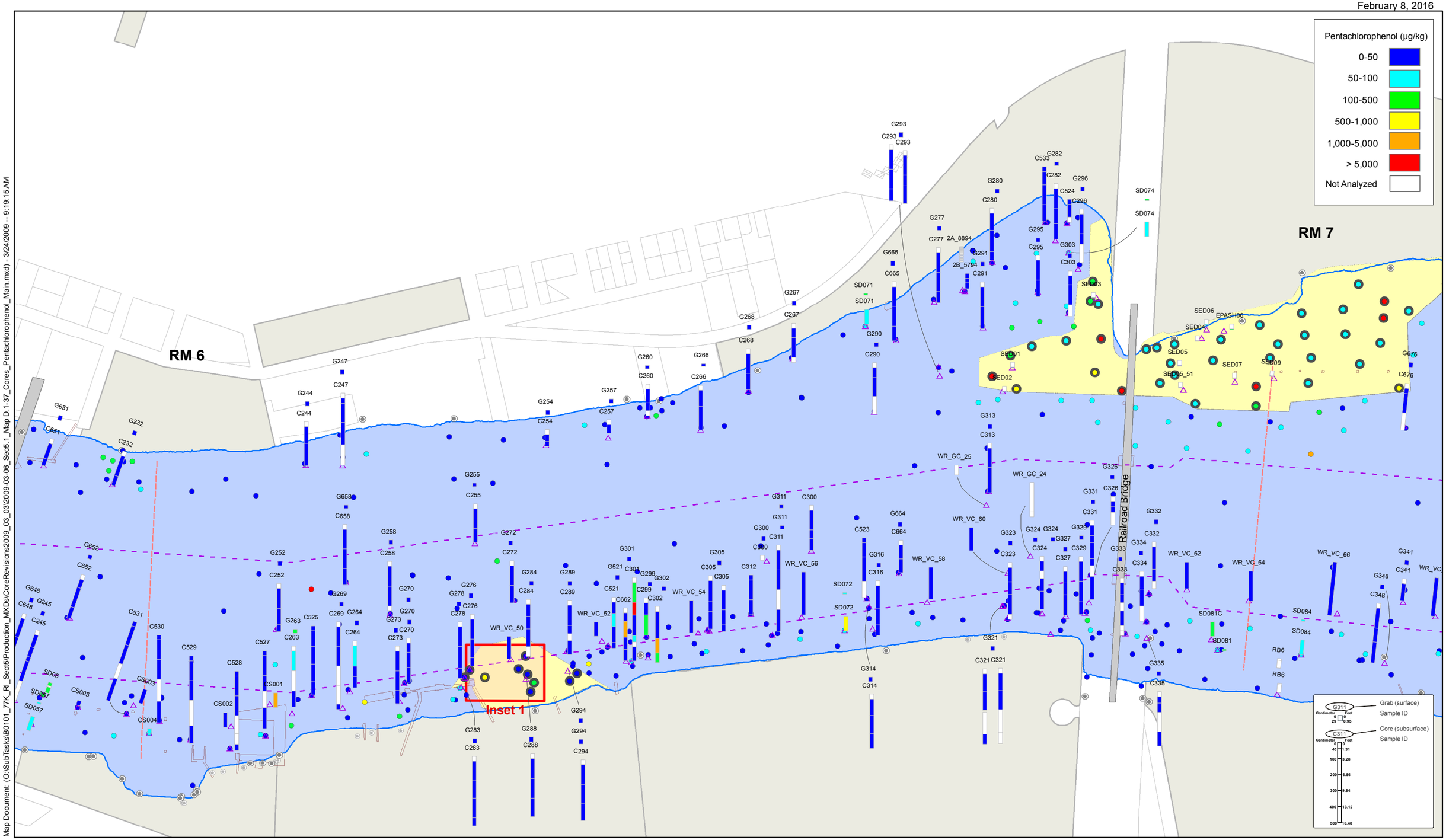
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-53f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Pentachlorophenol (µg/kg)

River Mile 05 to 06

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

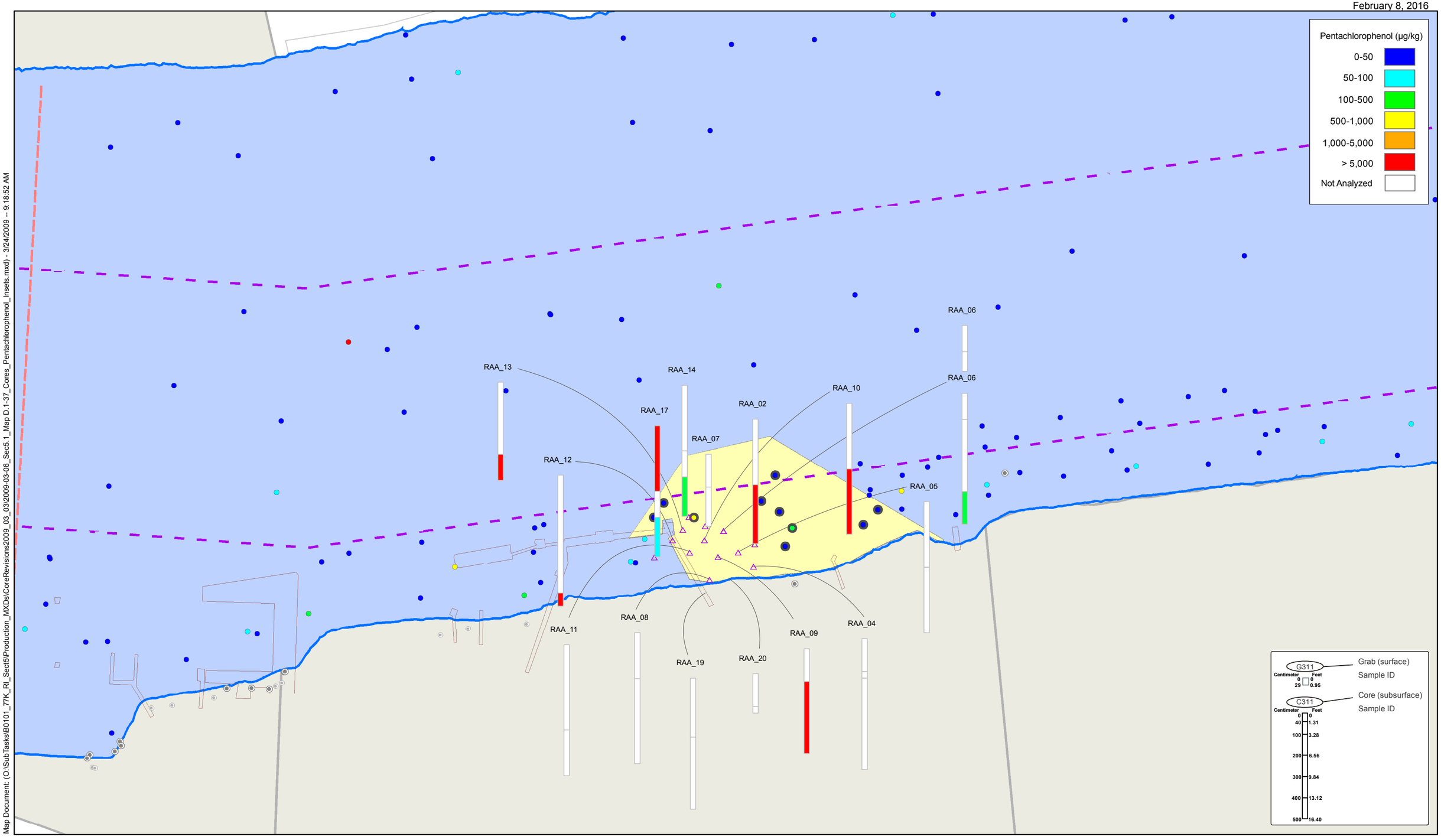
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-53g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Pentachlorophenol (µg/kg)

River Mile 06 to 07

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-37_Cores_Pentachlorophenol_Insets.mxd) - 3/24/2009 -- 9:18:52 AM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

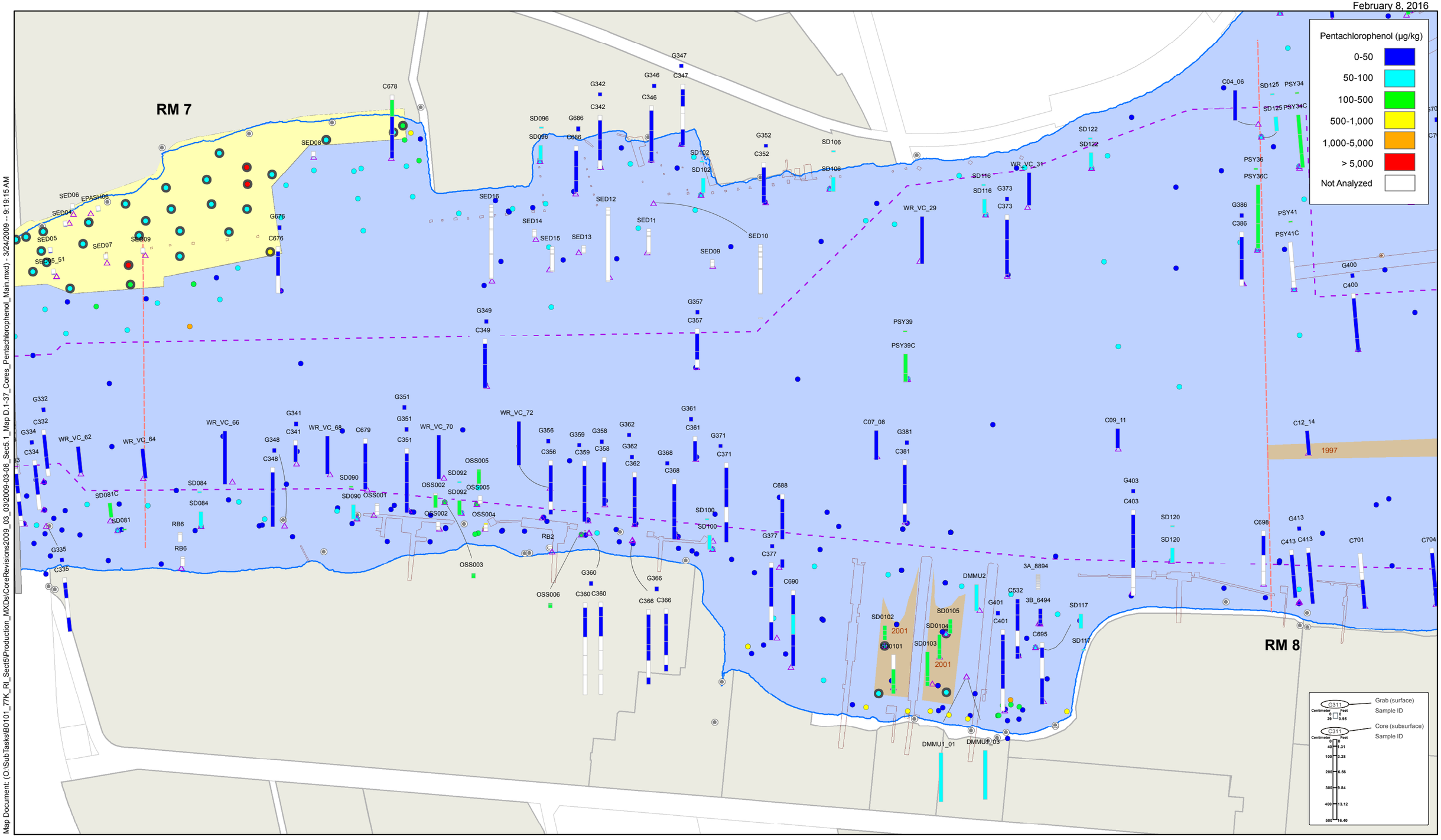
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-53g1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Pentachlorophenol (µg/kg)

River Mile 06 to 07 - Inset 1




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-53h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Pentachlorophenol (µg/kg)

River Mile 07 to 08

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-37_Cores_Pentachlorophenol_Main.mxd) - 3/24/2009 -- 9:19:15 AM

RM 8

RM 9

Pentachlorophenol (µg/kg)
- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- > 5,000
- Not Analyzed

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-53i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Pentachlorophenol (µg/kg)

River Mile 08 to 09 - Swan Is. East

Pentachlorophenol (µg/kg)
- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- > 5,000
- Not Analyzed

RM 8

RM 9

1997

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-53j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Pentachlorophenol (µg/kg)
River Mile 08 to 09 - Swan Is. West

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-37_Cores_Pentachlorophenol_Main.mxd) 4/14/2009 -- 3:04:24 PM

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-37_Cores_Pentachlorophenol_Main.mxd) - 3/24/2009 -- 9:19:15 AM

Pentachlorophenol (µg/kg)
- 0-50
- 50-100
- 100-500
- 500-1,000
- 1,000-5,000
- > 5,000
- Not Analyzed

**RM 10**

**RM 9**

G454 C454 SD150 C733 WR_VC_33 WR_VC_35 WR_VC_37 WR_VC_39 WR_VC_41 WR_VC_43 WR_VC_45 G742 C742 G743 C743 SD04 G746 C746 C749 WR_GC_32 WR_GC_33 2000 WR_GC_31 C33_35 C36_38 C39_41 WR_VC_04 C42_44 RC483 C45_47 WR_VC_03 WR_VC_05 C48_50 C51_52 WR_GC_34 WR_GC_35 G748 C748 G747 C747 WR_VC_106 1997 G471 C471 G458 C458 G461 C461 G462 C462 G468 C468 G474 C474 G477 C477 SD151 G735 C735 G738 C738 G739 C739 G492 HC_VC_53 C492 T2_01_2 T2U1 2002 G494 C494 T2U2 T2_01_1 2005

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

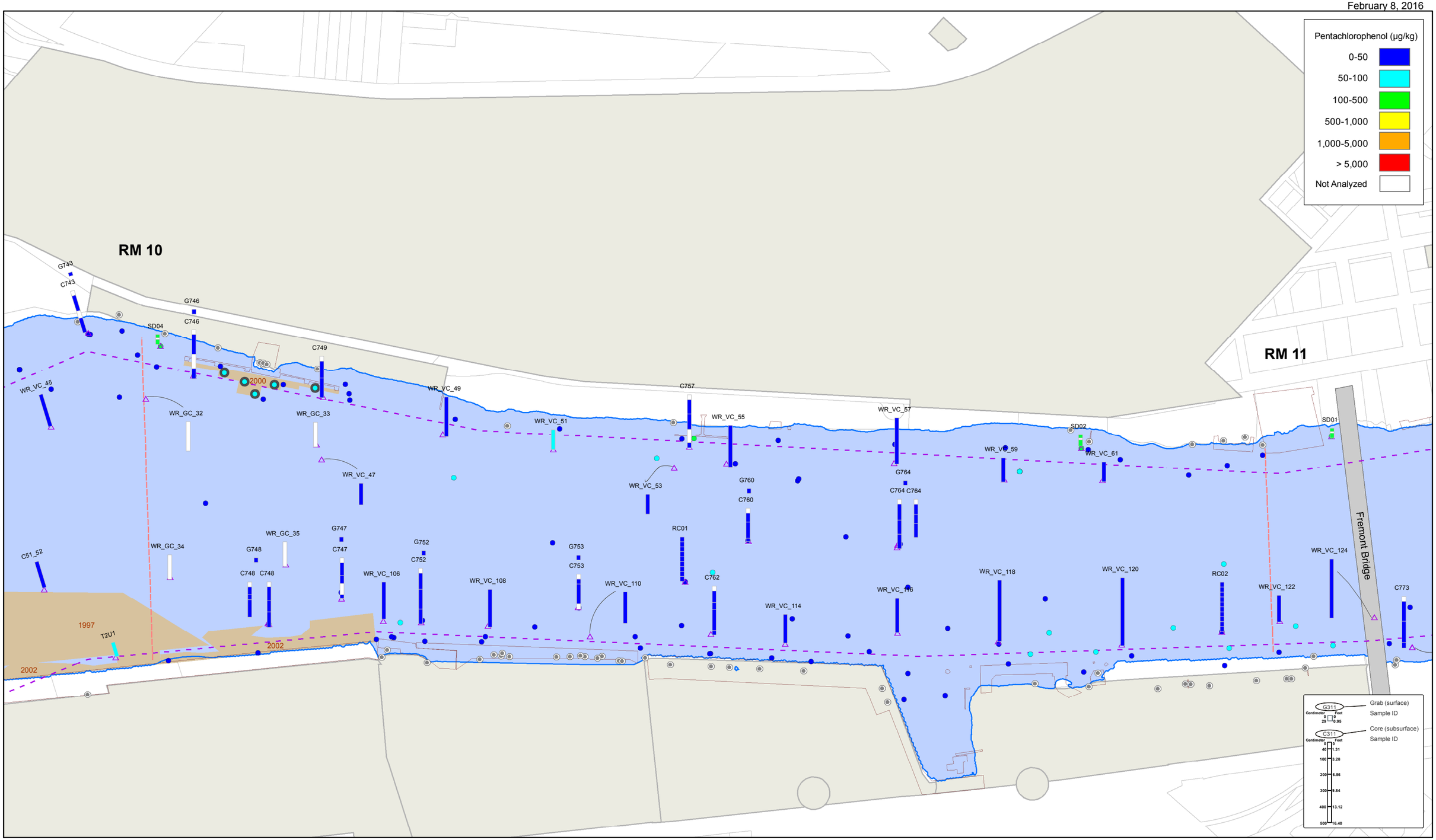
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-53k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Pentachlorophenol (µg/kg)

River Mile 09 to 10

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

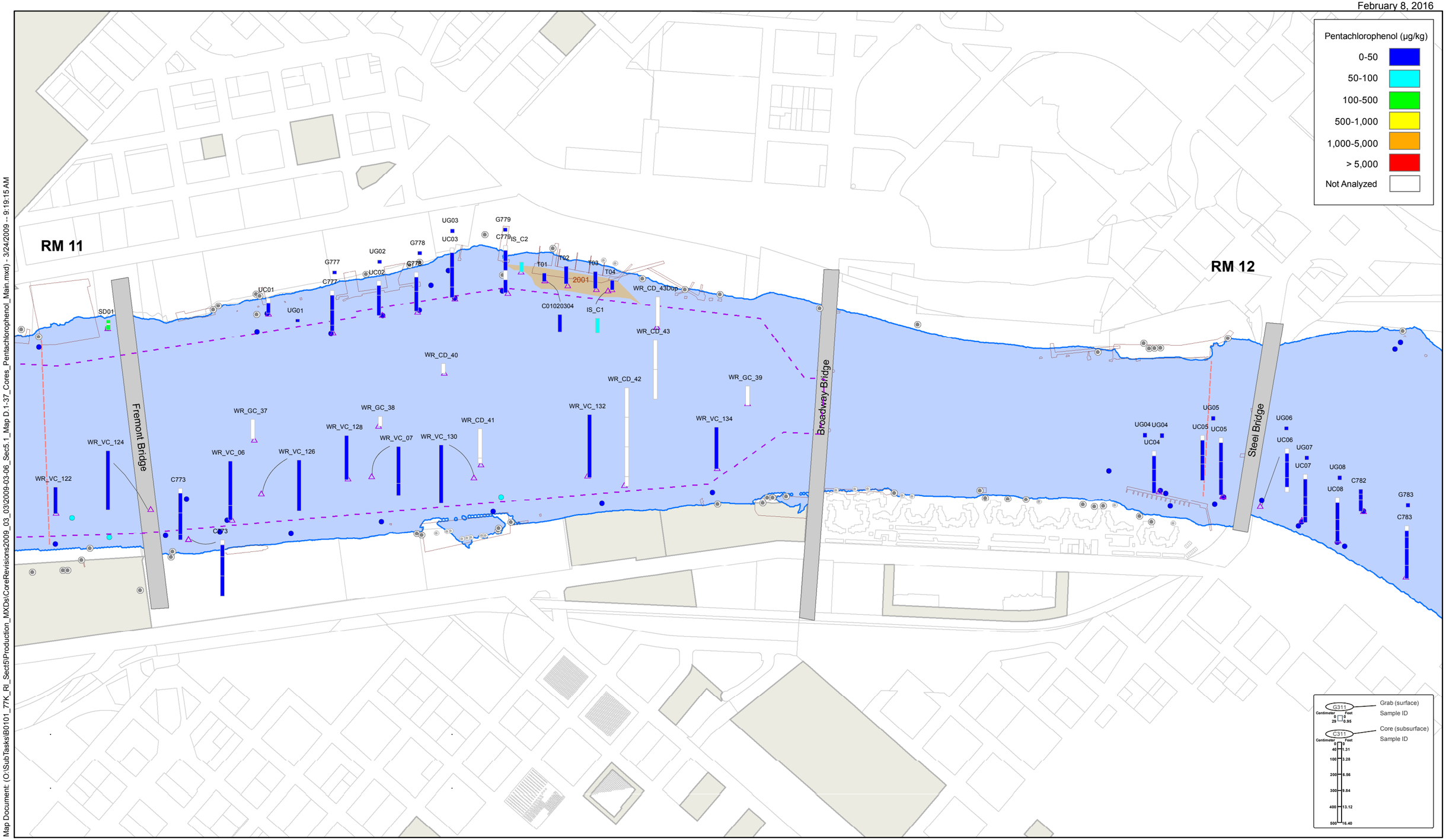
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-53I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Pentachlorophenol (µg/kg)

River Mile 10 to 11

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

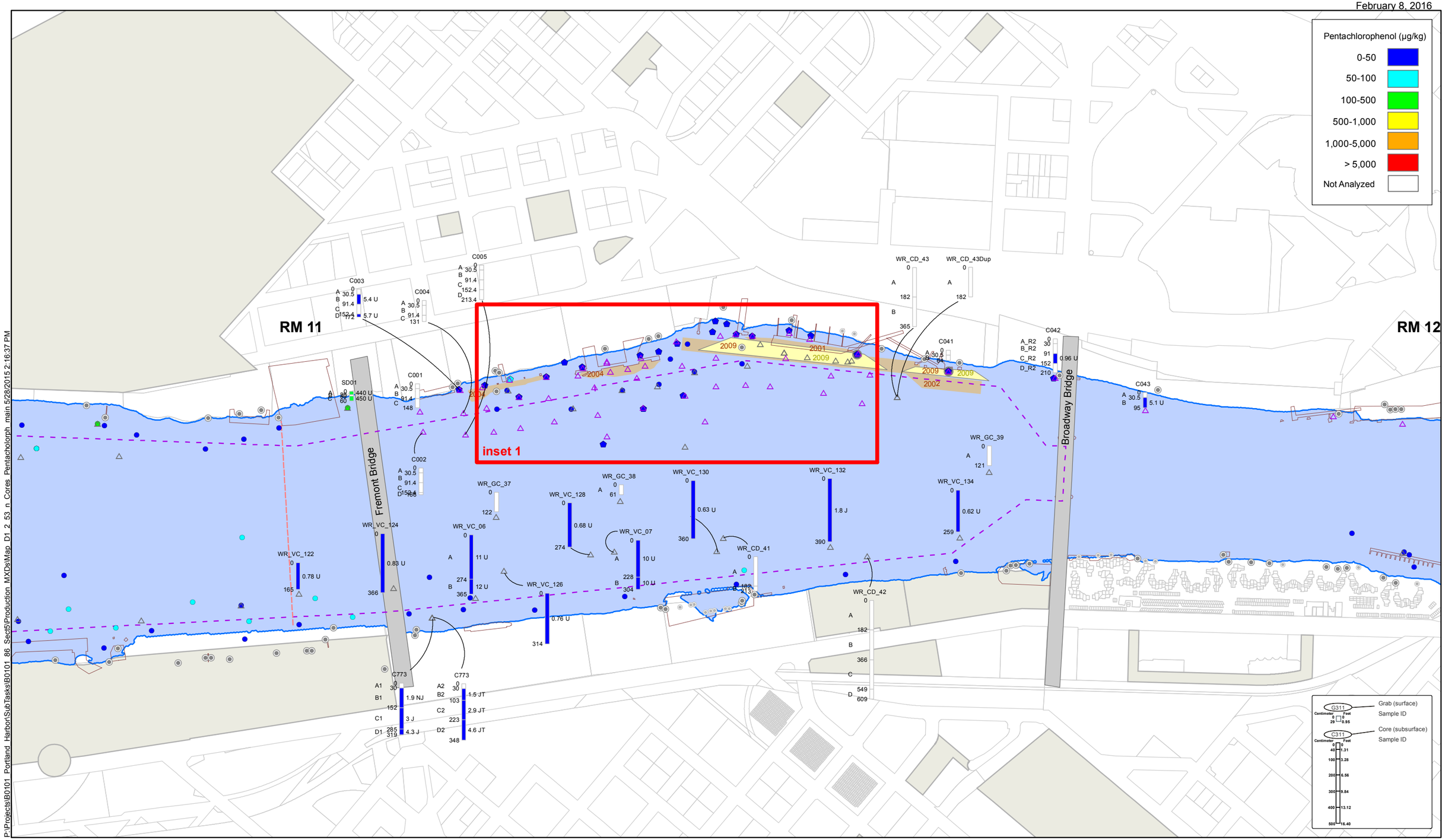
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-53 m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Pentachlorophenol (µg/kg)

River Mile 11 to 12




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

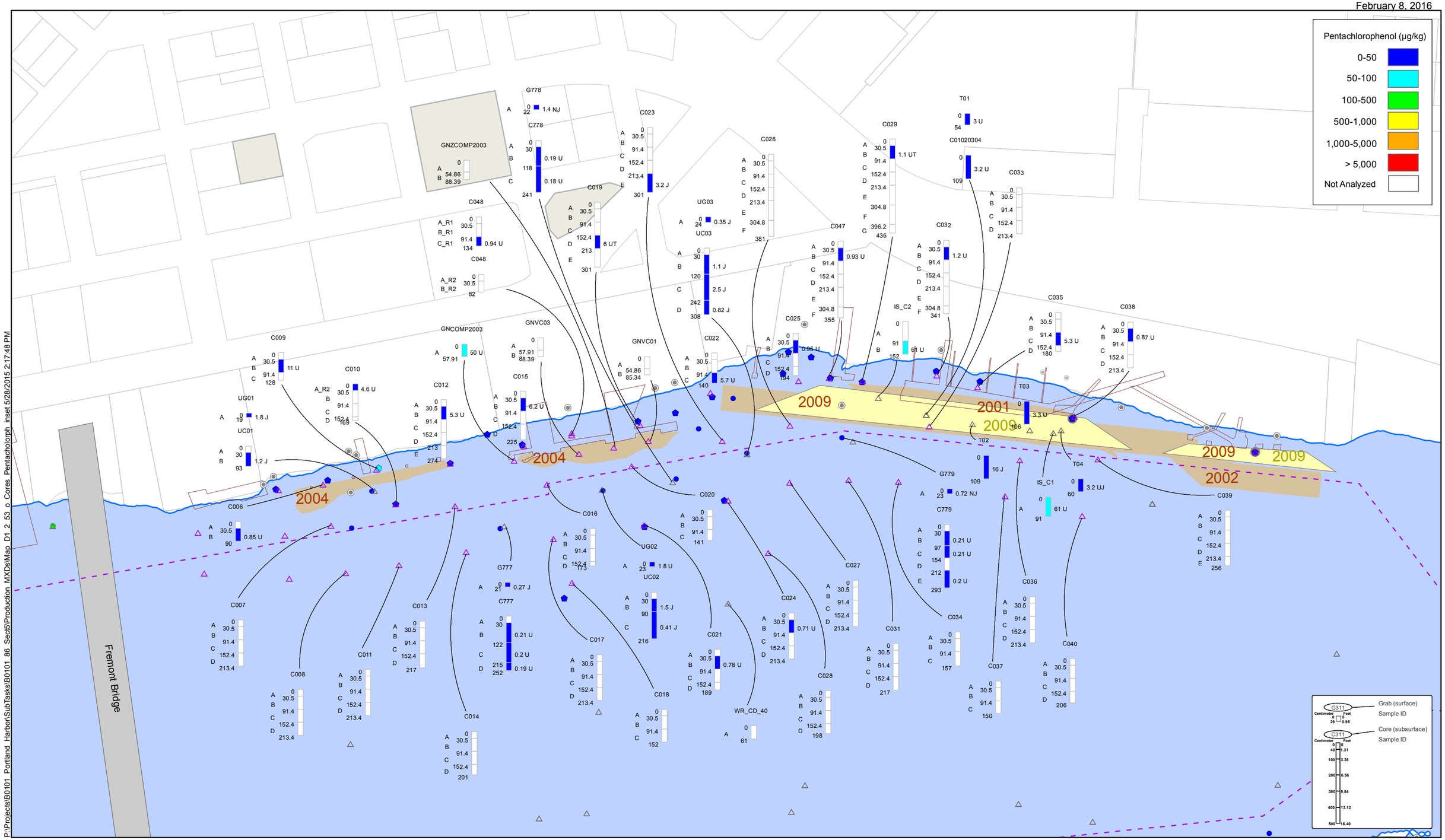
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

Grab (surface) Sample ID
Core (subsurface) Sample ID

**Map D1.2-53n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Pentachlorophenol (µg/kg)

River Mile 11.0 - 11.8




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

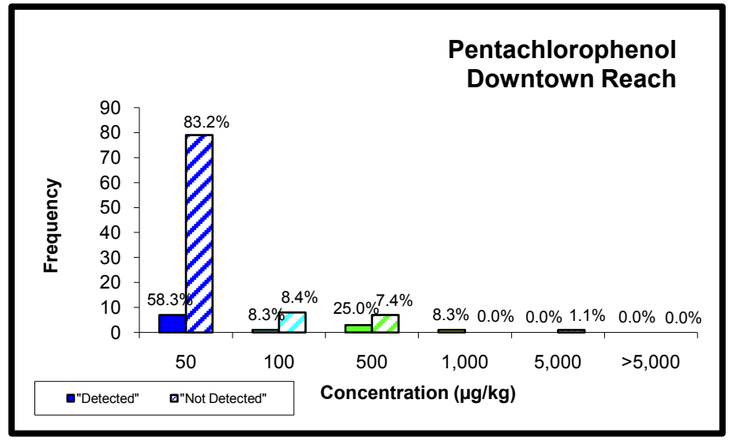
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

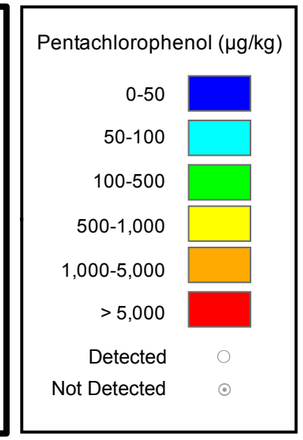
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

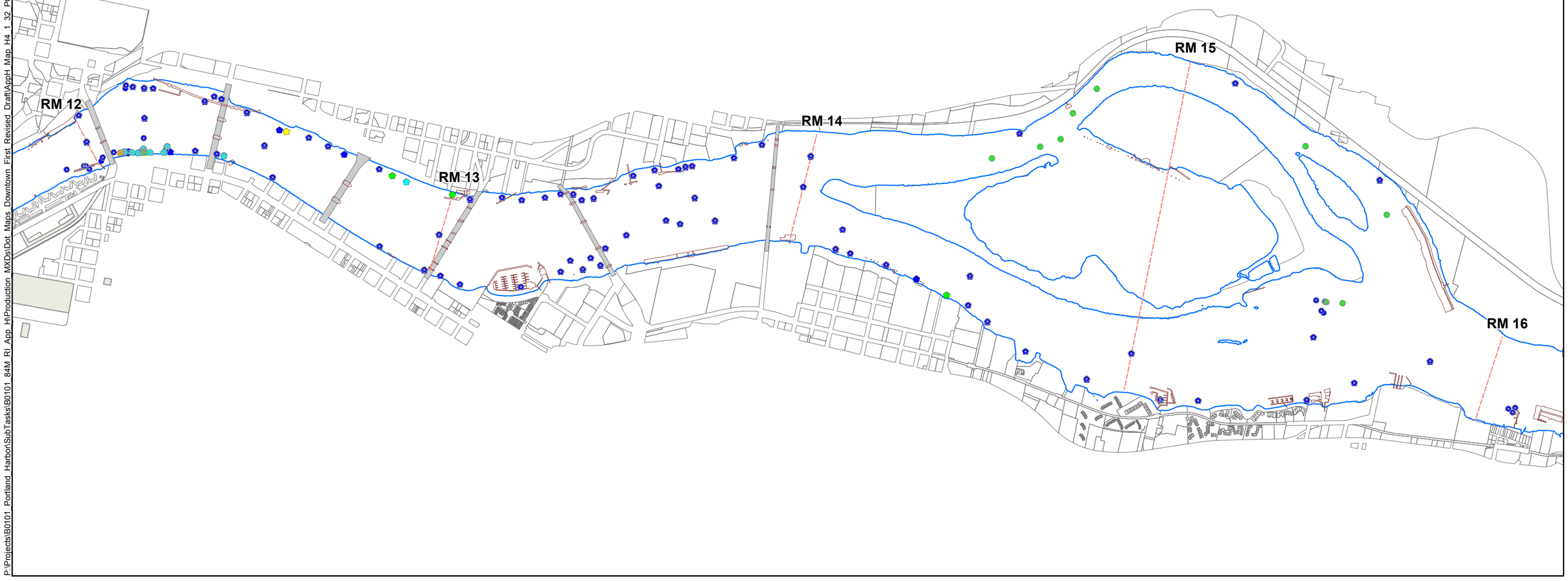
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-53o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Pentachlorophenol (µg/kg)

River Mile 11.0 - 11.8 - Inset 1

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N

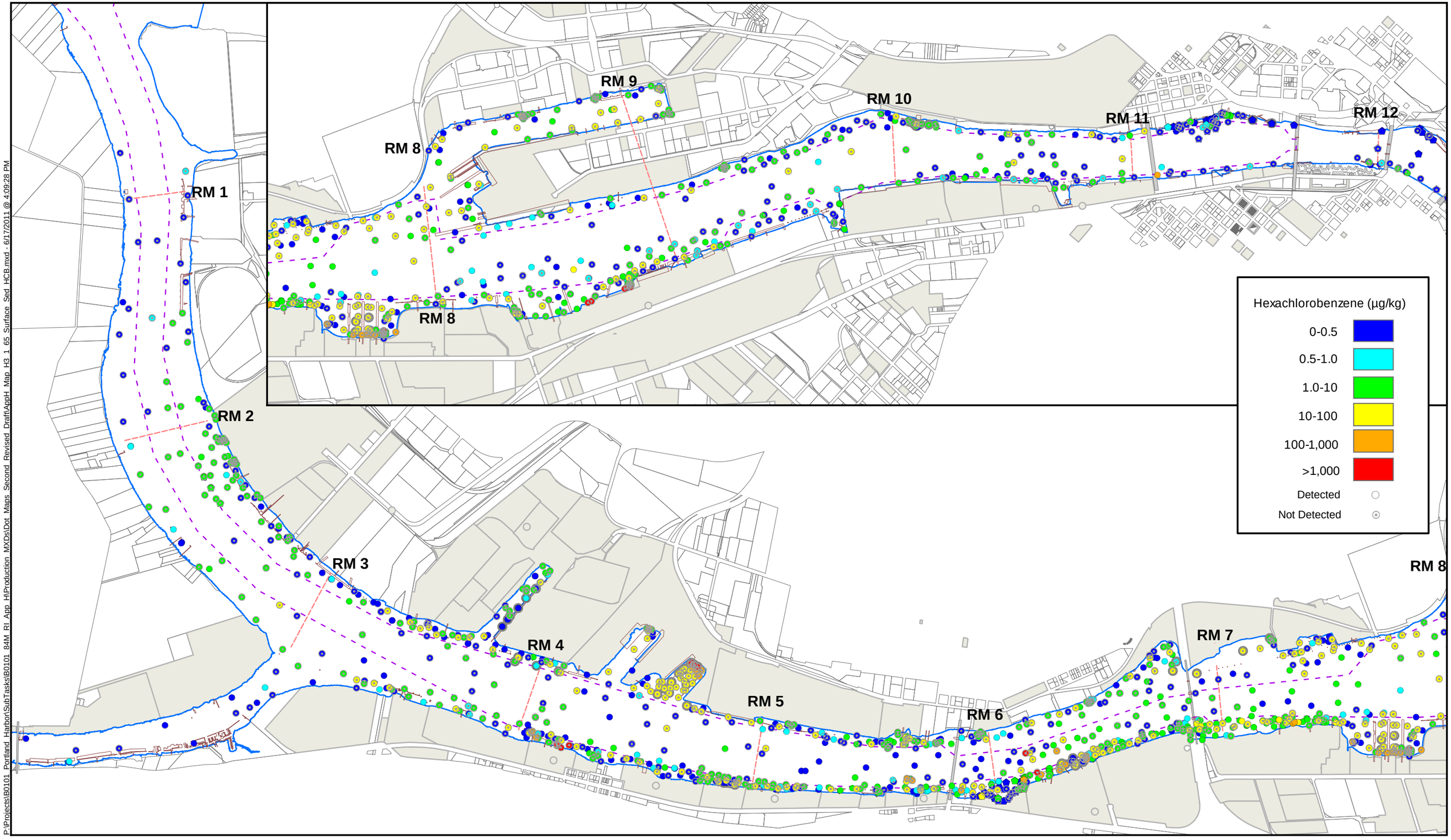
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

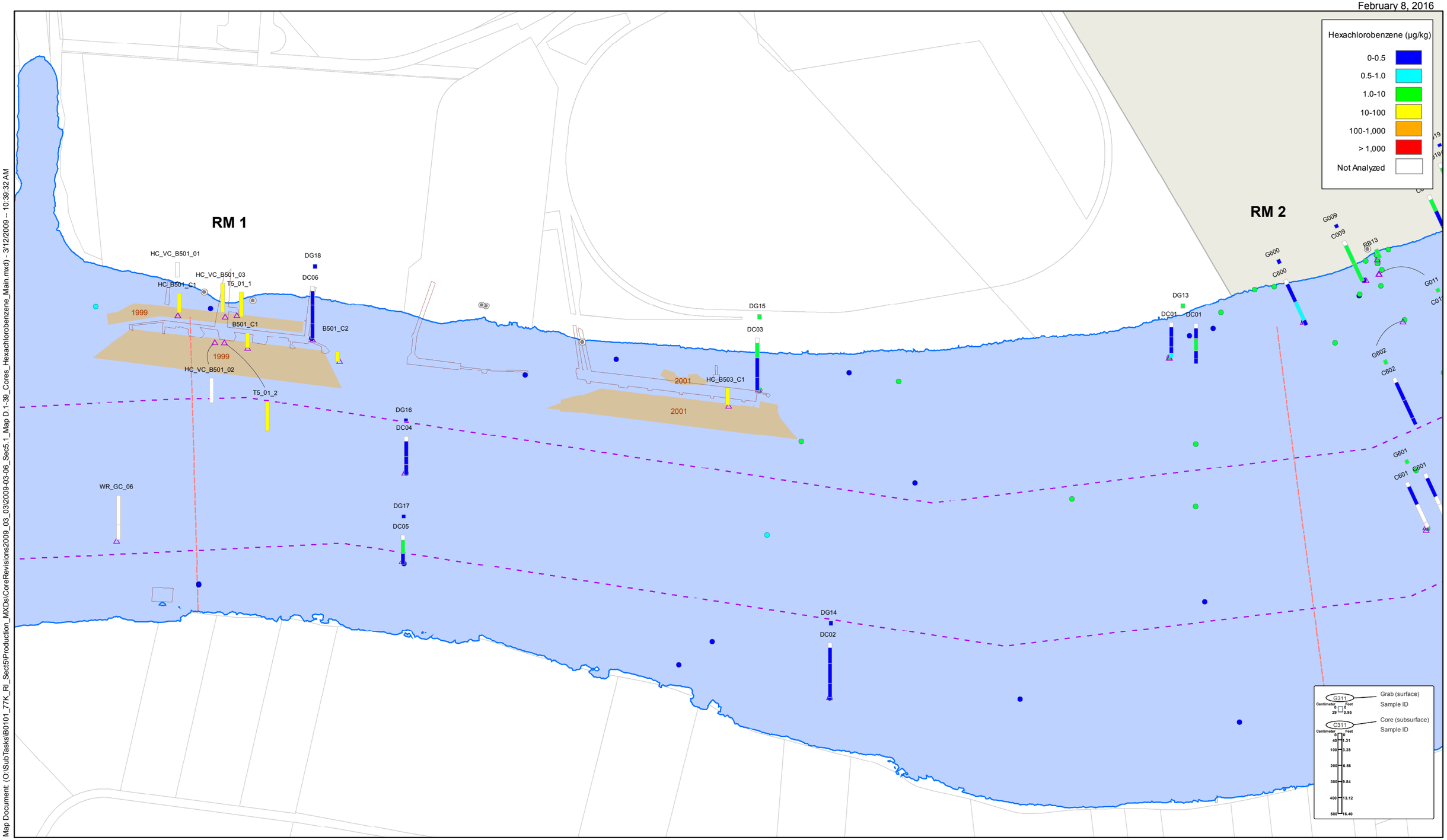
- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-54**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Pentachlorophenol (µg/kg)
Downtown Reach




**Map D1.2-55**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Hexachlorobenzene (µg/kg)

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-39_Cores_Hexachlorobenzene_Main.mxd) - 3/12/2009 -- 10:39:32 AM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

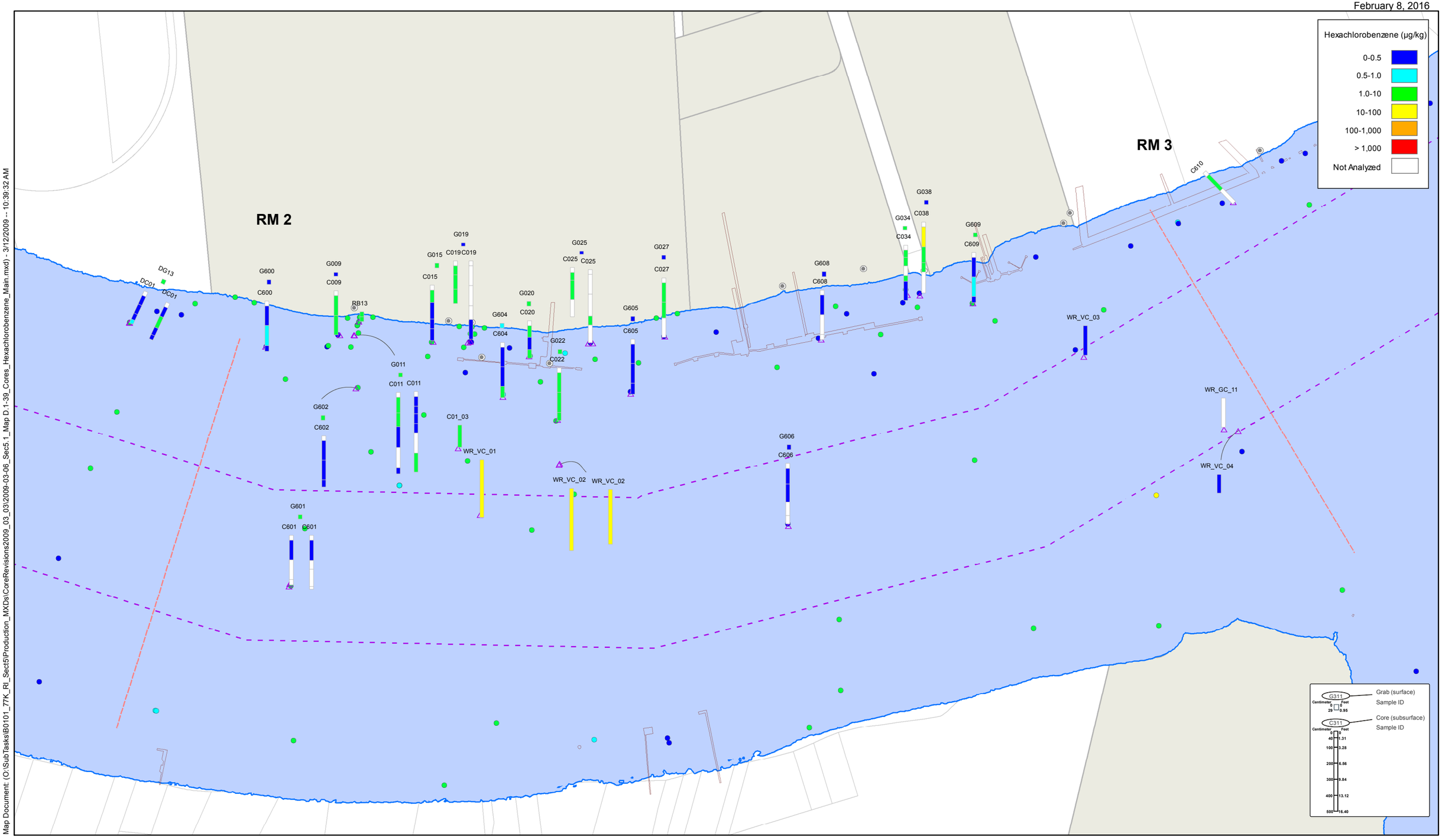
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-56a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Hexachlorobenzene (µg/kg)
River Mile 01 to 02




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-39_Cores_Hexachlorobenzene_Main.mxd) - 3/12/2009 -- 10:39:32 AM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

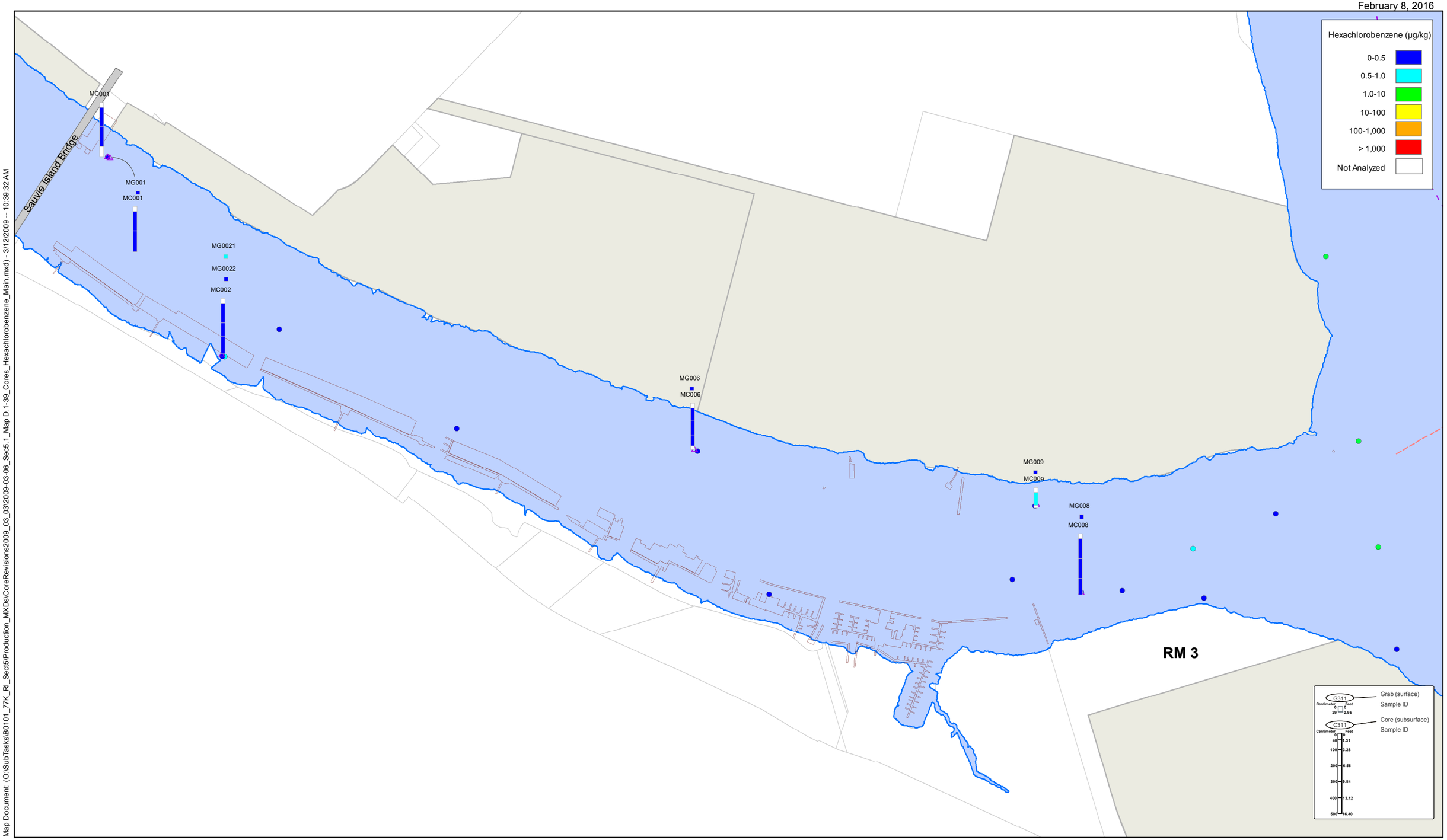
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-56 b**

Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Hexachlorobenzene (µg/kg)

River Mile 02 to 03




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-39_Cores_Hexachlorobenzene_Main.mxd) - 3/12/2009 -- 10:39:32 AM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

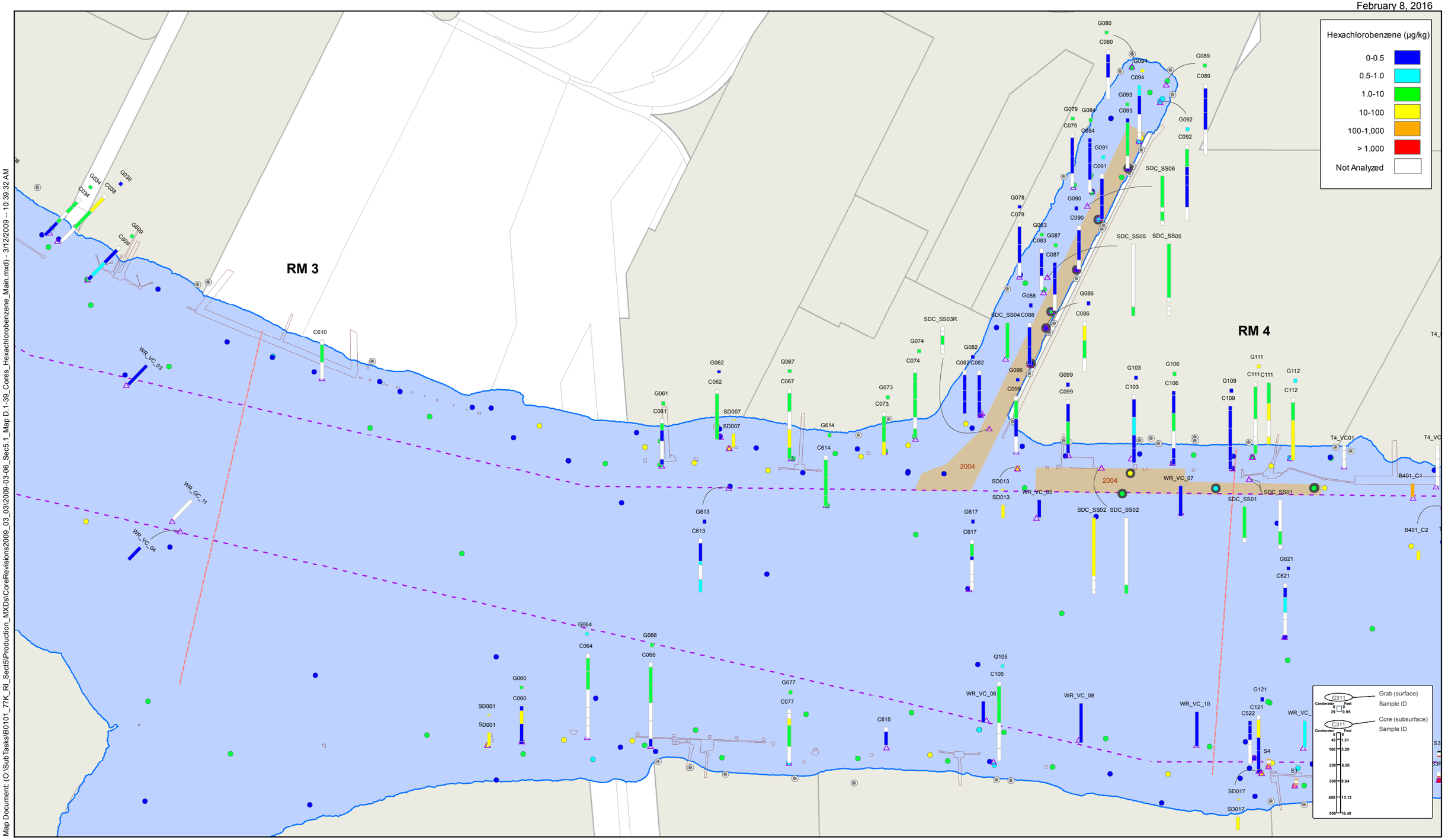
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-56c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Hexachlorobenzene (µg/kg)
River Mile 03 - Multnomah Channel




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-39_Cores_Hexachlorobenzene_Main.mxd) - 3/12/2009 -- 10:39:32 AM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-56 d**

Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Hexachlorobenzene (µg/kg)

River Mile 03 to 04

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-38_Cores_Hexachlorobenzene_Main.mxd) 7/1/2009 -- 12:49:07 PM

Hexachlorobenzene (µg/kg)
- 0-0.5
- 0.5-1.0
- 1.0-10
- 10-100
- 100-1,000
- > 1,000
- Not Analyzed

RM 4

RM 5

Inset 1

Inset 2

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

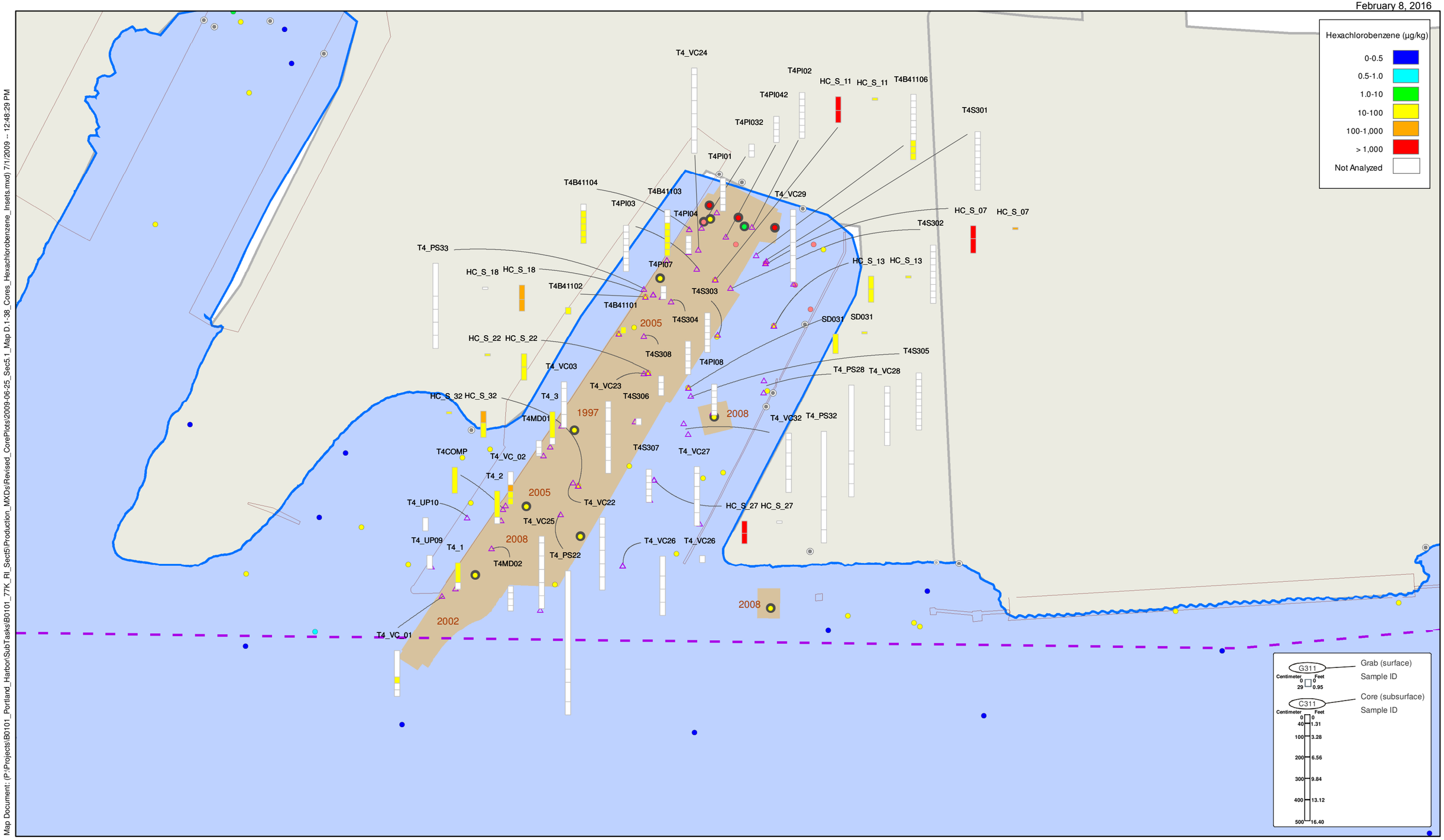
- Upland ECSI Sites (2008)
- Waterfront Taxlots

Grab (surface) Sample ID

Core (subsurface) Sample ID

**Map D1.2-56e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Hexachlorobenzene (µg/kg)

River Mile 04 to 05 - Slips




Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-38_Cores_Hexachlorobenzene_Insets.mxd) 7/1/2009 -- 12:48:29 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-56e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Hexachlorobenzene (µg/kg)

River Mile 04 to 05 - Slips - Inset 1

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-39_Cores_Hexachlorobenzene_Insets.mxd) - 3/12/2009 -- 10:41:41 AM

Hexachlorobenzene (µg/kg)
- 0-0.5
- 0.5-1.0
- 1.0-10
- 10-100
- 100-1,000
- > 1,000
- Not Analyzed

SGP08 SGP10 SGP17 SGP13 SGP14 SGP06 SGP12 SGP20 SGP15 SGP22 SGP24 SGP23 SGP21 SGP16 SGP18 2008 SGP05 SGP03 SGP19 SGP04 SGP09 SGP01 SGP07 SGP02

G311 Grab (surface) Sample ID
Centimeter 0 29 Feet 0 0.95

C311 Core (subsurface) Sample ID
Centimeter 0 40 100 200 300 400 500 Feet 0 1.31 3.28 6.56 9.84 13.12 16.40

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 125 250 500 Feet

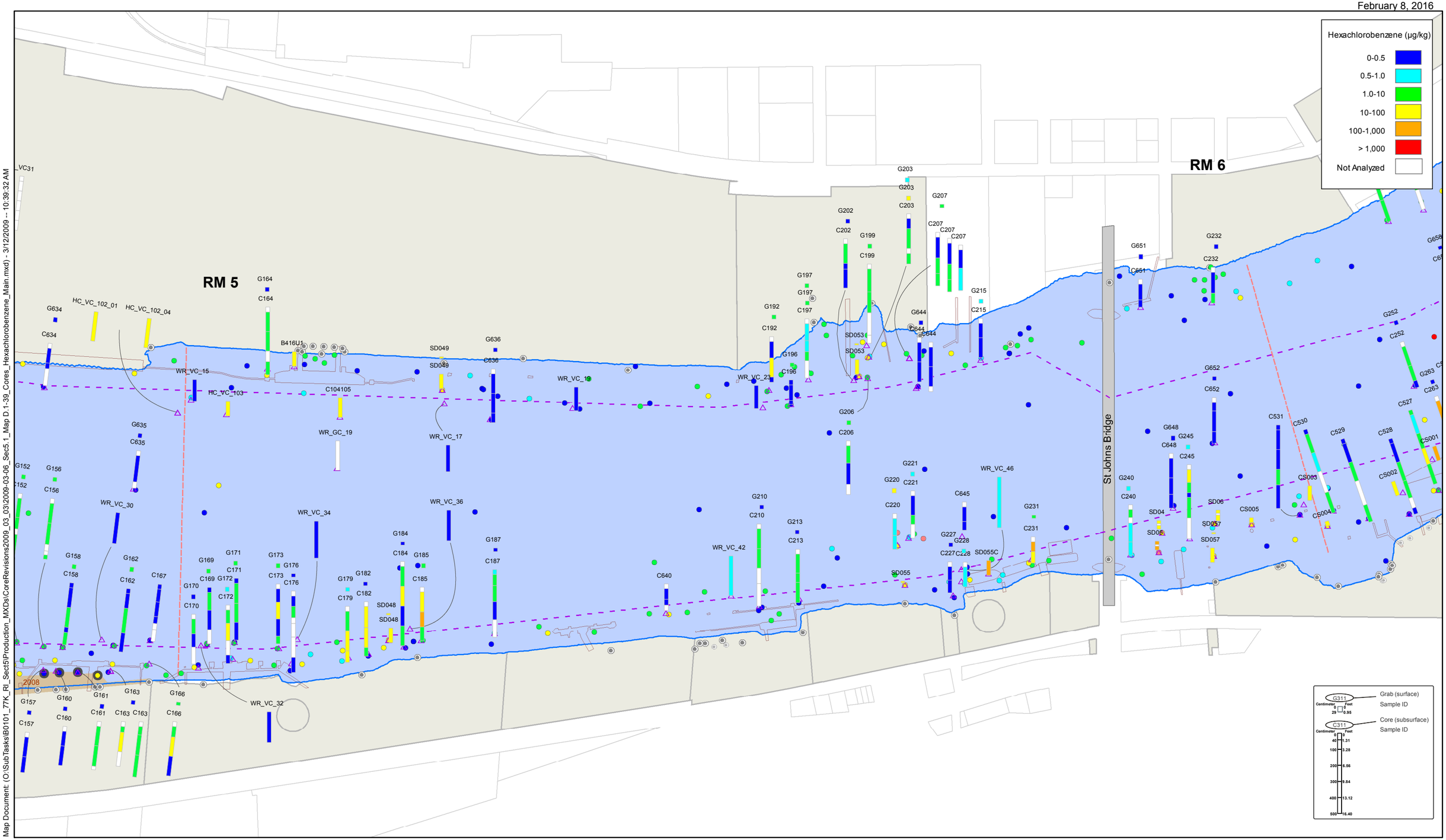
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-56e2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Hexachlorobenzene (µg/kg)
River Mile 04 to 05 - Slips - Inset 2

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

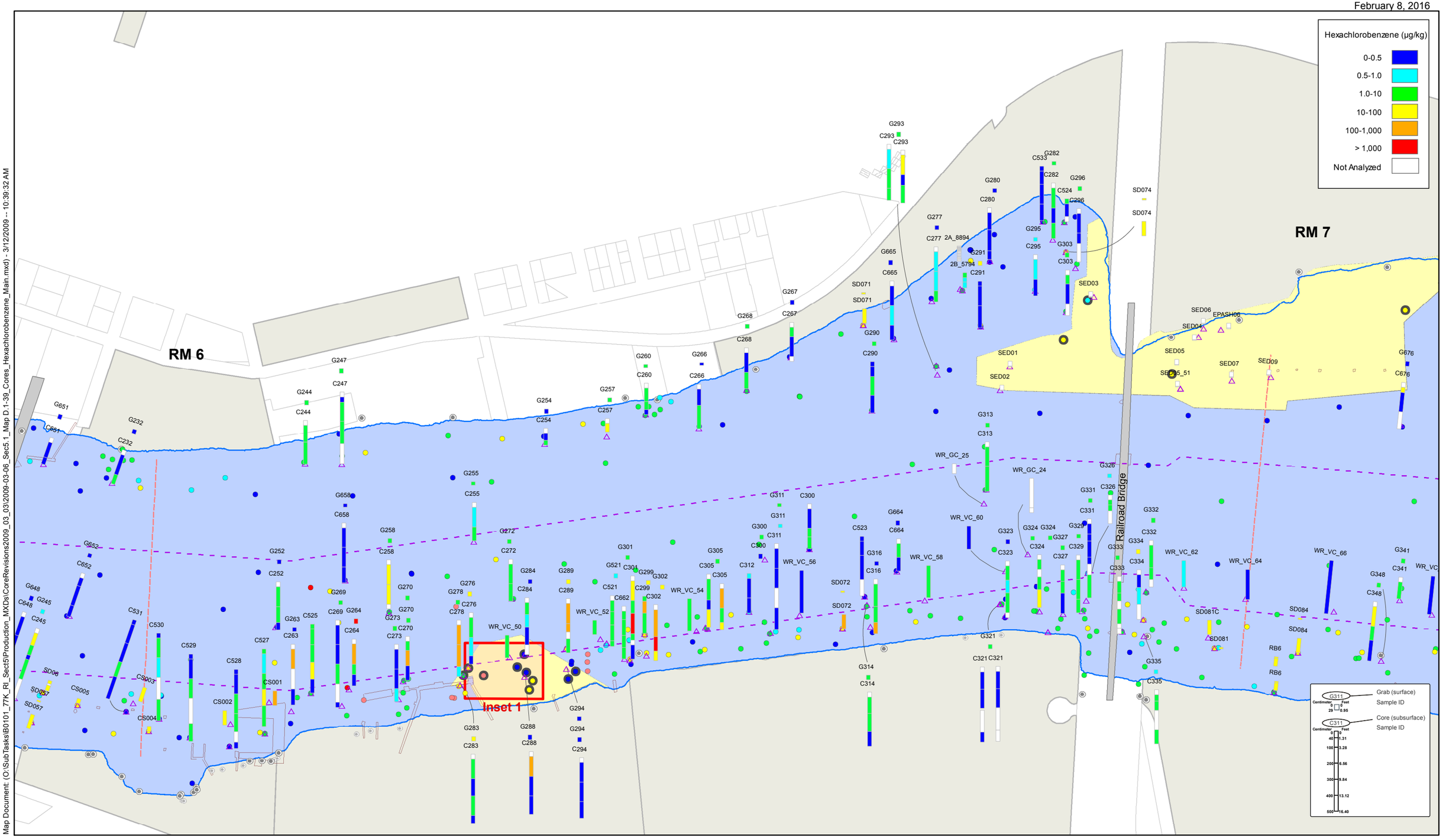
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-56f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Hexachlorobenzene (µg/kg)

River Mile 05 to 06

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-39_Cores_Hexachlorobenzene_Main.mxd) - 3/12/2009 -- 10:39:32 AM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

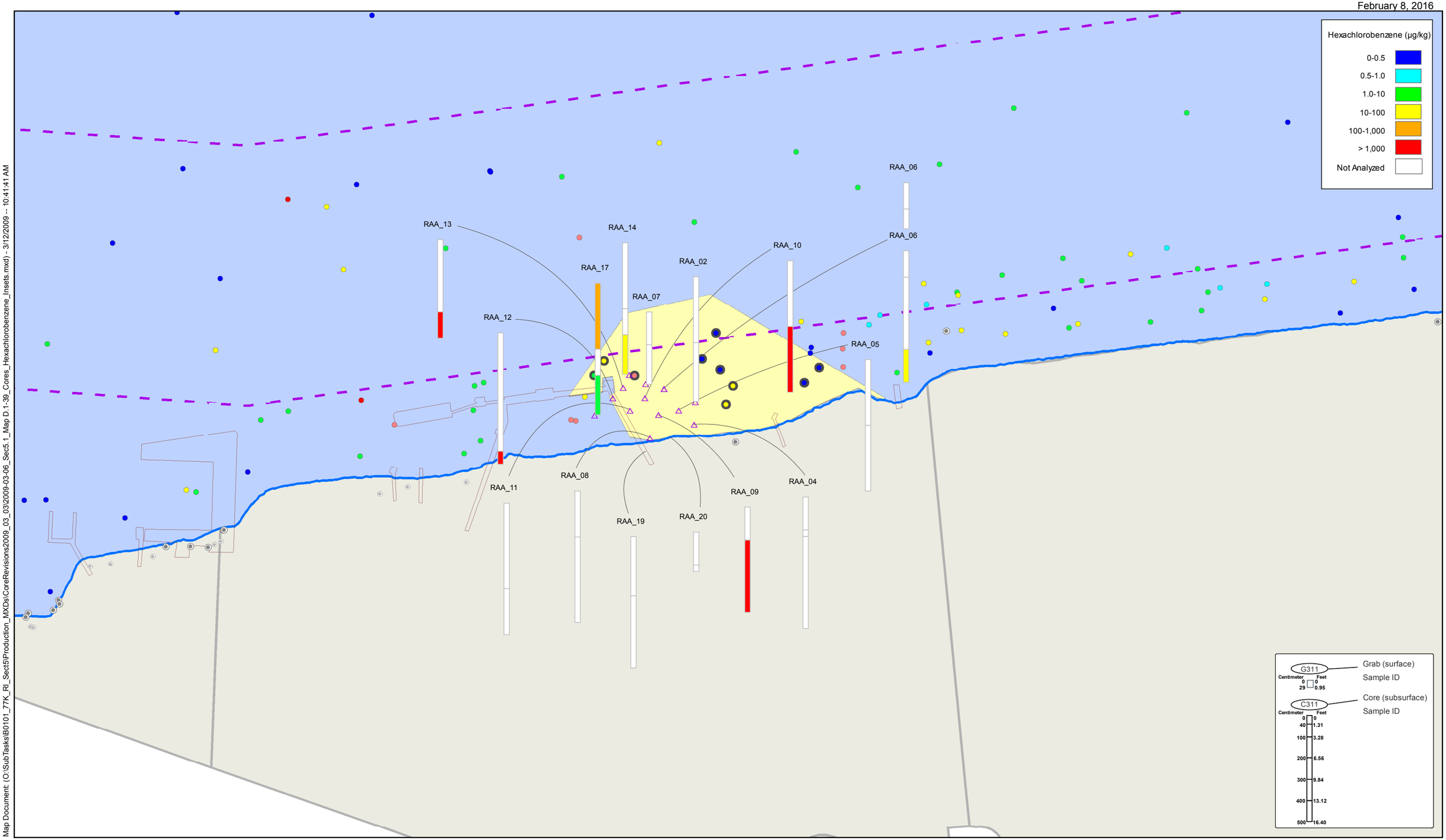
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-56g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Hexachlorobenzene (µg/kg)
River Mile 06 to 07

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

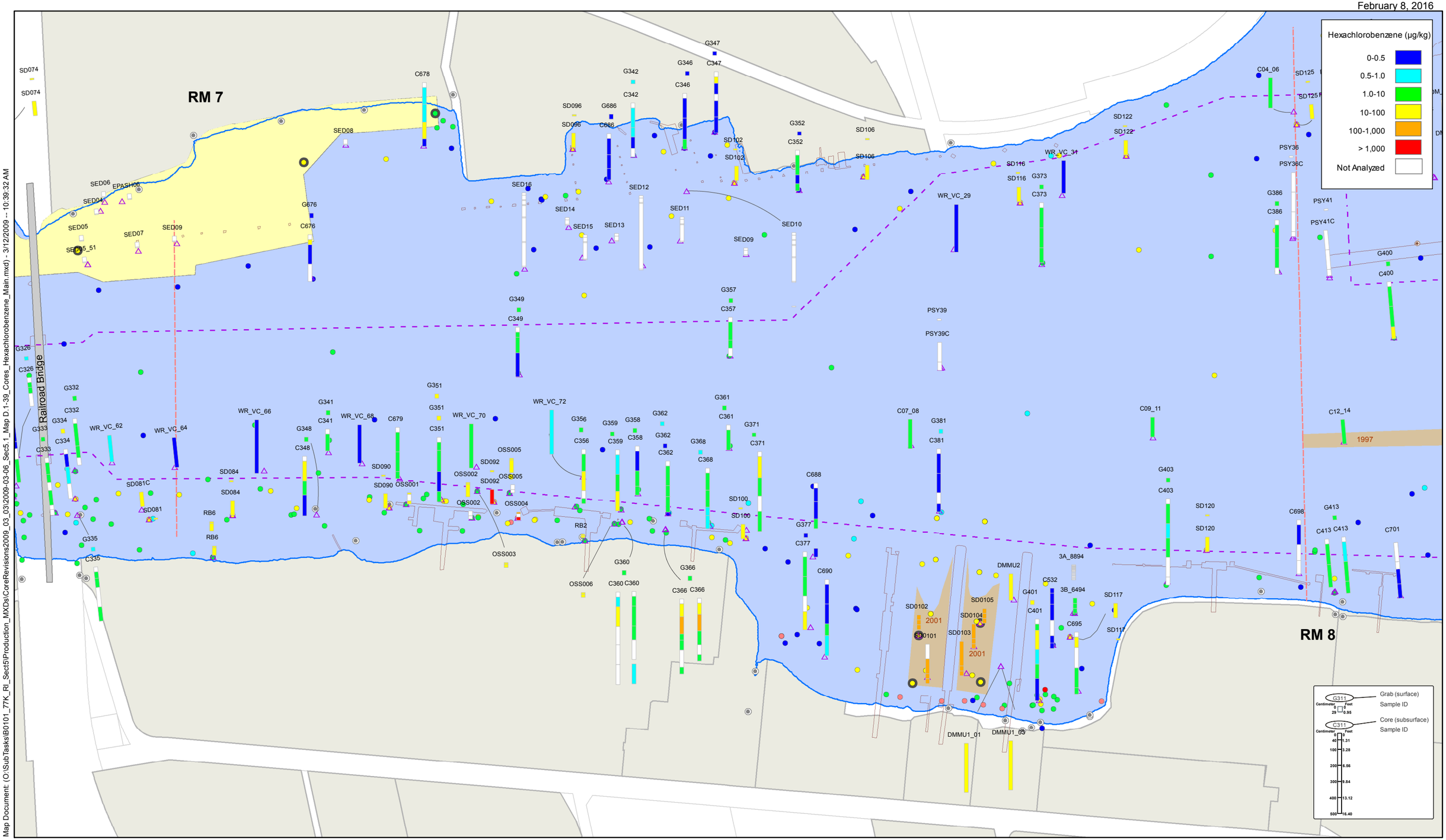
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-56g1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Hexachlorobenzene (µg/kg)
River Mile 06 to 07 - Inset 1




Map Document: (O:\Sub\Tasks\B0101_7TK_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-39_Cores_Hexachlorobenzene_Main.mxd) - 3/12/2009 -- 10:39:32 AM

N

0 150 300 450 600 750 Feet

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

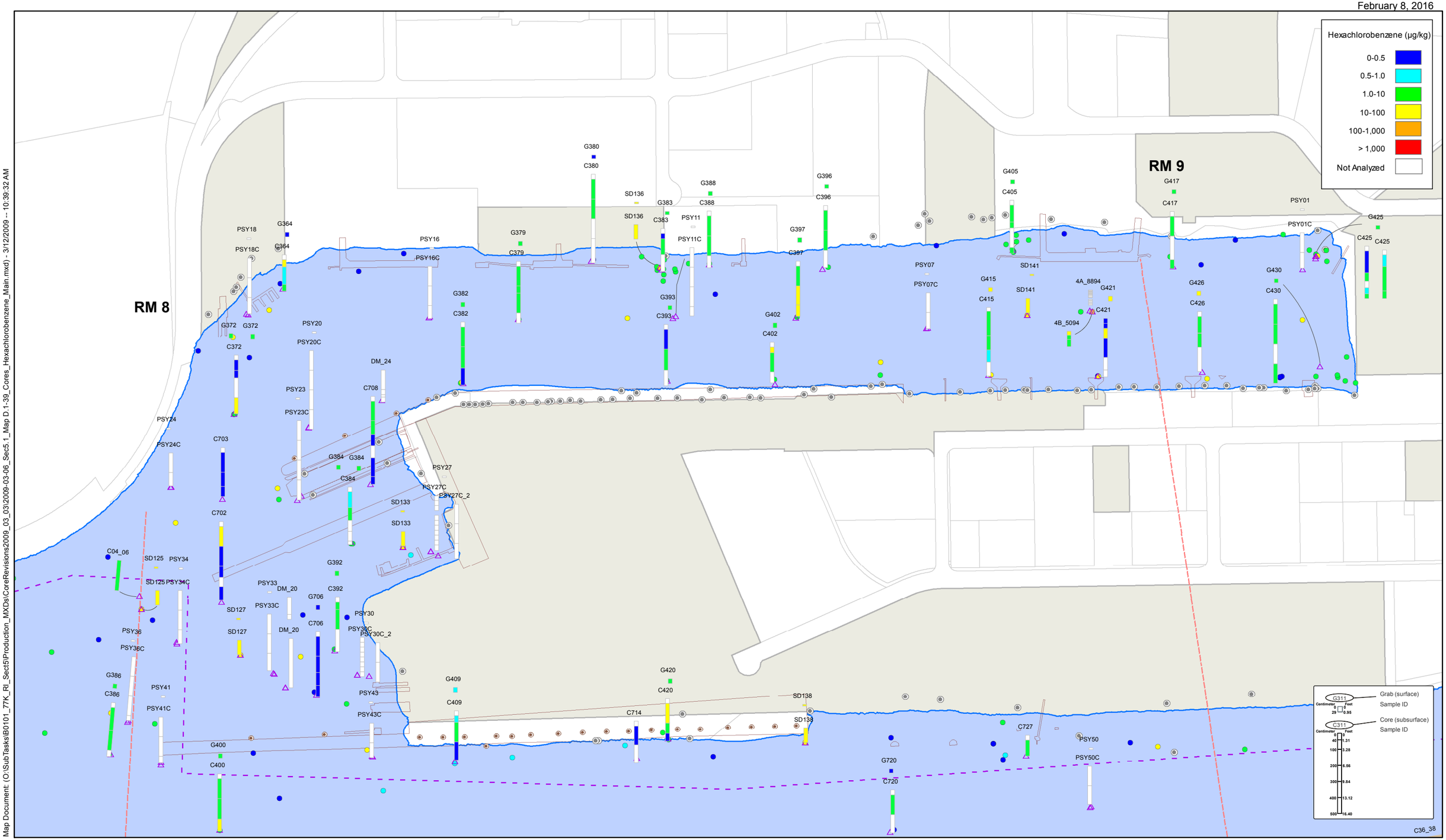
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-56 h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Hexachlorobenzene (µg/kg)
River Mile 07 to 08

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-39_Cores_Hexachlorobenzene_Main.mxd) - 3/12/2009 -- 10:39:32 AM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

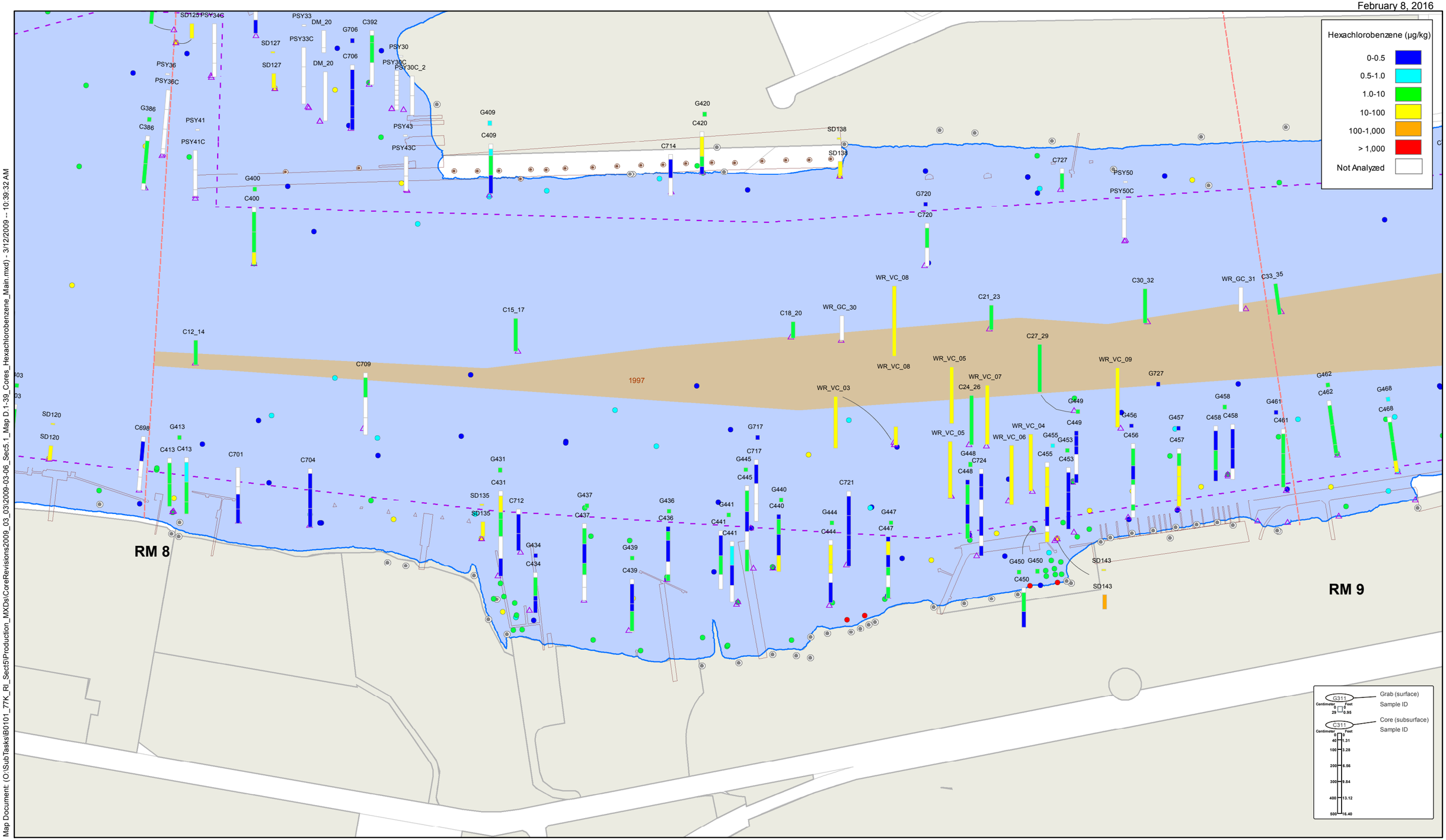
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-56i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Hexachlorobenzene (µg/kg)

River Mile 08 to 09 - Swan Is. East




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-39_Cores_Hexachlorobenzene_Main.mxd) - 3/12/2009 -- 10:39:32 AM

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-56j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Hexachlorobenzene (µg/kg)

River Mile 08 to 09 - Swan Is. West

Map Document: (O:\Sub\Tasks\B0101_7TK_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-39_Cores_Hexachlorobenzene_Main.mxd) - 3/12/2009 -- 10:39:32 AM

Hexachlorobenzene (µg/kg)
- 0-0.5
- 0.5-1.0
- 1.0-10
- 10-100
- 100-1,000
- > 1,000
- Not Analyzed

**RM 10**

**RM 9**

G454 C454 SD150 C733 WR_VC_33 WR_VC_35 WR_VC_37 WR_VC_39 WR_VC_41 WR_VC_43 WR_VC_45 G742 C742 G743 C743 SD04 G746 C746 C749 WR_GC_32 WR_GC_33 WR_GC_31 C33_35 C36_38 C39_41 WR_VC_04 C42_44 RC483 C45_47 WR_VC_03 WR_VC_05 C48_50 C51_52 WR_GC_34 WR_GC_35 G748 C748 G747 C747 WR_VC_106 G458 C458 G461 C461 G462 C462 G468 C468 G471 C471 G474 C474 G477 C477 SD151 G735 C735 G738 C738 G739 C739 G492 HC_VC_53 C492 T2_01_2 T2U1 G494 C494 T2U2 T2_01_1

1997 2000 2002 2005

Grab (surface) Sample ID
Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

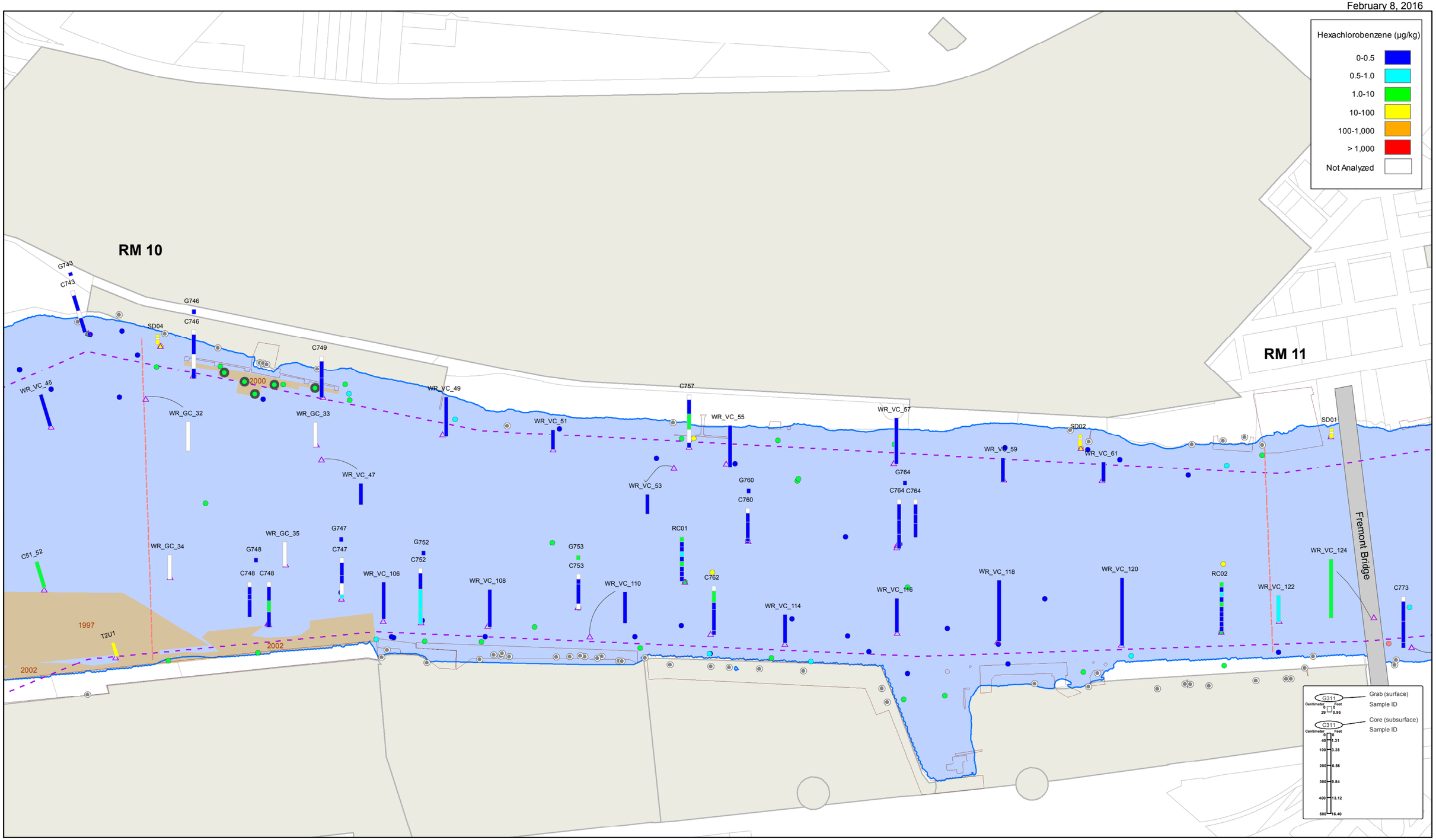
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-56k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Hexachlorobenzene (µg/kg)
River Mile 09 to 10

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-39_Cores_Hexachlorobenzene_Main.mxd) - 3/12/2009 -- 10:39:32 AM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-56I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Hexachlorobenzene (µg/kg)

River Mile 10 to 11

Map Document: (O:\SubTasks\B0101_7TK_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-06_Sec5.1_Map D.1-39_Cores_Hexachlorobenzene_Main.mxd) - 3/12/2009 -- 10:39:32 AM

Hexachlorobenzene (µg/kg)

- 0-0.5
- 0.5-1.0
- 1.0-10
- 10-100
- 100-1,000
- > 1,000
- Not Analyzed

RM 11

RM 12

Fremont Bridge

Broadway Bridge

Steel Bridge

2001

SD01 UC01 UG01 G777 C777 UC02 UG02 G778 C778 UG03 UC03 G779 C779 IS_C2 T01 T02 T03 T04 C01020304 IS_C1 WR_CD_43Dup WR_CD_43 WR_CD_40 WR_CD_42 WR_GC_39 WR_GC_37 WR_GC_38 WR_VC_128 WR_VC_07 WR_VC_130 WR_CD_41 WR_VC_132 WR_VC_134 WR_VC_124 WR_VC_122 C773 WR_VC_06 WR_VC_126 UG04 UG04 UC04 UG05 UC05 UC05 UG06 UC06 UG07 UC07 UG08 UC08 C782 G783 C783

Grab (surface) Sample ID

Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

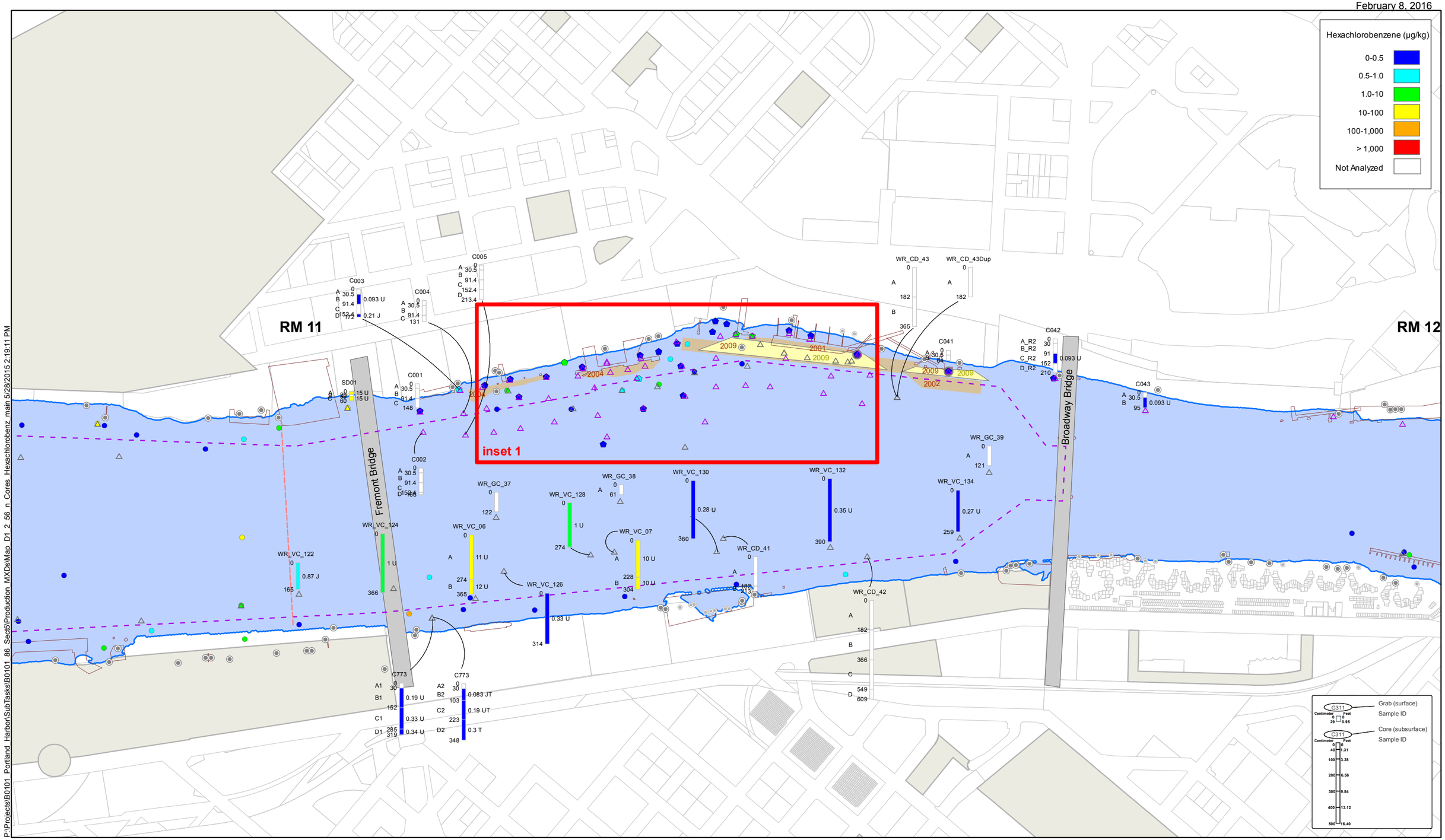
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-56m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Hexachlorobenzene (µg/kg)
River Mile 11 to 12

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-56n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Hexachlorobenzene (µg/kg)

River Mile 11.0 - 11.8

P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_86_Sect5\Production_MXDs\Map_D1_2_56_o_Cores_Hexachlorobenz_inset 5/28/2015 2:20:10 PM

Hexachlorobenzene (µg/kg)
- 0-0.5
- 0.5-1.0
- 1.0-10
- 10-100
- 100-1,000
- > 1,000
- Not Analyzed

Fremont Bridge

2009
2001
2009
2004
2004
2009
2009
2002

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

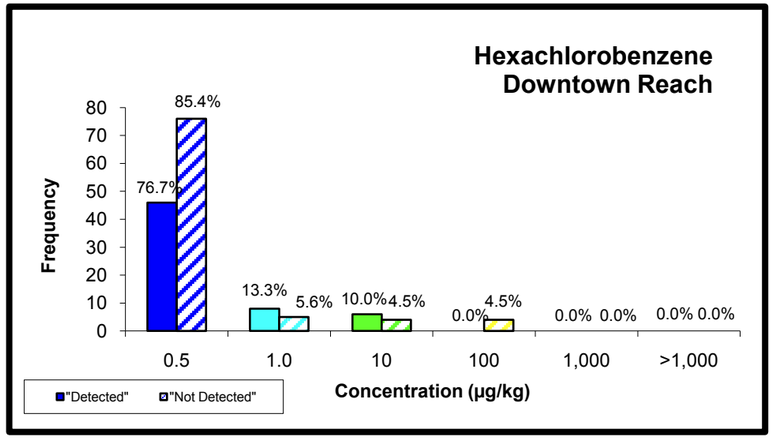
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

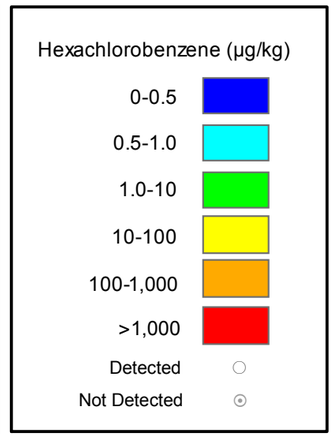
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

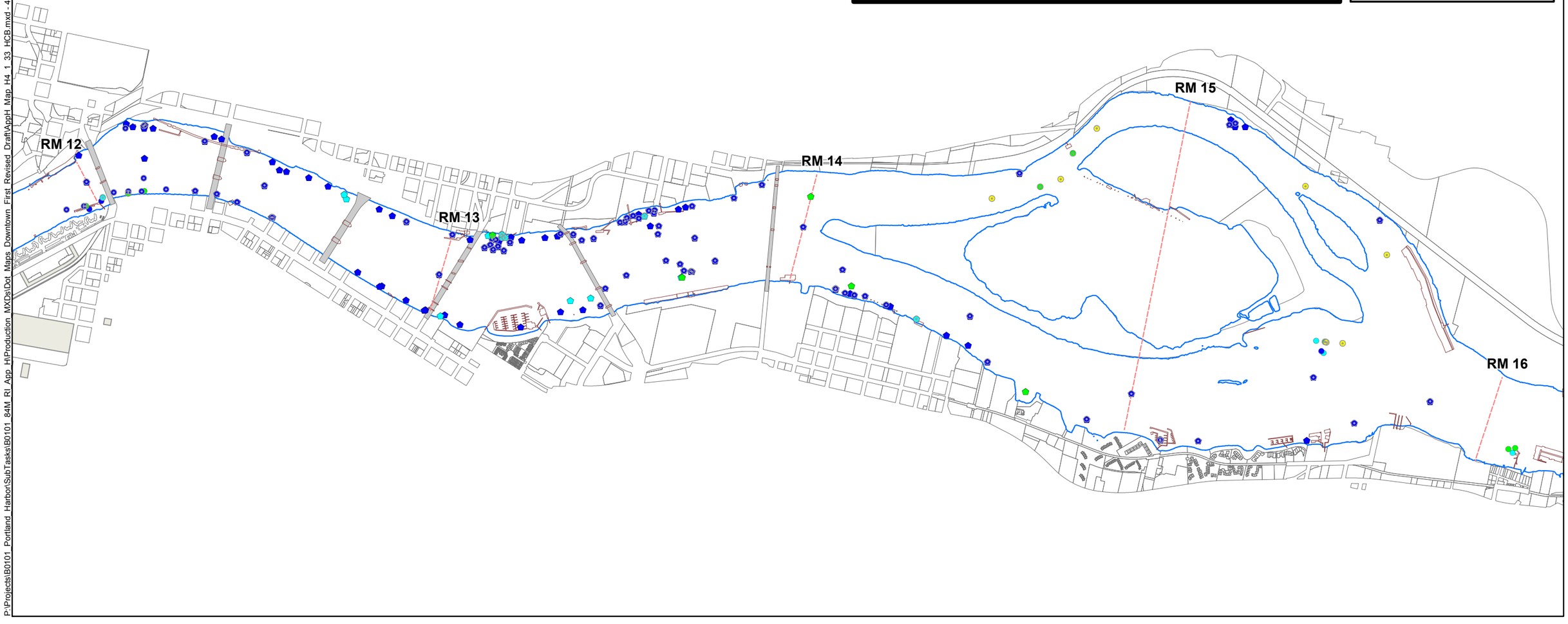
Grab (surface) Sample ID
Core (subsurface) Sample ID

**Map D1.2-56o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Hexachlorobenzene (µg/kg)

River Mile 11.0 - 11.8 - Inset 1

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-57**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Hexachlorobenzene (µg/kg)
Downtown Reach

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RM 1
RM 2
RM 3
RM 4
RM 5
RM 6
RM 7
RM 8
RM 8
RM 9
RM 10
RM 11
RM 12

gamma-Hexachlorocyclohexane (Lindane) (µg/kg)

- 0-0.5
- 0.5-1.0
- 1.0-5.0
- 5.0-10
- 10-50
- >50
- Detected
- Not Detected

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

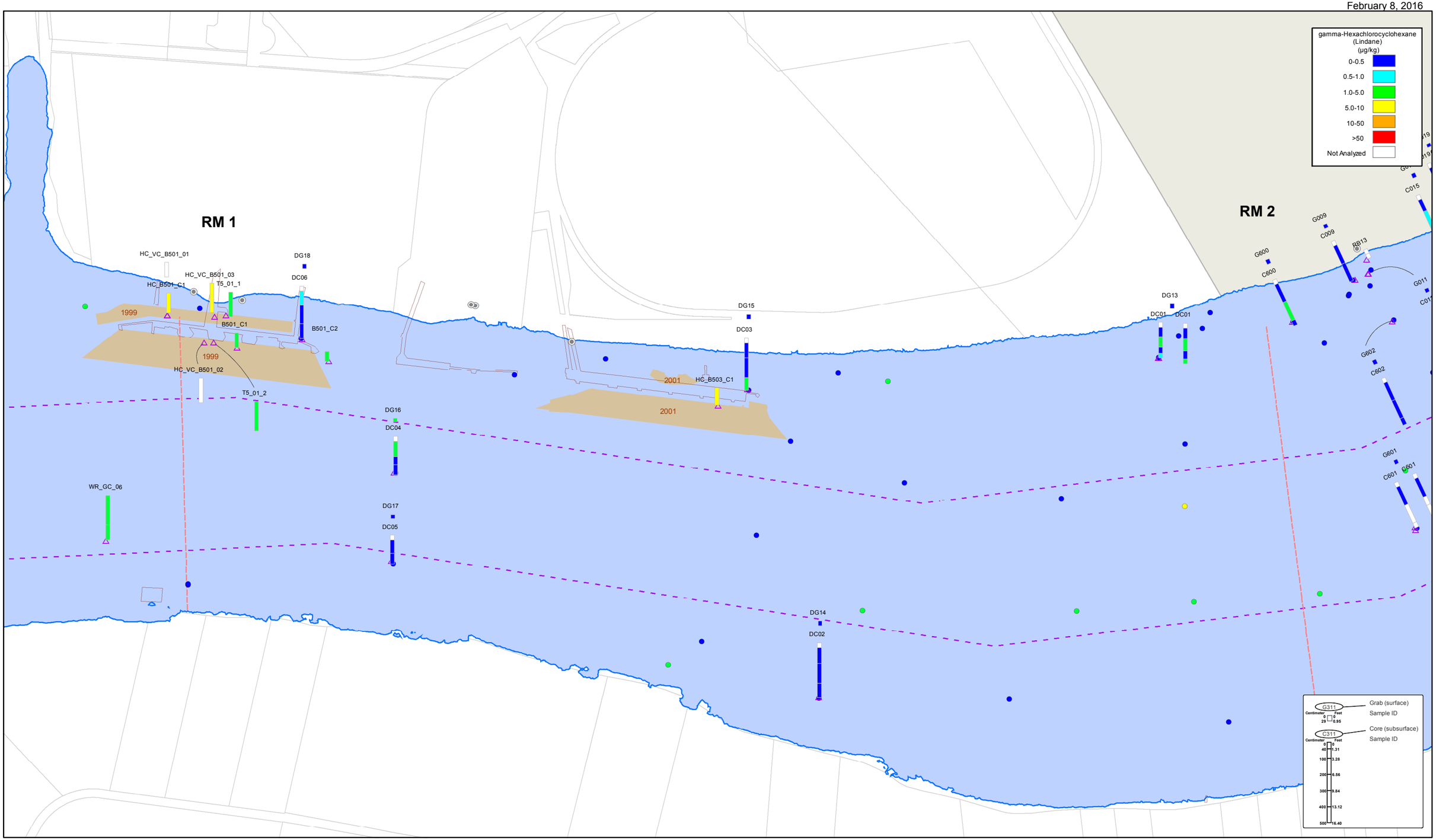
0 1,000 2,000 3,000 4,000 5,000 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-58**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
gamma-Hexachlorocyclohexane (Lindane) (µg/kg)

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-40_Cores_GammaHexachlorocyclohexane_Main.mxd) 7/1/2009 -- 12:51:01 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

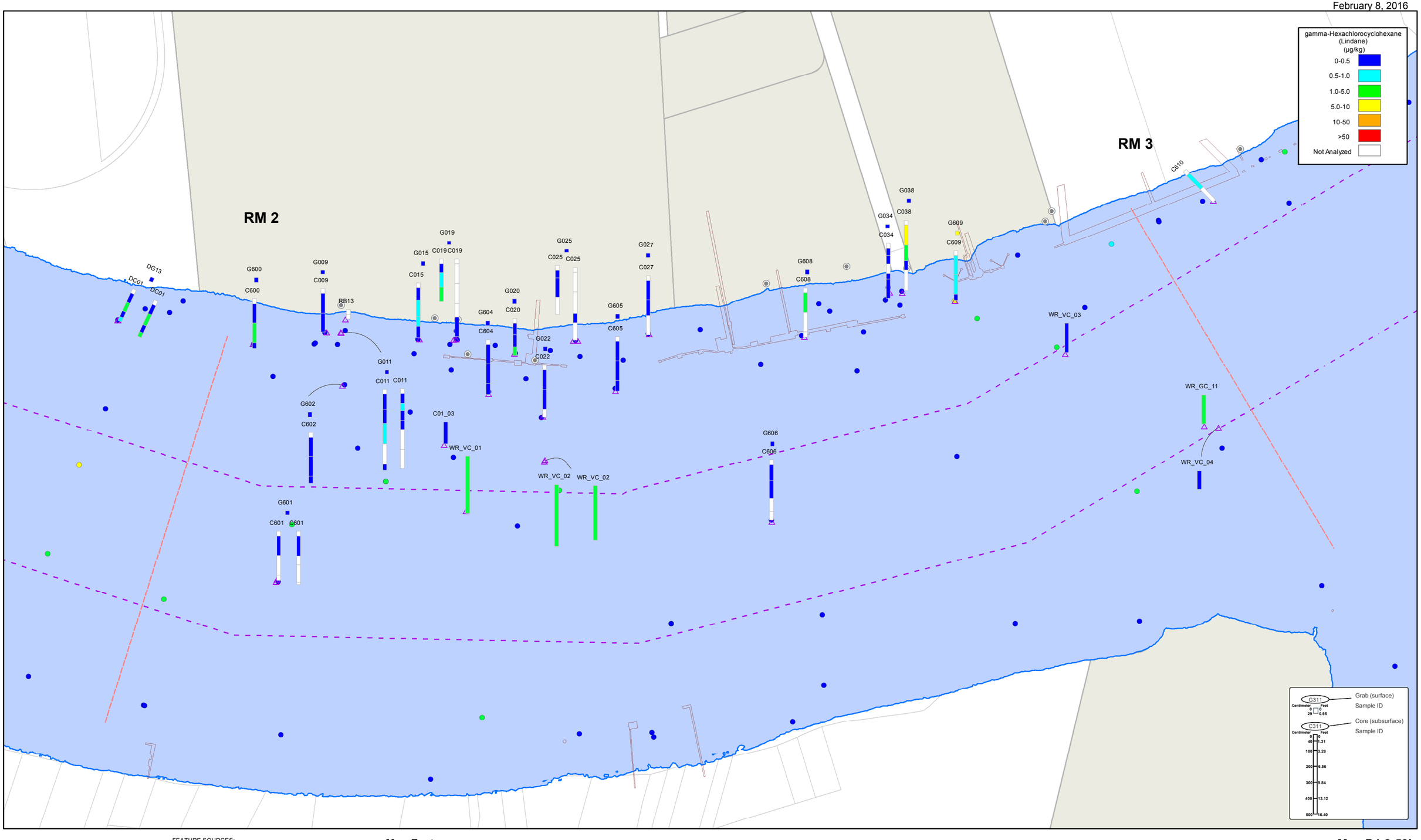
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-59a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
gamma-Hexachlorocyclohexane (Lindane) (µg/kg)
River Mile 01 to 02

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-40_Cores_GammaHexachlorocyclohexane_Main.mxd) 7/1/2009 -- 12:51:01 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

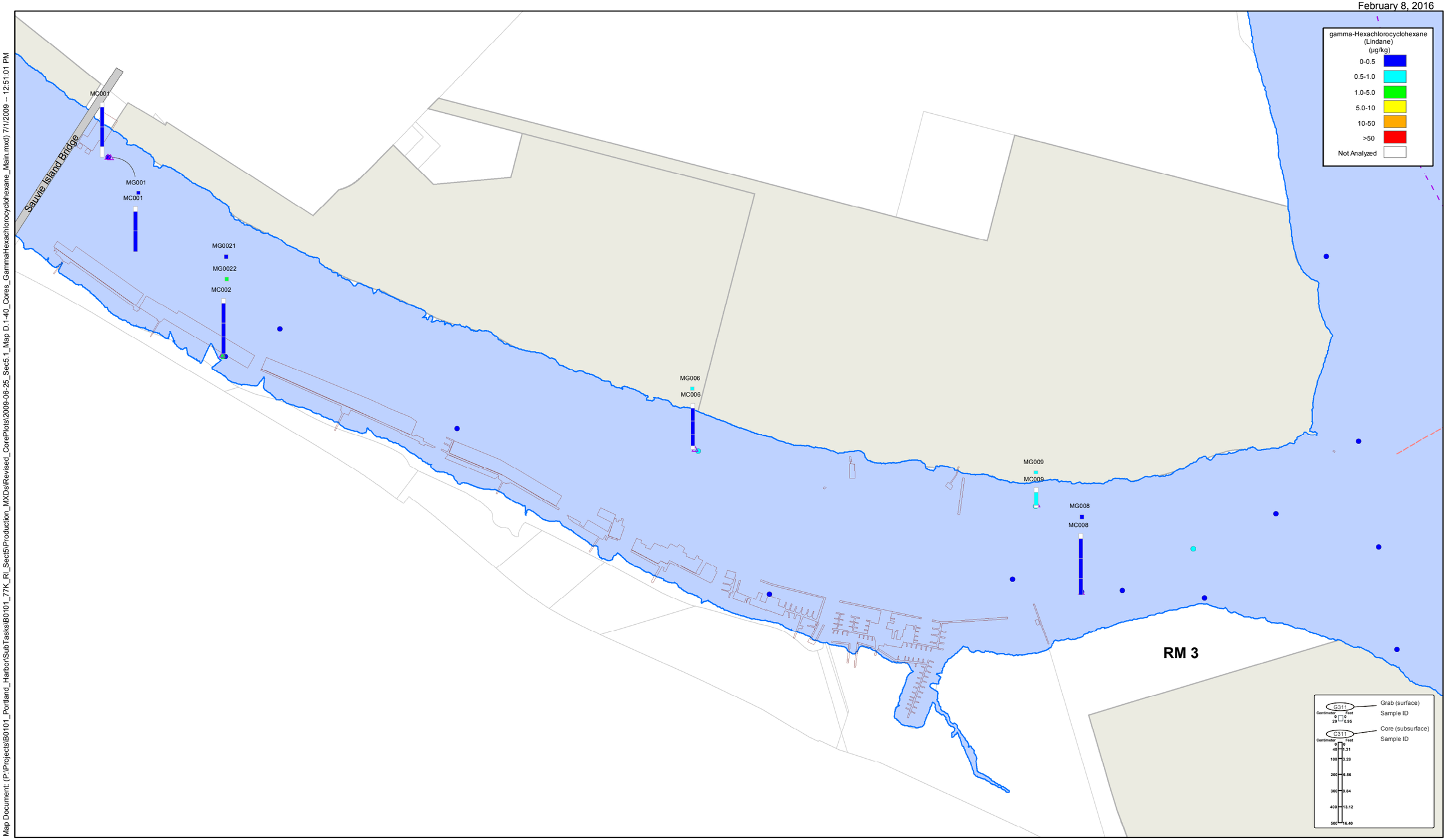
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-59b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
gamma-Hexachlorocyclohexane (Lindane) (µg/kg)
River Mile 02 to 03

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-40_Cores_GammaHexachlorocyclohexane_Main.mxd) 7/1/2009 -- 12:51:01 PM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

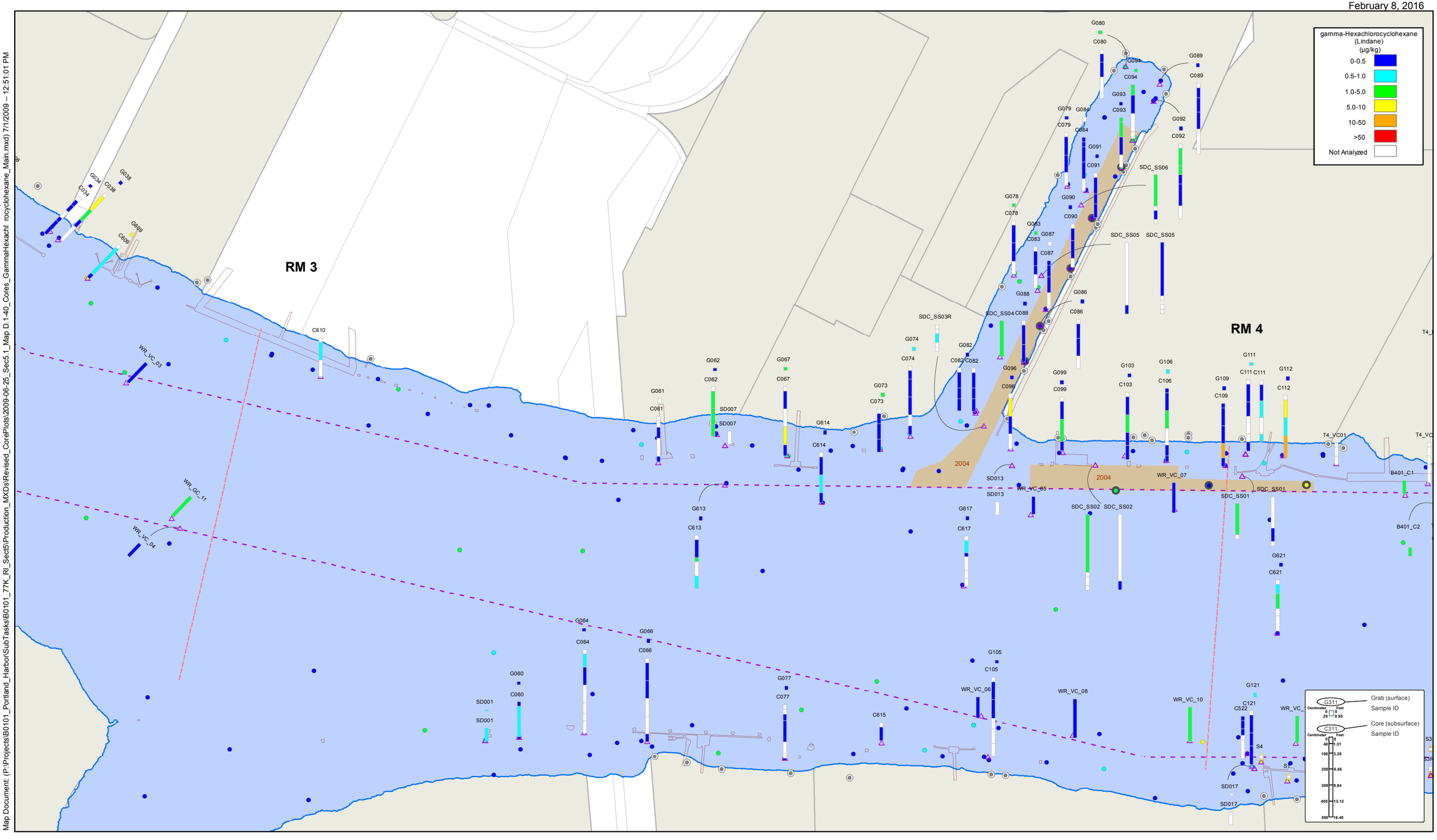
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-59c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
gamma-Hexachlorocyclohexane (Lindane) (µg/kg)
River Mile 03 - Multnomah Channel

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-40_Cores_GammaHexachl rocyclohexane_Main.mxd) 7/1/2009 -- 12:51:01 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

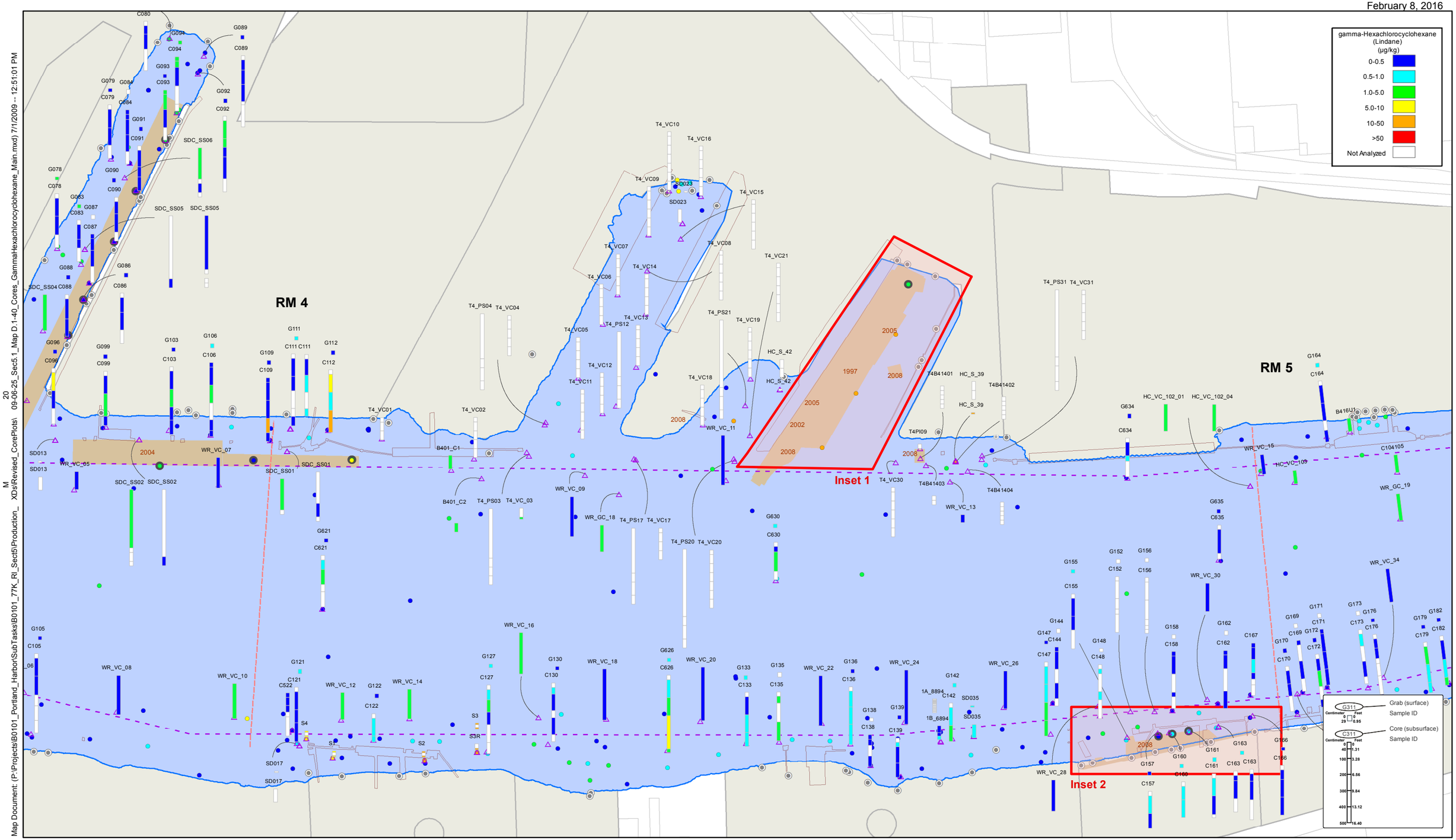
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-59d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
gamma-Hexachlorocyclohexane (Lindane) (µg/kg)
River Mile 03 to 04

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

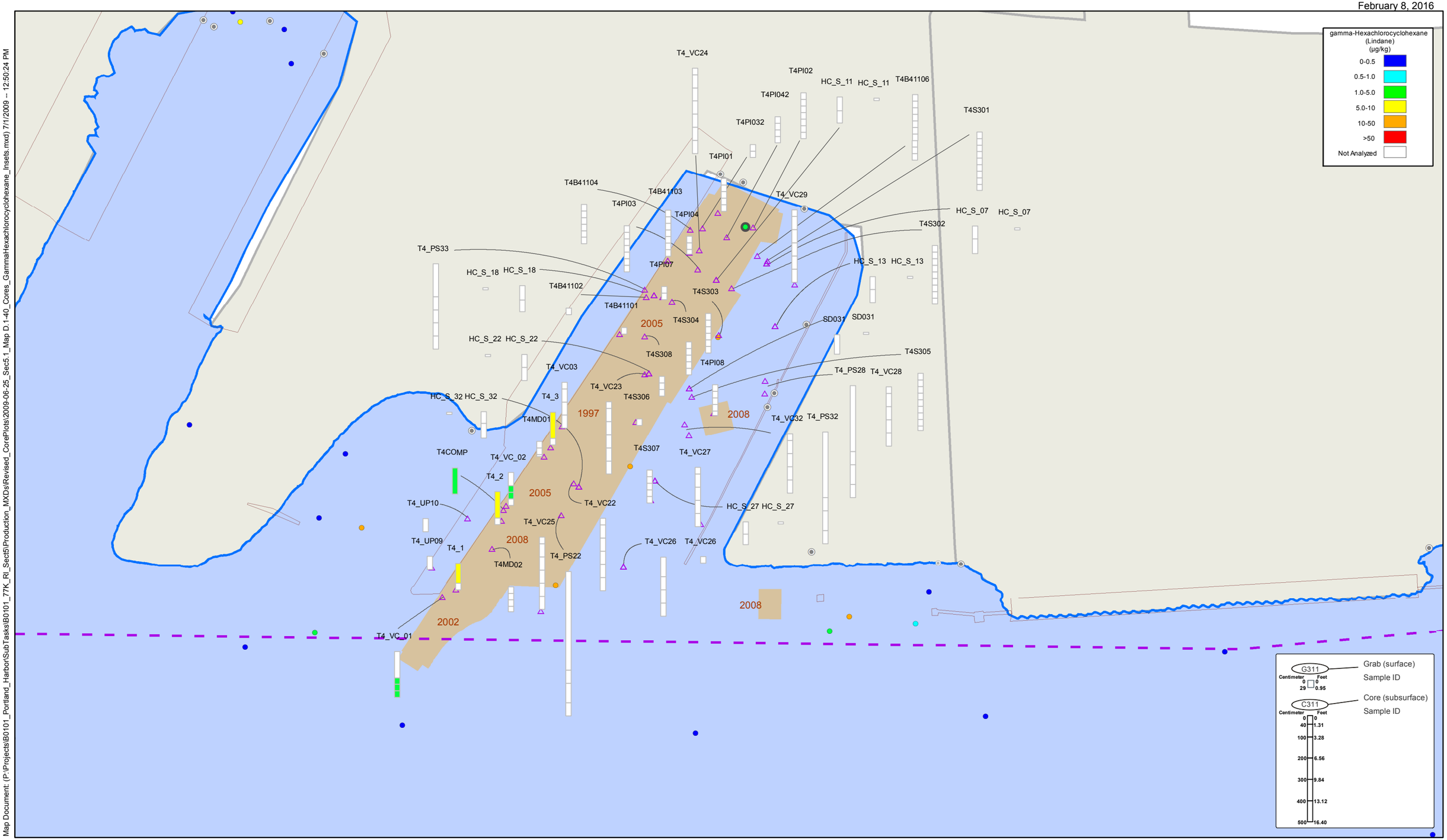
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-59e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
gamma-Hexachlorocyclohexane (Lindane) (µg/kg)
River Mile 04 to 05 - Slips

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

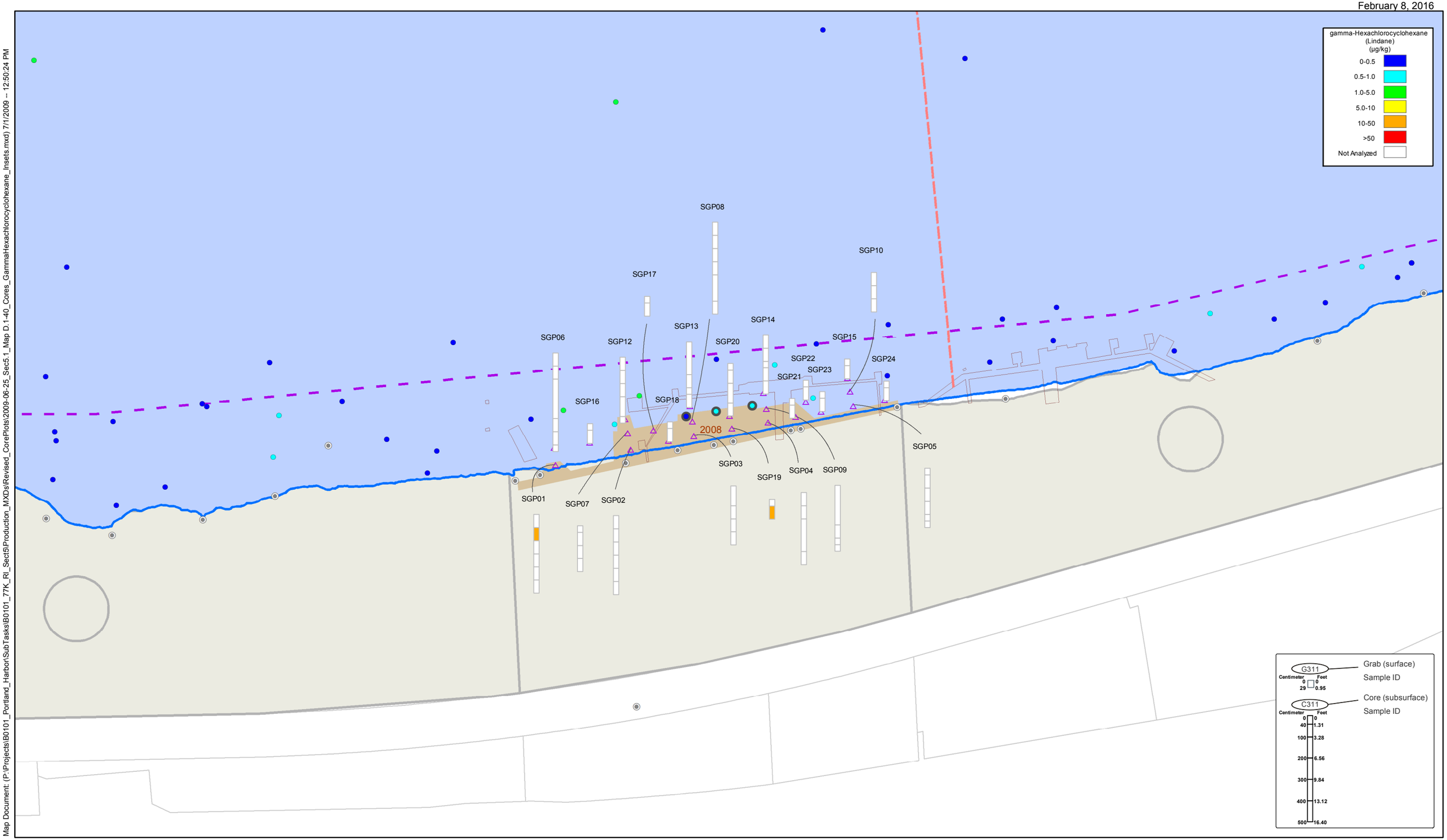
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-59e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
gamma-Hexachlorocyclohexane (Lindane) (µg/kg)
River Mile 04 to 05 - Slips - Inset 1

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-40_Cores_GammaHexachlorocyclohexane_Insets.mxd) 7/1/2009 -- 12:50:24 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

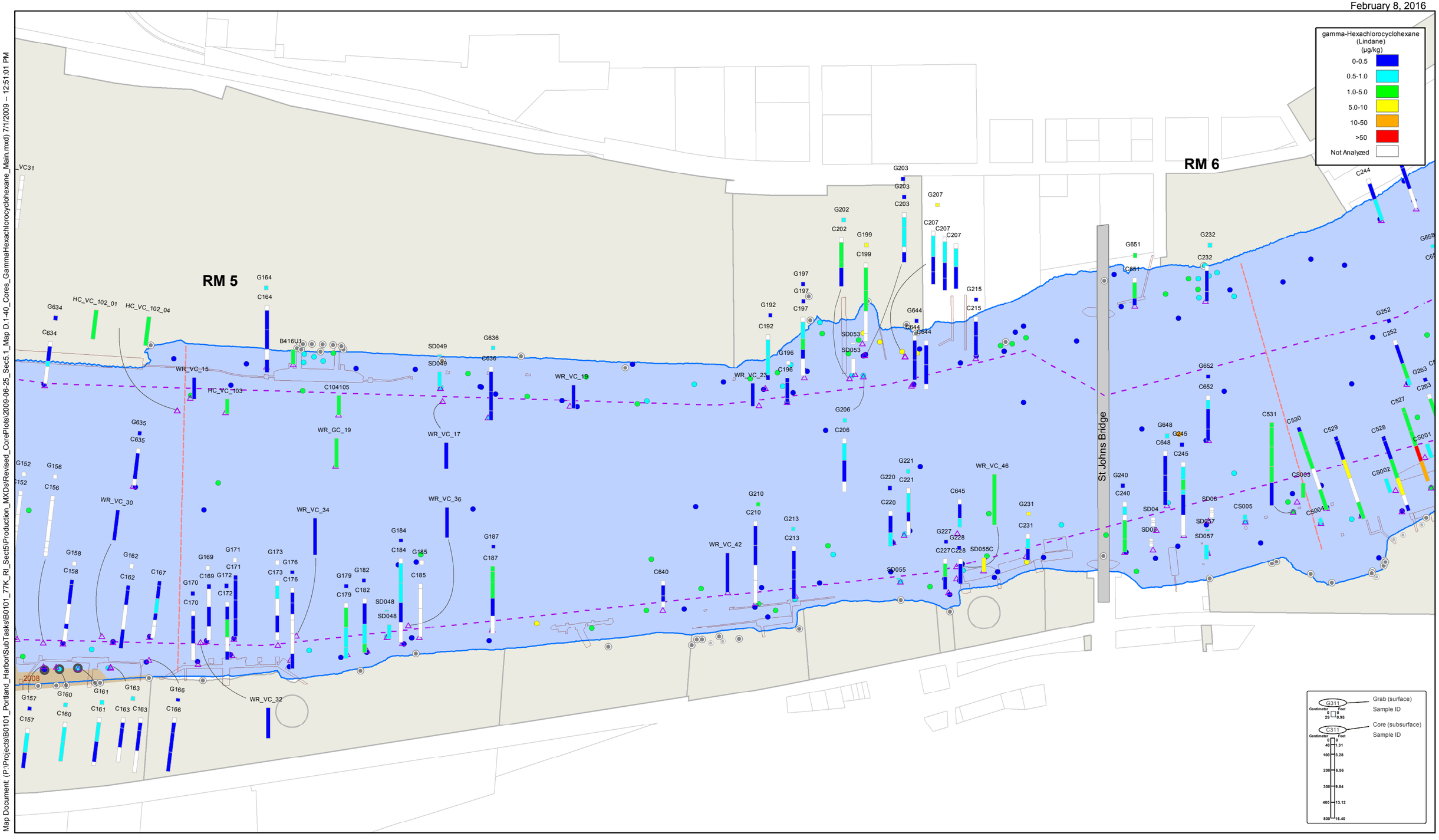
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-59e2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
gamma-Hexachlorocyclohexane (Lindane) (µg/kg)
River Mile 04 to 05 - Slips - Inset 2

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

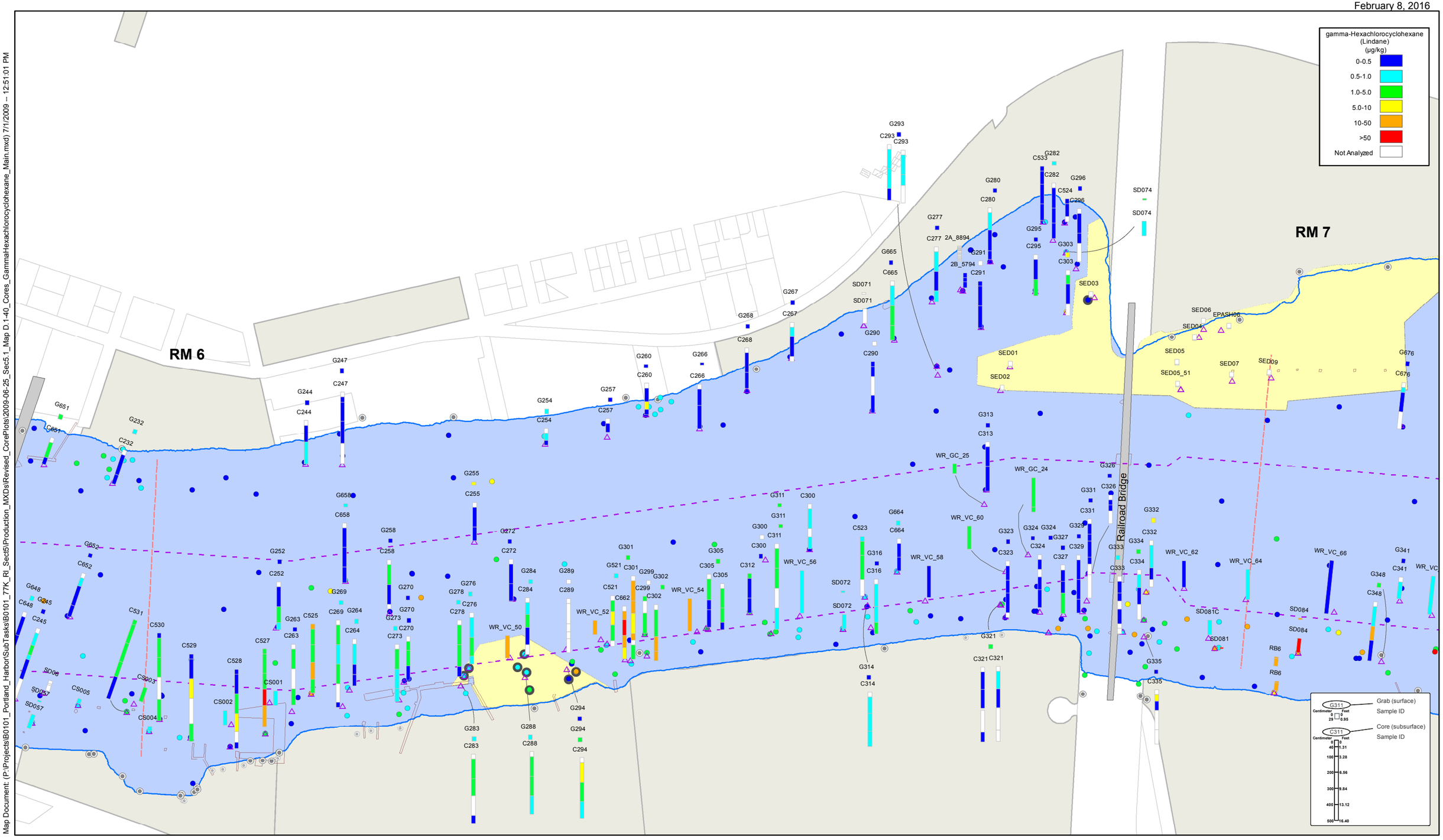
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-59f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
gamma-Hexachlorocyclohexane (Lindane) (µg/kg)
River Mile 05 to 06

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-40_Cores_GammaHexachlorocyclohexane_Main.mxd) 7/1/2009 -- 12:51:01 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

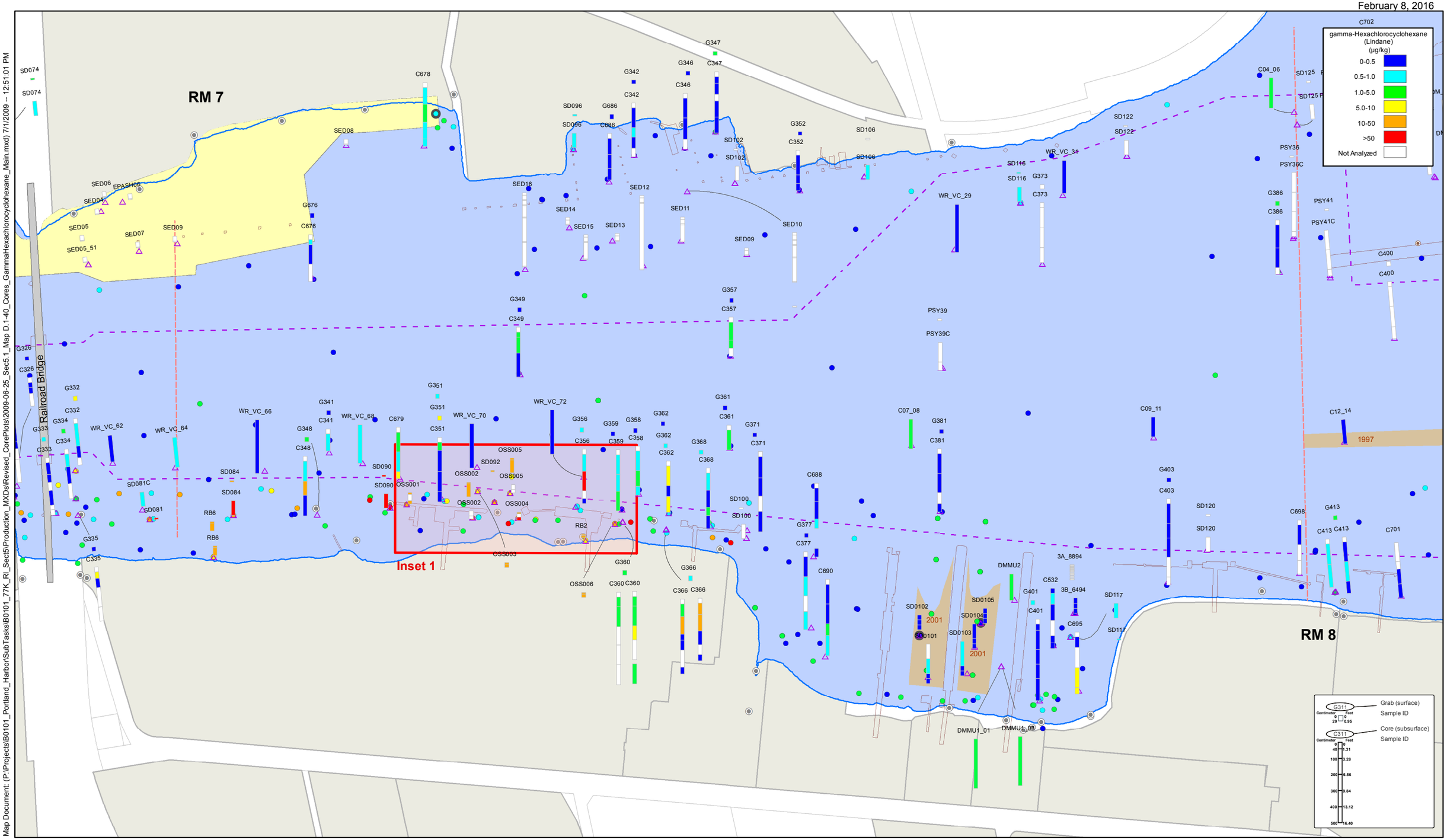
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-59g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
gamma-Hexachlorocyclohexane (Lindane) (µg/kg)
River Mile 06 to 07

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

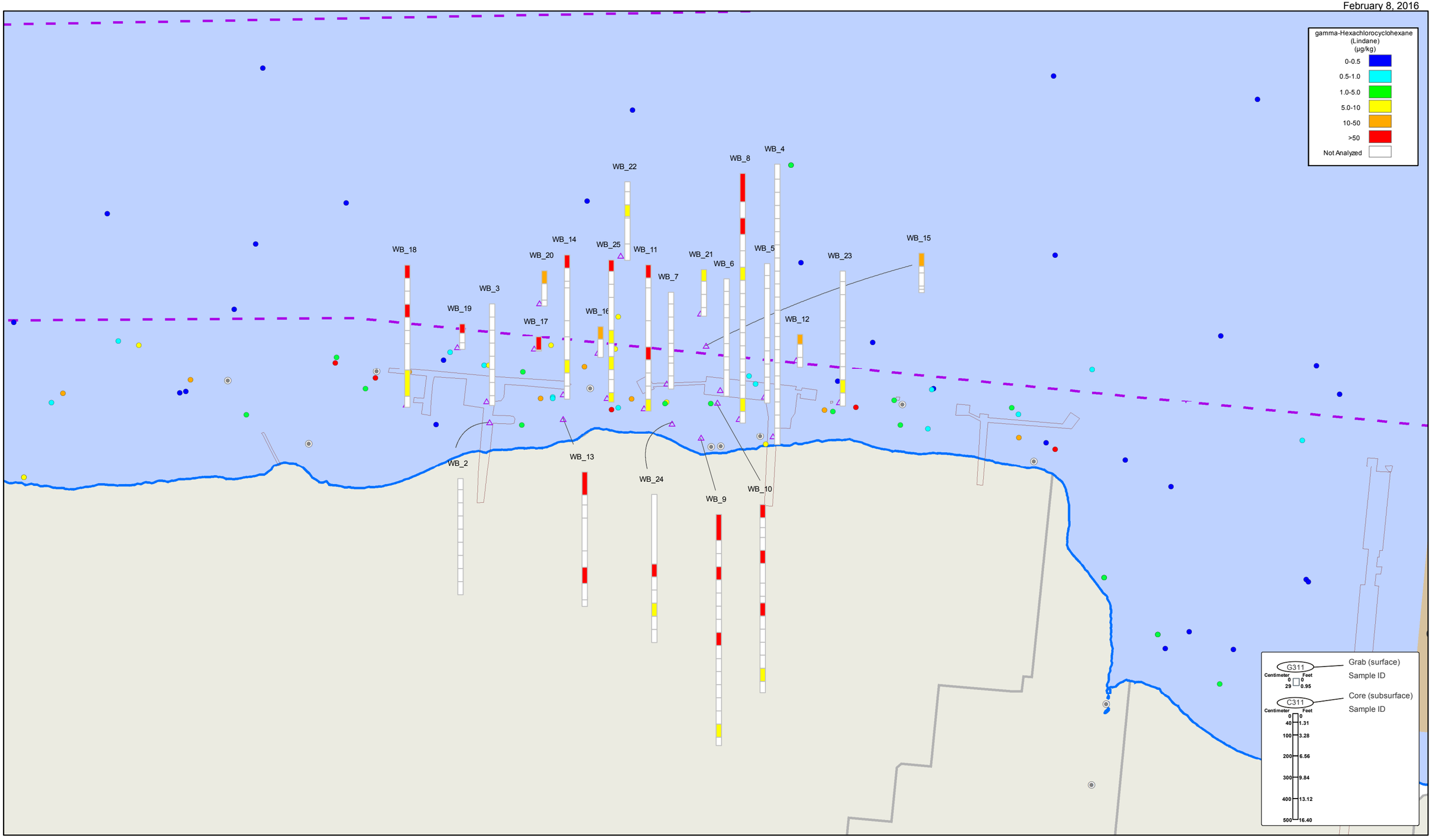
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-59h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
gamma-Hexachlorocyclohexane (Lindane) (µg/kg)
River Mile 07 to 08

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-40_Cores_GammaHexachlorocyclohexane_Insets.mxd) 7/1/2009 -- 12:50:24 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

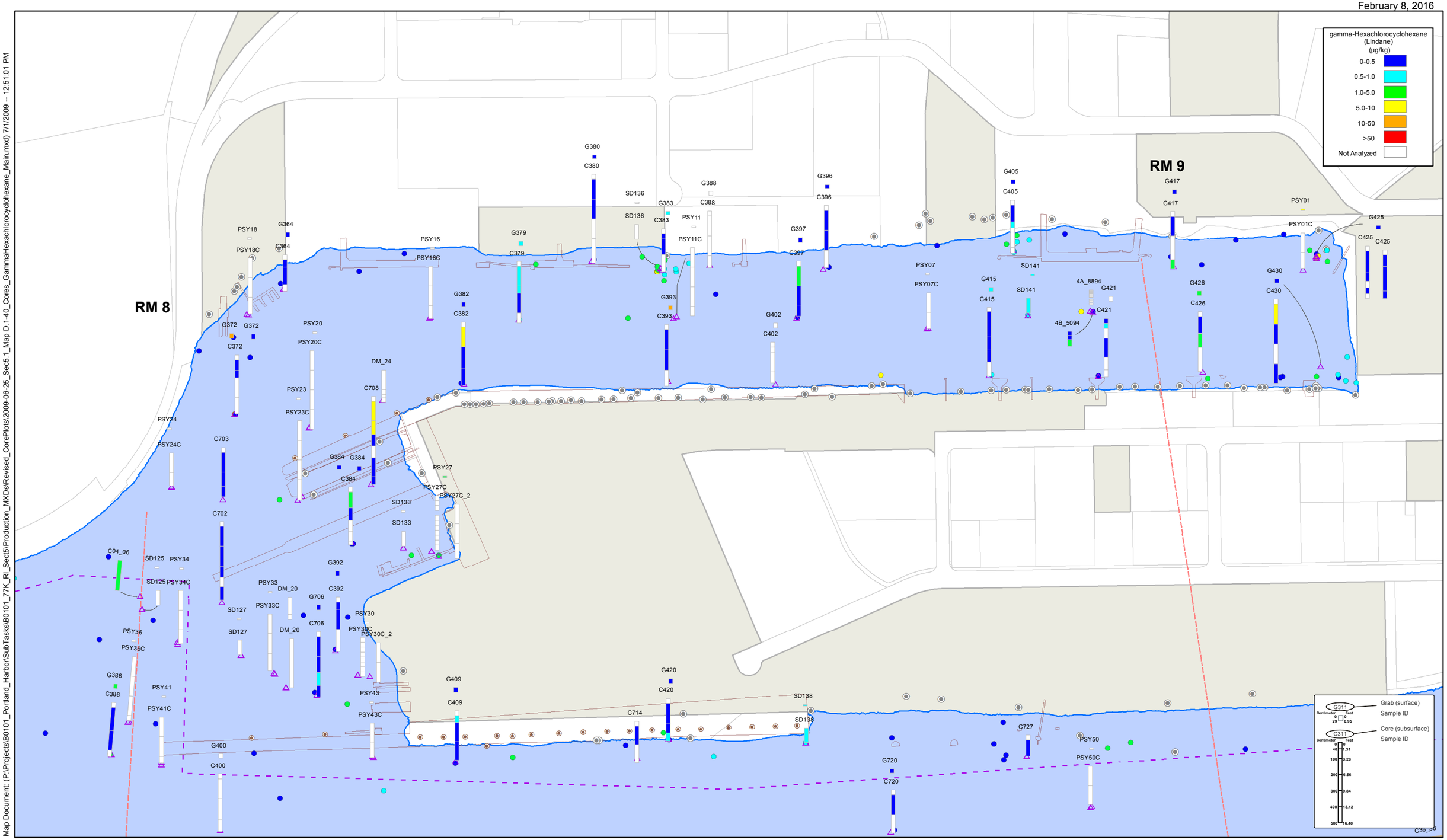
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-59h1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
gamma-Hexachlorocyclohexane (Lindane) (µg/kg)
River Mile 07 to 08 - Inset 1

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-40_Cores_GammaHexachlorocyclohexane_Main.mxd) 7/1/2009 -- 12:51:01 PM




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

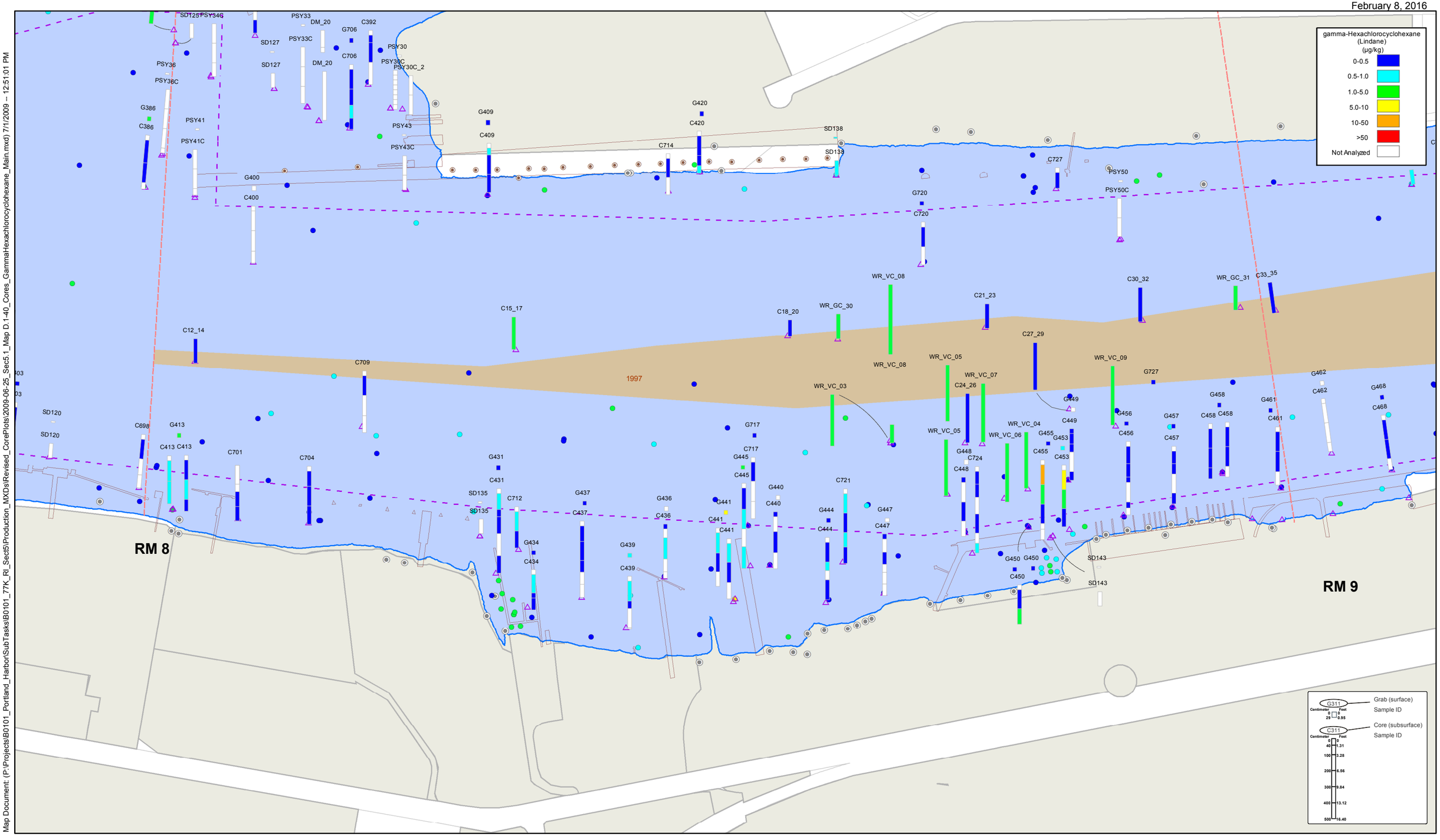
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-59i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
gamma-Hexachlorocyclohexane (Lindane) (µg/kg)
River Mile 08 to 09 - Swan Is. East

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-40_Cores_GammaHexachlorocyclohexane_Main.mxd) 7/1/2009 -- 12:51:01 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

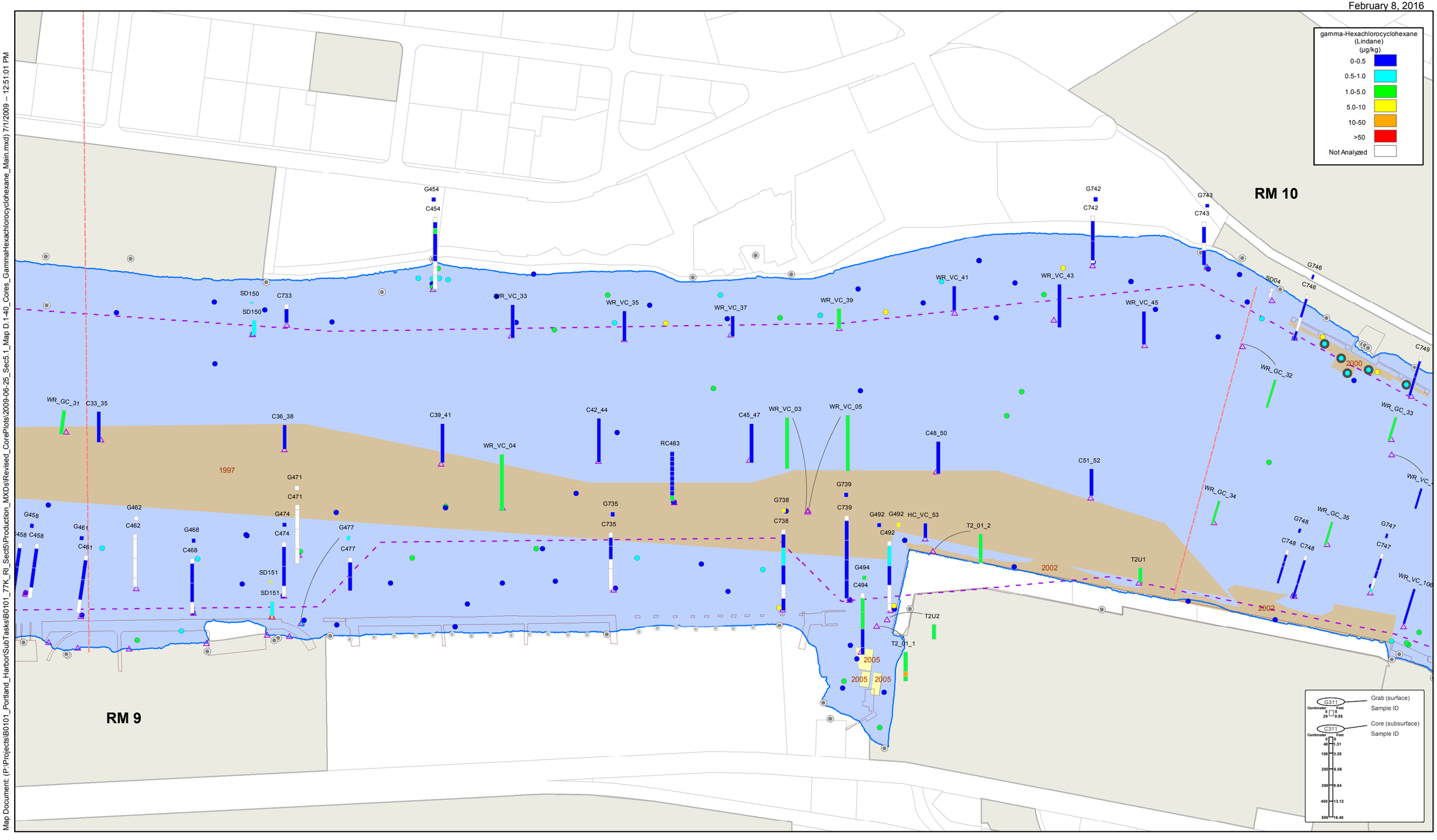
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-59j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
gamma-Hexachlorocyclohexane (Lindane) (µg/kg)
River Mile 08 to 09 - Swan Is. West

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-40_Cores_GammaHexachlorocyclohexane_Main.mxd) 7/1/2009 -- 12:51:01 PM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

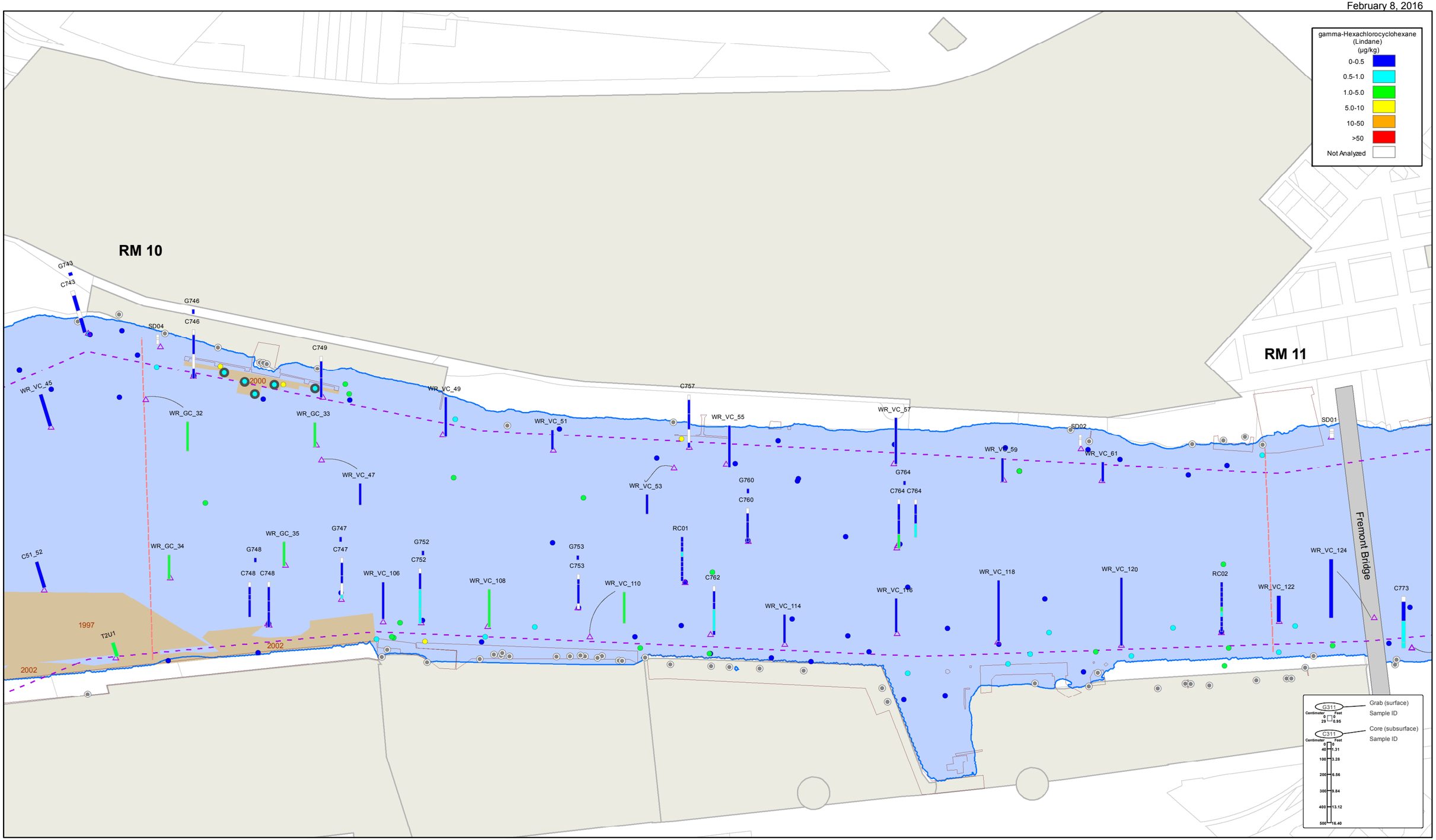
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-59k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
gamma-Hexachlorocyclohexane (Lindane) (µg/kg)
River Mile 09 to 10

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-40_Cores_GammaHexachlorocyclohexane_Main.mxd) 7/1/2009 -- 12:51:01 PM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

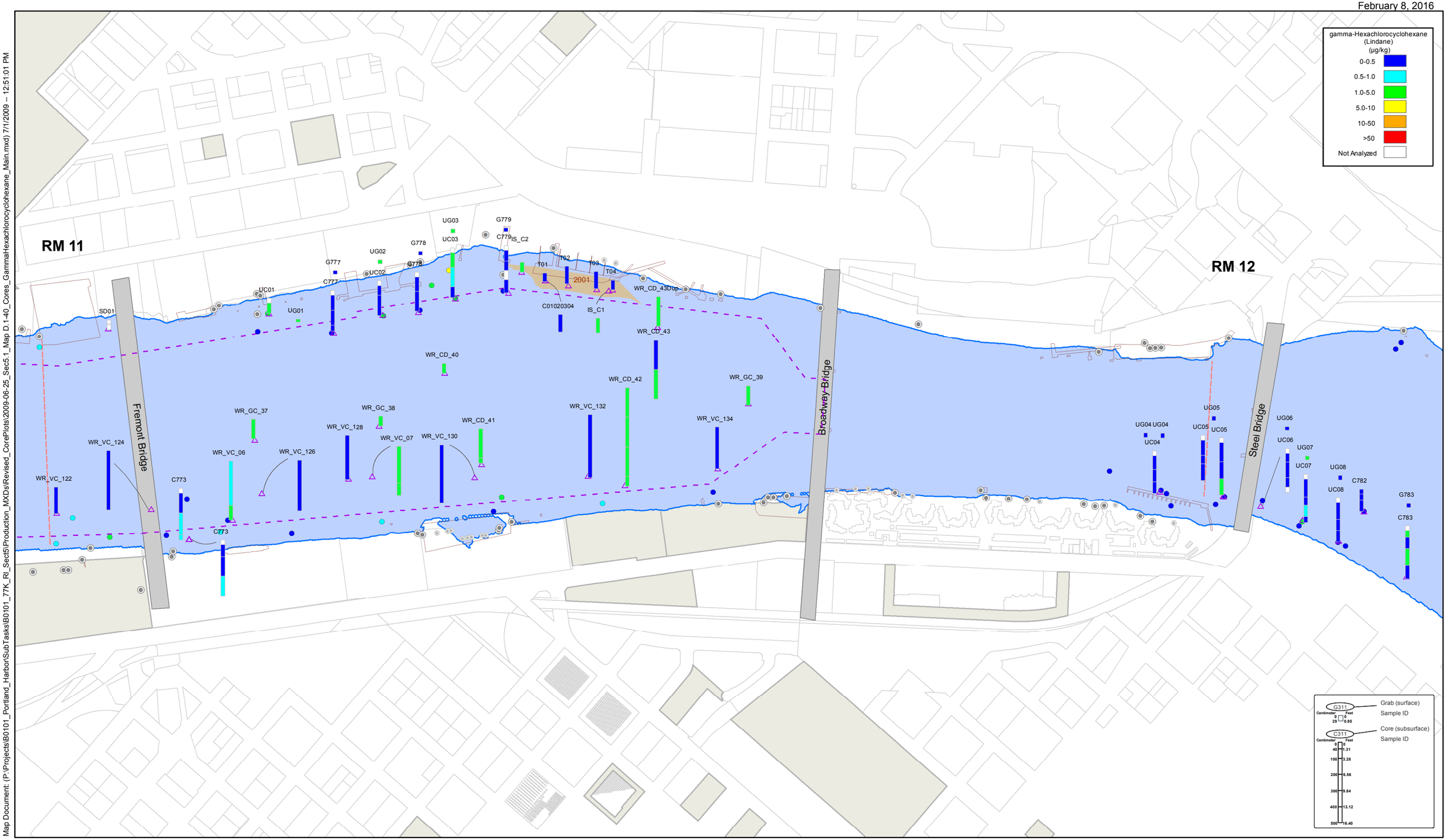
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-59I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
gamma-Hexachlorocyclohexane (Lindane) (µg/kg)
River Mile 10 to 11

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-40_Cores_GammaHexachlorocyclohexane_Main.mxd) 7/1/2009 -- 12:51:01 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

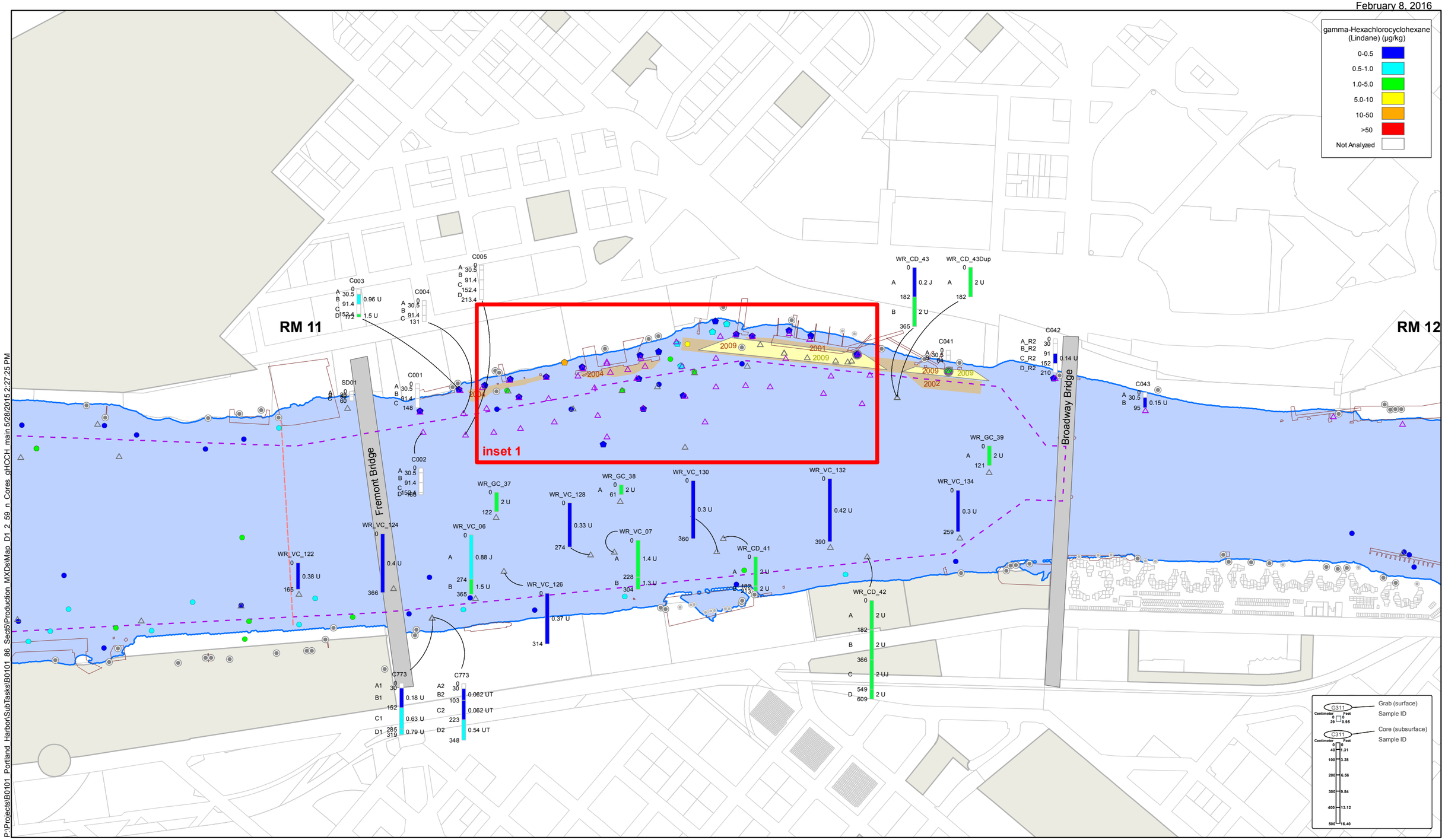
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-59m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
gamma-Hexachlorocyclohexane (Lindane) (µg/kg)
River Mile 11 to 12

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

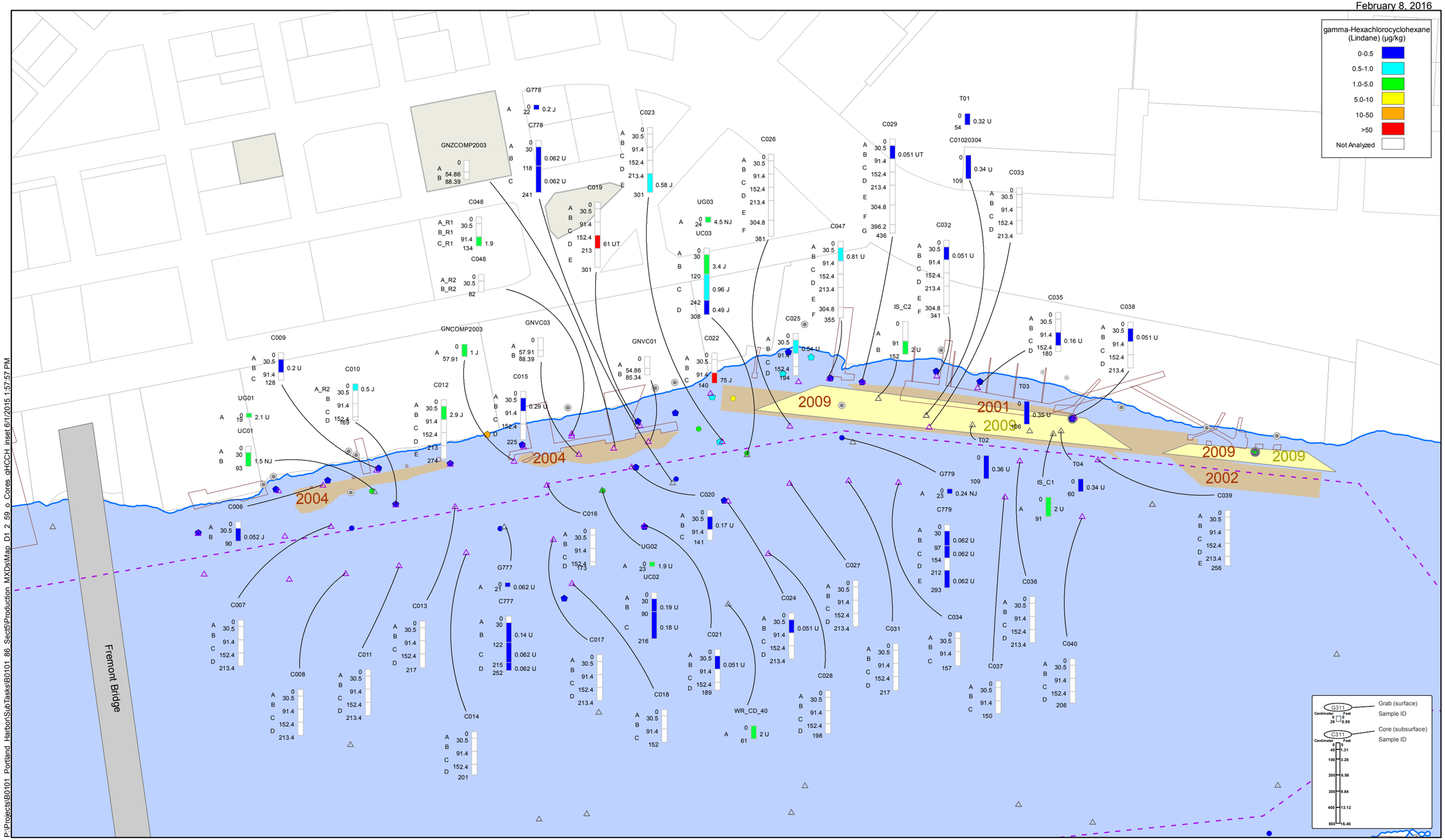
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-59n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
gamma-Hexachlorocyclohexane (Lindane) (µg/kg)

River Mile 11.0 - 11.8

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

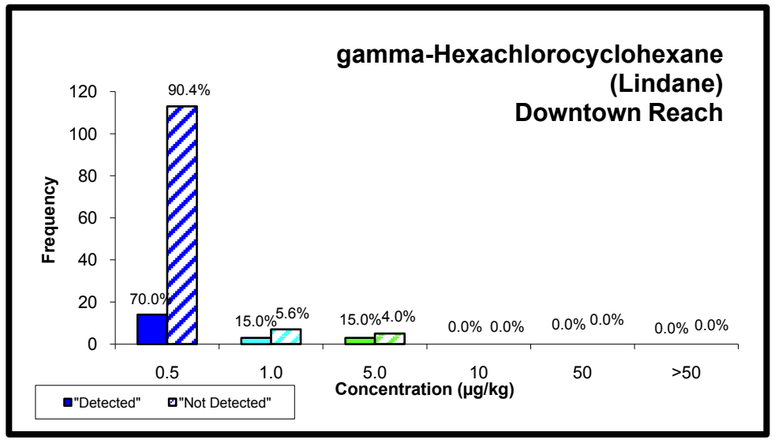
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

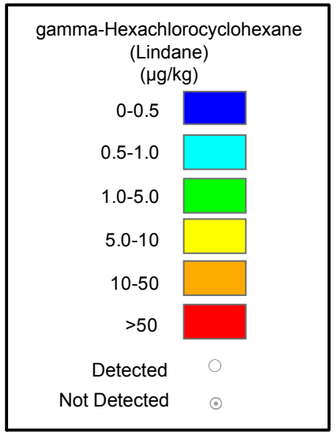
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

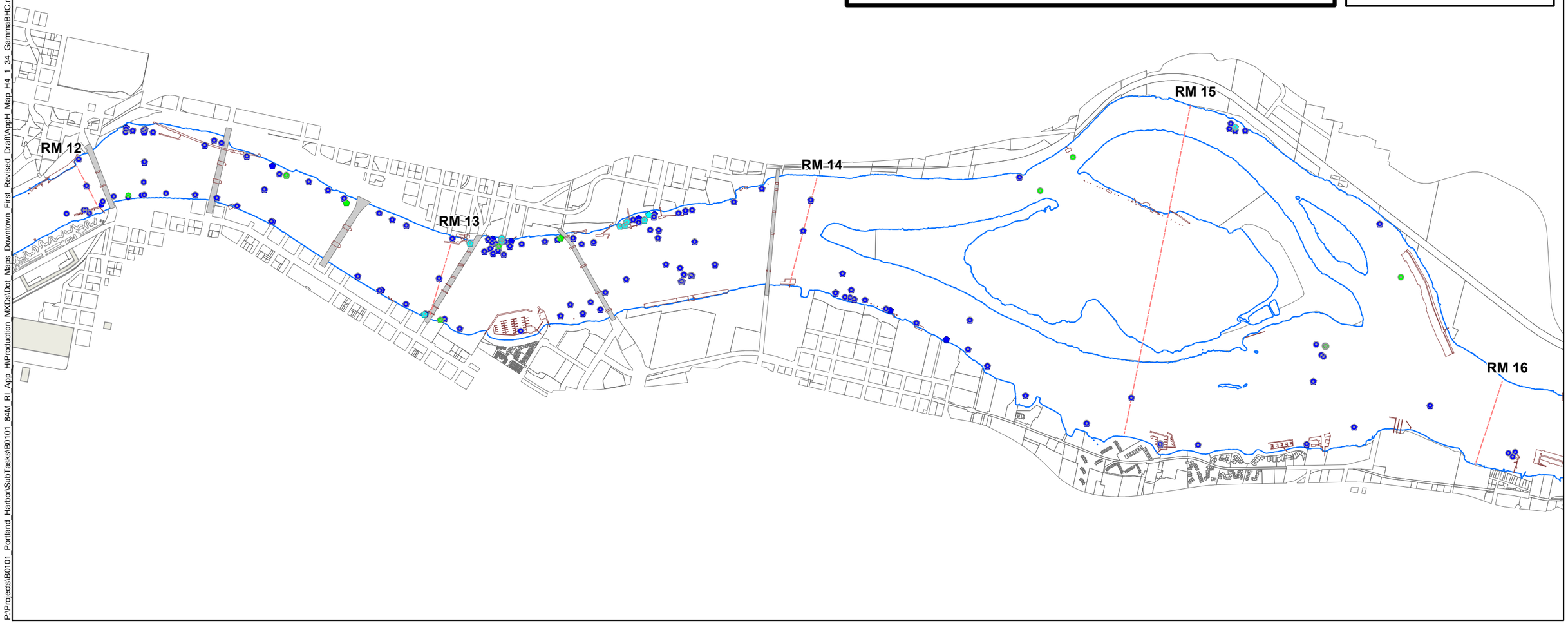
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-59o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
gamma-Hexachlorocyclohexane (Lindane) (µg/kg)

River Mile 11.0 - 11.8 - Inset 1

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N

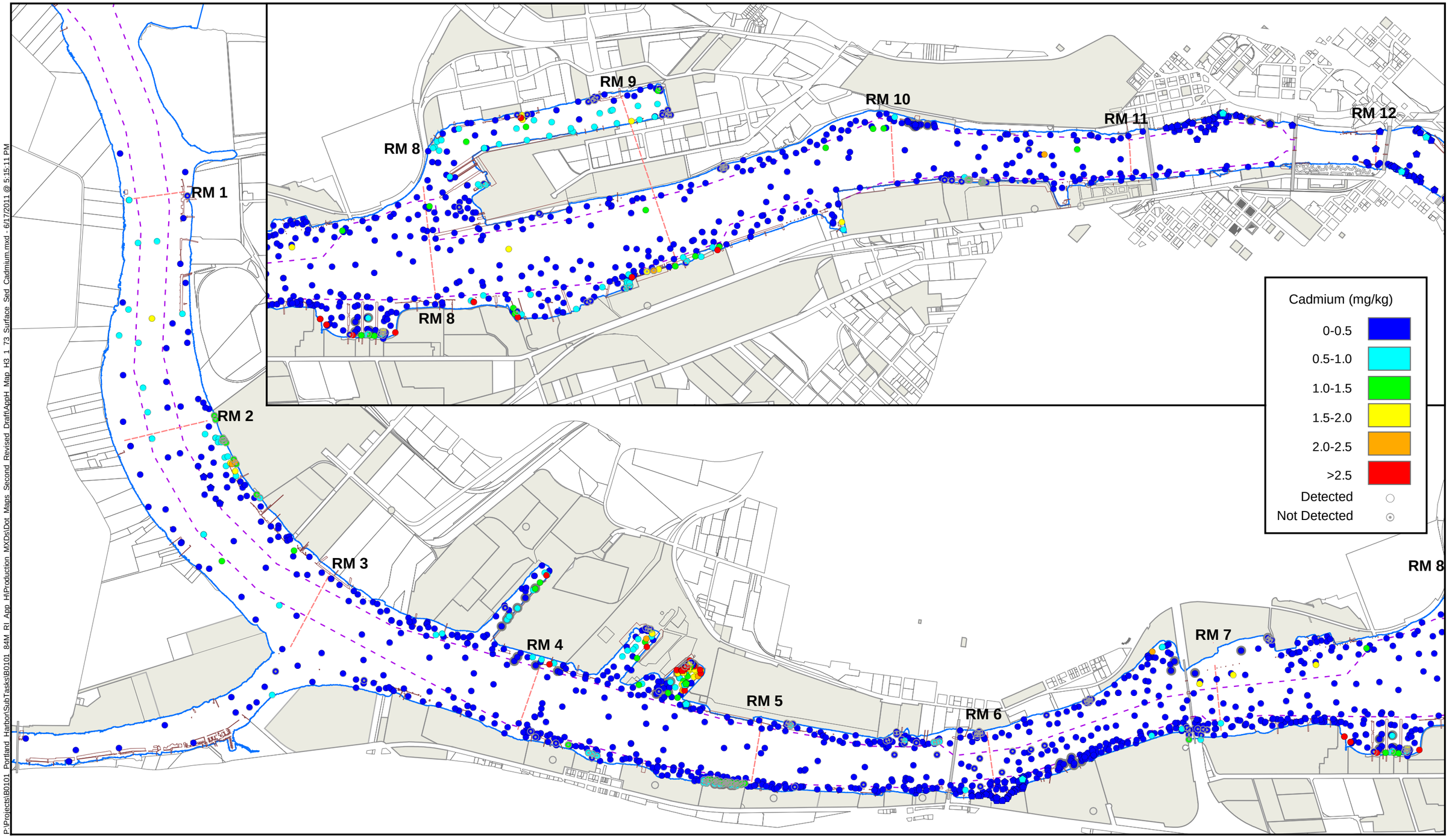
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

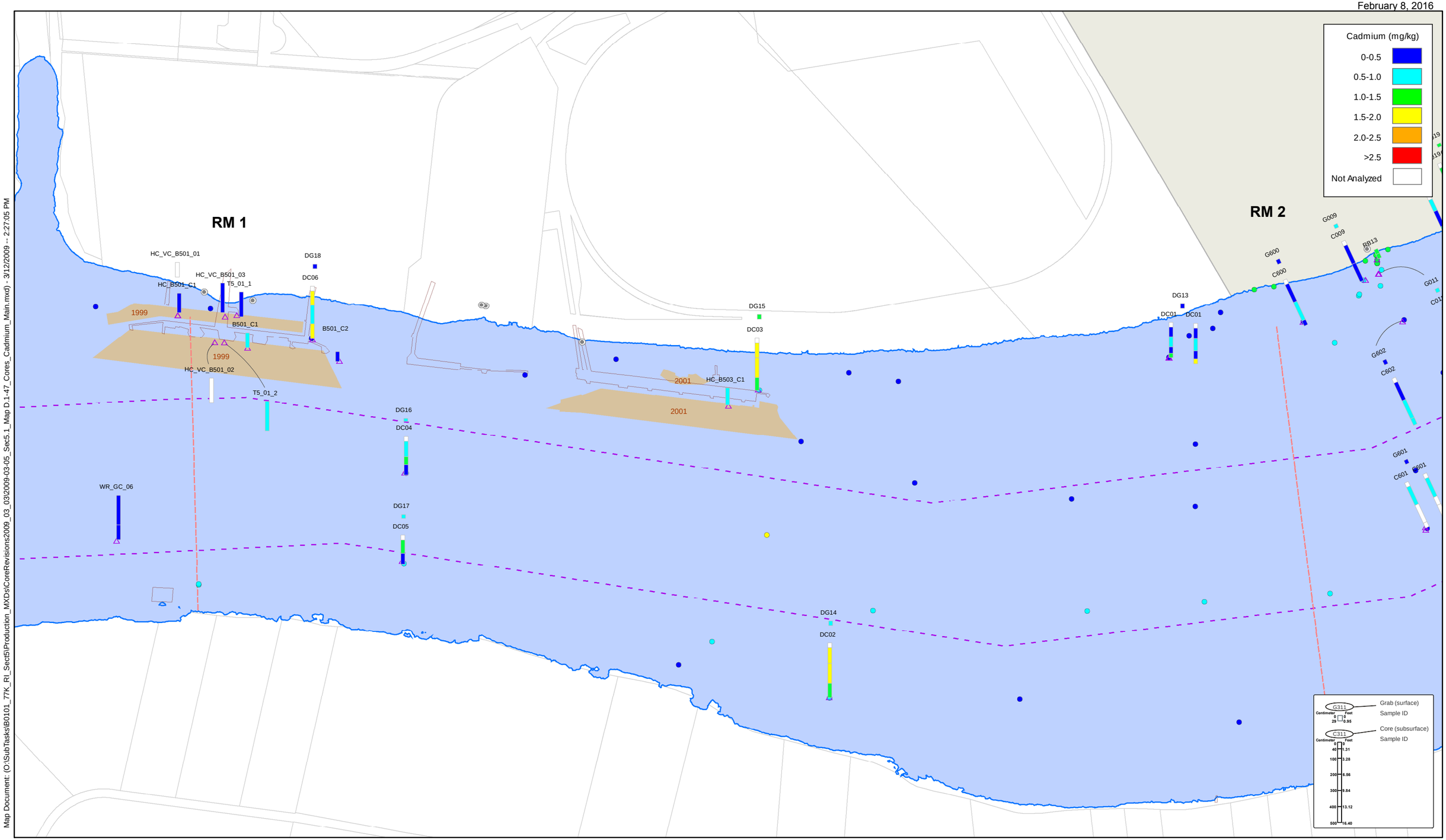
**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-60**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
gamma-Hexachlorocyclohexane (Lindane) (µg/kg)
Downtown Reach




**Map D1.2-61**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Cadmium (mg/kg)

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

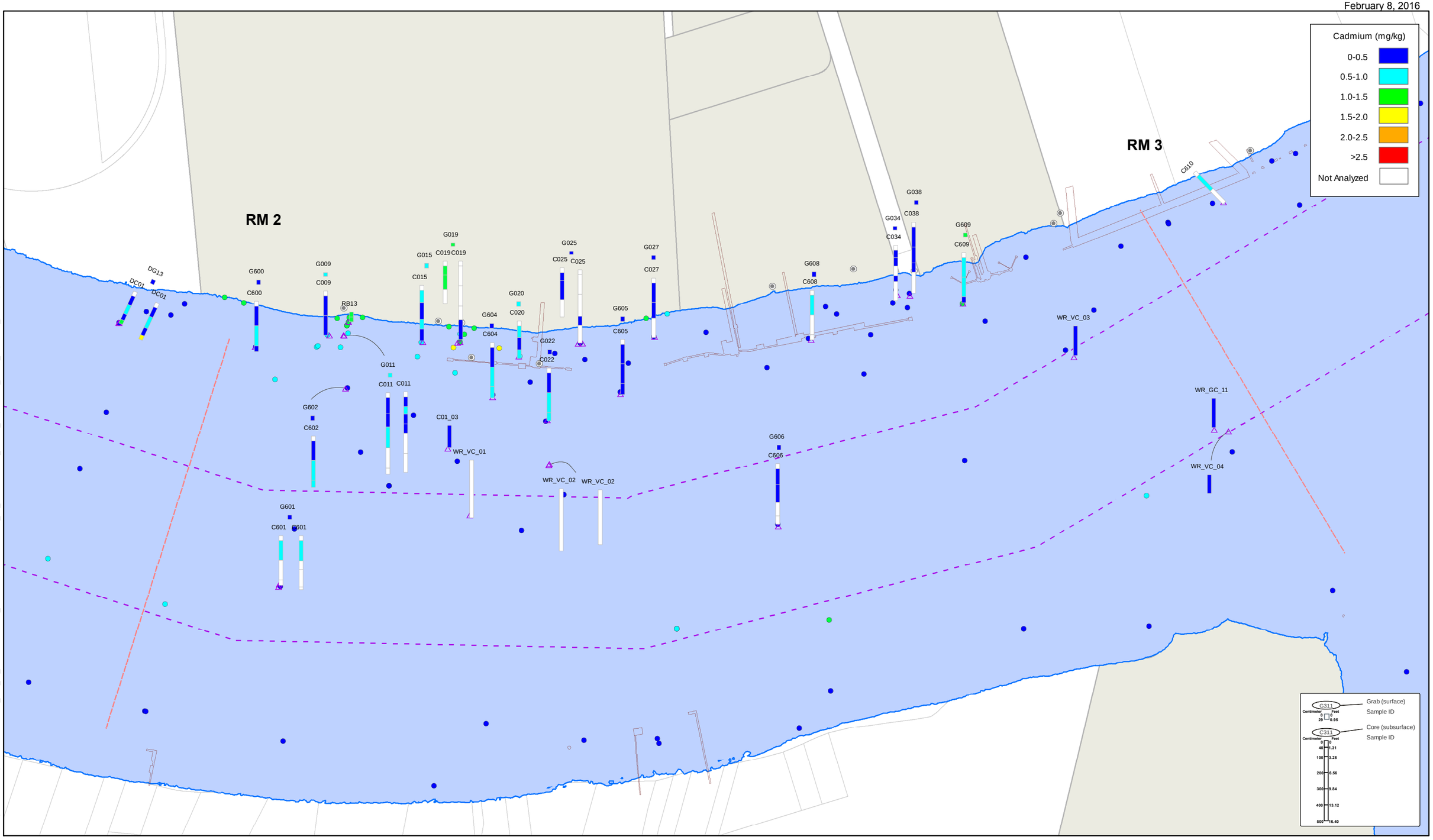
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-62a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Cadmium (mg/kg)

River Mile 01 to 02

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_032009-03-05_Sec5.1_Map D.1-47_Cores_Cadmium_Main.mxd) - 3/12/2009 -- 2:27:05 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-62 b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Cadmium (mg/kg)

River Mile 02 to 03

Map Document: (O:\SubTasks\B0101_7\K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_032009-03-05_Sec5.1_Map D.1-47_Cores_Cadmium_Main.mxd) - 3/12/2009 -- 2:27:05 PM

Cadmium (mg/kg)
- 0-0.5
- 0.5-1.0
- 1.0-1.5
- 1.5-2.0
- 2.0-2.5
- >2.5
- Not Analyzed

Sauvie Island Bridge

MC001
MG001
MC001
MG0021
MG0022
MC002
MG006
MC006
MG009
MC009
MG008
MC008

RM 3

G311 Grab (surface) Sample ID
C311 Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-62c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Cadmium (mg/kg)

River Mile 03 - Multnomah Channel

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_032009-03-05_Sec5.1_Map D.1-47_Cores_Cadmium_Main.mxd) - 3/12/2009 -- 2:27:05 PM

RM 3

RM 4

Cadmium (mg/kg)
- 0-0.5
- 0.5-1.0
- 1.0-1.5
- 1.5-2.0
- 2.0-2.5
- >2.5
- Not Analyzed

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

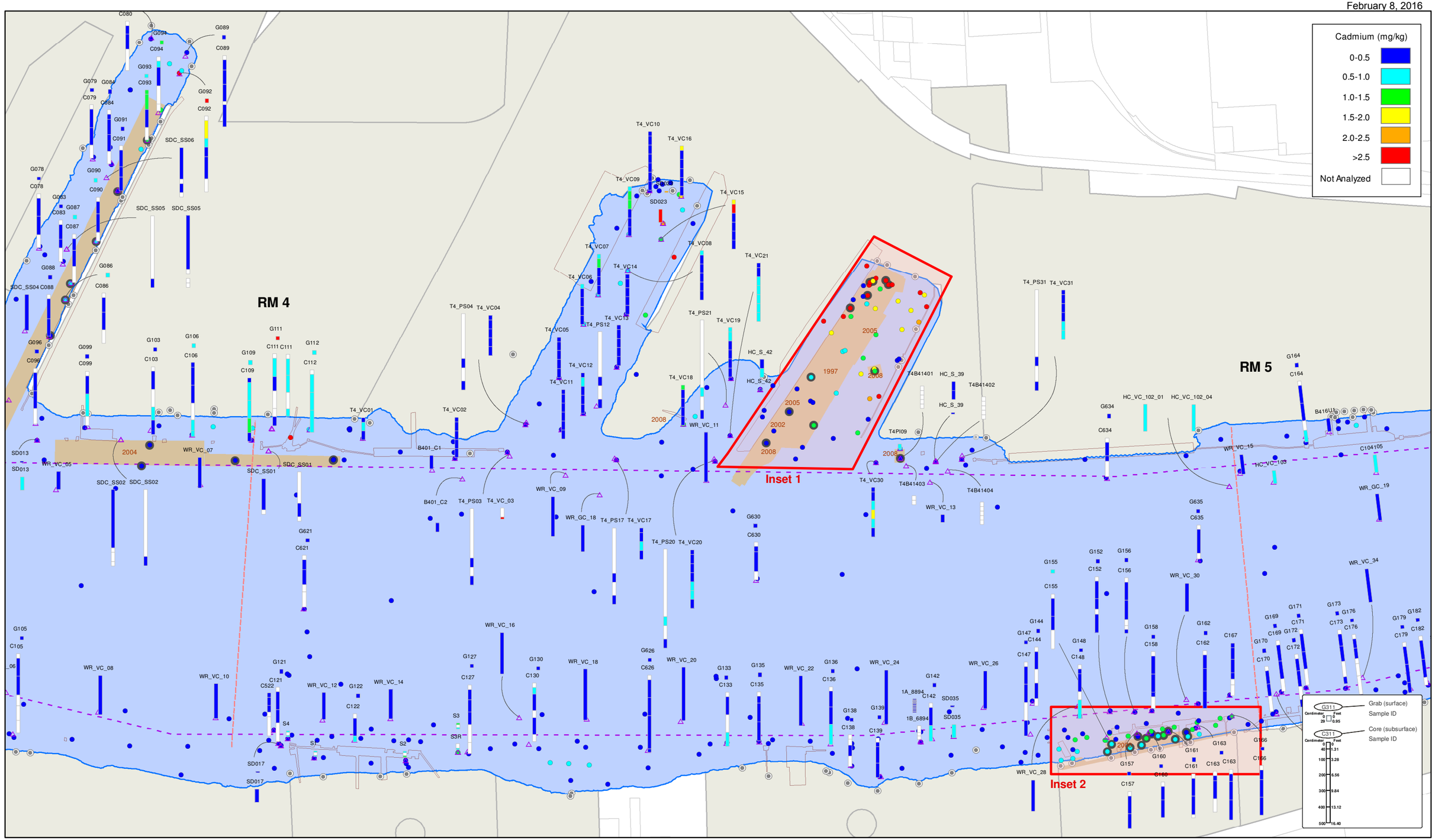
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-62 d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Cadmium (mg/kg)

River Mile 03 to 04




Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-46_Cores_Cadmium_Main.mxd) 7/1/2009 -- 12:56:01 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

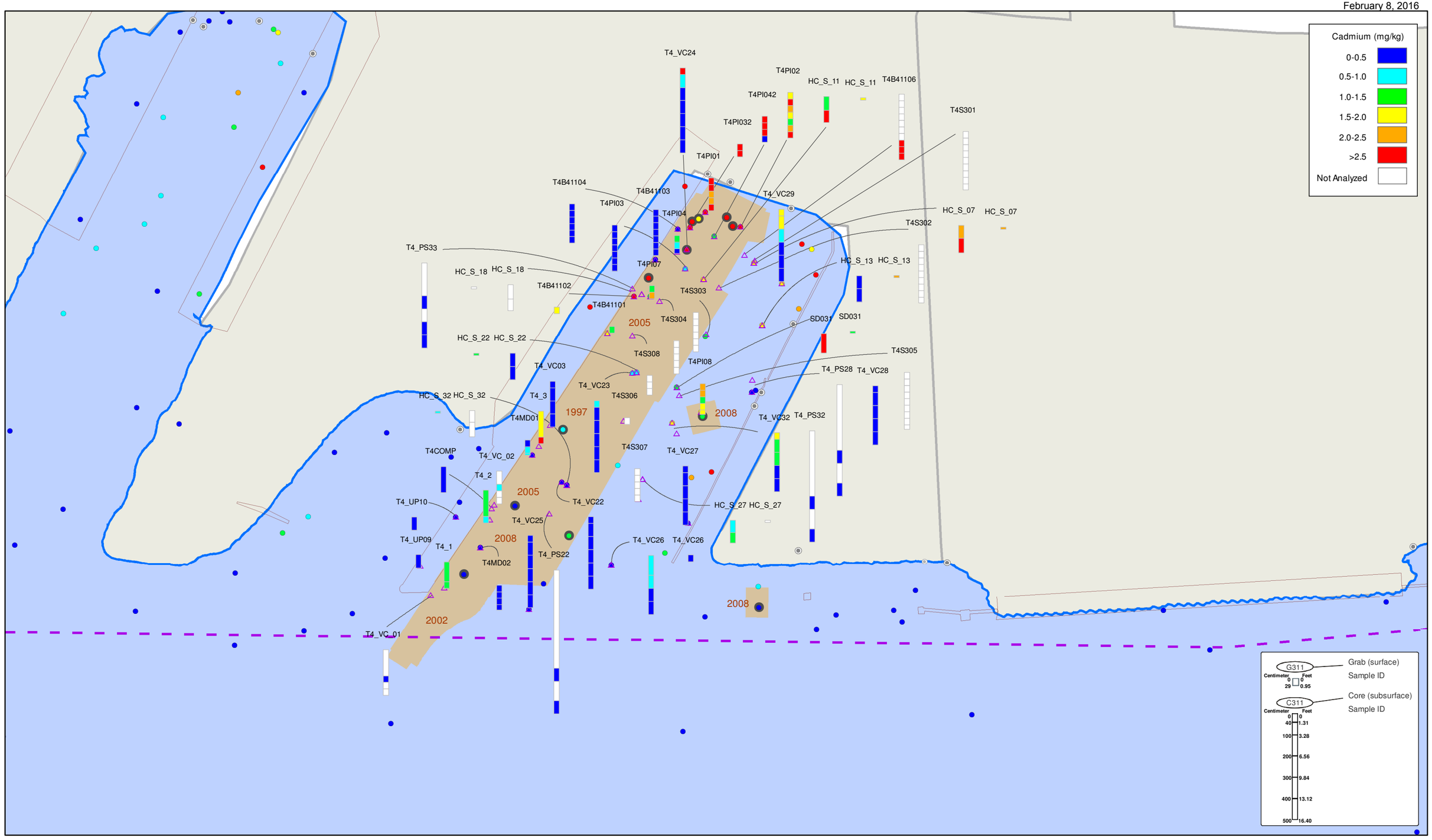
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-62e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Cadmium (mg/kg)

River Mile 04 to 05 - Slips




Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-46_Cores_Cadmium_Insets.mxd) 7/1/2009 -- 12:55:01 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 120 240 480 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-62e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Cadmium (mg/kg)
River Mile 04 to 05 - Slips - Inset 1

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_032009-03-05_Sec5.1_Map D.1-47_Cores_Cadmium_Insets.mxd) - 3/12/2009 -- 2:30:30 PM

Cadmium (mg/kg)
- 0-0.5
- 0.5-1.0
- 1.0-1.5
- 1.5-2.0
- 2.0-2.5
- >2.5
- Not Analyzed

SGP08 SGP17 SGP10 SGP06 SGP12 SGP13 SGP14 SGP20 SGP15 SGP22 SGP24 SGP23 SGP21 SGP16 SGP18 2008 SGP05 SGP03 SGP19 SGP04 SGP09 SGP01 SGP07 SGP02

G311 Grab (surface) Sample ID
Centimeter 0 29 Feet 0 0.95

C311 Core (subsurface) Sample ID
Centimeter 0 40 100 200 300 400 500 Feet 0 1.31 3.28 6.56 9.84 13.12 16.40

N

0 125 250 500 Feet

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

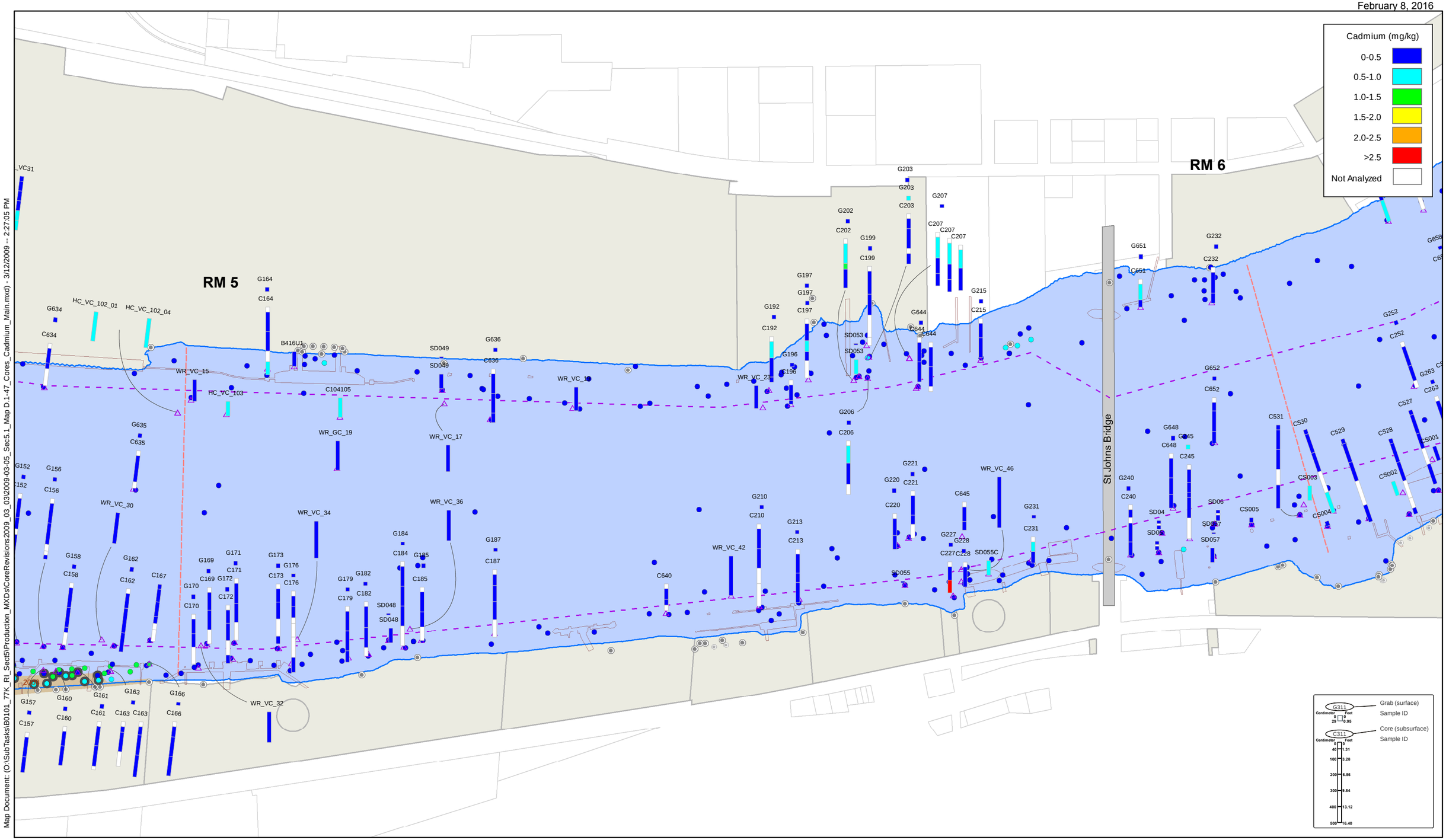
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-62e2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Cadmium (mg/kg)

River Mile 04 to 05 - Slips - Inset 2




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-47_Cores_Cadmium_Main.mxd) - 3/12/2009 -- 2:27:05 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-62f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Cadmium (mg/kg)

River Mile 05 to 06

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-47_Cores_Cadmium_Main.mxd) - 3/12/2009 -- 2:27:05 PM

Cadmium (mg/kg)
- 0-0.5
- 0.5-1.0
- 1.0-1.5
- 1.5-2.0
- 2.0-2.5
- >2.5
- Not Analyzed

RM 6

RM 7

Railroad Bridge

Inset 1

G311 — Grab (surface) Sample ID

C311 — Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-62 g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Cadmium (mg/kg)

River Mile 06 to 07

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-47_Cores_Cadmium_Insets.mxd) - 3/12/2009 -- 2:30:30 PM

Cadmium (mg/kg)
- 0-0.5
- 0.5-1.0
- 1.0-1.5
- 1.5-2.0
- 2.0-2.5
- >2.5
- Not Analyzed

GS09 GSD2 GS08 GSD4 GSD5 AN_1_5 GS07 GS06 GSC5 GS05 GS04 AN_2_5 GSC2 GSB2 GSB7 GSC7 AN_1_3 AN_1_2 AN_2_4 GSB5 AN_2_3 AN_2_1 AN_1_1 AN_2_2

G311 Grab (surface) Sample ID

C311 Core (subsurface) Sample ID

| Centimeter | Feet |
|---|---|
| 0 | 0 |
| 29 | 0.95 |
| 40 | 1.31 |
| 100 | 3.28 |
| 200 | 6.56 |
| 300 | 9.84 |
| 400 | 13.12 |
| 500 | 16.40 |

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-62 g1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Cadmium (mg/kg)

River Mile 06 to 07 - Inset 1

RM 7

RM 8

Railroad Bridge

Cadmium (mg/kg)
- 0-0.5
- 0.5-1.0
- 1.0-1.5
- 1.5-2.0
- 2.0-2.5
- >2.5
- Not Analyzed

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-62 h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Cadmium (mg/kg)

River Mile 07 to 08

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-47_Cores_Cadmium_Main.mxd) - 3/12/2009 -- 2:27:05 PM

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RM 8

RM 9

Cadmium (mg/kg)
- 0-0.5
- 0.5-1.0
- 1.0-1.5
- 1.5-2.0
- 2.0-2.5
- >2.5
- Not Analyzed

G380 C380 SD136 G383 C383 G388 C388 PSY11 PSY11C G396 C396 G405 C405 G417 C417 PSY01 PSY01C G425 C425
PSY18 PSY18C G364 C364 PSY16 PSY16C G379 C379 G397 C397 PSY07 PSY07C G415 C415 SD141 4A_8894 G421 C421 4B_5094 G426 C426 G430 C430
G382 C382 G393 C393 G402 C402
G372 C372 PSY20 PSY20C DM_24 C708 PSY23 PSY23C PSY24 PSY24C C703 G384 C384 PSY27 PSY27C PSY27C_2 SD133 C702
C04_06 SD125 PSY34 PSY34C PSY33 DM_20 G706 G392 C392 PSY33C SD127 C706 PSY30 PSY30C PSY30C_2 PSY36 PSY36C G386 C386 PSY41 PSY41C PSY43 PSY43C G409 C409 G420 C420 SD138 C714 G400 C400 G720 C720 C727 PSY50 PSY50C

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

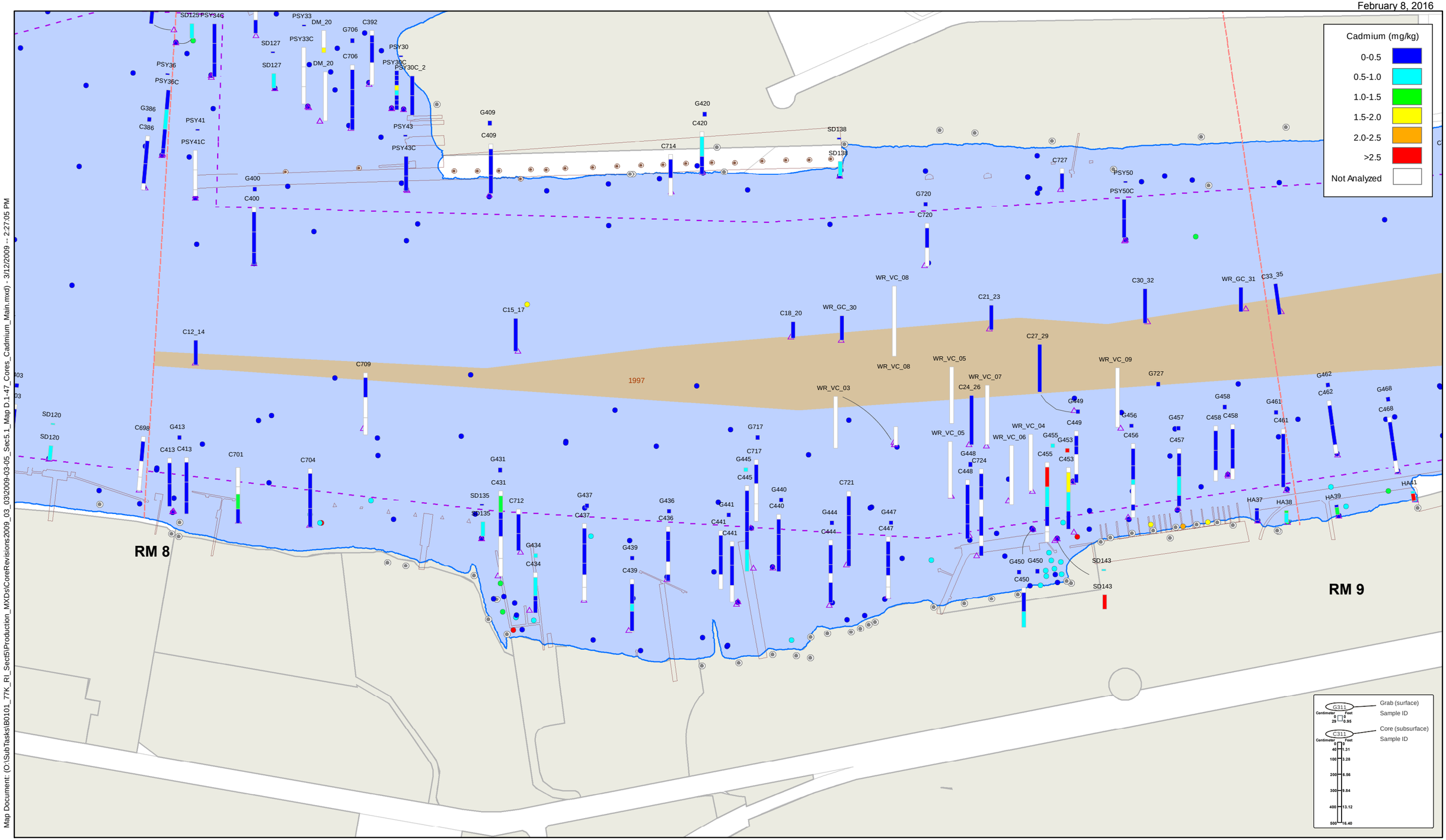
- Upland ECSI Sites (2008)
- Waterfront Taxlots

Grab (surface) Sample ID: G311
Core (subsurface) Sample ID: C311

C36_38

**Map D1.2-62i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Cadmium (mg/kg)

River Mile 08 to 09 - Swan Is. East

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-62j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Cadmium (mg/kg)

River Mile 08 to 09 - Swan Is. West

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-47_Cores_Cadmium_Main.mxd) - 3/12/2009 -- 2:27:05 PM

Cadmium (mg/kg)
- 0-0.5
- 0.5-1.0
- 1.0-1.5
- 1.5-2.0
- 2.0-2.5
- >2.5
- Not Analyzed

RM 10

RM 9

G454 C454 SD150 C733 WR_VC_33 WR_VC_35 WR_VC_37 WR_VC_39 WR_VC_41 WR_VC_43 WR_VC_45 G742 C742 G743 C743 G746 C746 SD04 C749 WR_GC_32 WR_GC_33 WR_GC_34 WR_GC_35 G748 C748 G747 C747 WR_VC_106 WR_GC_31 C33_35 C36_38 C39_41 WR_VC_04 C42_44 RC483 C45_47 WR_VC_03 WR_VC_05 C48_50 C51_52 G471 C471 G474 C474 G477 C477 G462 C462 G468 C468 G461 C461 G458 C458 G735 C735 G738 C738 G739 C739 G492 C492 HC_VC_53 T2_01_2 T2U1 T2U2 T2_01_1 G494 C494 SD151 HA37 HA38 HA39 HA41 HA42 HA43

1997 2000 2002 2005 2005 2005 2002

G311 Grab (surface) Sample ID
C311 Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

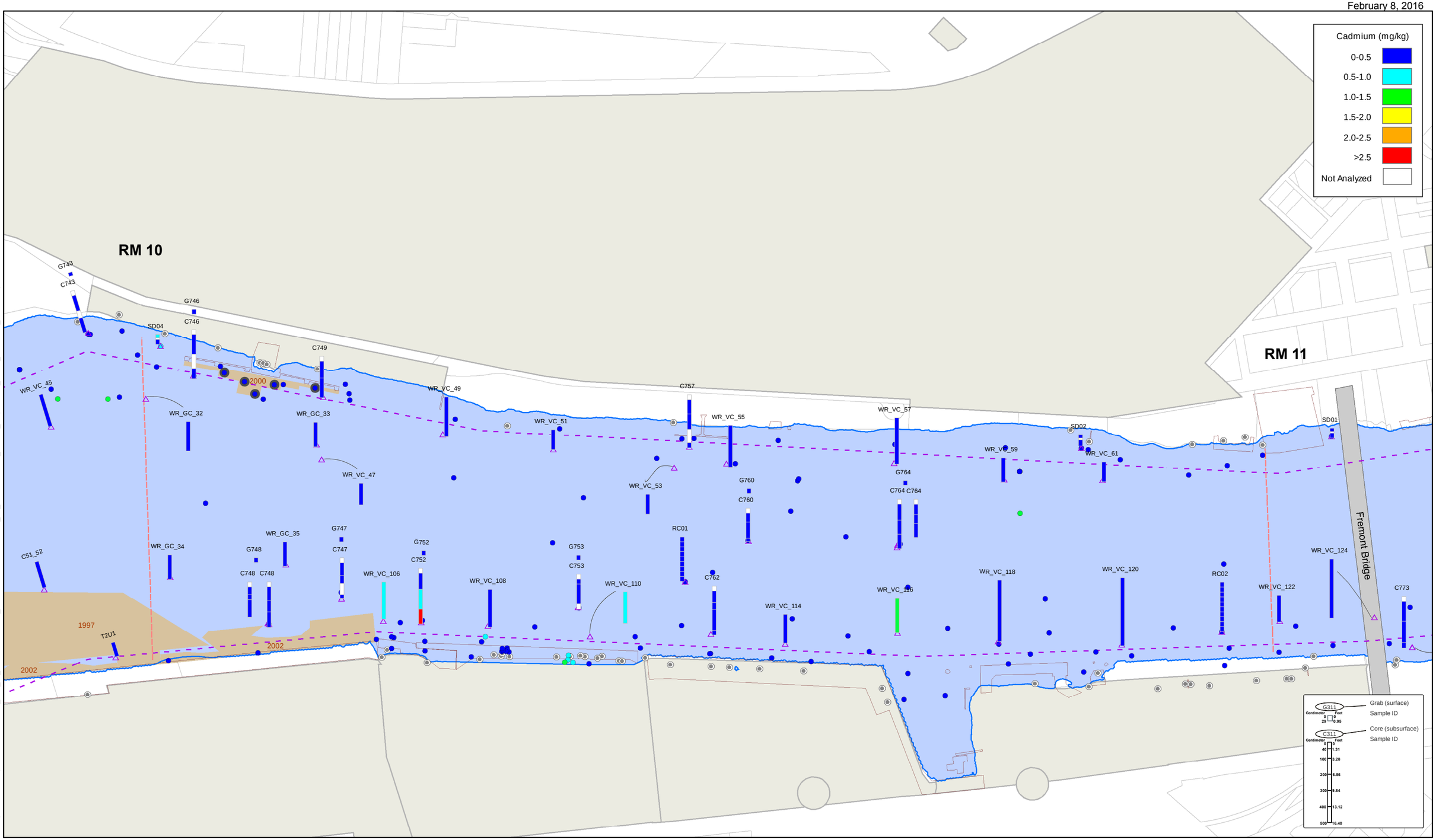
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-62k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Cadmium (mg/kg)

River Mile 09 to 10

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-47_Cores_Cadmium_Main.mxd) - 3/12/2009 -- 2:27:05 PM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

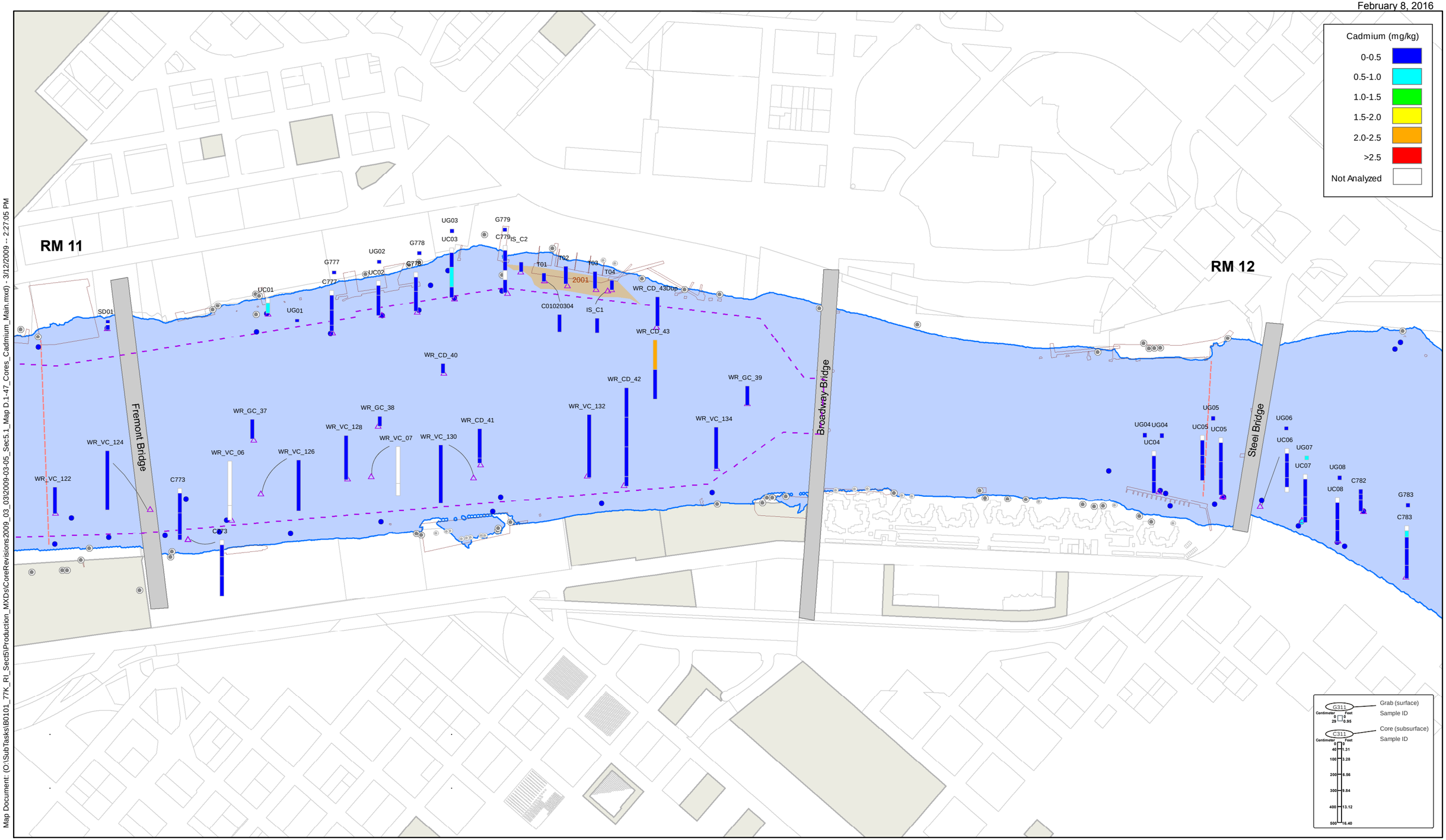
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-62I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Cadmium (mg/kg)

River Mile 10 to 11

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

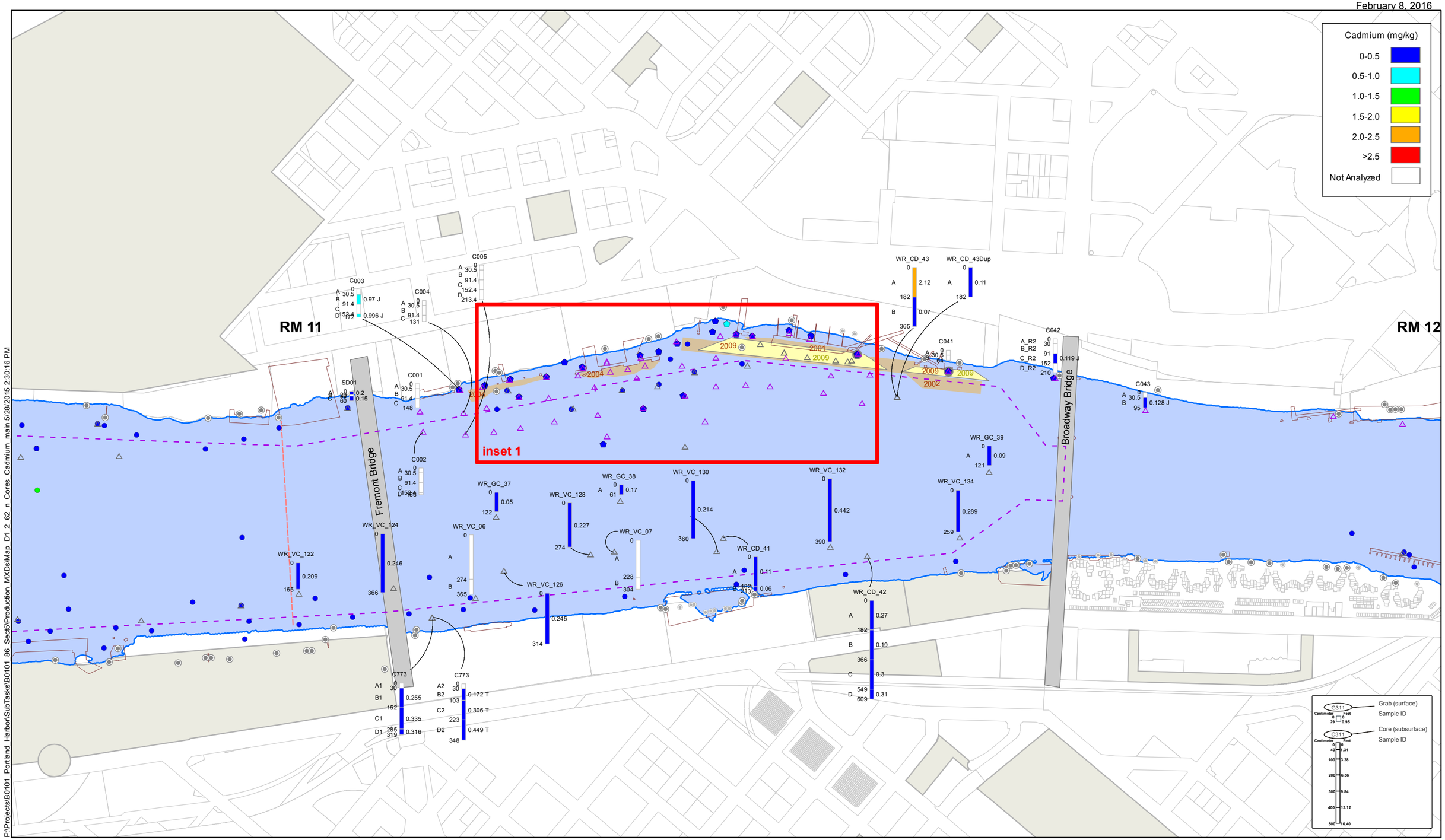
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-62 m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Cadmium (mg/kg)

River Mile 11 to 12

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-62n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Cadmium (mg/kg)

River Mile 11.0 - 11.8

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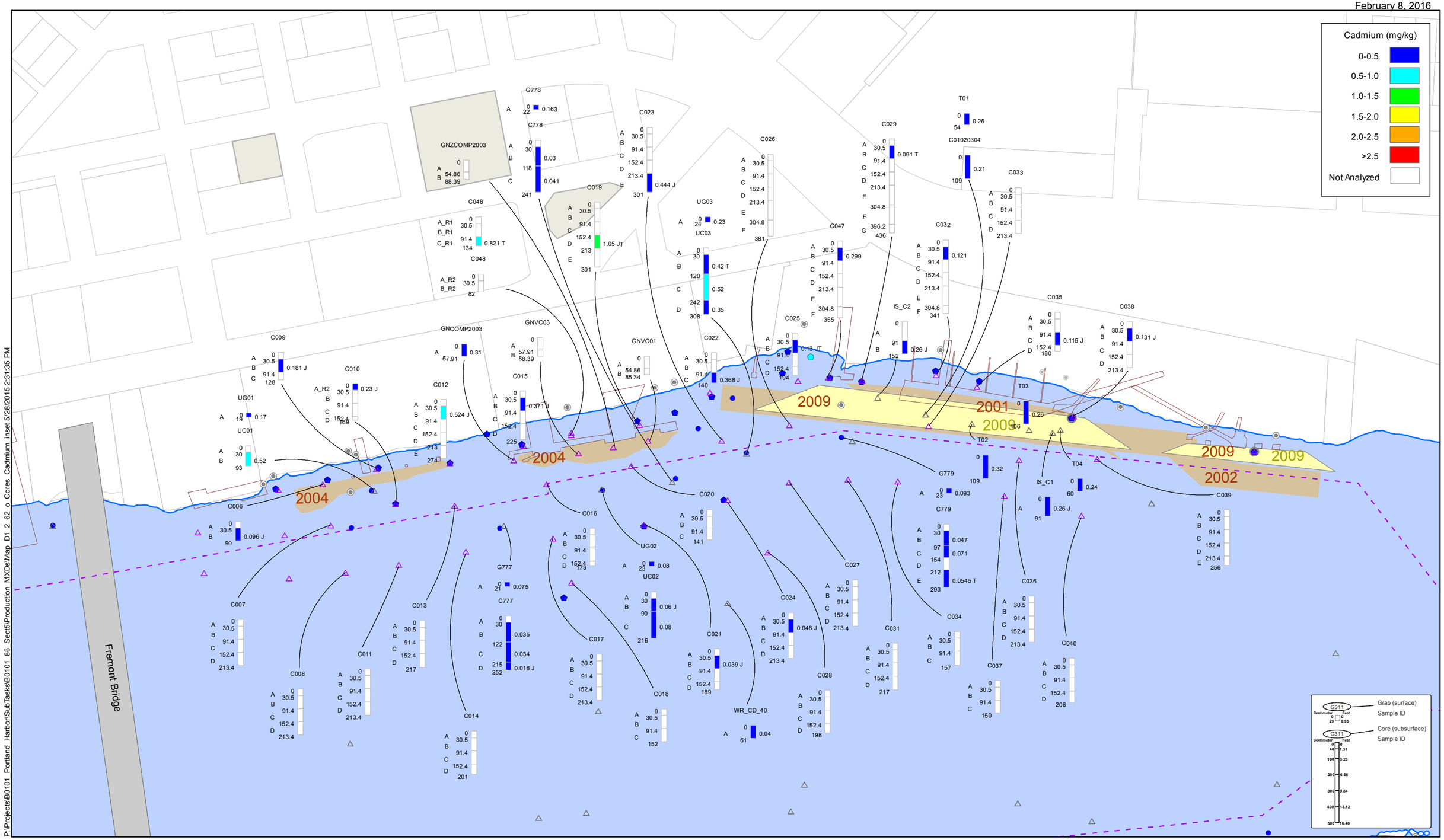



N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

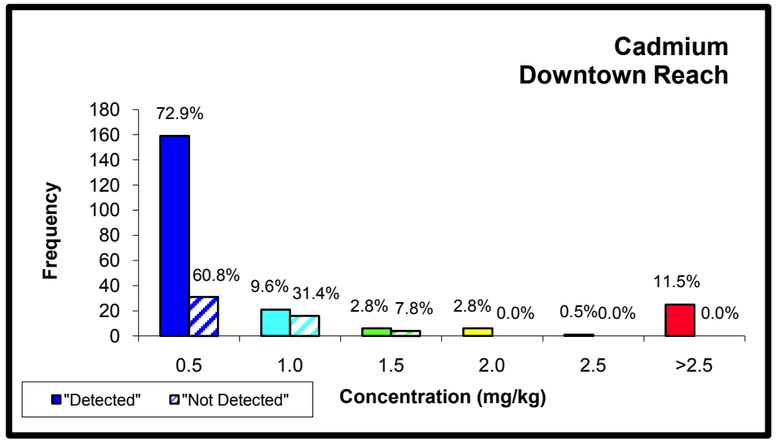
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

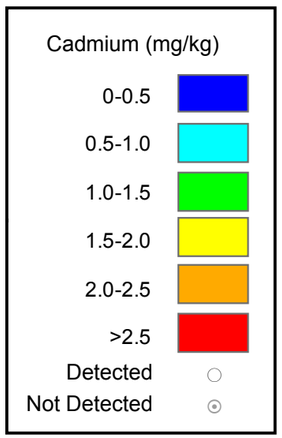
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

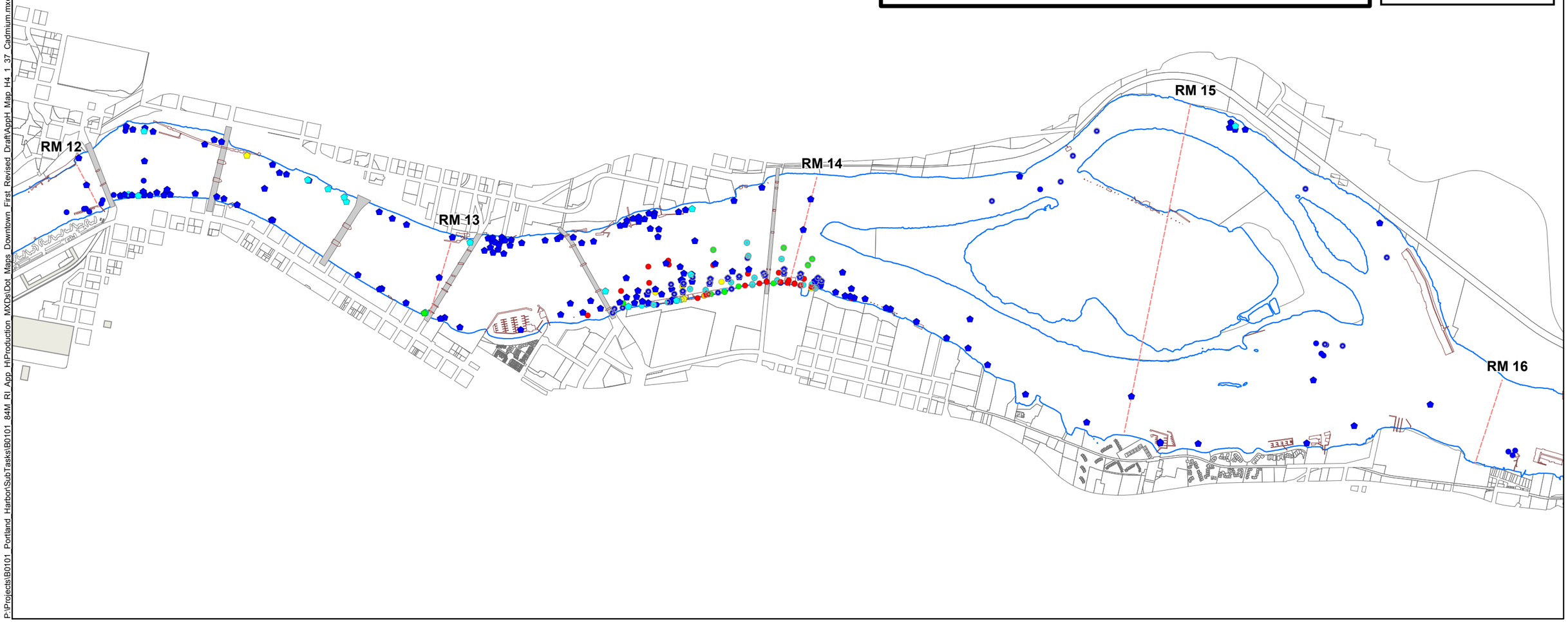
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-62o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Cadmium (mg/kg)

River Mile 11.0 - 11.8 - Inset 1

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N

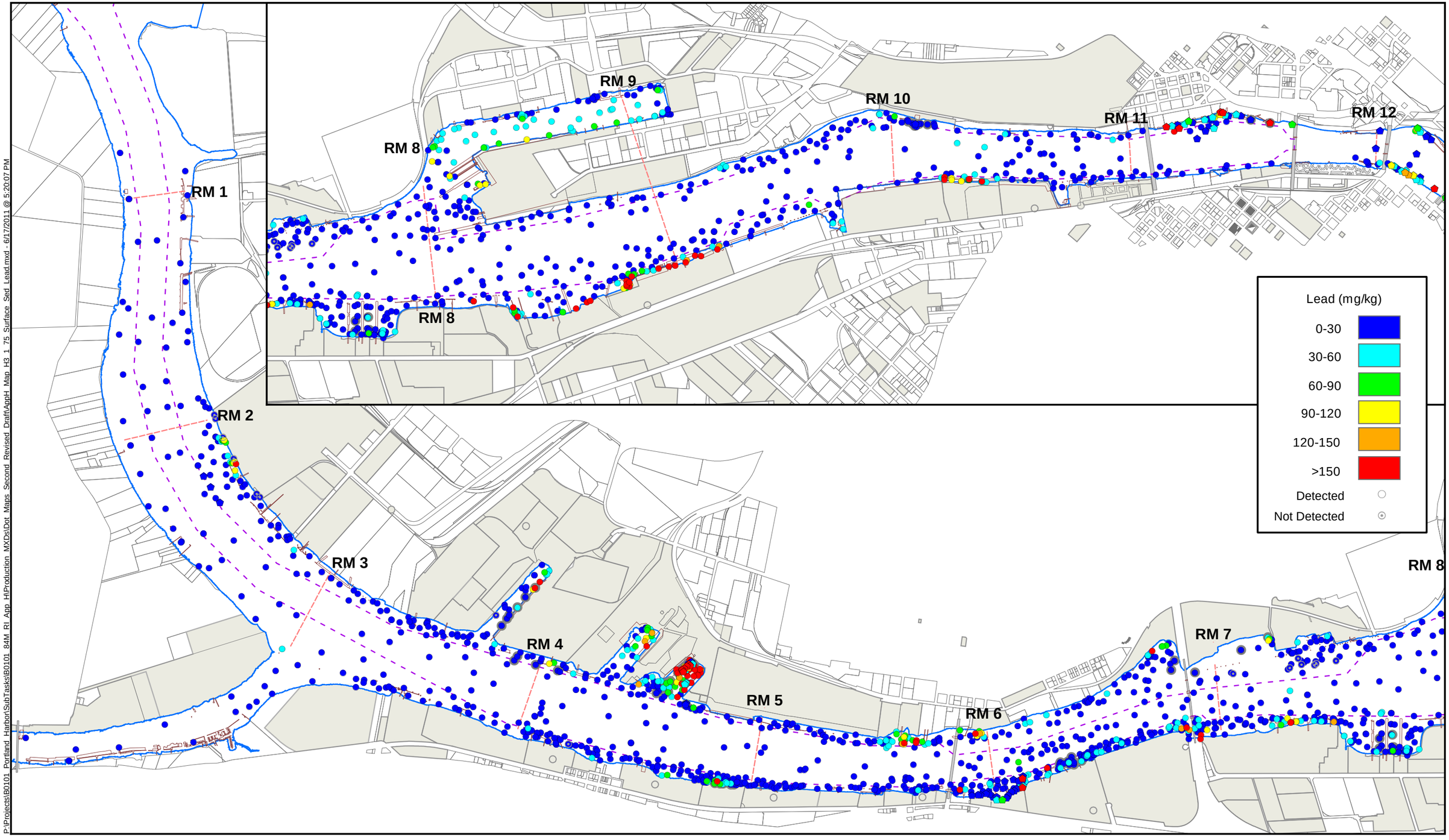
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-63**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Cadmium (mg/kg)
Downtown Reach

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

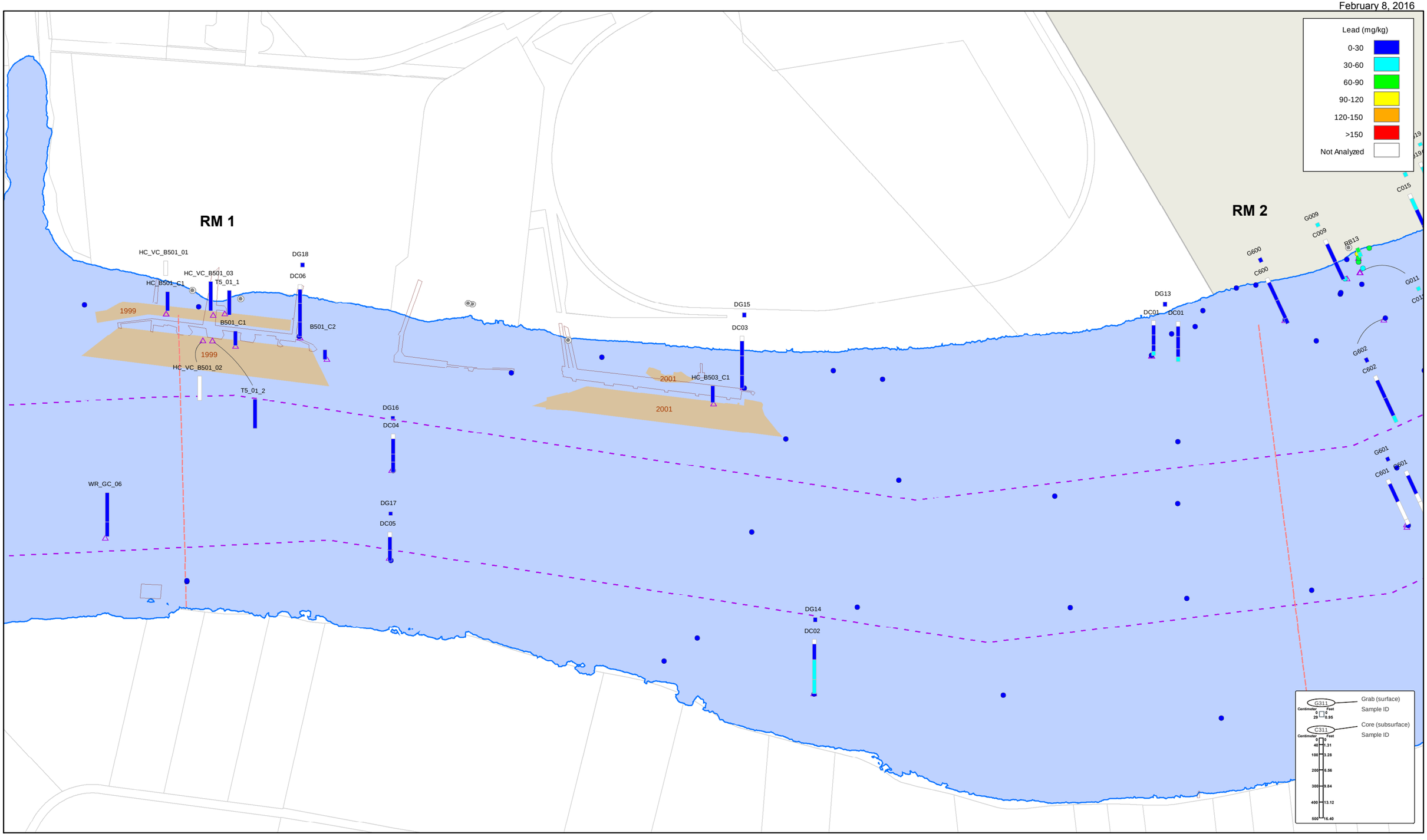
N

0 1,000 2,000 3,000 4,000 5,000 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-64**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Lead (mg/kg)




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-49_Cores_Lead_Main.mxd) - 3/12/2009 -- 3:11:03 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

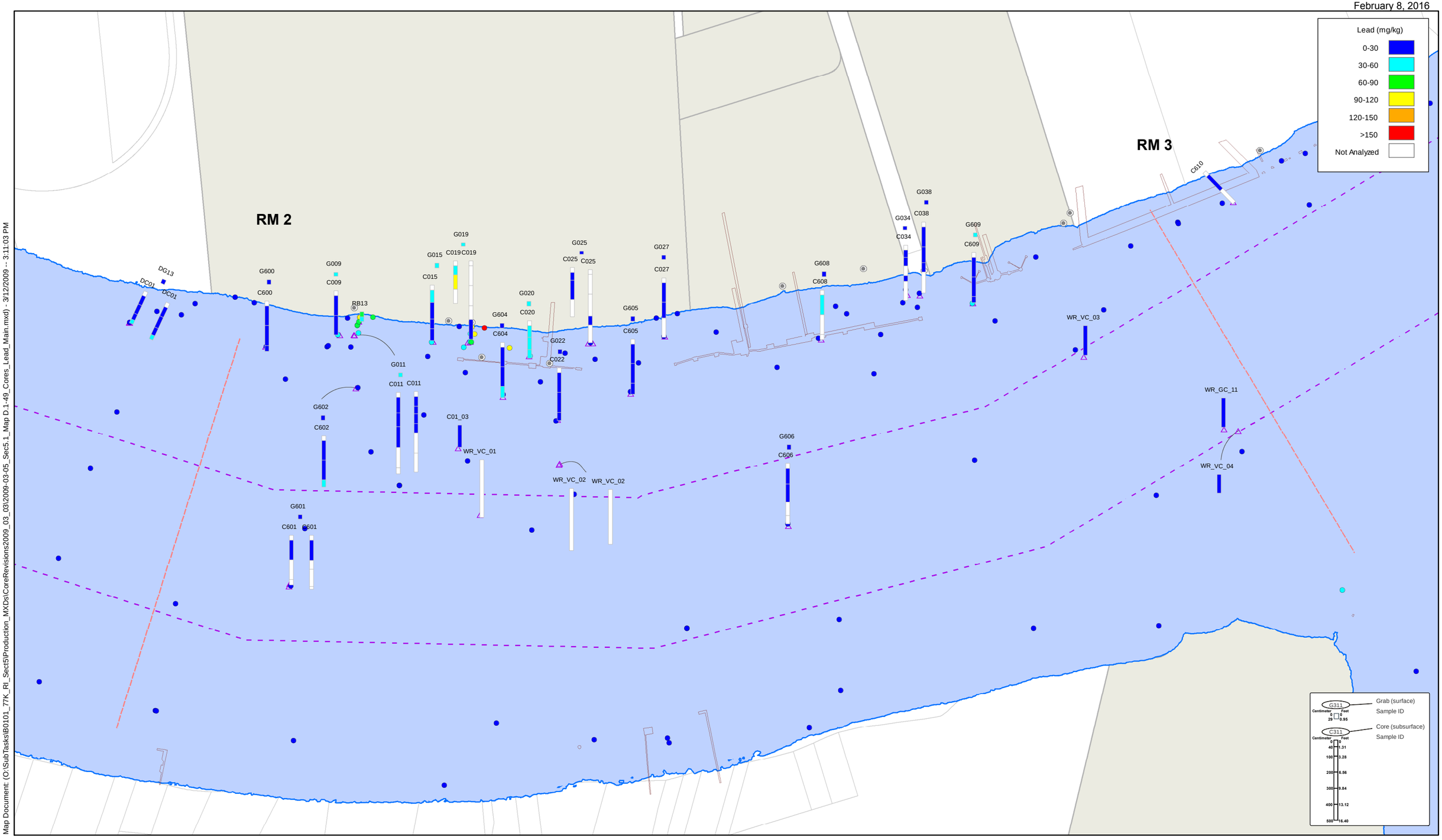
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-65a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Lead (mg/kg)

River Mile 01 to 02

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

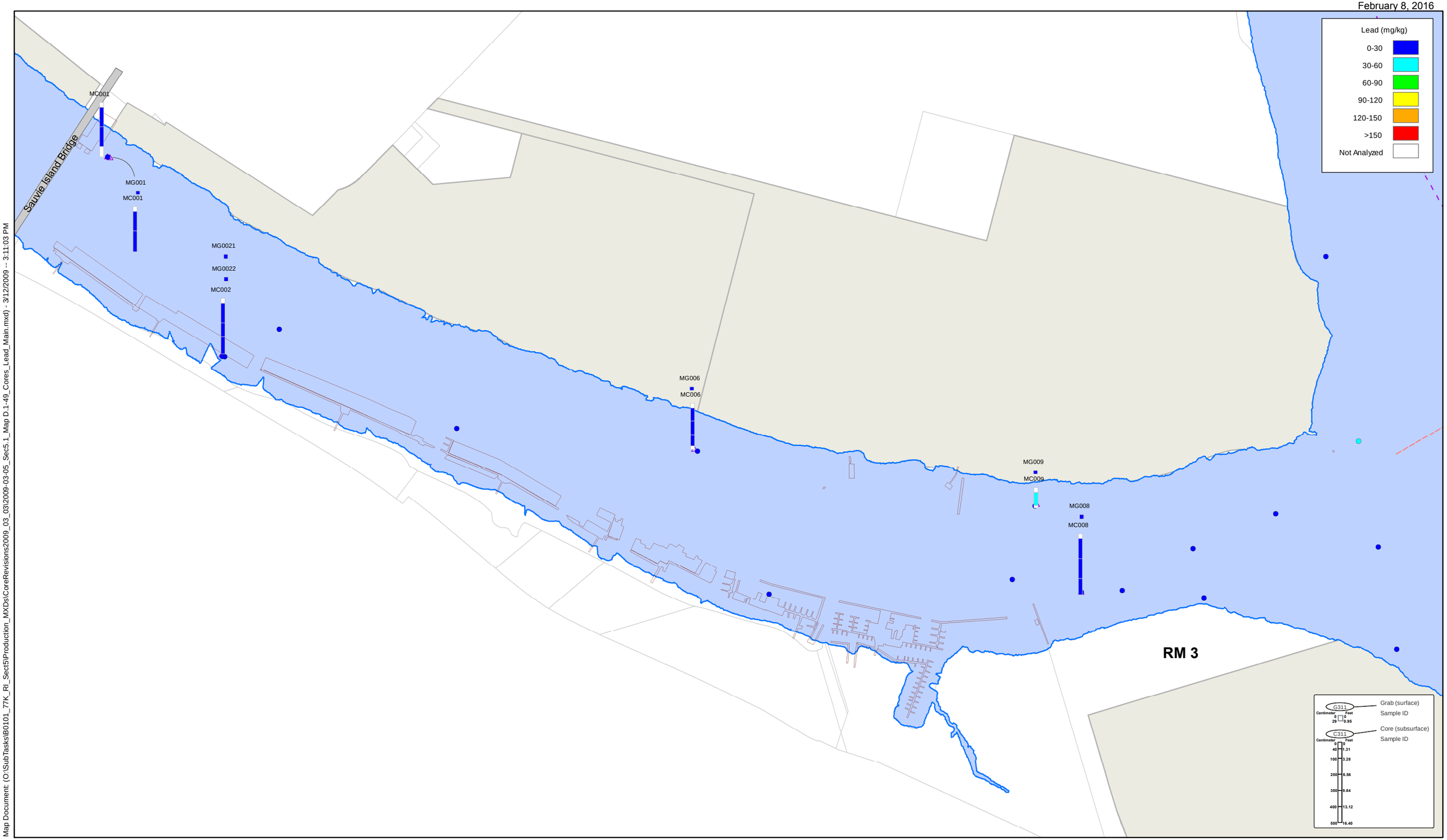
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-65b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Lead (mg/kg)

River Mile 02 to 03

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

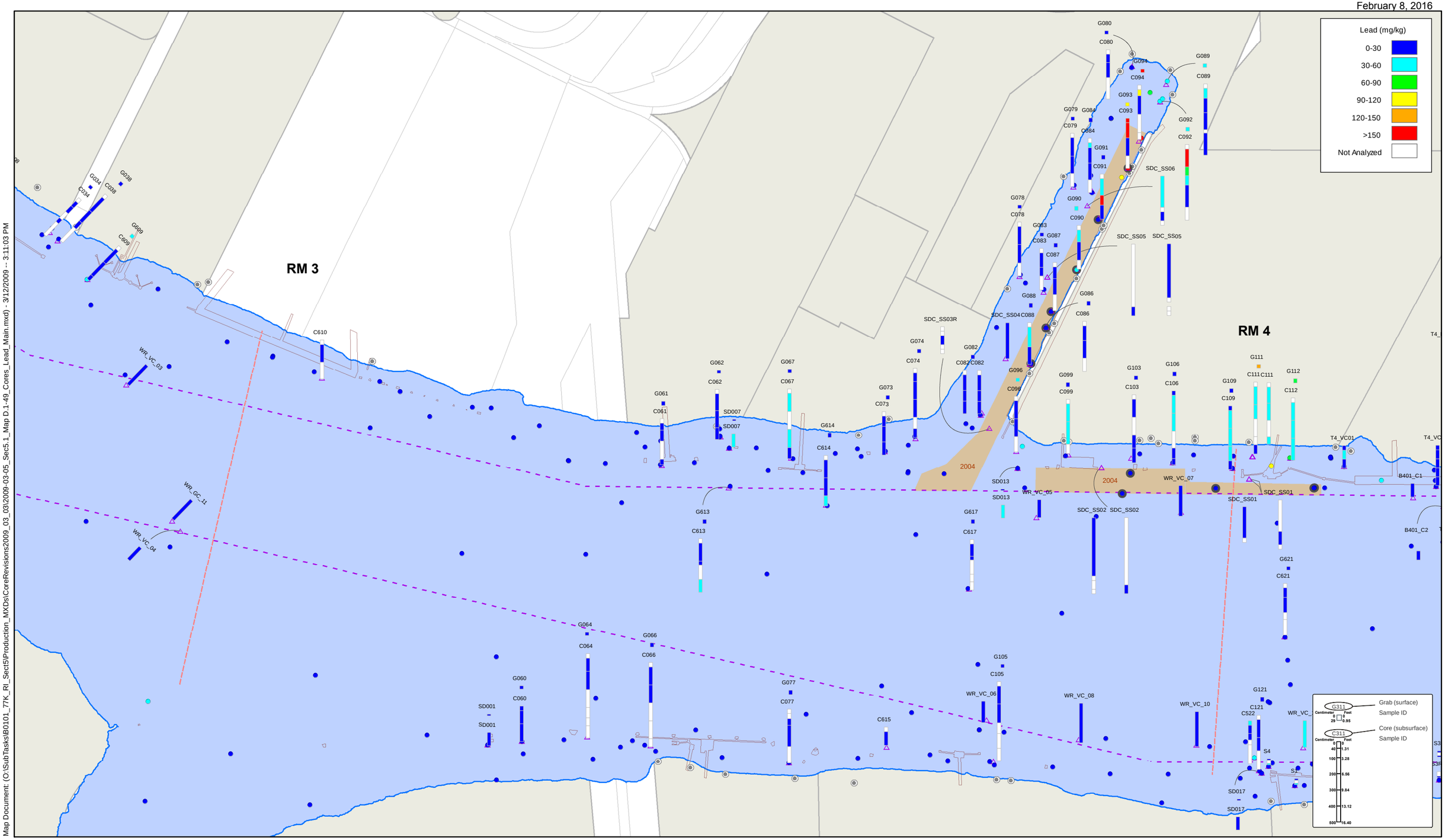
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-65c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Lead (mg/kg)

River Mile 03 - Multnomah Channel




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-49_Cores_Lead_Main.mxd) - 3/12/2009 -- 3:11:03 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-65 d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Lead (mg/kg)

River Mile 03 to 04

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-48_Cores_Lead_Main.mxd) 7/1/2009 -- 12:57:06 PM

Lead (mg/kg)
- 0-30
- 30-60
- 60-90
- 90-120
- 120-150
- >150
- Not Analyzed

RM 4

RM 5

Inset 1

Inset 2

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

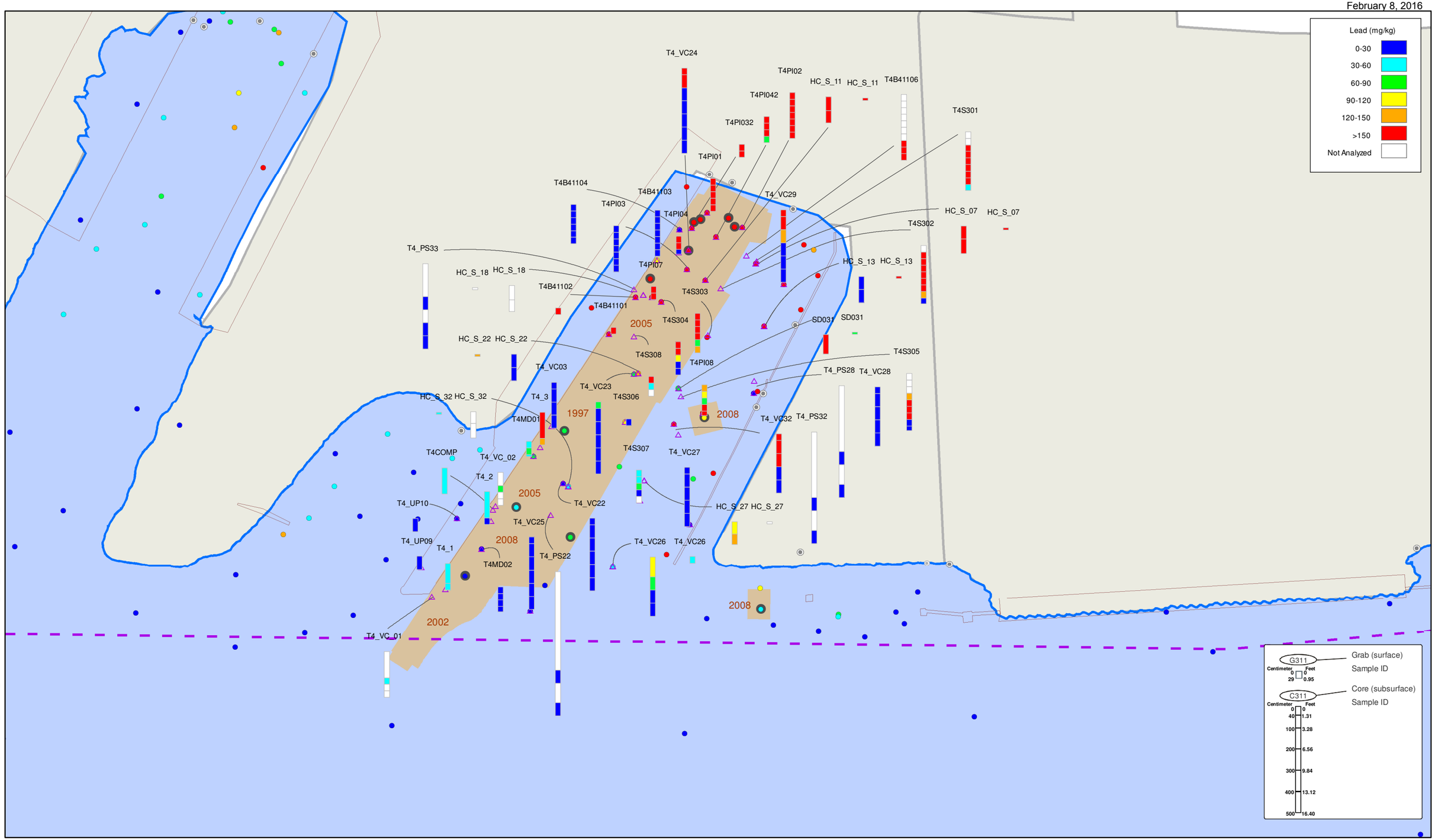
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-65e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Lead (mg/kg)

River Mile 04 to 05 - Slips




Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-48_Cores_Lead_Insets.mxd) 7/1/2009 -- 12:56:33 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

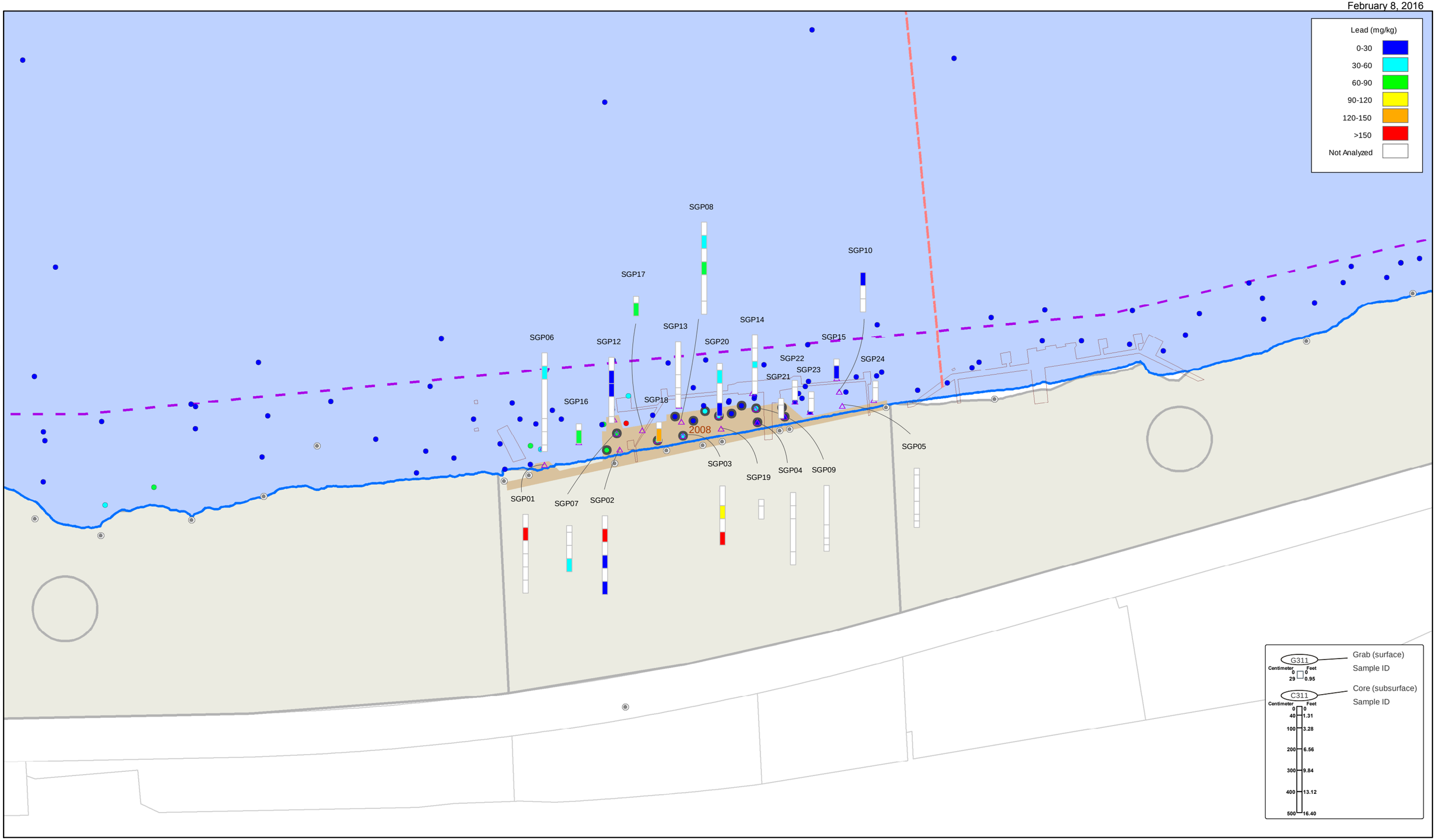
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-65e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Lead (mg/kg)

River Mile 04 to 05 - Slips - Inset 1

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

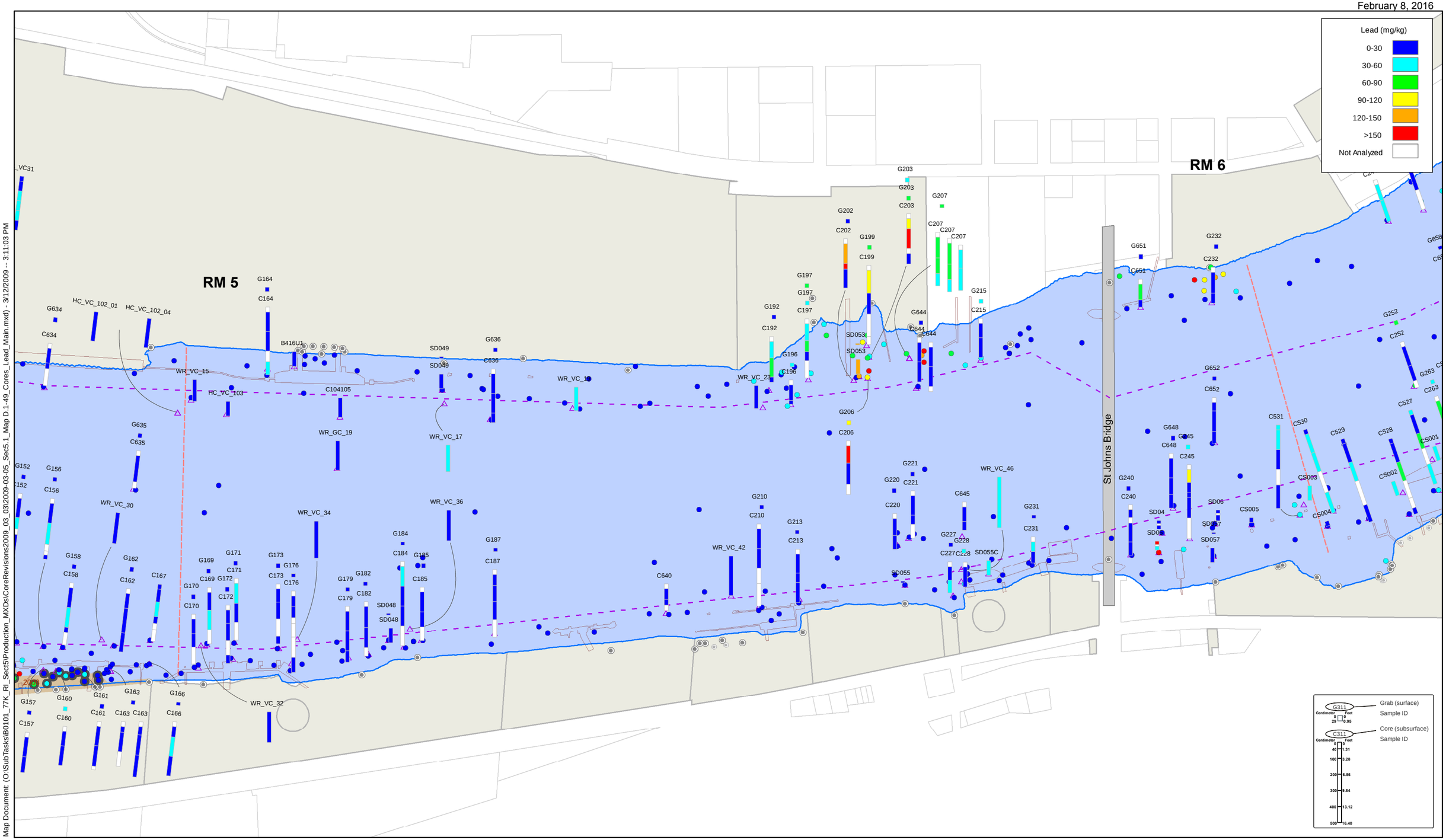
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-65e2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Lead (mg/kg)

River Mile 04 to 05 - Slips - Inset 2

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

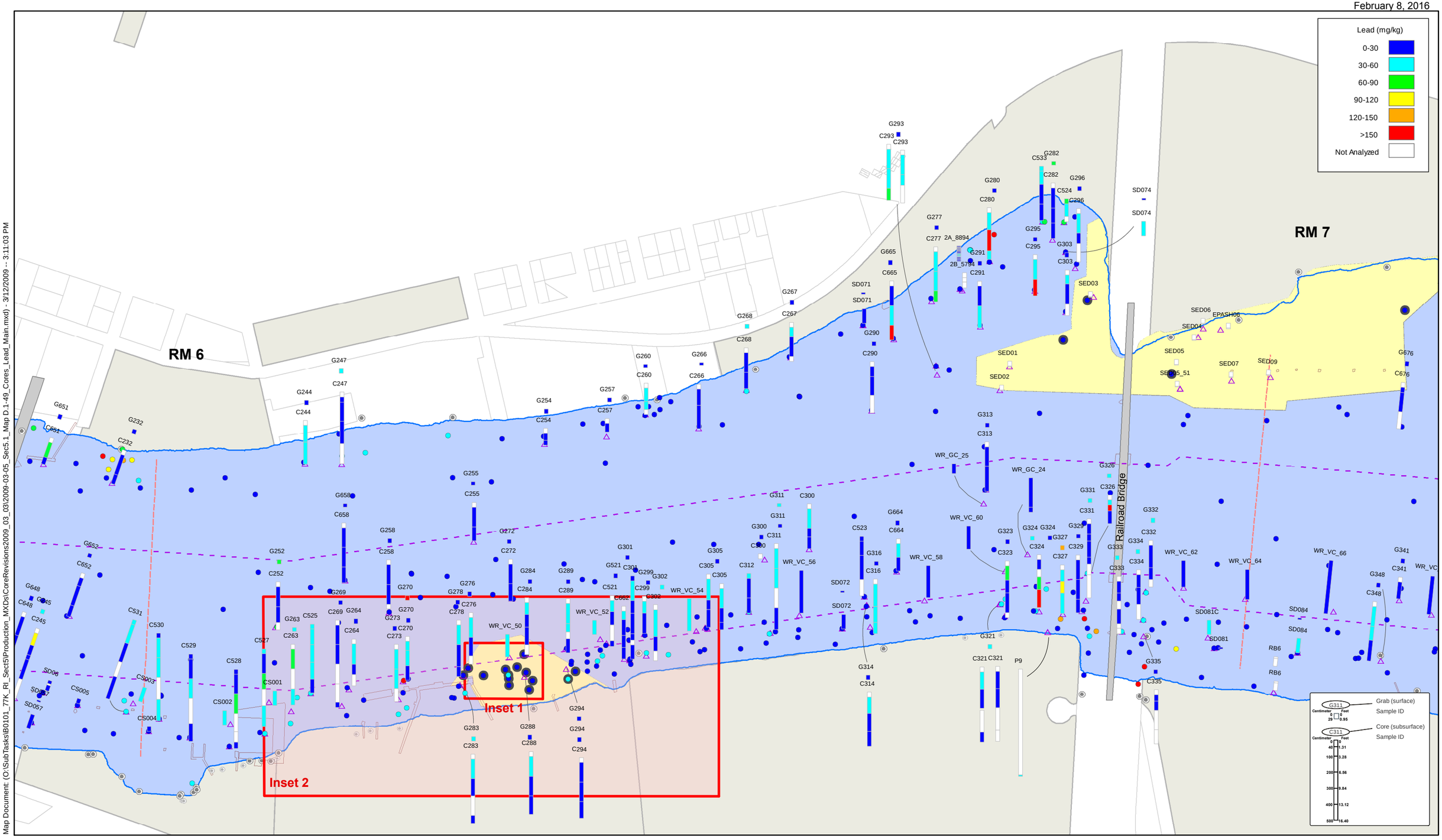
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-65f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Lead (mg/kg)

River Mile 05 to 06

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-49_Cores_Lead_Main.mxd) - 3/12/2009 -- 3:11:03 PM




N

0 150 300 450 600 750 Feet

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

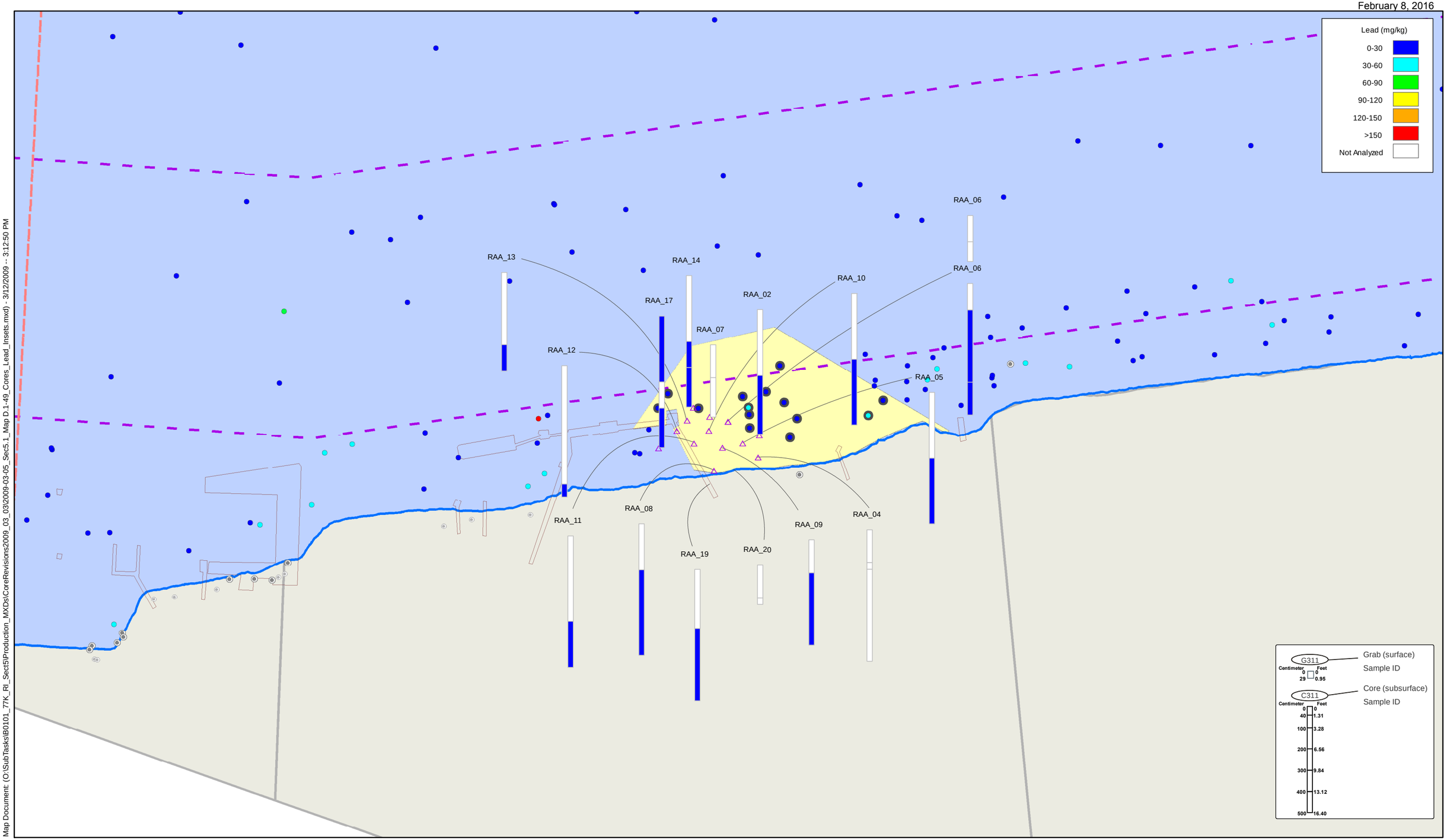
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-65g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Lead (mg/kg)

River Mile 06 to 07

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-49_Cores_Lead_Insets.mxd) - 3/12/2009 -- 3:12:50 PM




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-65g1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Lead (mg/kg)

River Mile 06 to 07 - Inset 1

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-49_Cores_Lead_Insets.mxd) - 3/12/2009 -- 3:12:50 PM

Lead (mg/kg)
- 0-30
- 30-60
- 60-90
- 90-120
- 120-150
- >150
- Not Analyzed

GS09 GSD5 GSD4 AN_1_5 GS08 GSD2 GS07 GS06 GSC5 GS05 GS04 AN_2_5 GSC2 GSB2 GSB7 GSC7 AN_1_3 AN_1_2 AN_2_4 GSB5 AN_1_1 AN_2_3 AN_2_1 AN_2_2

G311 Grab (surface) Sample ID
Centimeter 0 29 Feet 0 0.95

C311 Core (subsurface) Sample ID
Centimeter 0 40 100 200 300 400 500 Feet 0 1.31 3.28 6.56 9.84 13.12 16.40

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

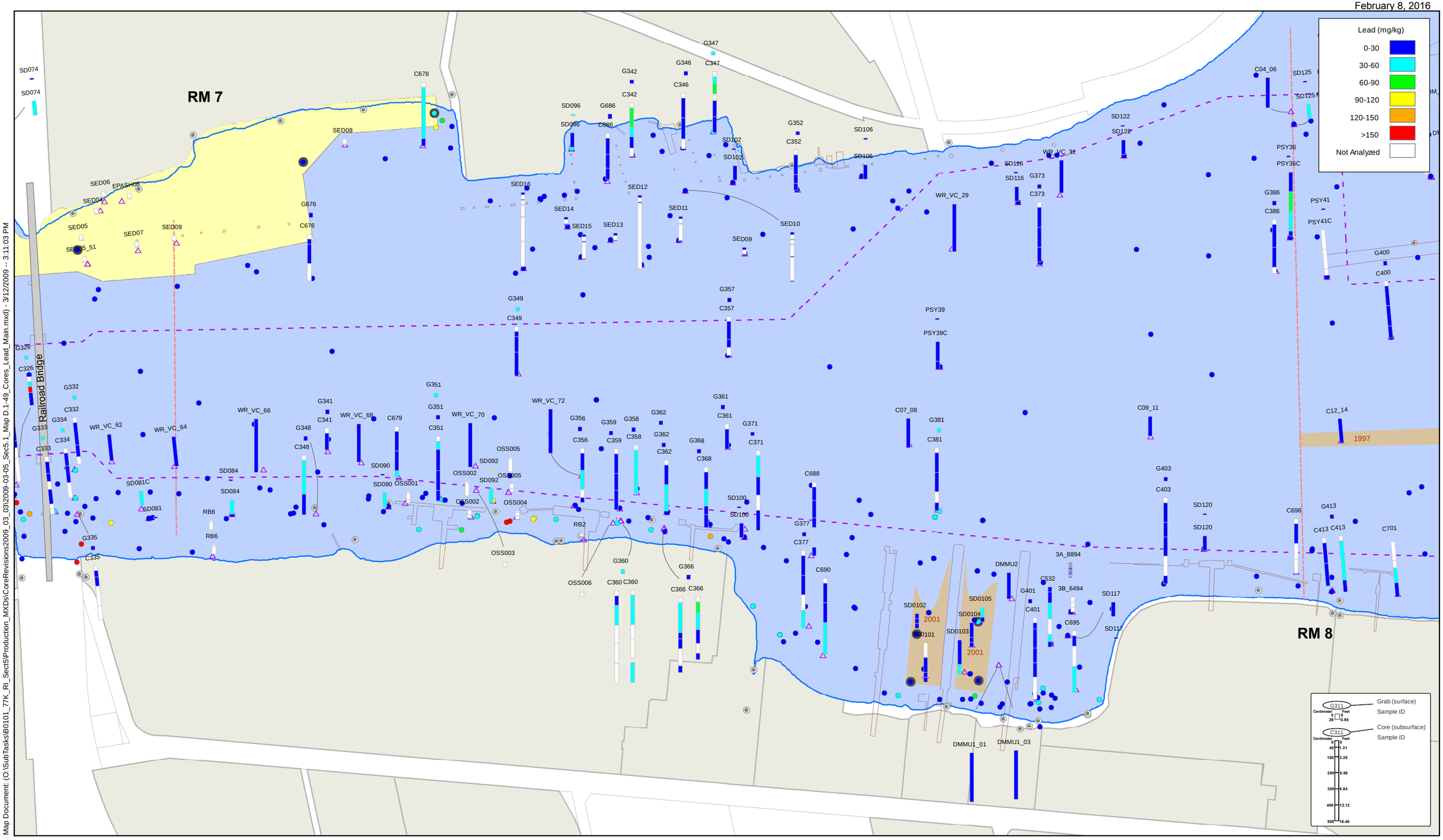
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-65g2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Lead (mg/kg)

River Mile 06 to 07 - Inset 2

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-65h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Lead (mg/kg)

River Mile 07 to 08

Map Document: (O:\Sub\Tasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-49_Cores_Lead_Main.mxd) - 3/12/2009 -- 3:11:03 PM

RM 8

RM 9

Lead (mg/kg)
- 0-30
- 30-60
- 60-90
- 90-120
- 120-150
- >150
- Not Analyzed

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-65i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Lead (mg/kg)

River Mile 08 to 09 - Swan Is. East

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-49_Cores_Lead_Main.mxd) - 3/12/2009 -- 3:11:03 PM

Lead (mg/kg)
- 0-30
- 30-60
- 60-90
- 90-120
- 120-150
- >150
- Not Analyzed

RM 8

RM 9

1997

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

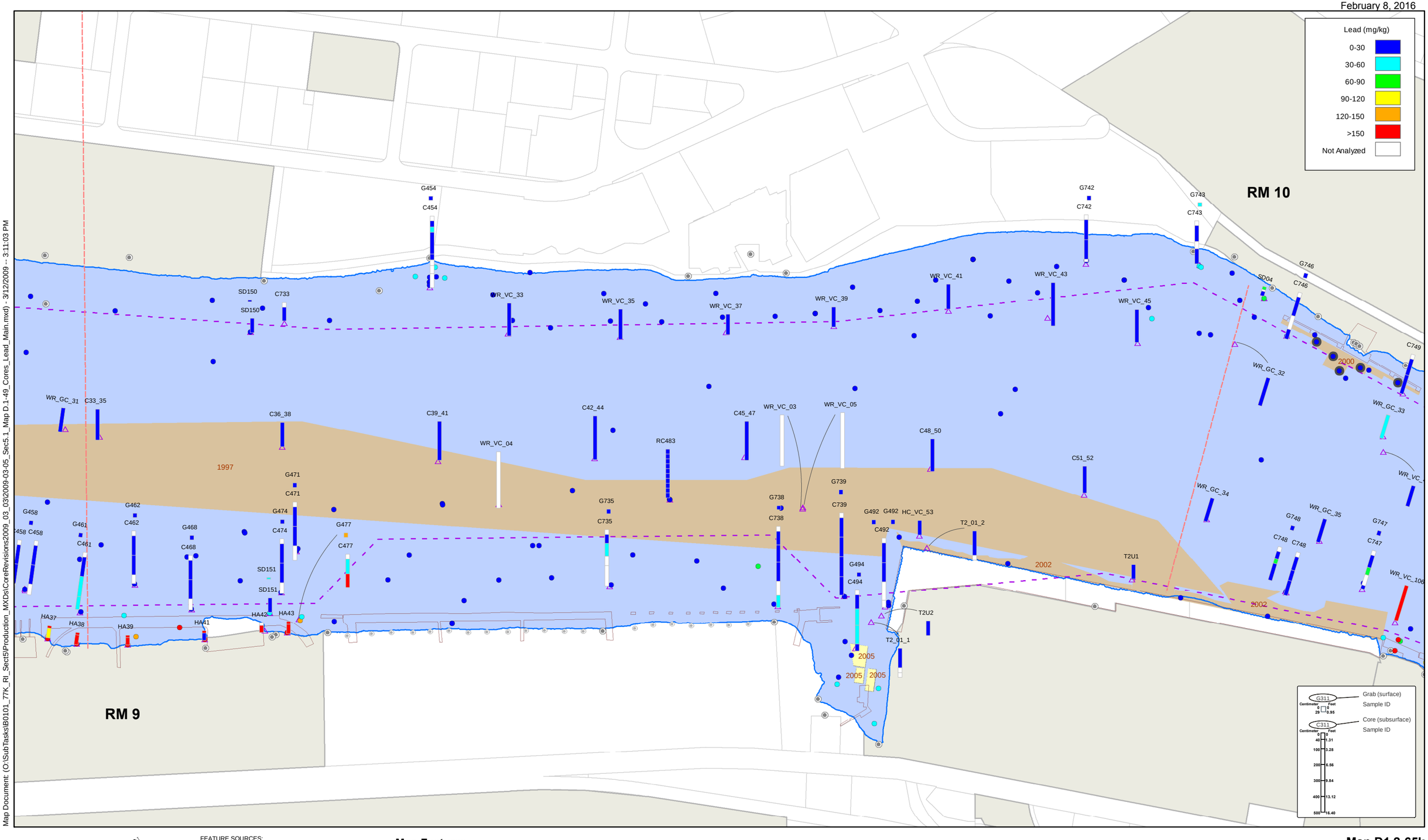
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-65j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Lead (mg/kg)

River Mile 08 to 09 - Swan Is. West

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

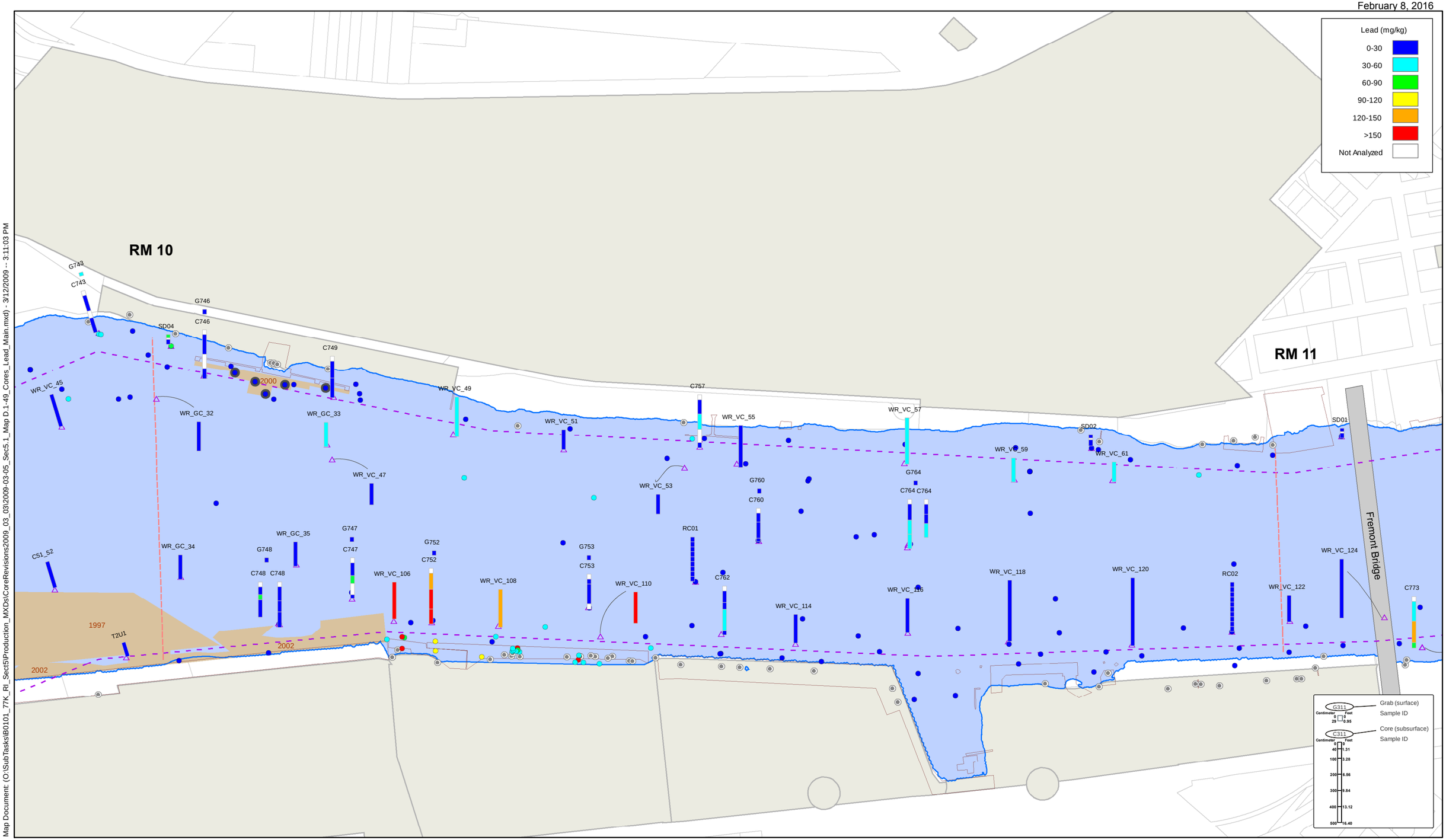
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-65k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Lead (mg/kg)

River Mile 09 to 10

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

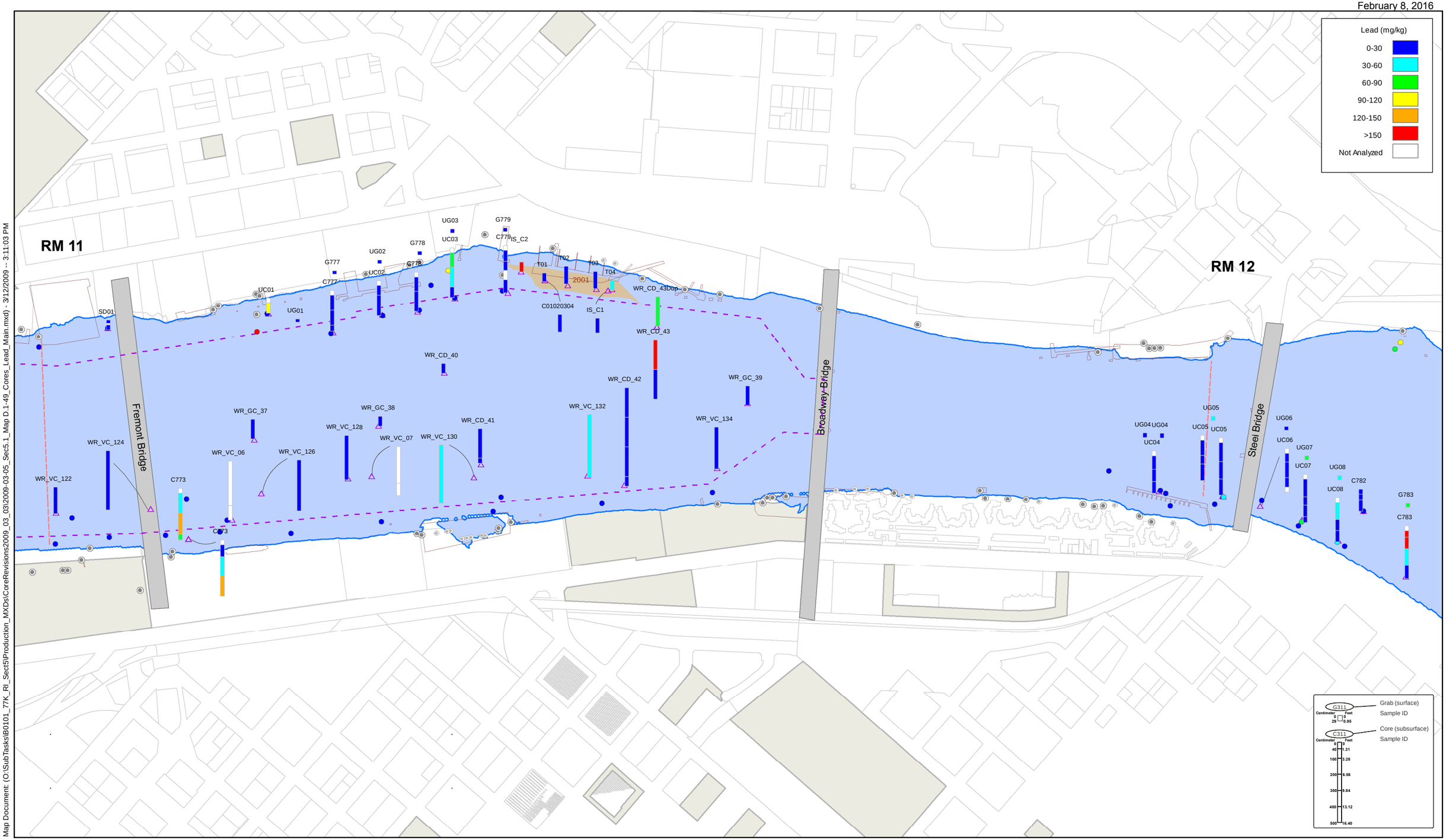
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-65I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Lead (mg/kg)

River Mile 10 to 11

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N

0 150 300 450 600 750 Feet

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

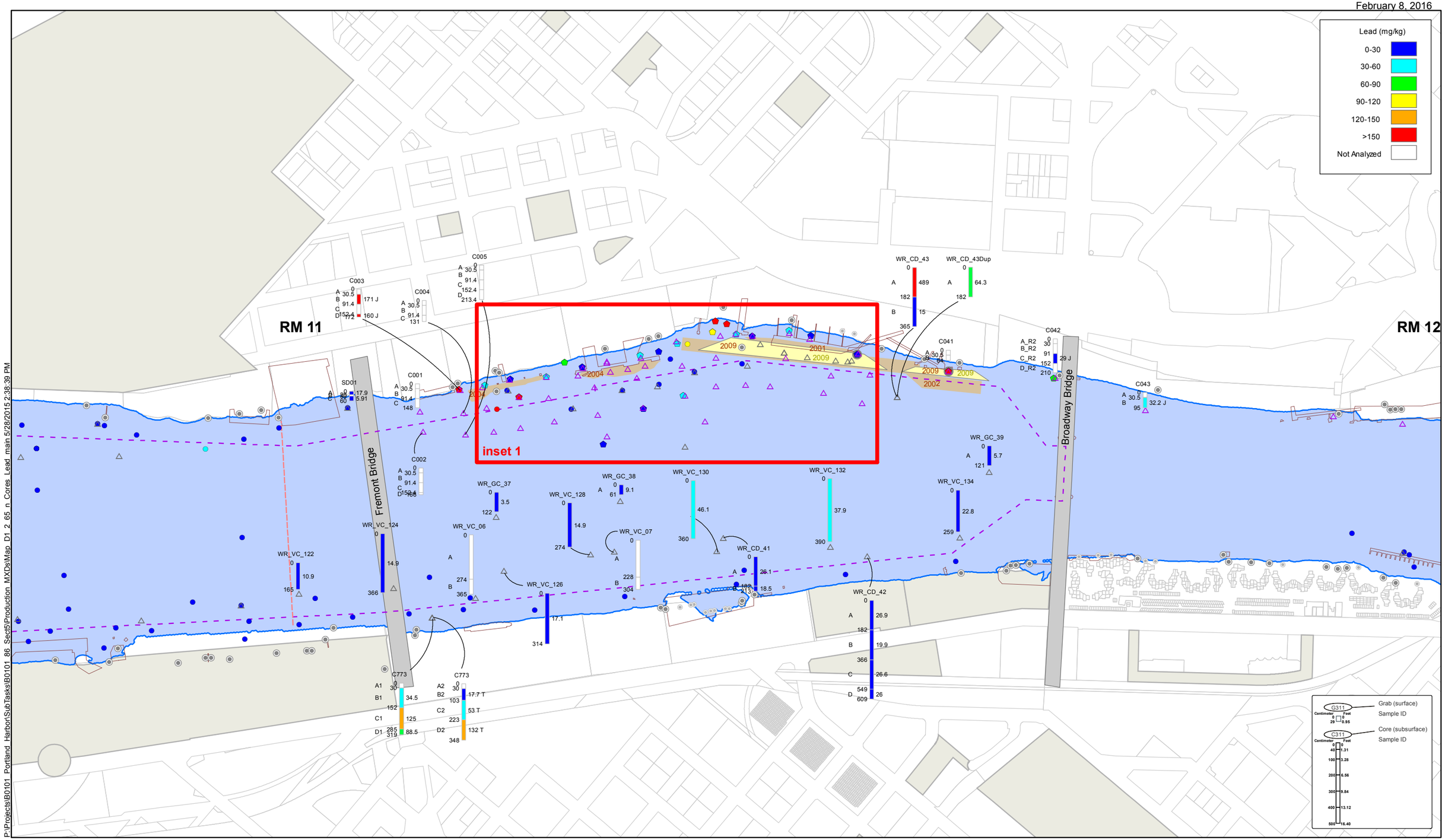
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-65m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Lead (mg/kg)

River Mile 11 to 12

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

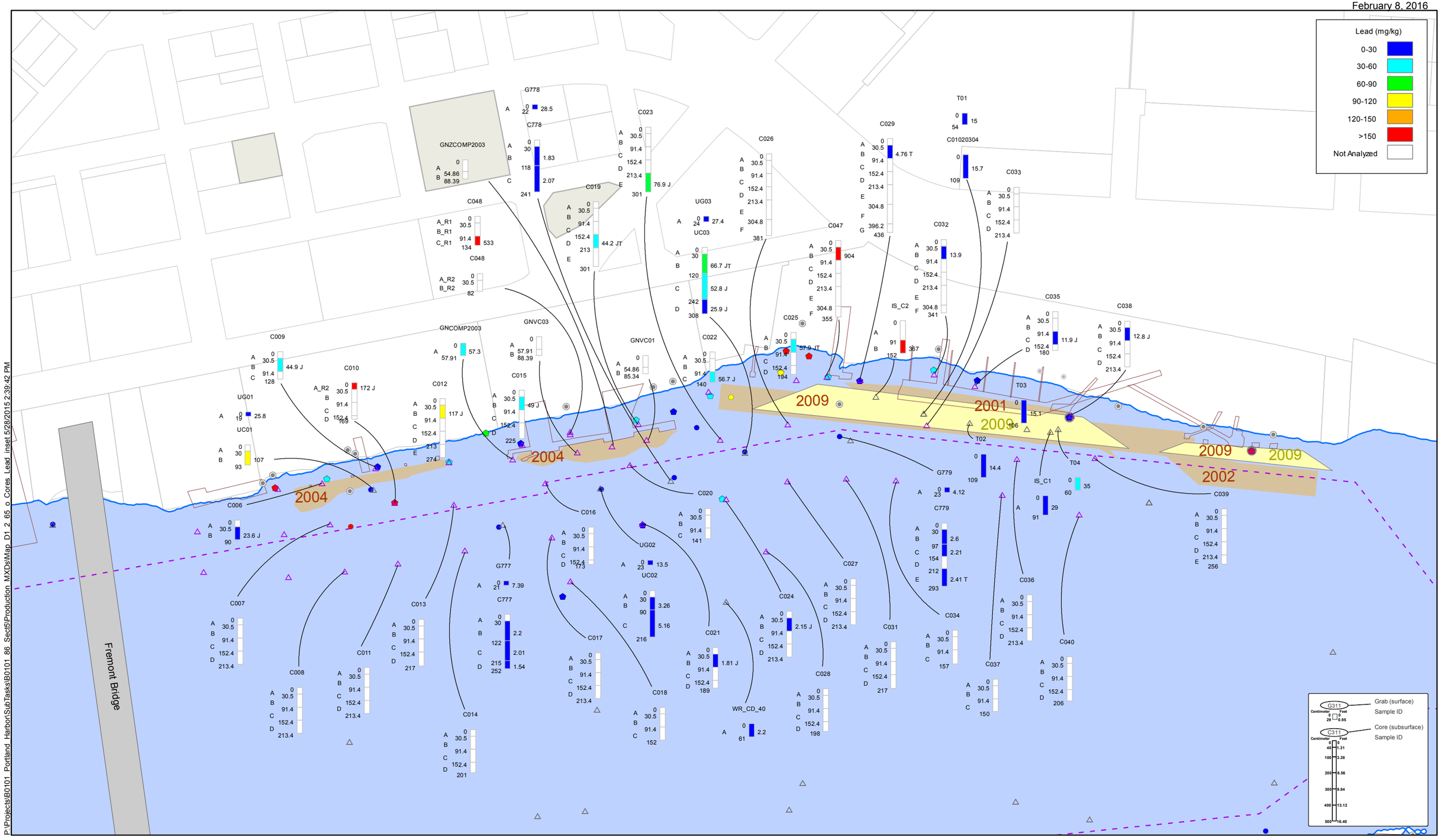
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-65n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Lead (mg/kg)

River Mile 11.0 - 11.8




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

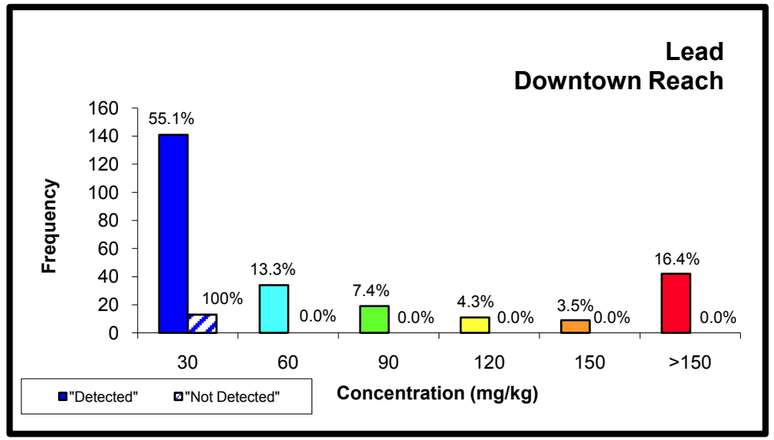
**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

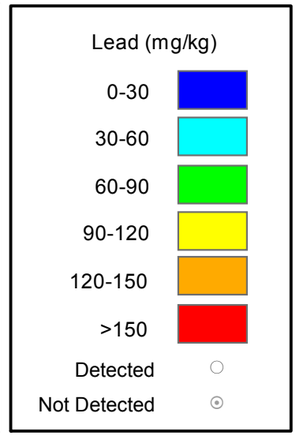
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

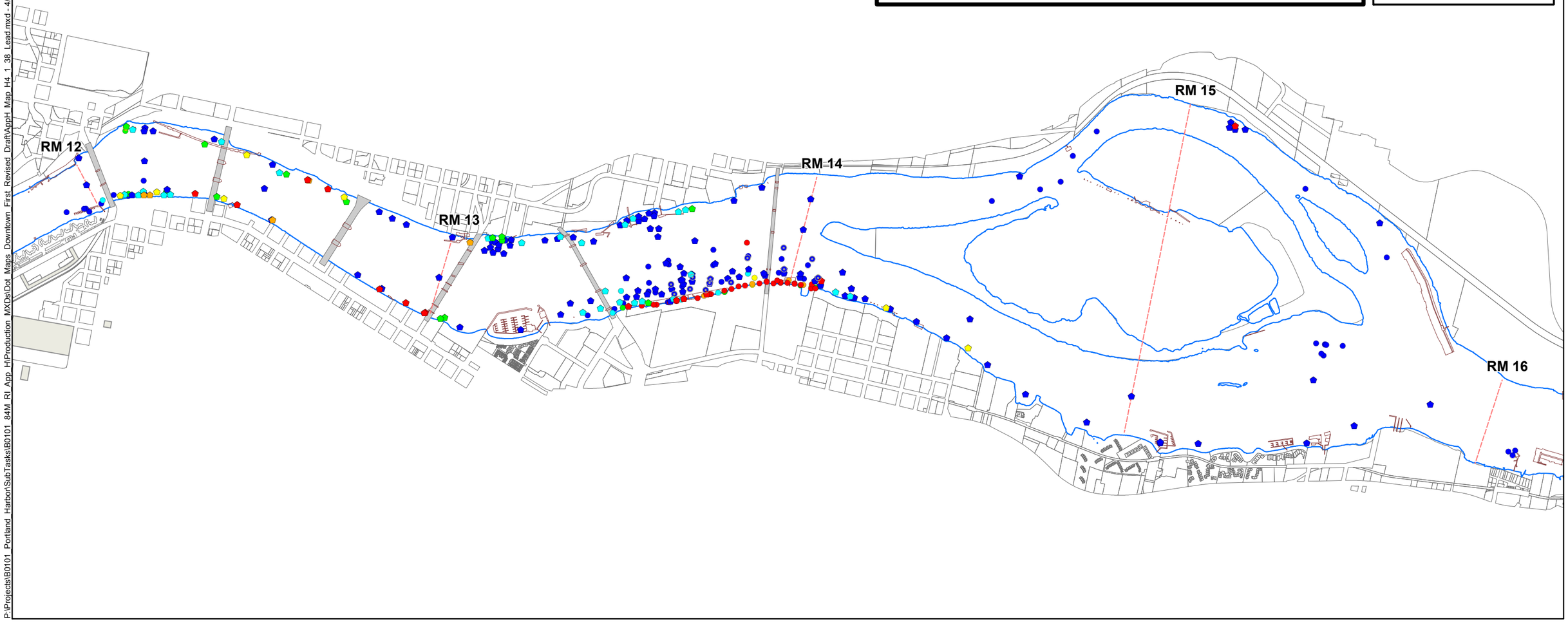
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-65o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Lead (mg/kg)

River Mile 11.0 - 11.8 - Inset 1

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N

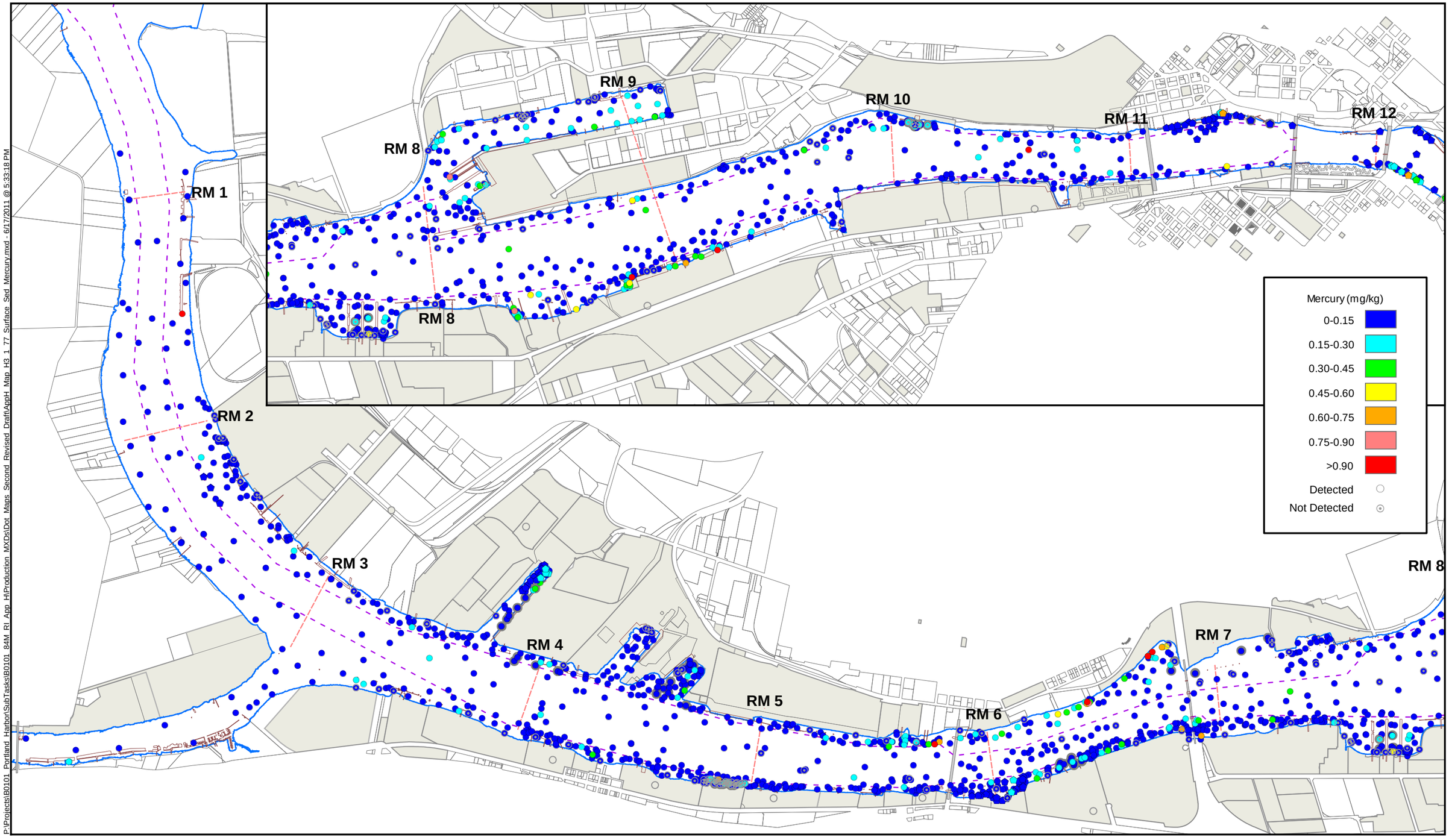
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-66**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Lead (mg/kg)
Downtown Reach

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

N

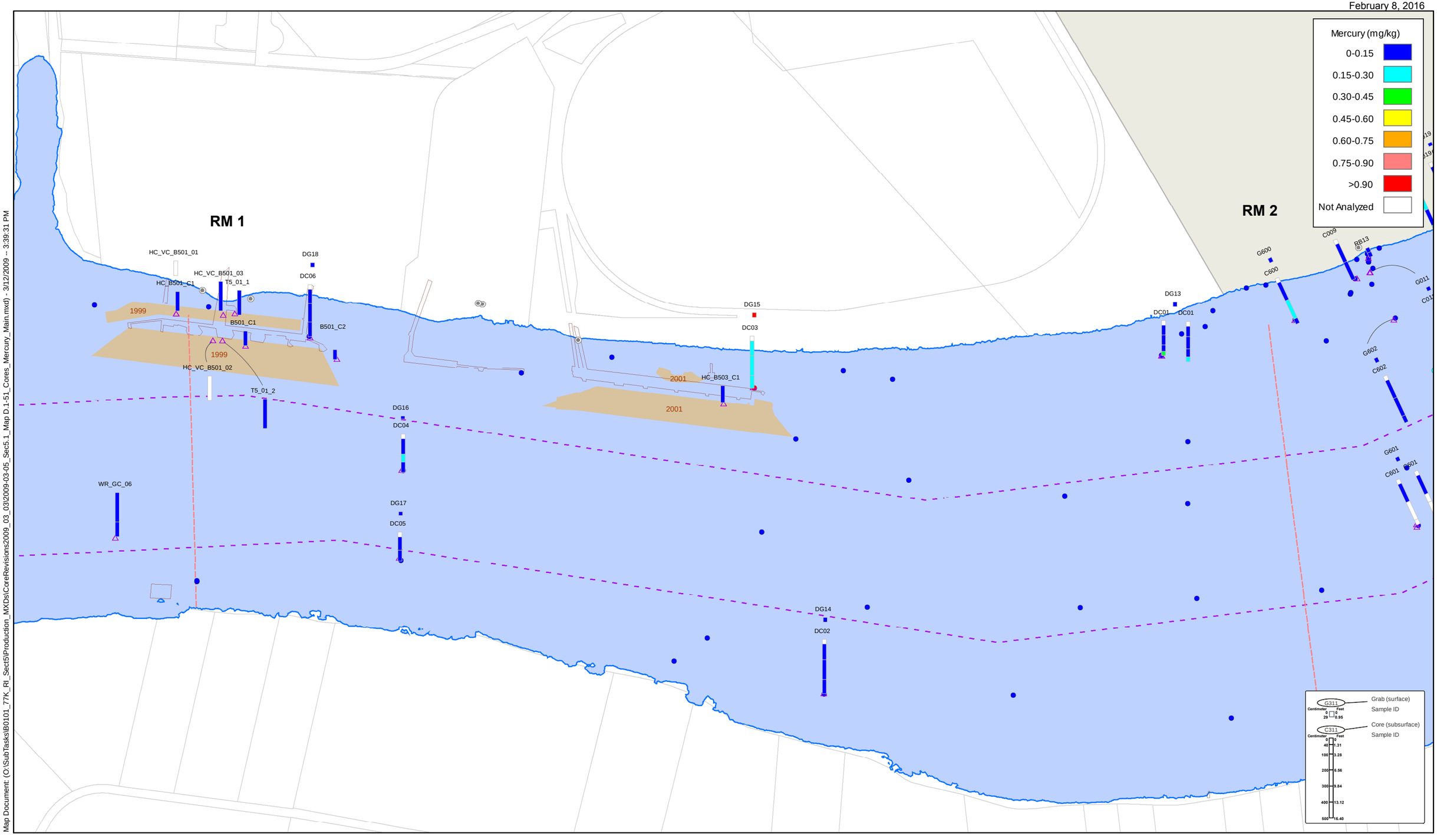
0 1,000 2,000 3,000 4,000 5,000 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-67**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Mercury (mg/kg)

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-51_Cores_Mercury_Main.mxd) - 3/12/2009 -- 3:39:31 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

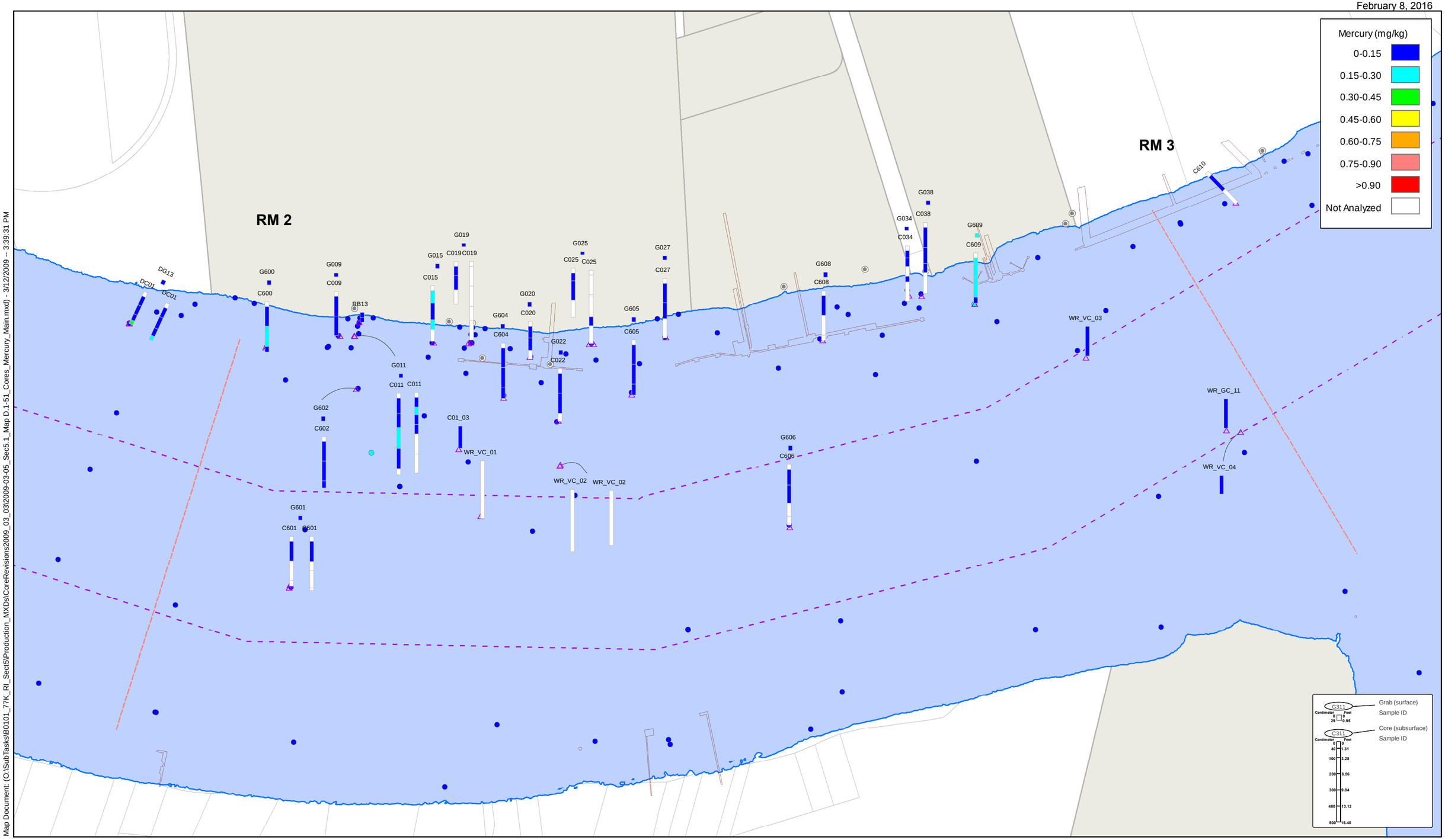
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-68a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Mercury (mg/kg)

River Mile 01 to 02




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-51_Cores_Mercury_Main.mxd) - 3/12/2009 -- 3:39:31 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

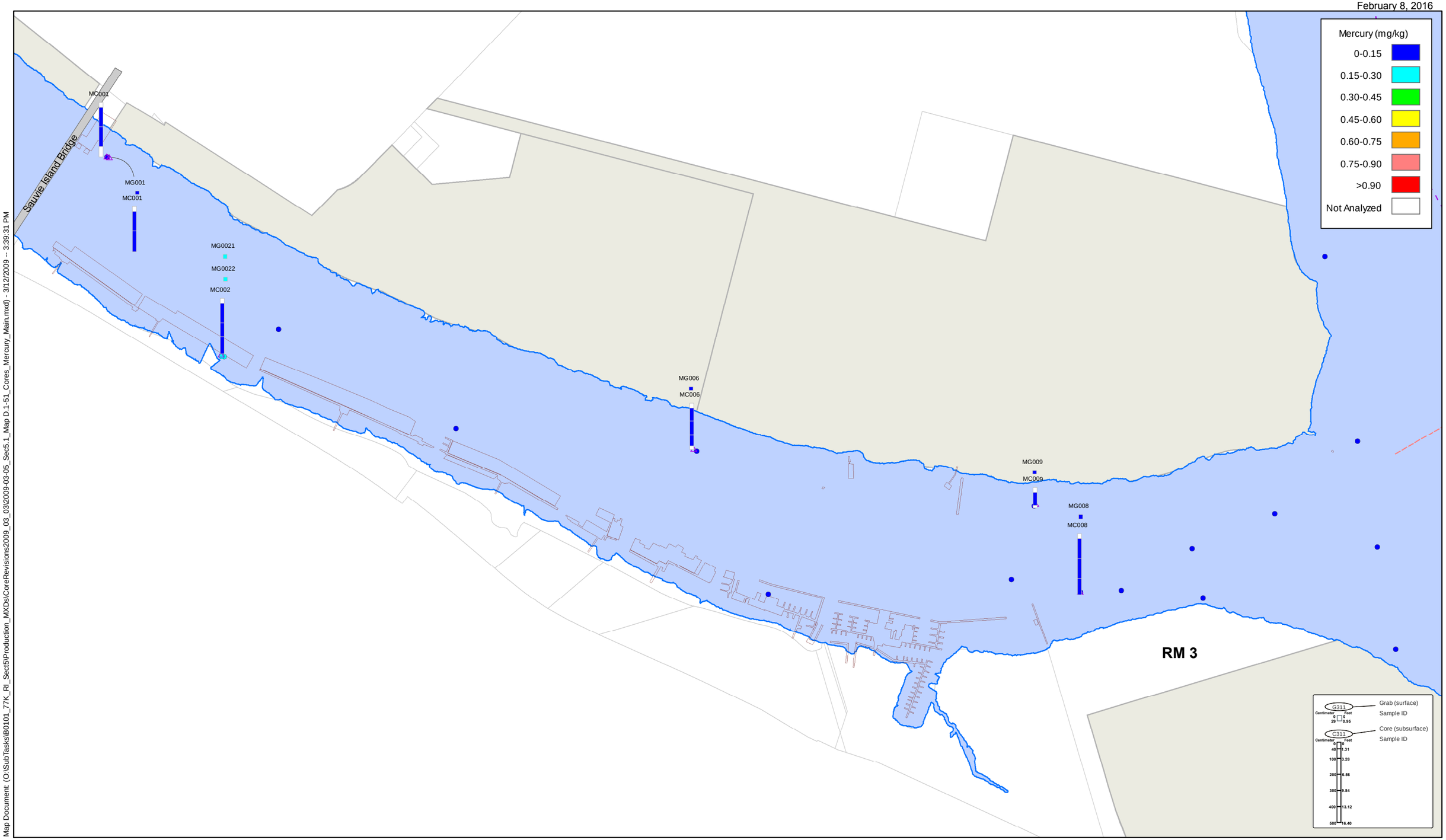
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-68 b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Mercury (mg/kg)

River Mile 02 to 03




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-51_Cores_Mercury_Main.mxd) - 3/12/2009 -- 3:39:31 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

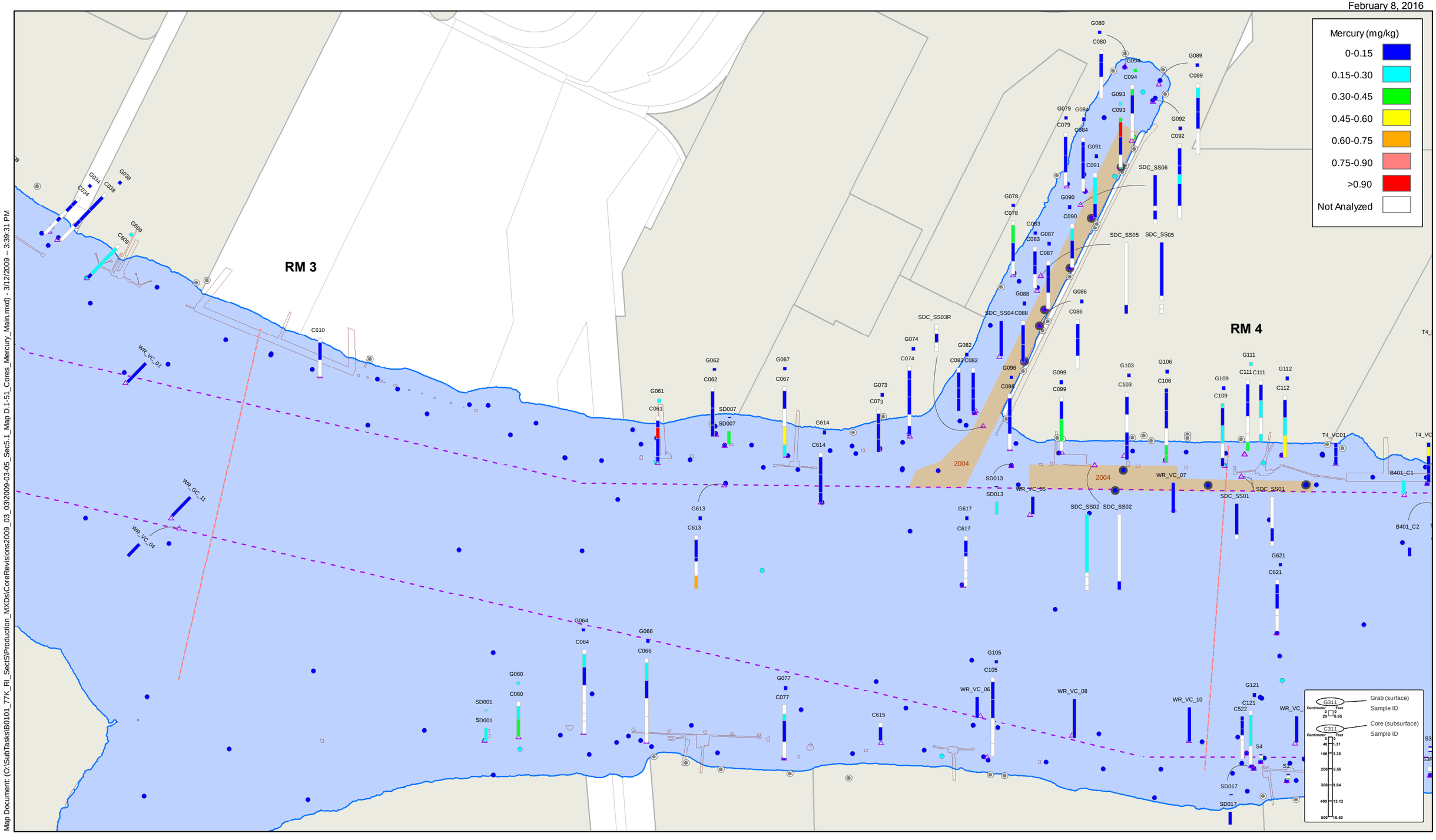
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-68c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Mercury (mg/kg)

River Mile 03 - Multnomah Channel




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-51_Cores_Mercury_Main.mxd) - 3/12/2009 -- 3:39:31 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

## Map Features

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

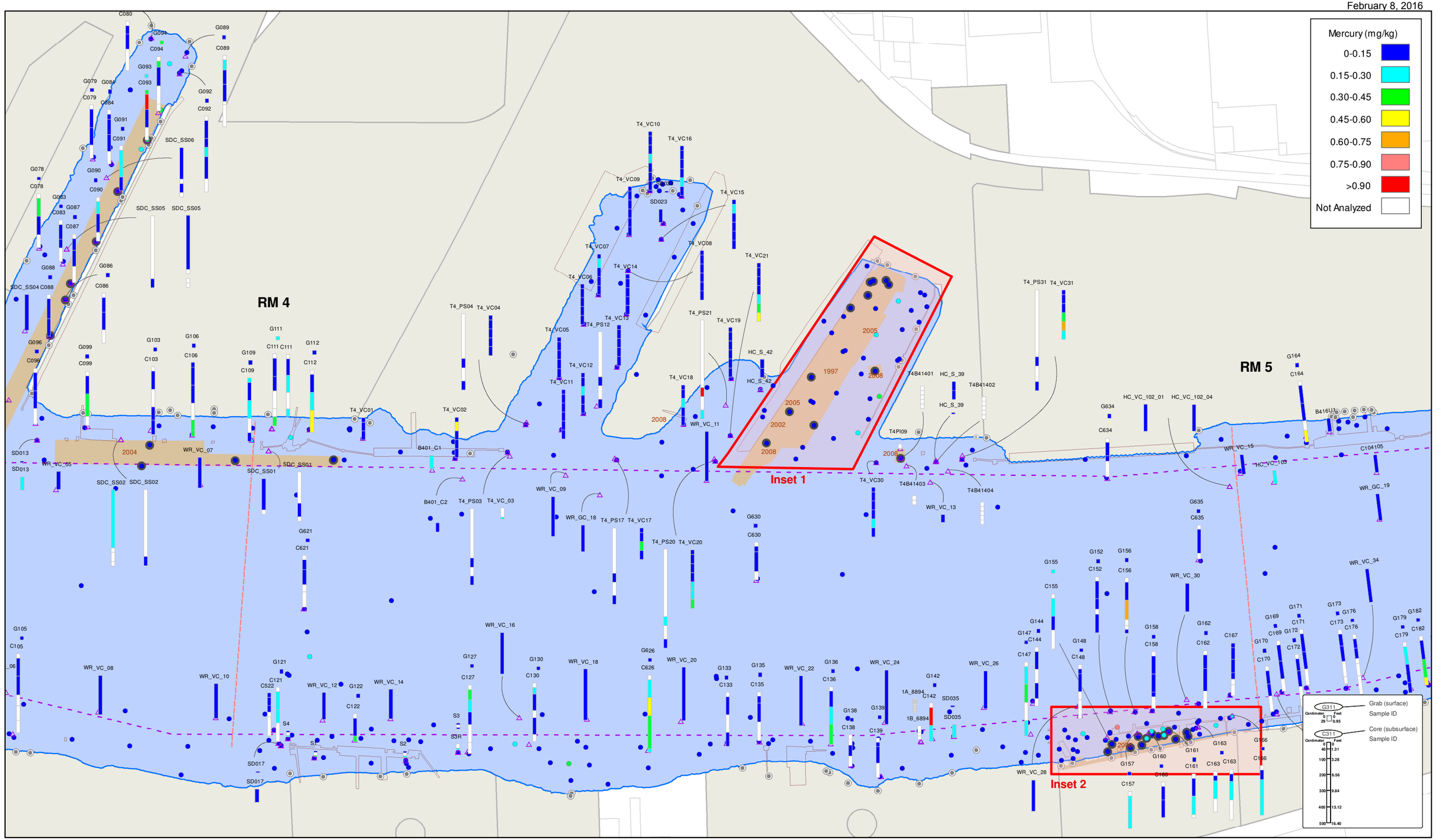
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-68 d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Mercury (mg/kg)

River Mile 03 to 04

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sec45\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-50_Cores_Mercury_Main.mxd) 7/1/2009 -- 1:18:36 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-68e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Mercury (mg/kg)

River Mile 04 to 05 - Slips

Mercury (mg/kg)
0-0.15
0.15-0.30
0.30-0.45
0.45-0.60
0.60-0.75
0.75-0.90
>0.90
Not Analyzed

T4_VC24 T4PI02 HC_S_11 HC_S_11 T4B41106 T4PI042 T4PI032 T4S301 T4PI01 T4B41104 T4B41103 T4PI03 T4PI04 T4_VC29 HC_S_07 HC_S_07 T4S302 T4_PS33 HC_S_18 HC_S_18 T4PI07 HC_S_13 HC_S_13 T4B41102 T4S303 T4B41101 T4S304 SD031 SD031 2005 HC_S_22 HC_S_22 T4S308 T4S305 T4_VC03 T4PI08 T4_PS28 T4_VC28 T4_VC23 HC_S_32 HC_S_32 T4_3 T4S306 1997 2008 T4MD01 T4_VC32 T4_PS32 T4COMP T4_VC_02 T4S307 T4_VC27 T4_2 2005 T4_UP10 T4_VC22 HC_S_27 HC_S_27 T4_VC25 T4_UP09 2008 T4_1 T4_PS22 T4_VC26 T4_VC26 T4MD02 2008 2002 T4_VC_01

G311 Grab (surface) Sample ID
Centimeter 0 29 Feet 0 0.95
C311 Core (subsurface) Sample ID
Centimeter 0 40 100 200 300 400 500 Feet 0 1.31 3.28 6.56 9.84 13.12 16.40

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-68e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Mercury (mg/kg)
River Mile 04 to 05 - Slips - Inset 1

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sed5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-50_Cores_Mercury_Insets.mxd) 7/1/2009 -- 1:18:02 PM

Mercury (mg/kg)
0-0.15
0.15-0.30
0.30-0.45
0.45-0.60
0.60-0.75
0.75-0.90
>0.90
Not Analyzed

SGP08
SGP10
SGP17
SGP13
SGP14
SGP06
SGP12
SGP20
SGP15
SGP22
SGP24
SGP23
SGP21
SGP16
SGP18
2008
SGP05
SGP03
SGP19
SGP04
SGP09
SGP01
SGP07
SGP02

G311
Centimeter 0 29 Feet 0 0.95
Grab (surface) Sample ID

C311
Centimeter 0 40 100 200 300 400 500 Feet 0 1.31 3.28 6.56 9.84 13.12 16.40
Core (subsurface) Sample ID

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-51_Cores_Mercury_Insets.mxd) - 3/12/2009 -- 4:23:11 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

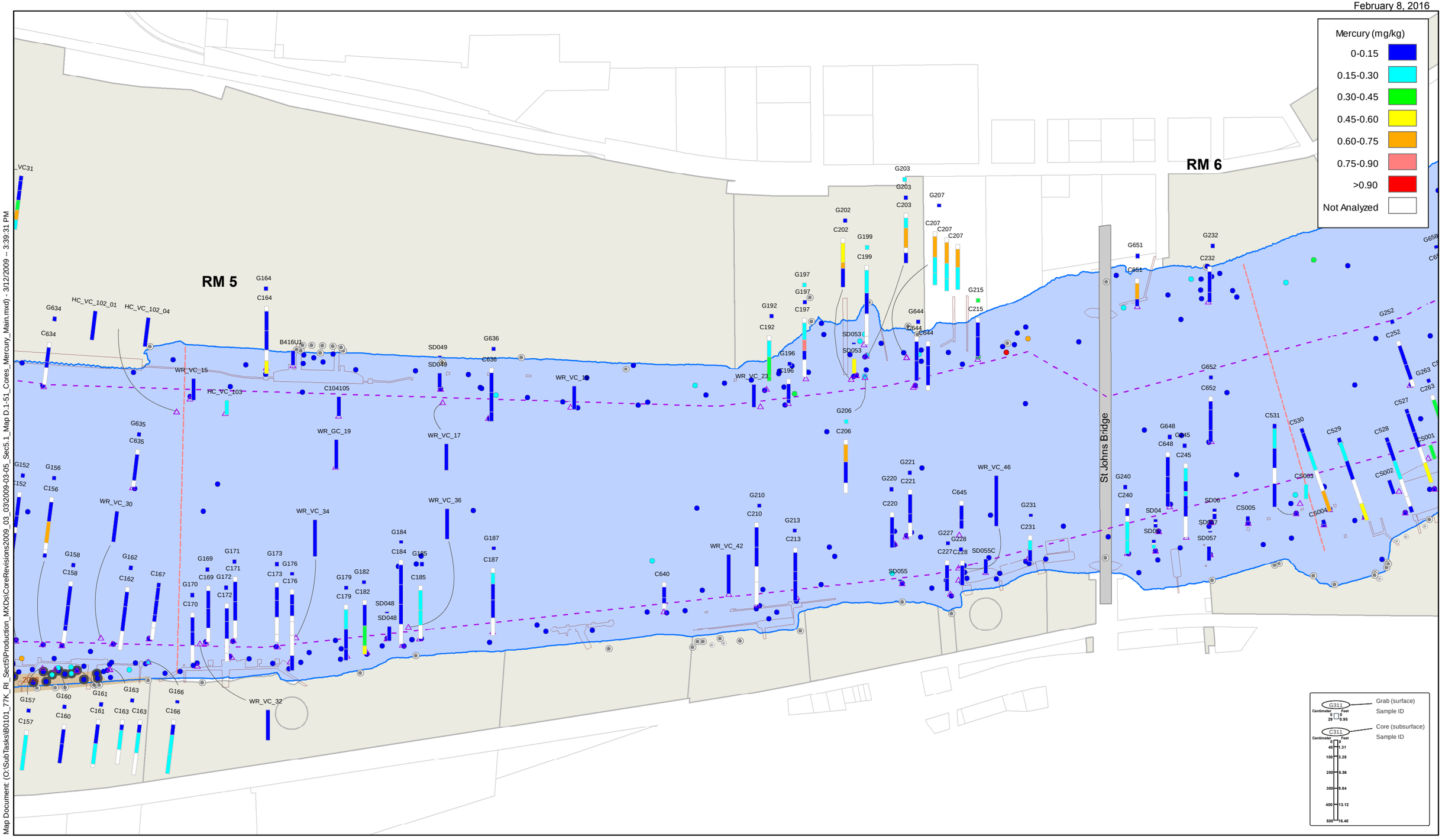
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-68e2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Mercury (mg/kg)
River Mile 04 to 05 - Slips - Inset 2

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-68 f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Mercury (mg/kg)

River Mile 05 to 06

Mercury (mg/kg)
- 0-0.15
- 0.15-0.30
- 0.30-0.45
- 0.45-0.60
- 0.60-0.75
- 0.75-0.90
- >0.90
- Not Analyzed

RM 6

RM 7

Inset 1

Railroad Bridge

WR_GC_25 WR_GC_24 WR_VC_60 WR_VC_58 WR_VC_56 WR_VC_54 WR_VC_52 WR_VC_50 WR_VC_62 WR_VC_64 WR_VC_66

Grab (surface) Sample ID

Core (subsurface) Sample ID

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-51_Cores_Mercury_Main.mxd) - 3/12/2009 -- 3:39:31 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-68 g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Mercury (mg/kg)

River Mile 06 to 07

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-51_Cores_Mercury_Insets.mxd) - 3/12/2009 -- 4:23:11 PM

Mercury (mg/kg)
- 0-0.15
- 0.15-0.30
- 0.30-0.45
- 0.45-0.60
- 0.60-0.75
- 0.75-0.90
- >0.90
- Not Analyzed

GS09 GSD5 GSD4 AN_1_5 GS08 GSD2 GS07 GS06 GSC5 GS05 GS04 AN_2_5 GSC2 GSB2 GSB7 GSC7 AN_1_3 AN_1_2 AN_2_4 GSB5 AN_1_1 AN_2_3 AN_2_1 AN_2_2

G311 Grab (surface) Sample ID
Centimeter 0 29 Feet 0 0.95

C311 Core (subsurface) Sample ID
Centimeter 0 40 100 200 300 400 500 Feet 0 1.31 3.28 6.56 9.84 13.12 16.40

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

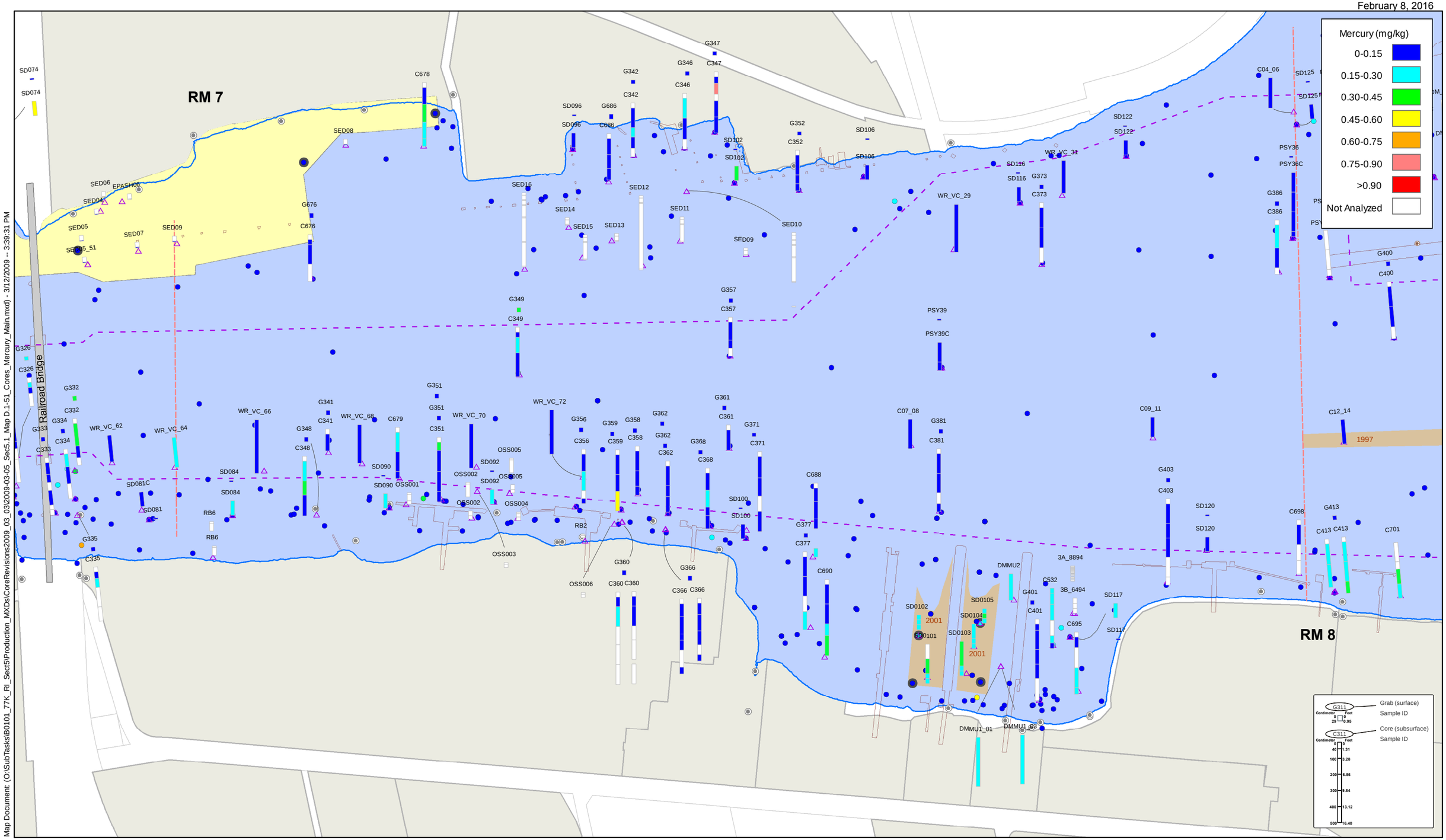
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-68g1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Mercury (mg/kg)
River Mile 06 to 07 - Inset 1




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-51_Cores_Mercury_Main.mxd) - 3/12/2009 -- 3:39:31 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-68 h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Mercury (mg/kg)

River Mile 07 to 08

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-51_Cores_Mercury_Main.mxd) - 3/12/2009 -- 3:39:31 PM

RM 8

RM 9

Mercury (mg/kg)
- 0-0.15
- 0.15-0.30
- 0.30-0.45
- 0.45-0.60
- 0.60-0.75
- 0.75-0.90
- >0.90
- Not Analyzed

PSY18 PSY18C G364 C364 PSY16 PSY16C G379 C379 G380 C380 SD136 G383 C383 G388 C388 PSY11 PSY11C G396 C396 G397 C397 PSY07 PSY07C G405 C405 SD141 G415 C415 SD141 4A_8894 G421 C421 4B_5094 G417 C417 PSY01 PSY01C C425 C425 G430 C430 G426 C426 G372 C372 PSY20 PSY20C G382 C382 G393 C393 G402 C402 DM_24 C708 PSY23 PSY23C PSY24 PSY24C C703 C702 G384 C384 PSY27 PSY27C PSY27C_2 SD133 C04_06 SD125 PSY34 PSY34C PSY33 PSY33C DM_20 G392 G706 C392 C706 SD127 PSY30 PSY30C PSY30C_2 PSY36 PSY36C G386 C386 PSY41 PSY41C PSY43 PSY43C G409 C409 G420 C420 C714 SD138 SD133 G400 C400 G720 C720 C727 PSY50 PSY50C C36_38

Grab (surface) Sample ID
Core (subsurface) Sample ID

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-68 i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Mercury (mg/kg)

River Mile 08 to 09 - Swan Is. East

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-51_Cores_Mercury_Main.mxd) - 3/12/2009 -- 3:39:31 PM

Mercury (mg/kg)
- 0-0.15
- 0.15-0.30
- 0.30-0.45
- 0.45-0.60
- 0.60-0.75
- 0.75-0.90
- >0.90
- Not Analyzed

RM 8

RM 9

1997

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

Grab (surface) Sample ID

Core (subsurface) Sample ID

**Map D1.2-68j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Mercury (mg/kg)

River Mile 08 to 09 - Swan Is. West

Mercury (mg/kg)
- 0-0.15
- 0.15-0.30
- 0.30-0.45
- 0.45-0.60
- 0.60-0.75
- 0.75-0.90
- >0.90
- Not Analyzed

RM 10

RM 9

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-68k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Mercury (mg/kg)

River Mile 09 to 10

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-51_Cores_Mercury_Main.mxd) - 3/12/2009 -- 3:39:31 PM

Mercury (mg/kg)
- 0-0.15
- 0.15-0.30
- 0.30-0.45
- 0.45-0.60
- 0.60-0.75
- 0.75-0.90
- >0.90
- Not Analyzed

RM 10

RM 11

Fremont Bridge

G743 C743 G746 C746 SD04 C749 WR_VC_45 WR_GC_32 WR_GC_33 WR_VC_47 WR_VC_49 WR_VC_51 C757 WR_VC_53 WR_VC_55 G760 C760 WR_VC_57 G764 C764 C764 WR_VC_59 SD02 WR_VC_61 SD01 C51_52 WR_GC_34 WR_GC_35 G748 C748 C748 G747 C747 WR_VC_106 G752 C752 WR_VC_108 G753 C753 WR_VC_110 RC01 C762 WR_VC_114 WR_VC_116 WR_VC_118 WR_VC_120 RC02 WR_VC_122 WR_VC_124 C773 T2U1 1997 2002 2002 2000

G311 Grab (surface) Sample ID
C311 Core (subsurface) Sample ID

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-05_Sec5.1_Map D.1-51_Cores_Mercury_Main.mxd) - 3/12/2009 -- 3:39:31 PM

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

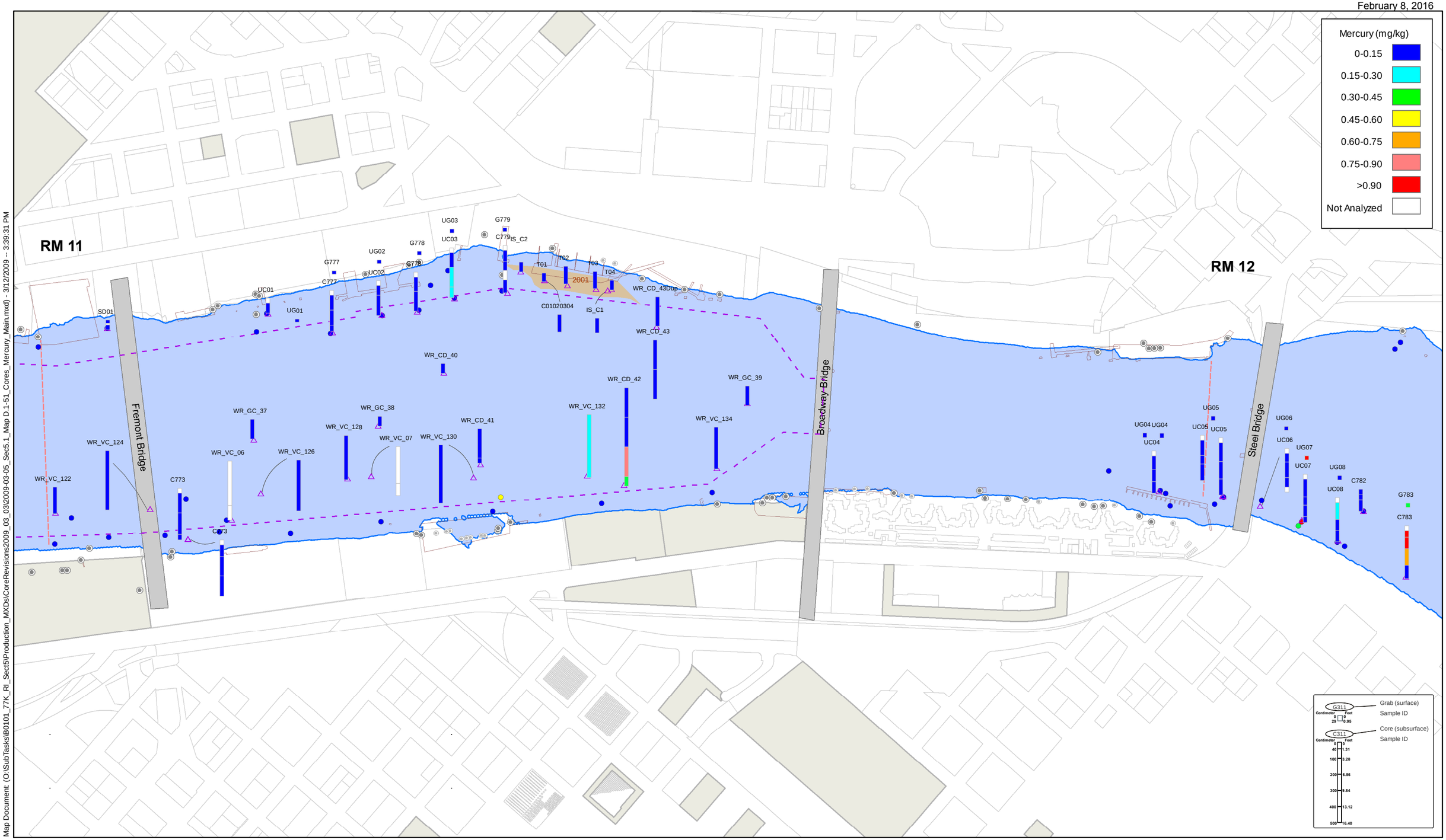
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-68I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Mercury (mg/kg)

River Mile 10 to 11

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_0312009-03-05_Sec5.1_Map D.1-51_Cores_Mercury_Main.mxd) - 3/12/2009 -- 3:39:31 PM




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

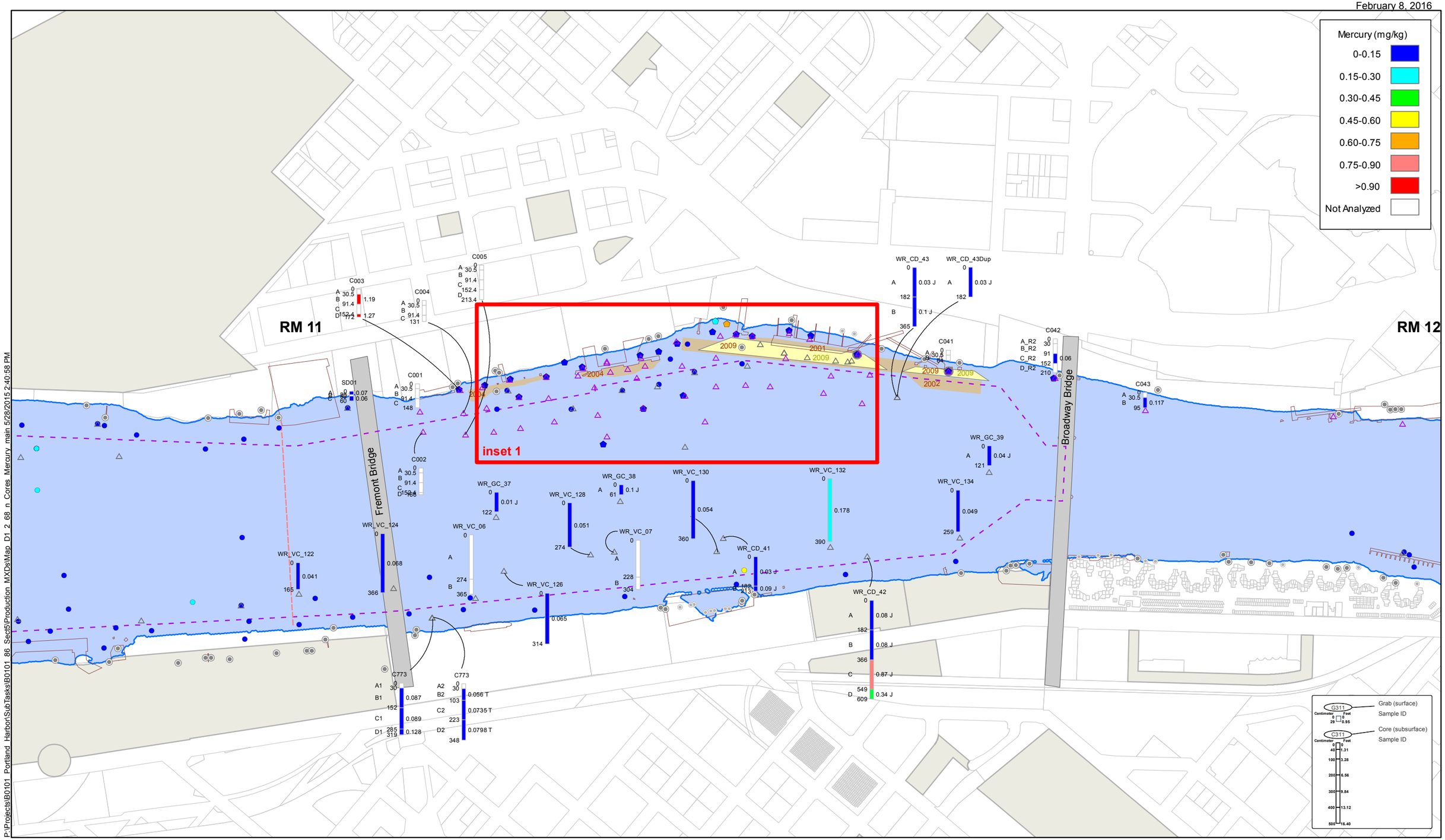
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-68 m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Mercury (mg/kg)

River Mile 11 to 12




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

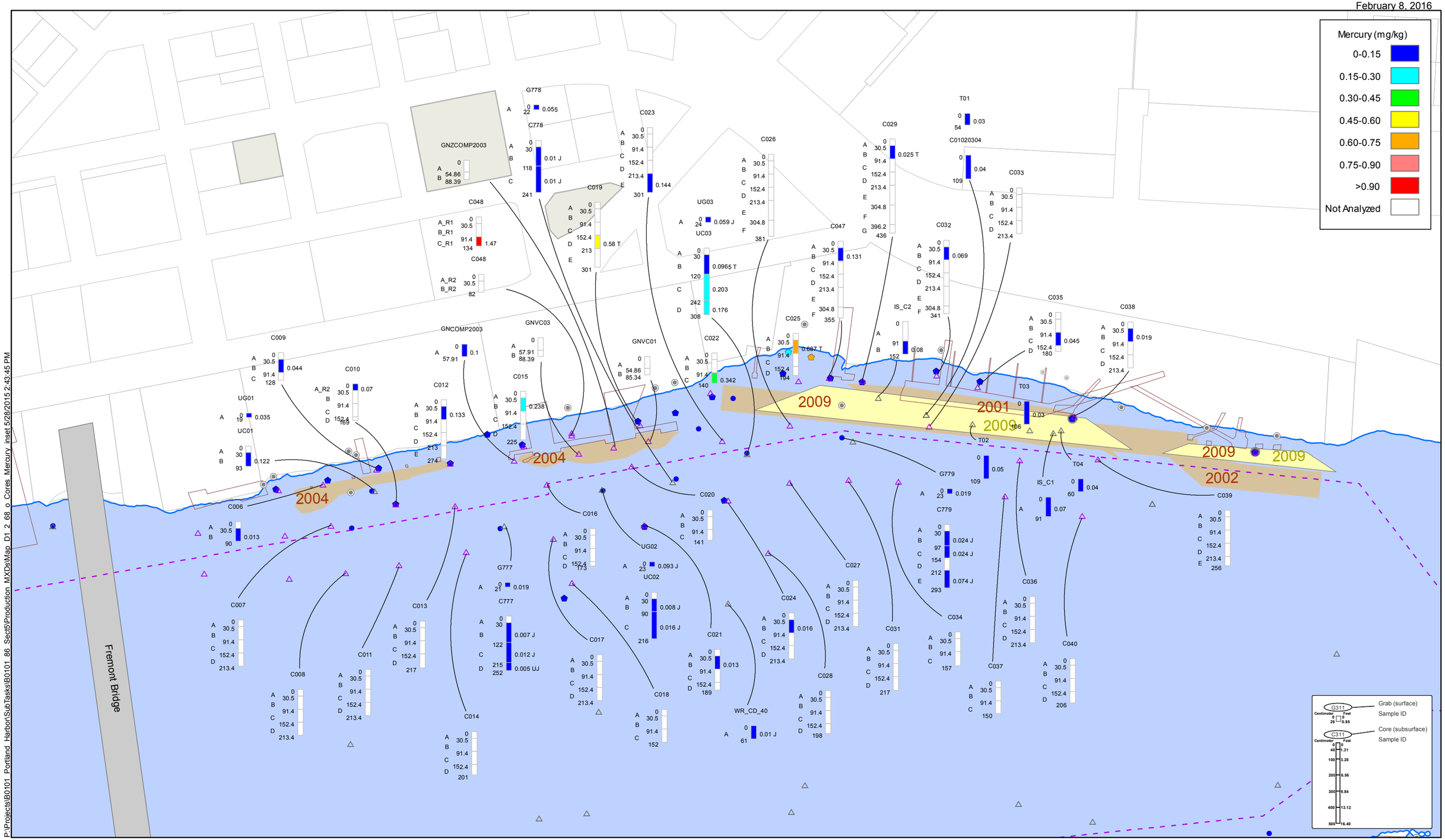
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-68n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Mercury (mg/kg)

River Mile 11.0 - 11.8




P:\Projects\B0101 Portland Harbor\SubTasks\B0101 86 Sect5\Production MXDs\Map D1 2 68 o Cores Mercury inset 5/28/2015 2:43:45 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

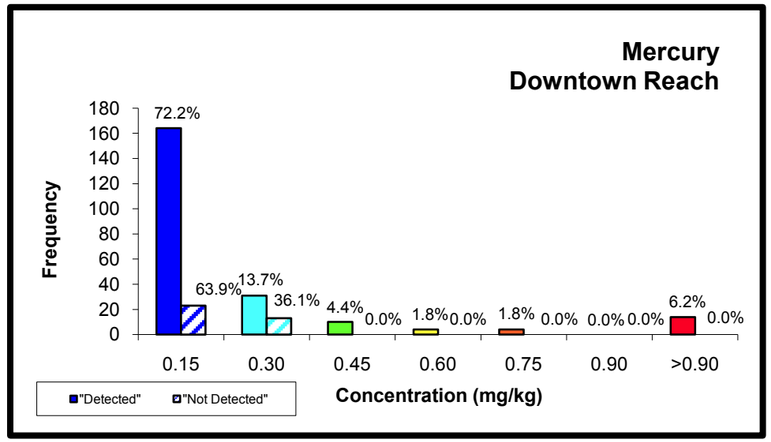
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

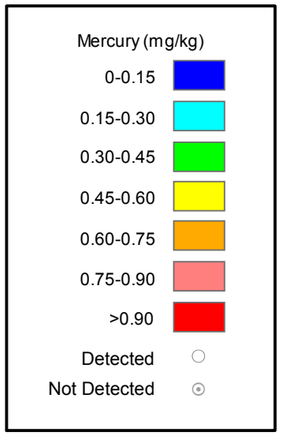
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

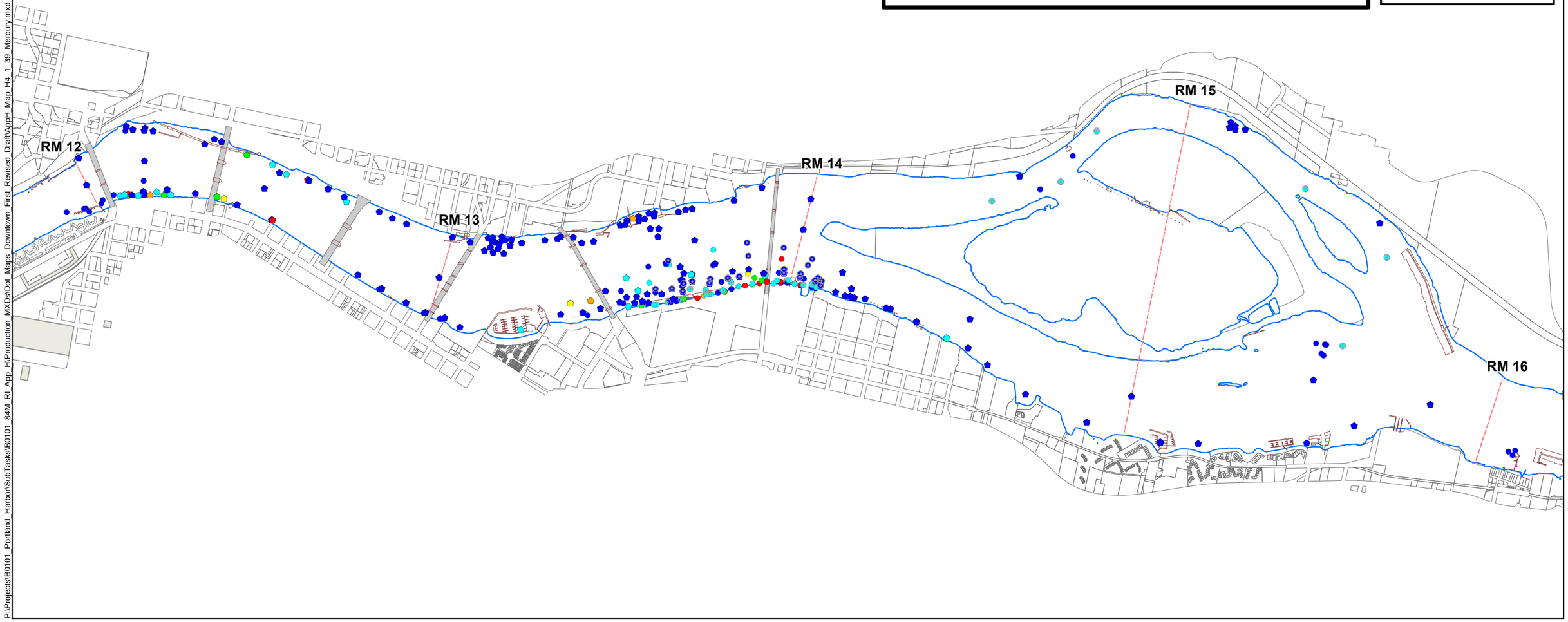
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-68o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Mercury (mg/kg)

River Mile 11.0 - 11.8 - Inset 1

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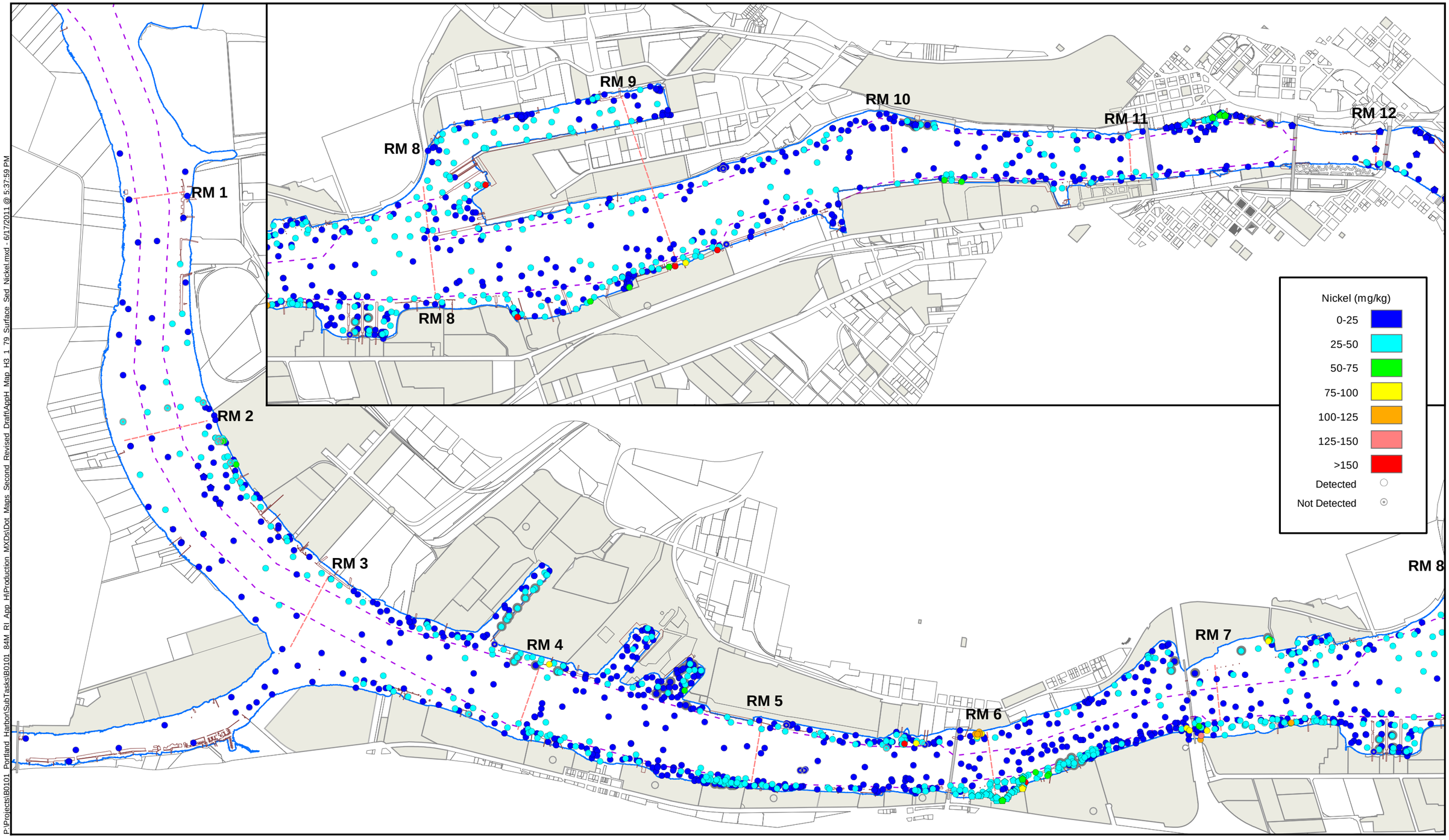
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-69**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Mercury (mg/kg)
Downtown Reach

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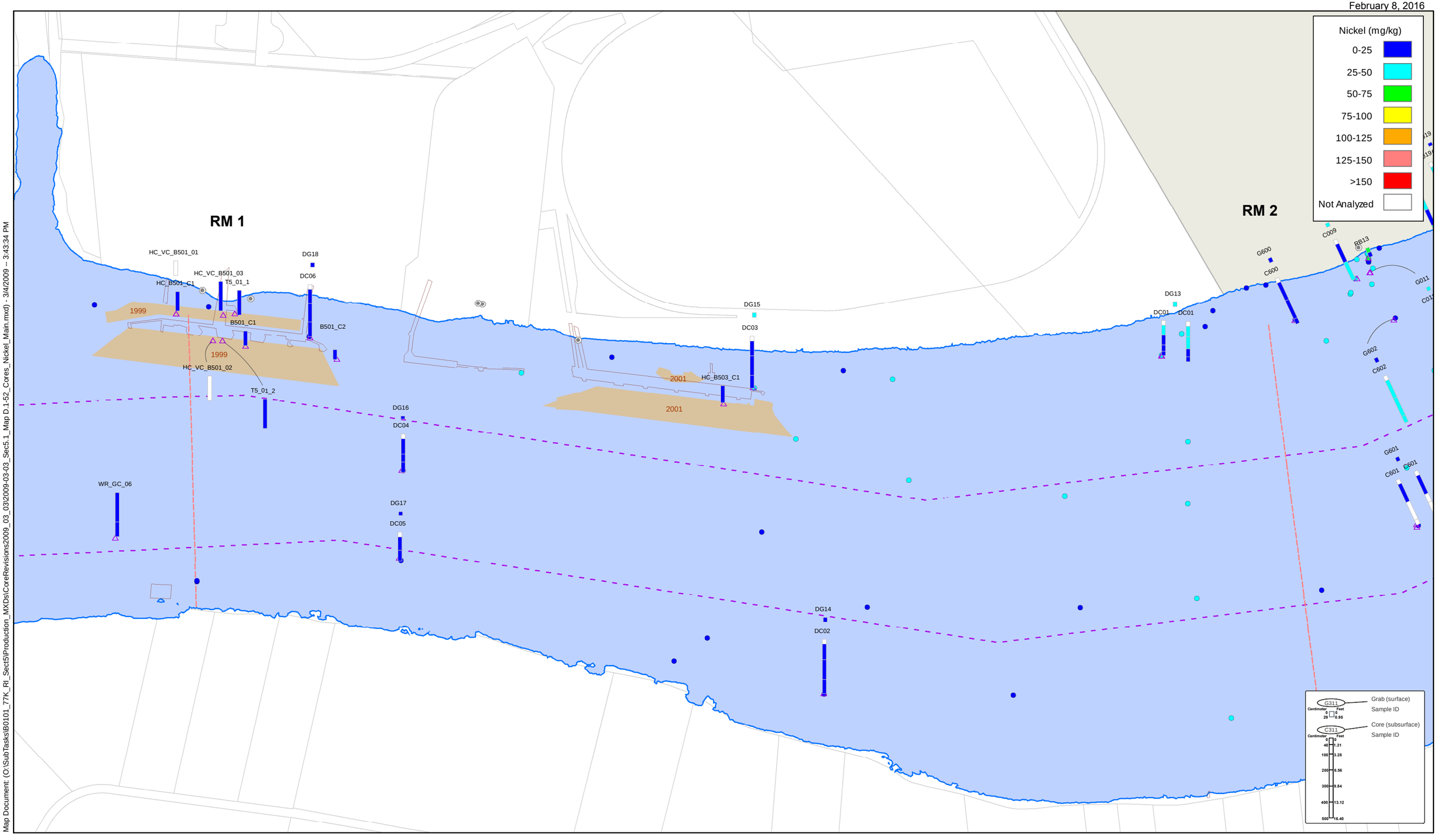
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

0 1,000 2,000 3,000 4,000 5,000 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-70**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Nickel (mg/kg)

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

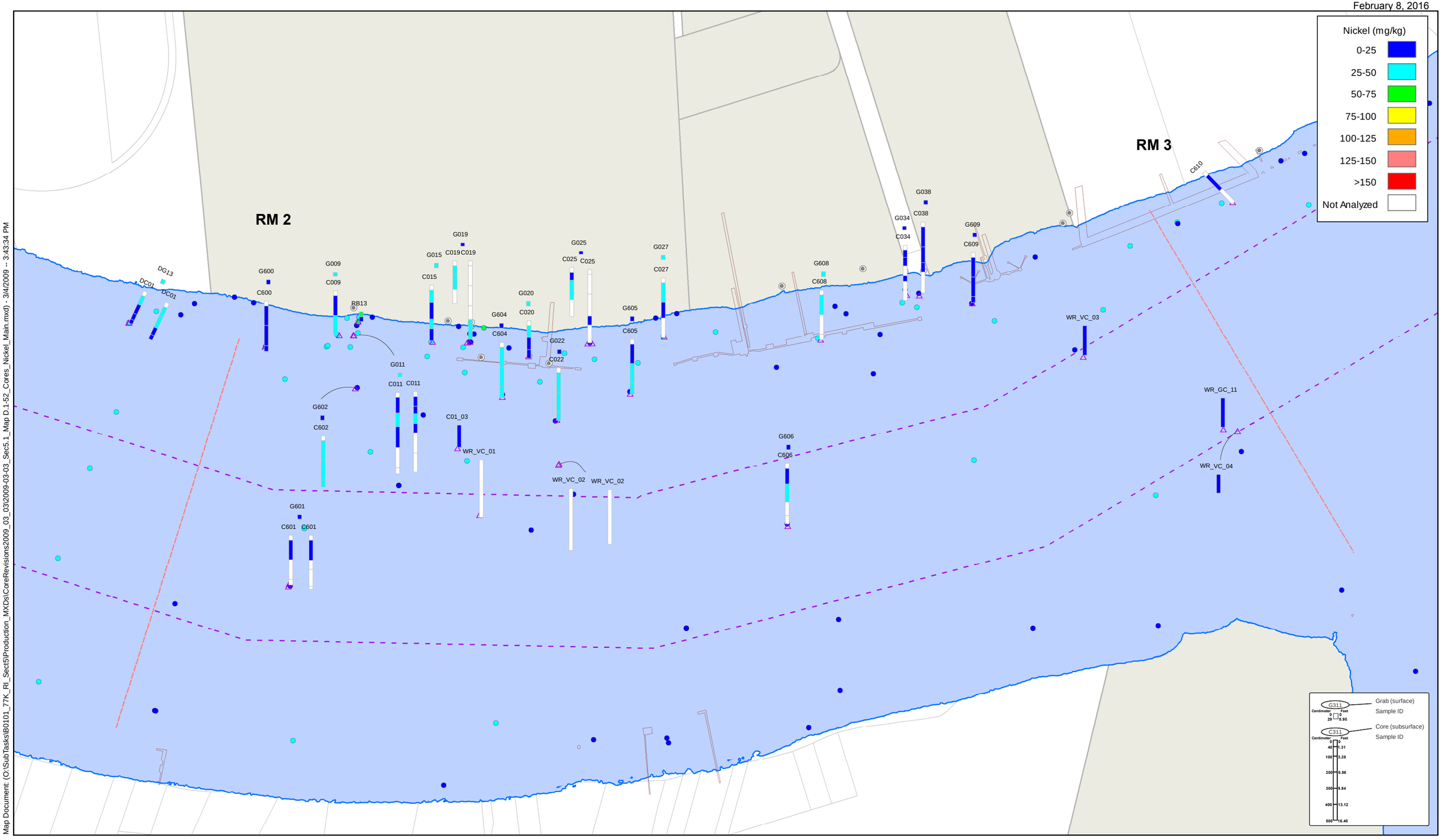
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-71a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Nickel (mg/kg)

River Mile 01 to 02

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

## Map Features

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

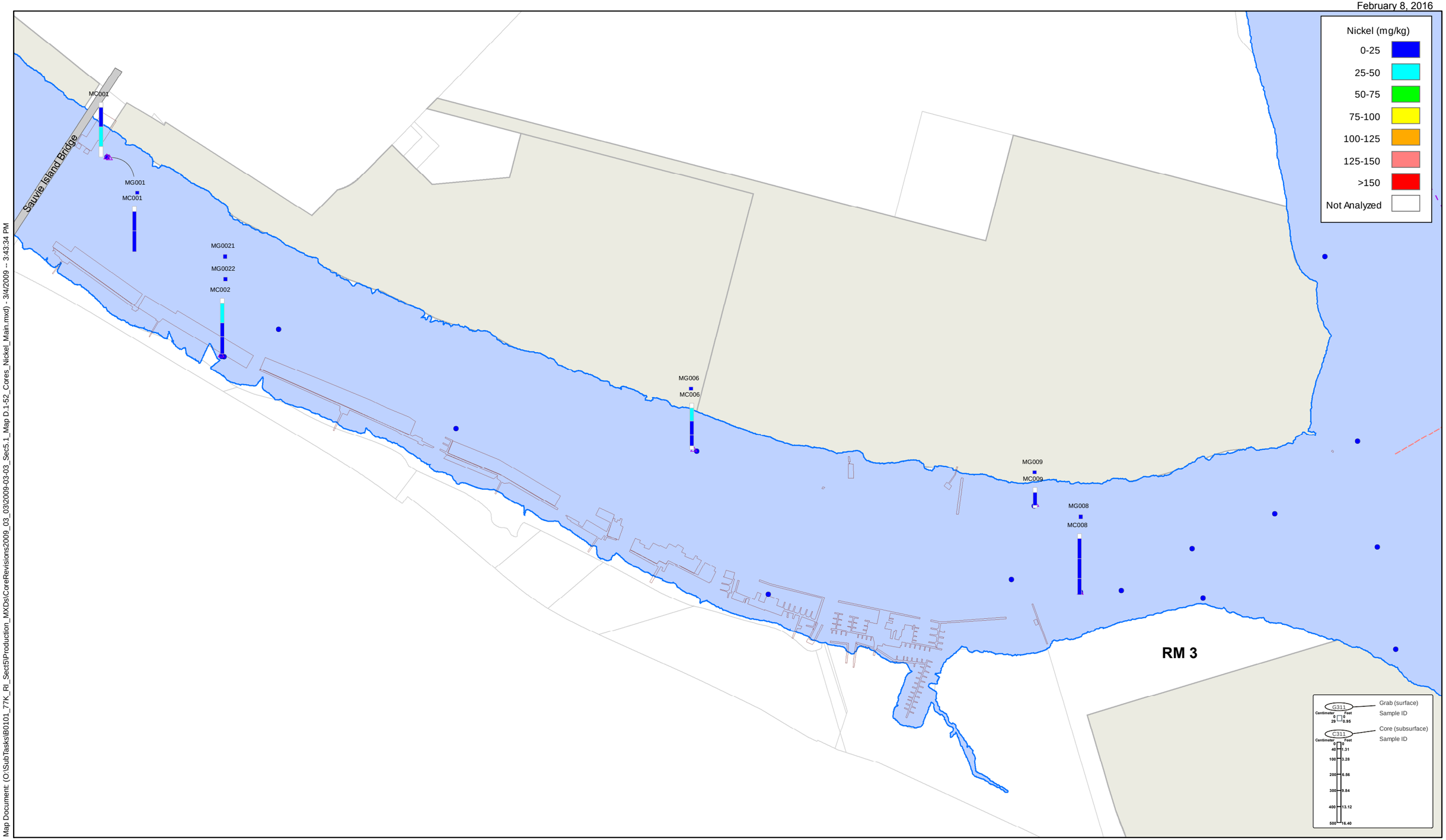
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-7 b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Nickel (mg/kg)

River Mile 02 to 03

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-71c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Nickel (mg/kg)

River Mile 03 - Multnomah Channel

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-03_Sec5.1_Map D.1-52_Cores_Nickel_Main.mxd) - 3/4/2009 -- 3:43:34 PM

RM 3

RM 4

Nickel (mg/kg)
- 0-25
- 25-50
- 50-75
- 75-100
- 100-125
- 125-150
- >150
- Not Analyzed

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

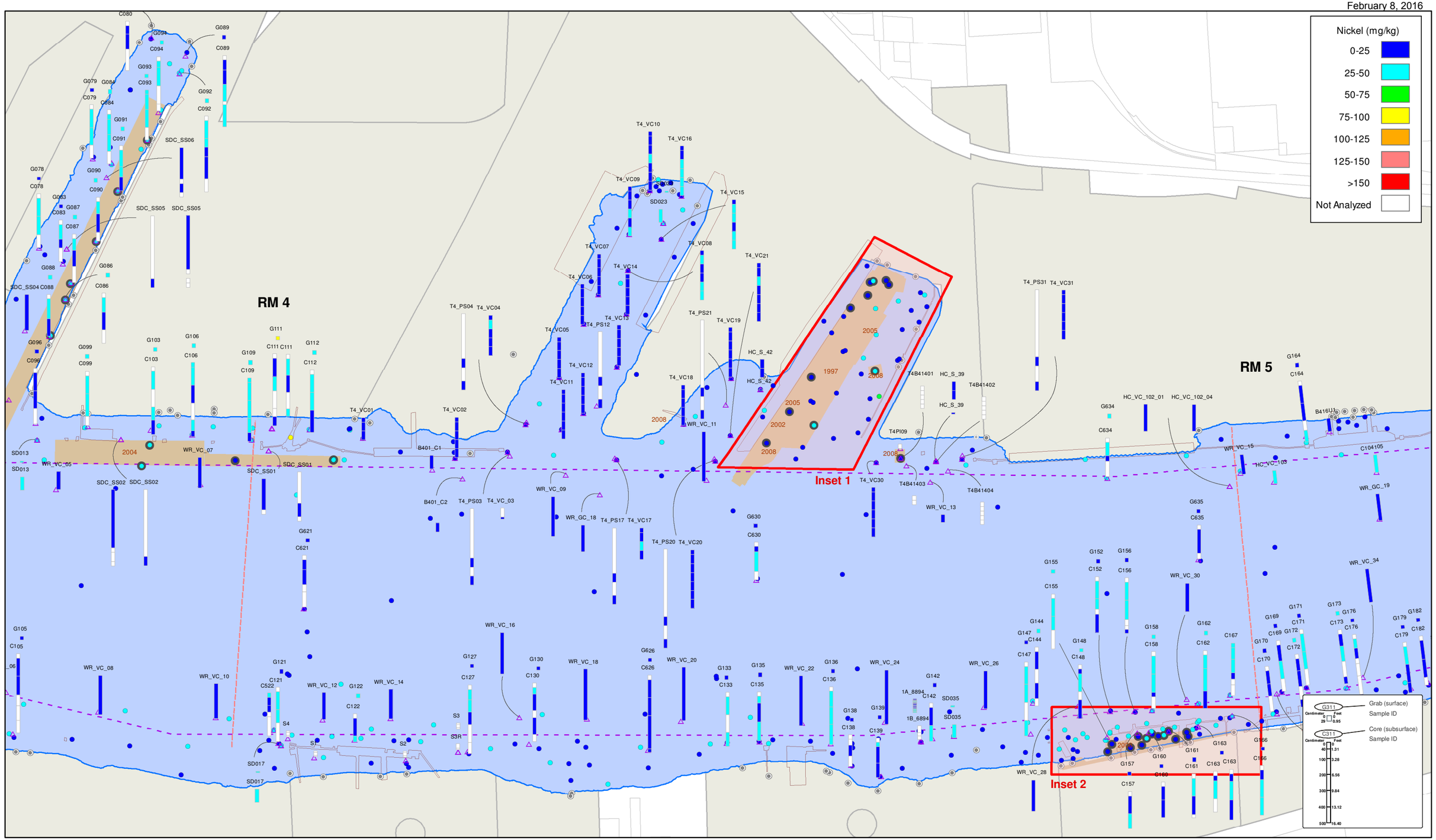
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-71 d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Nickel (mg/kg)

River Mile 03 to 04

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sec45\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-52_Cores_Nickel_Main.mxd) 7/1/2009 -- 1:19:45 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-71e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Nickel (mg/kg)

River Mile 04 to 05 - Slips

Nickel (mg/kg)
0-25
25-50
50-75
75-100
100-125
125-150
>150
Not Analyzed

T4_VC24 T4PI02 HC_S_11 HC_S_11 T4B41106 T4PI042 T4PI032 T4S301 T4PI01 T4B41104 T4B41103 T4PI03 T4PI04 T4_VC29 HC_S_07 HC_S_07 T4S302 T4_PS33 HC_S_18 HC_S_18 T4PI07 HC_S_13 HC_S_13 T4B41102 T4S303 T4B41101 T4S304 SD031 SD031 2005 HC_S_22 HC_S_22 T4S308 T4S305 T4_VC03 T4PI08 T4_PS28 T4_VC28 T4_VC23 HC_S_32 HC_S_32 T4_3 T4S306 1997 2008 T4MD01 T4_VC32 T4_PS32 T4COMP T4_VC_02 T4S307 T4_VC27 T4_2 2005 T4_UP10 T4_VC22 HC_S_27 HC_S_27 T4_VC25 T4_UP09 2008 T4_1 T4_PS22 T4_VC26 T4_VC26 T4MD02 2008 2002 T4_VC_01

G311 Grab (surface) Sample ID
Centimeter 0 29 Feet 0 0.95
C311 Core (subsurface) Sample ID
Centimeter 0 40 100 200 300 400 500 Feet 0 1.31 3.28 6.56 9.84 13.12 16.40

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-71e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Nickel (mg/kg)

River Mile 04 to 05 - Slips - Inset 1

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sed5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-52_Cores_Nickel_Insets.mxd) 7/1/2009 -- 1:19:06 PM

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Nickel (mg/kg)
- 0-25
- 25-50
- 50-75
- 75-100
- 100-125
- 125-150
- >150
- Not Analyzed

SGP08
SGP17
SGP10
SGP06
SGP12
SGP13
SGP14
SGP20
SGP15
SGP22
SGP24
SGP23
SGP21
SGP16
SGP18
2008
SGP05
SGP03
SGP19
SGP04
SGP09
SGP01
SGP07
SGP02

G311 Grab (surface) Sample ID
Centimeter 0 29 Feet 0 0.95

C311 Core (subsurface) Sample ID
Centimeter 0 40 100 200 300 400 500 Feet 0 1.31 3.28 6.56 9.84 13.12 16.40

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

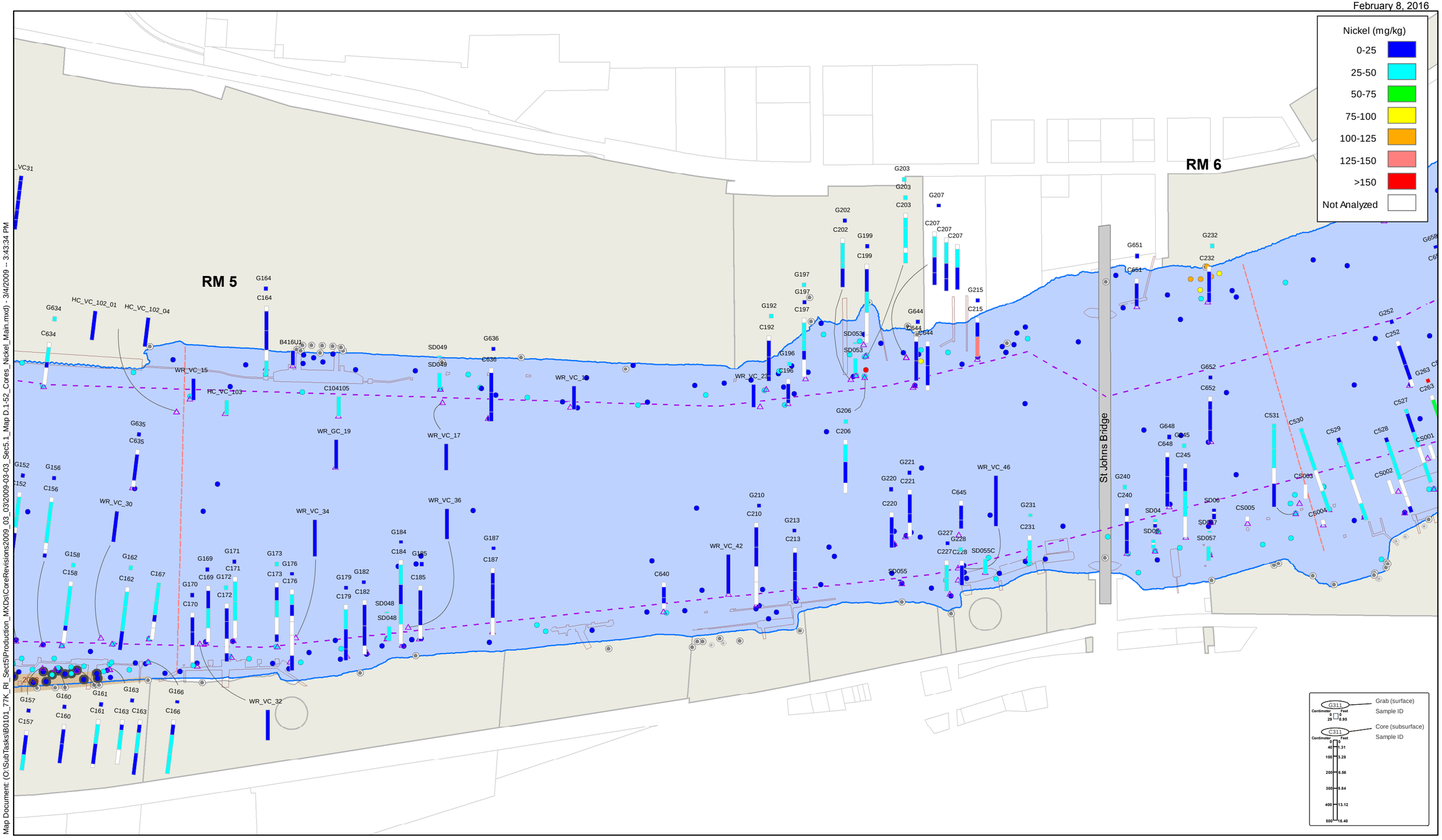
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-71e2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Nickel (mg/kg)

River Mile 04 to 05 - Slips - Inset 2

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

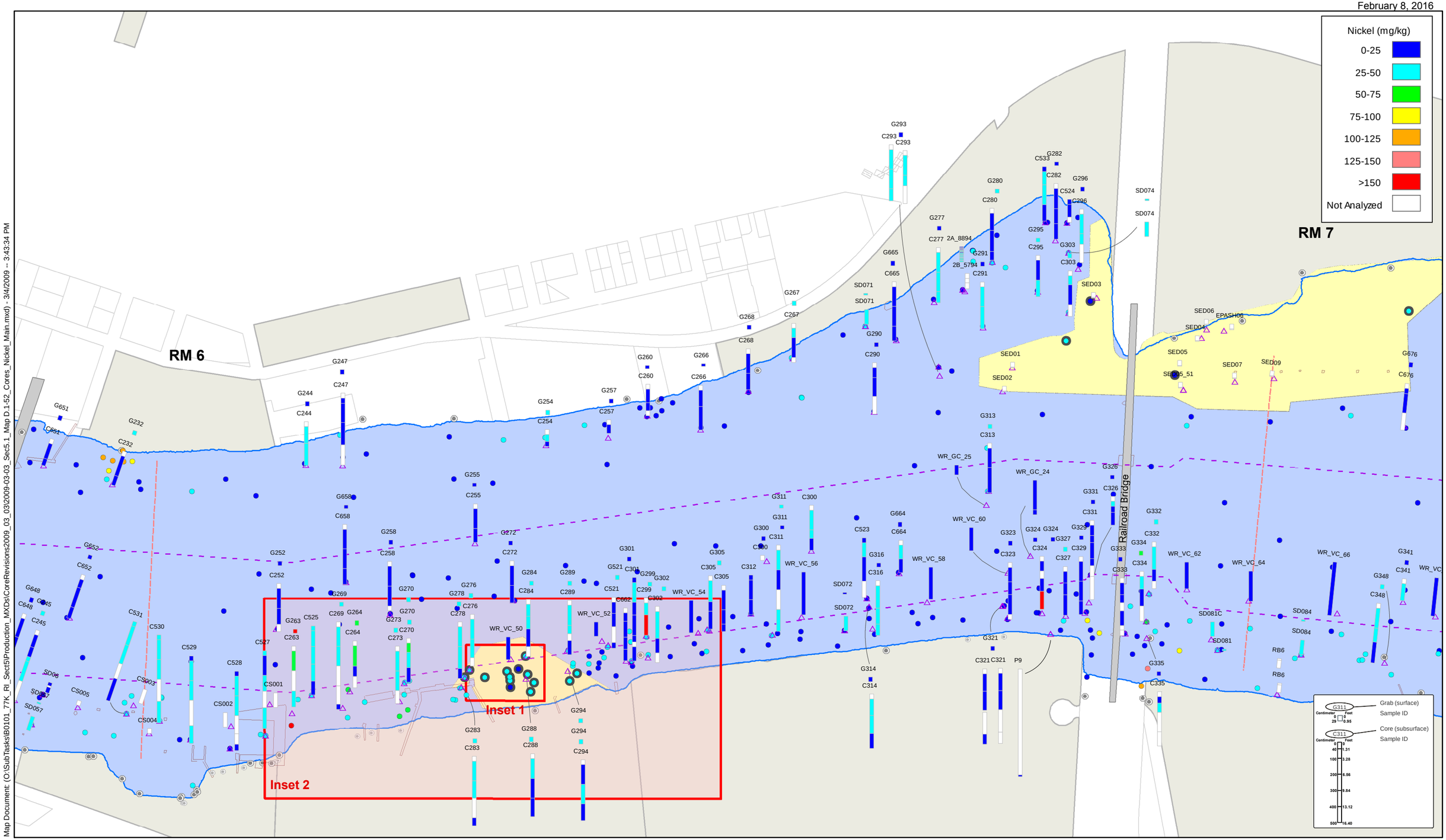
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-71 f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Nickel (mg/kg)

River Mile 05 to 06

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

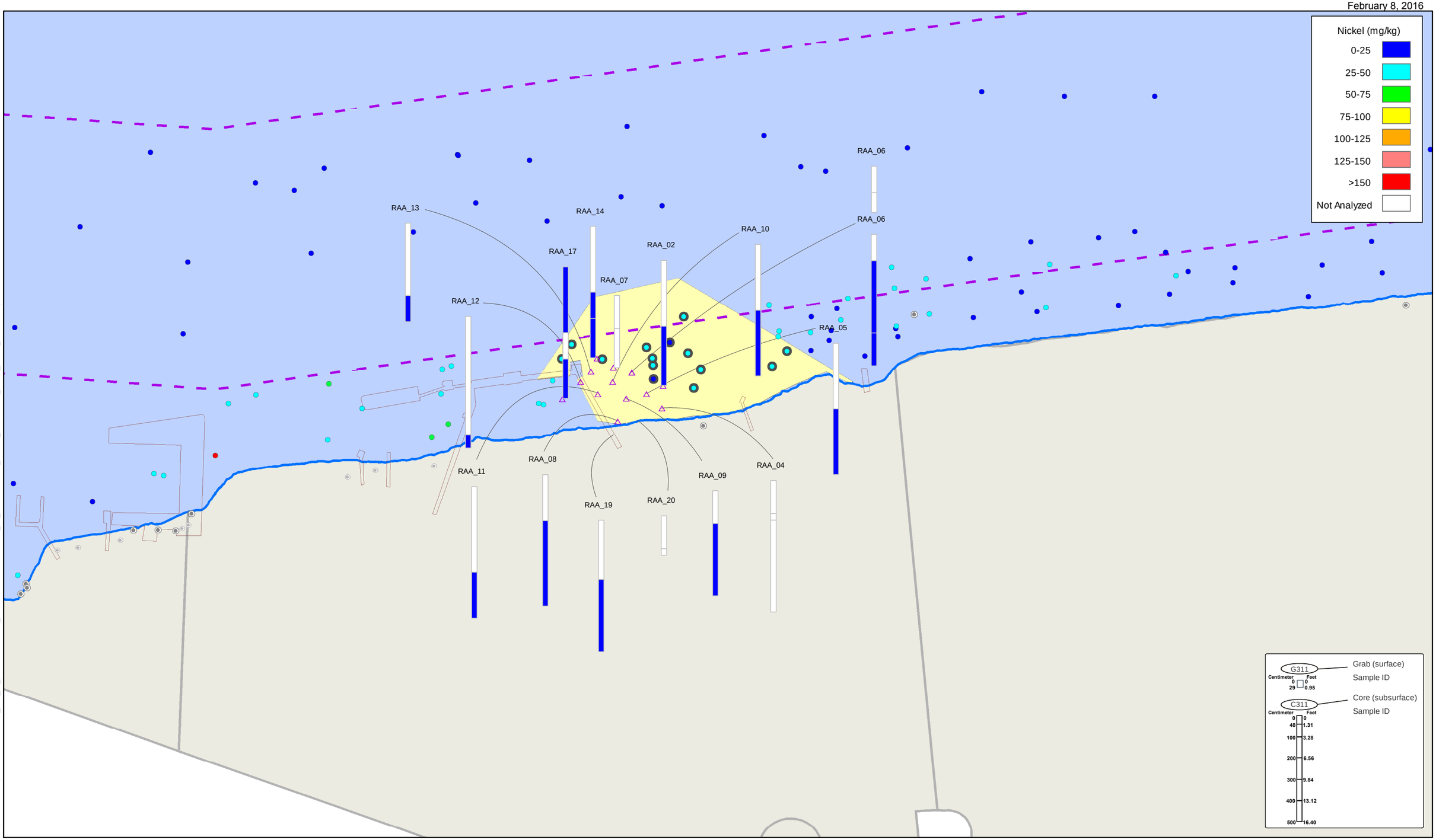
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-71 g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Nickel (mg/kg)

River Mile 06 to 07




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-03_Sec5.1_Map D.1-52_Cores_Nickel_Insets.mxd) - 3/4/2009 -- 4:23:53 PM

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-71g1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Nickel (mg/kg)

River Mile 06 to 07 - Inset 1

Nickel (mg/kg)
0-25
25-50
50-75
75-100
100-125
125-150
>150
Not Analyzed

GS09
GSD2
GS07
AN_1_5
GS08
GSD4
GSD5
GS06
GSC5
GS05
GS04
AN_2_5
GSC2
GSB2
GSB7
GSC7
AN_1_3
AN_1_2
AN_2_4
GSB5
AN_2_3
AN_2_1
AN_1_1
AN_2_2

G311 Grab (surface) Sample ID
Centimeter 0 29 Feet 0 0.95
C311 Core (subsurface) Sample ID
Centimeter 0 40 100 200 300 400 500 Feet 0 1.31 3.28 6.56 9.84 13.12 16.40

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-03_Sec5.1_Map D.1-52_Cores_Nickel_Insets.mxd) - 3/4/2009 -- 4:23:53 PM

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

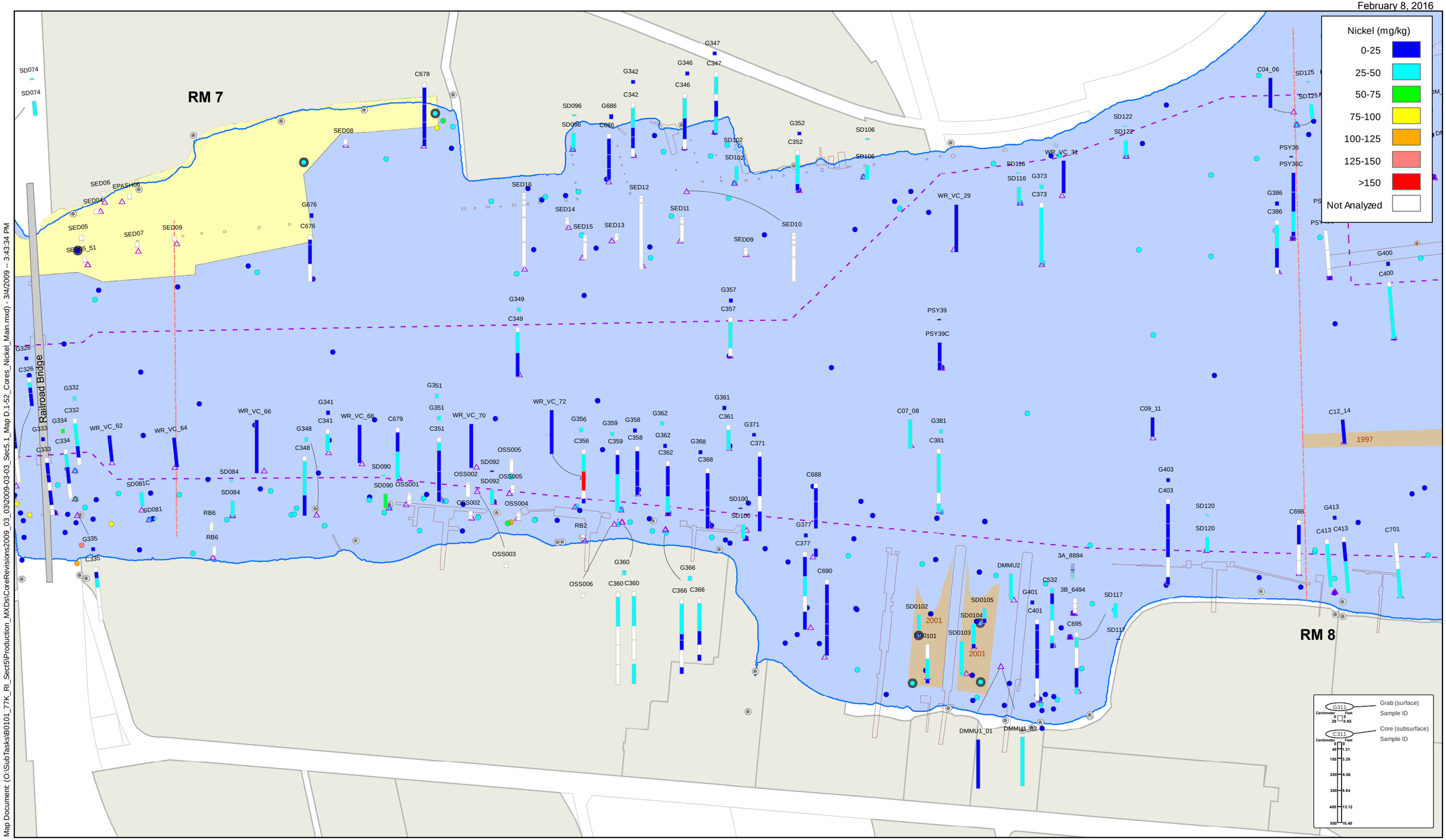
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-71g2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Nickel (mg/kg)

River Mile 06 to 07 - Inset 2

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

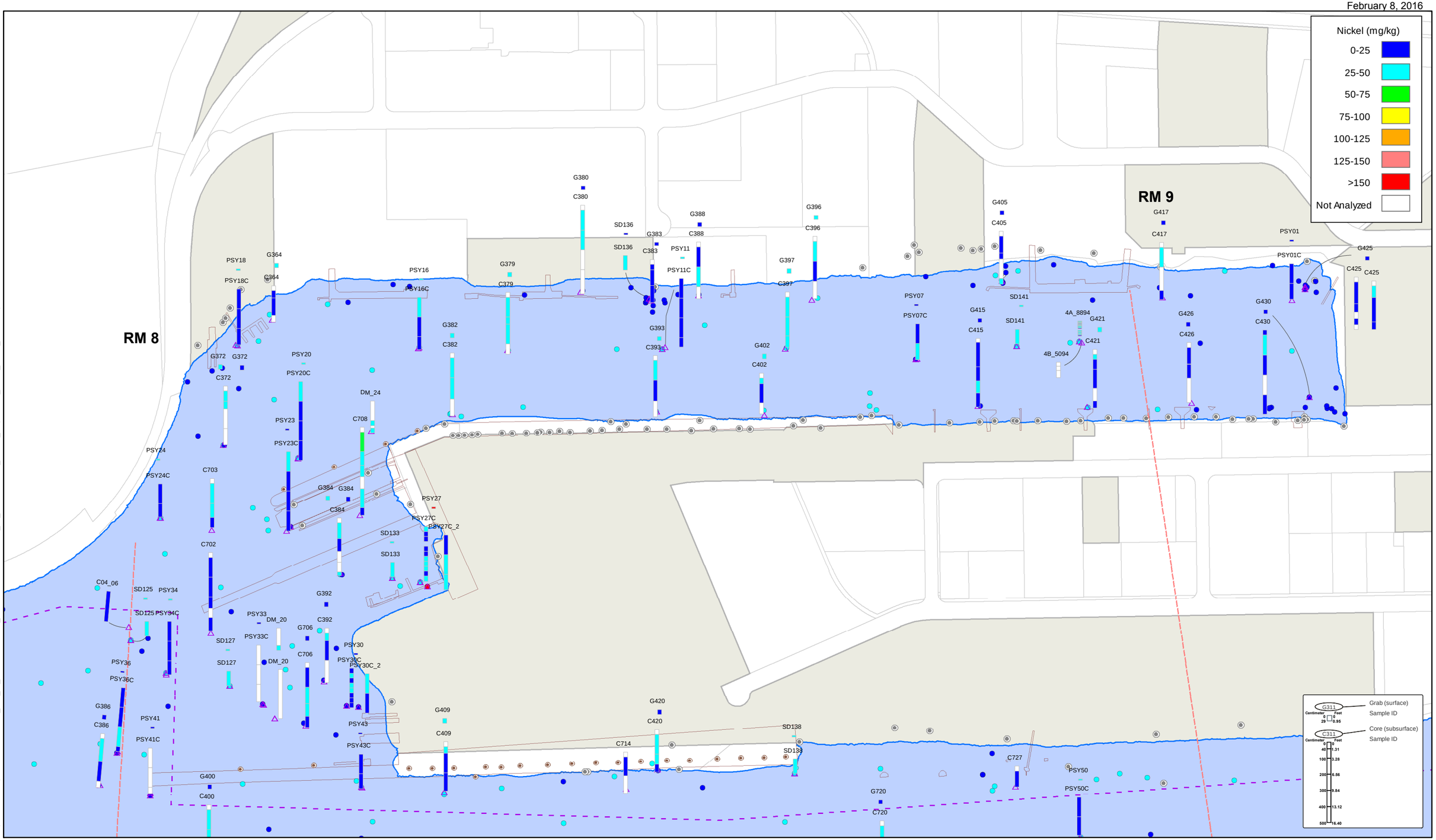
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-71 h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Nickel (mg/kg)

River Mile 07 to 08

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-03_Sec5.1_Map D.1-52_Cores_Nickel_Main.mxd) - 3/4/2009 -- 3:43:34 PM




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

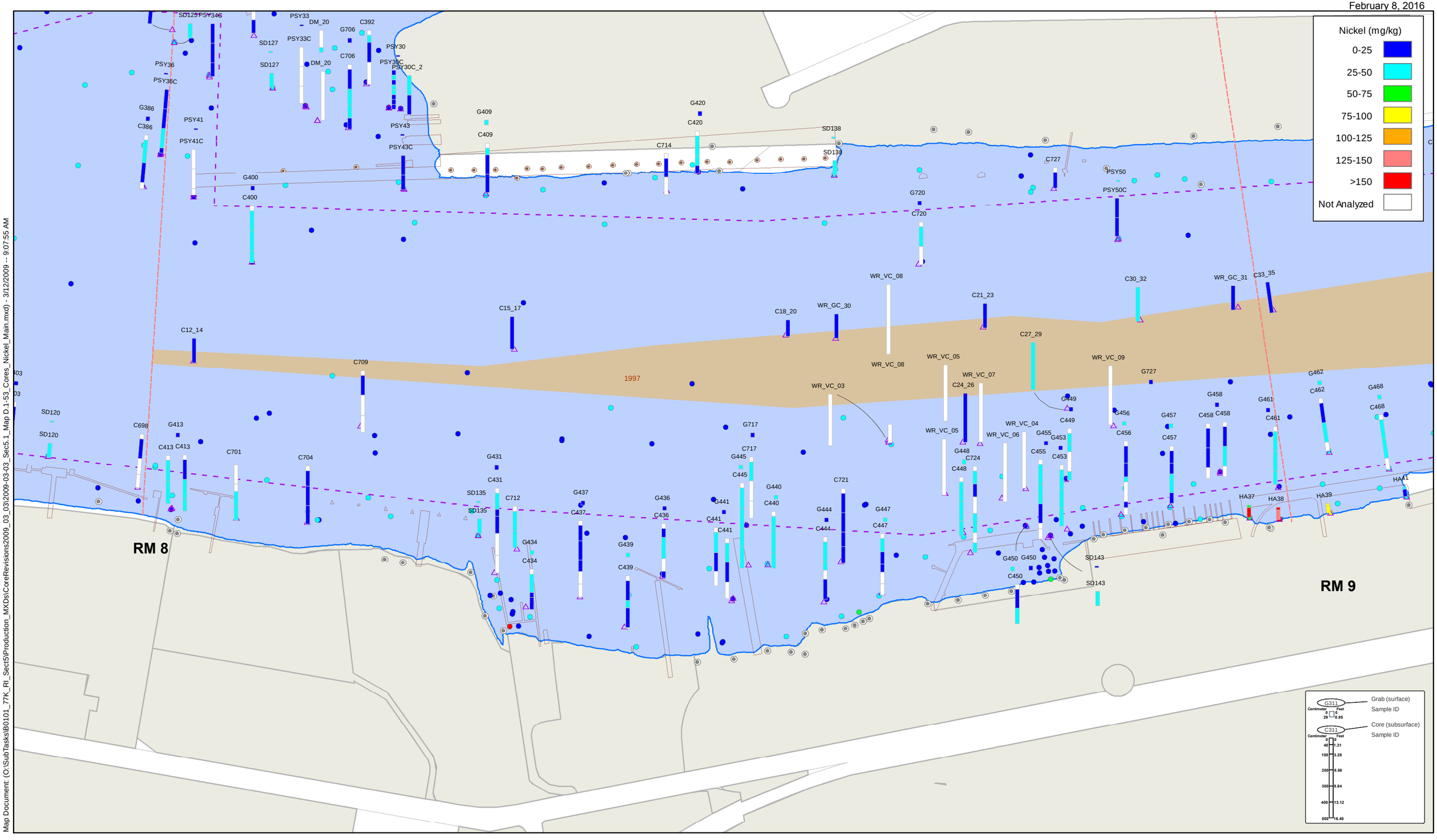
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-71 i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Nickel (mg/kg)

River Mile 08 to 09 - Swan Is. East




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-03_Sec5.1_Map D.1-53_Cores_Nickel_Main.mxd) - 3/12/2009 -- 9:07:55 AM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

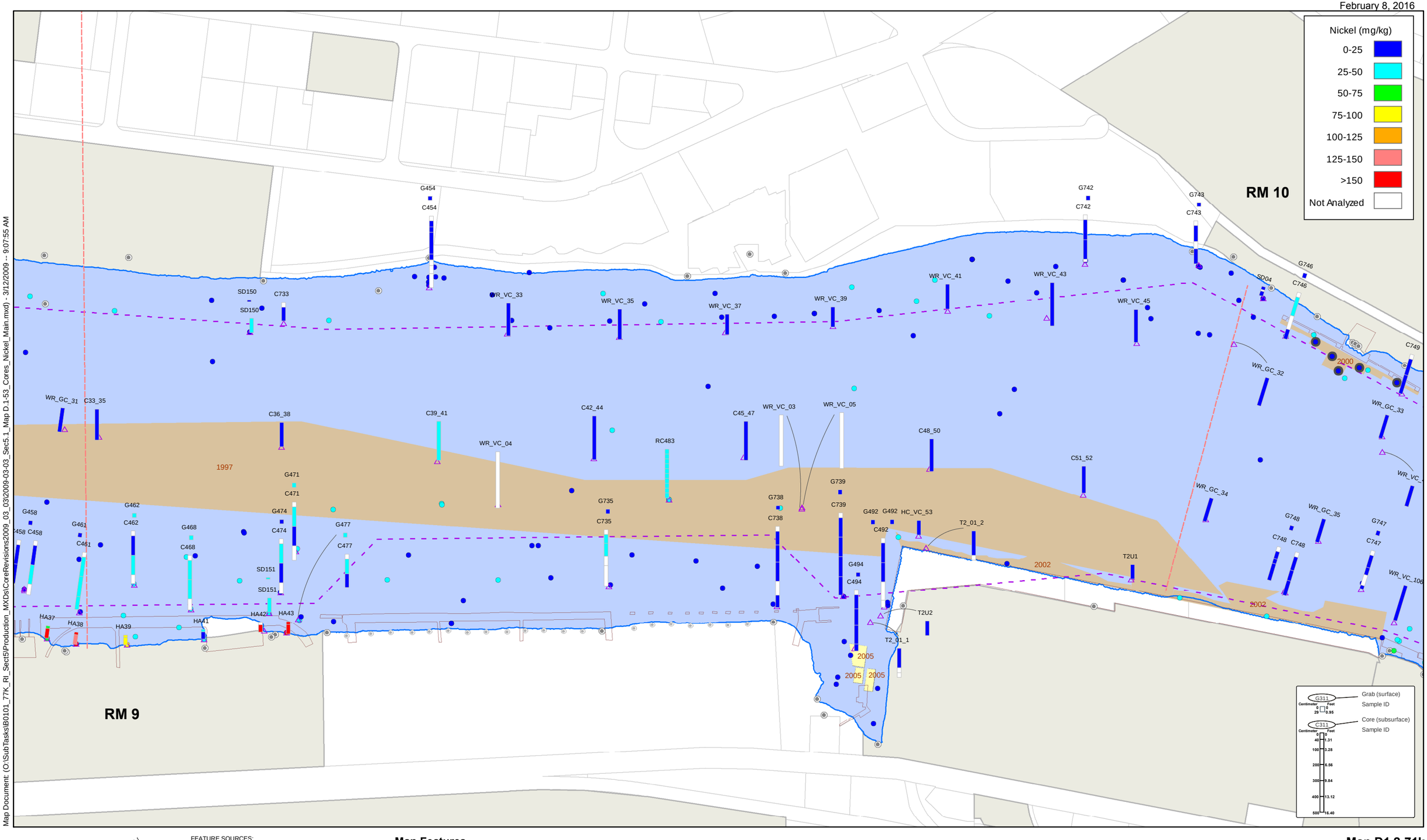
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-71 j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Nickel (mg/kg)

River Mile 08 to 09 - Swan Is. West

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-03_Sec5.1_Map D.1-53_Cores_Nickel_Main.mxd) - 3/12/2009 -- 9:07:55 AM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

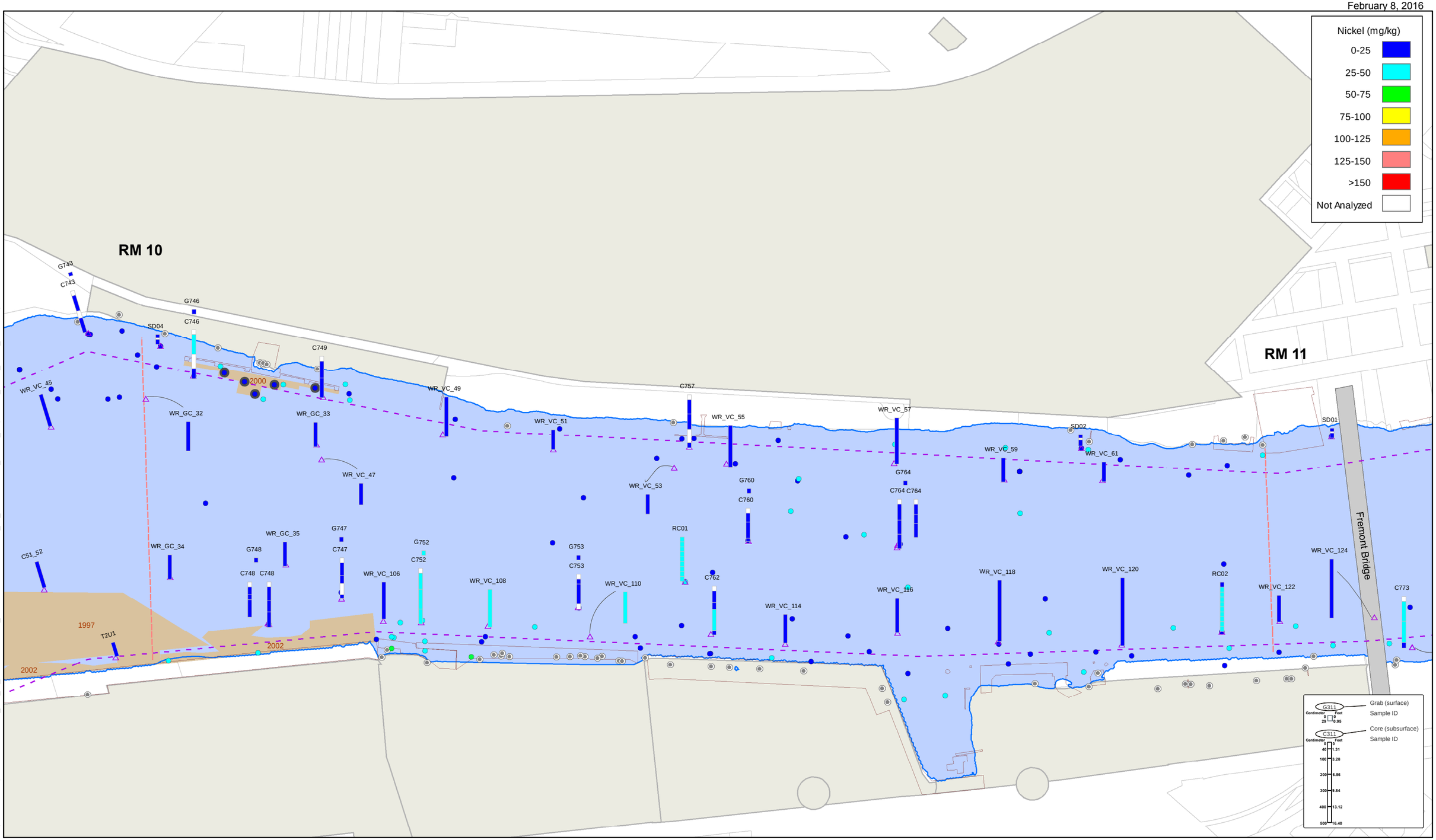
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-71k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Nickel (mg/kg)

River Mile 09 to 10

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-03_Sec5.1_Map D.1-52_Cores_Nickel_Main.mxd) - 3/4/2009 -- 3:43:34 PM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

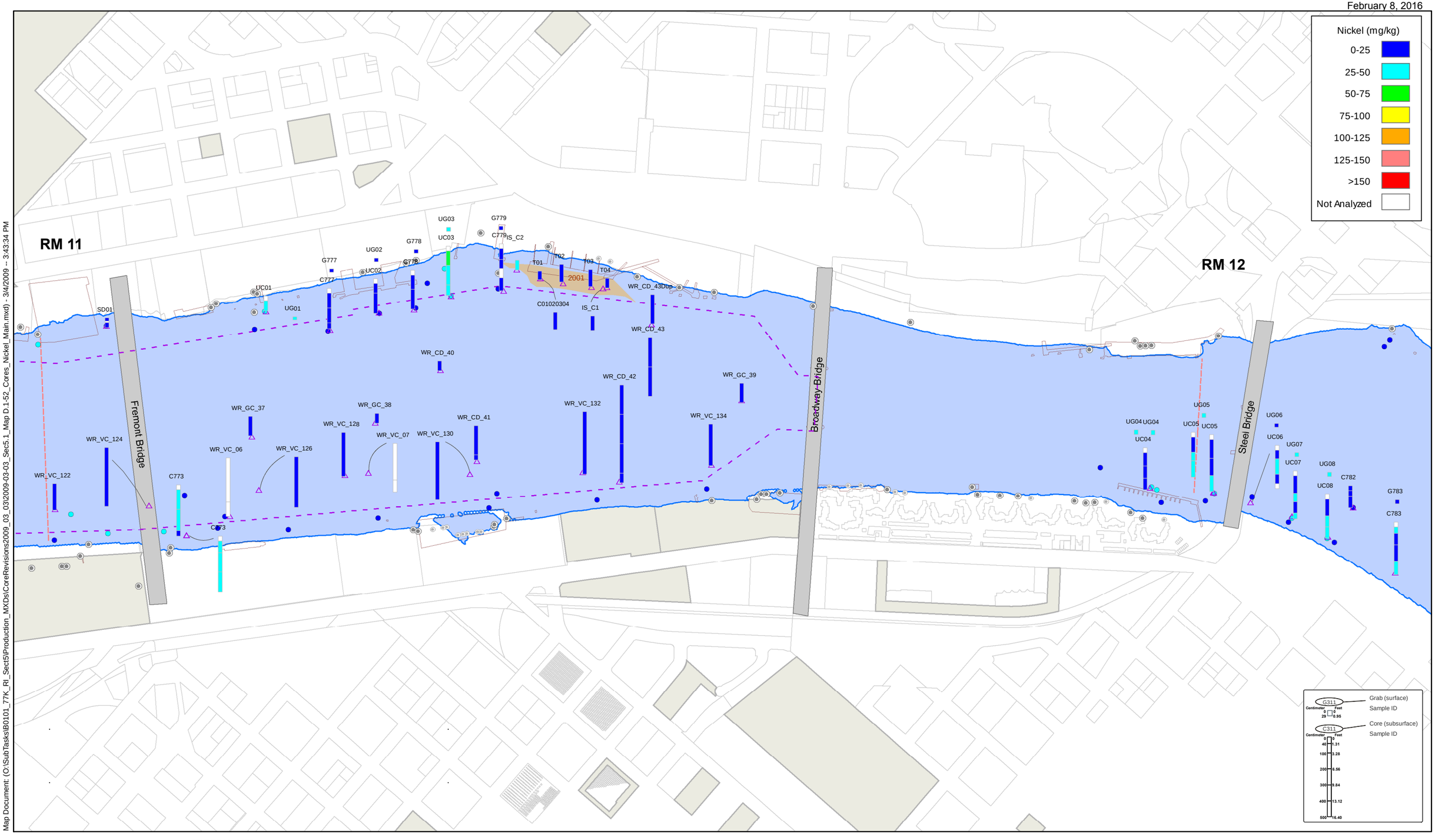
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-71I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Nickel (mg/kg)

River Mile 10 to 11

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

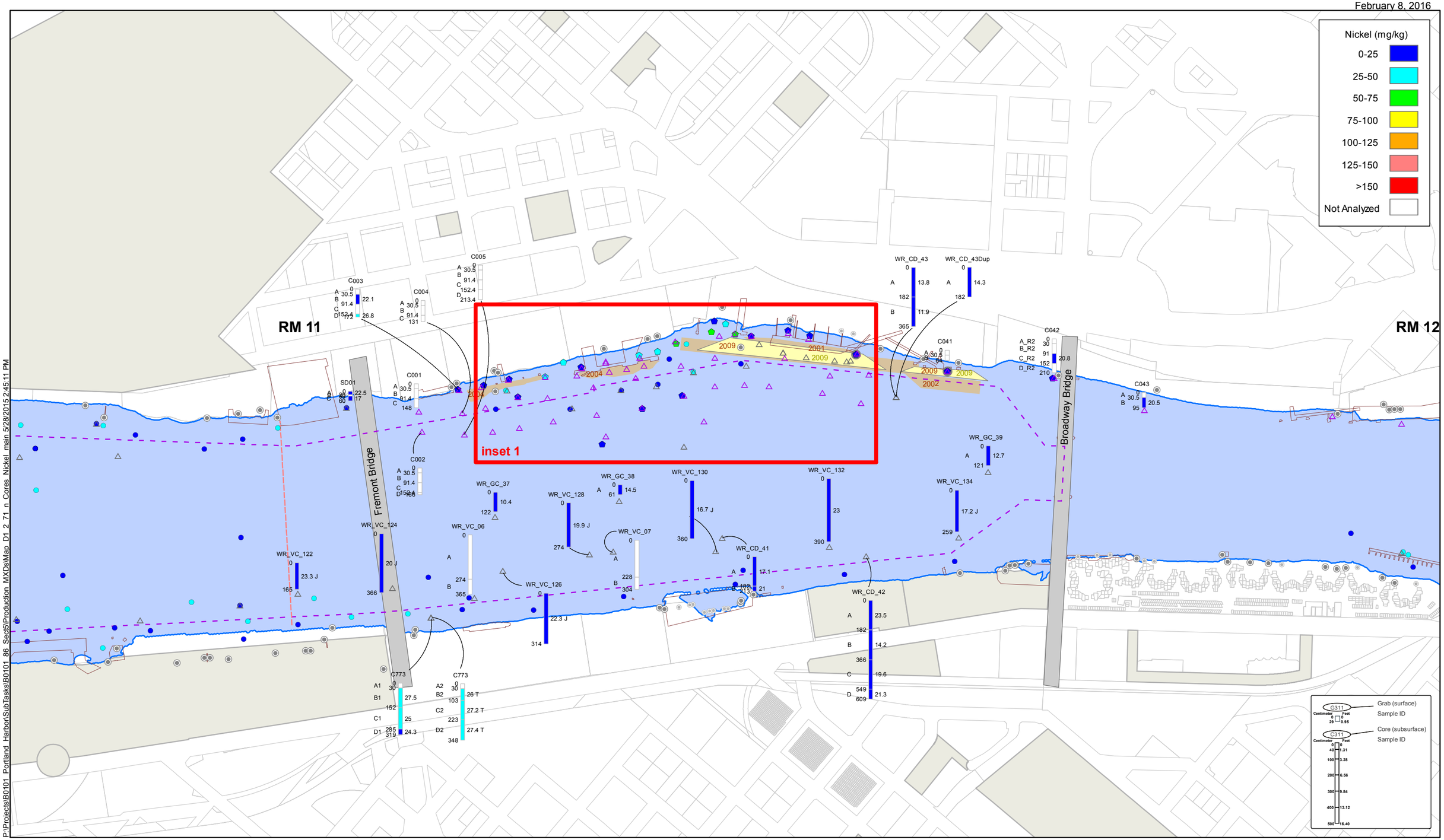
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-71 m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Nickel (mg/kg)

River Mile 11 to 12




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-71n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Nickel (mg/kg)

River Mile 11.0 - 11.8

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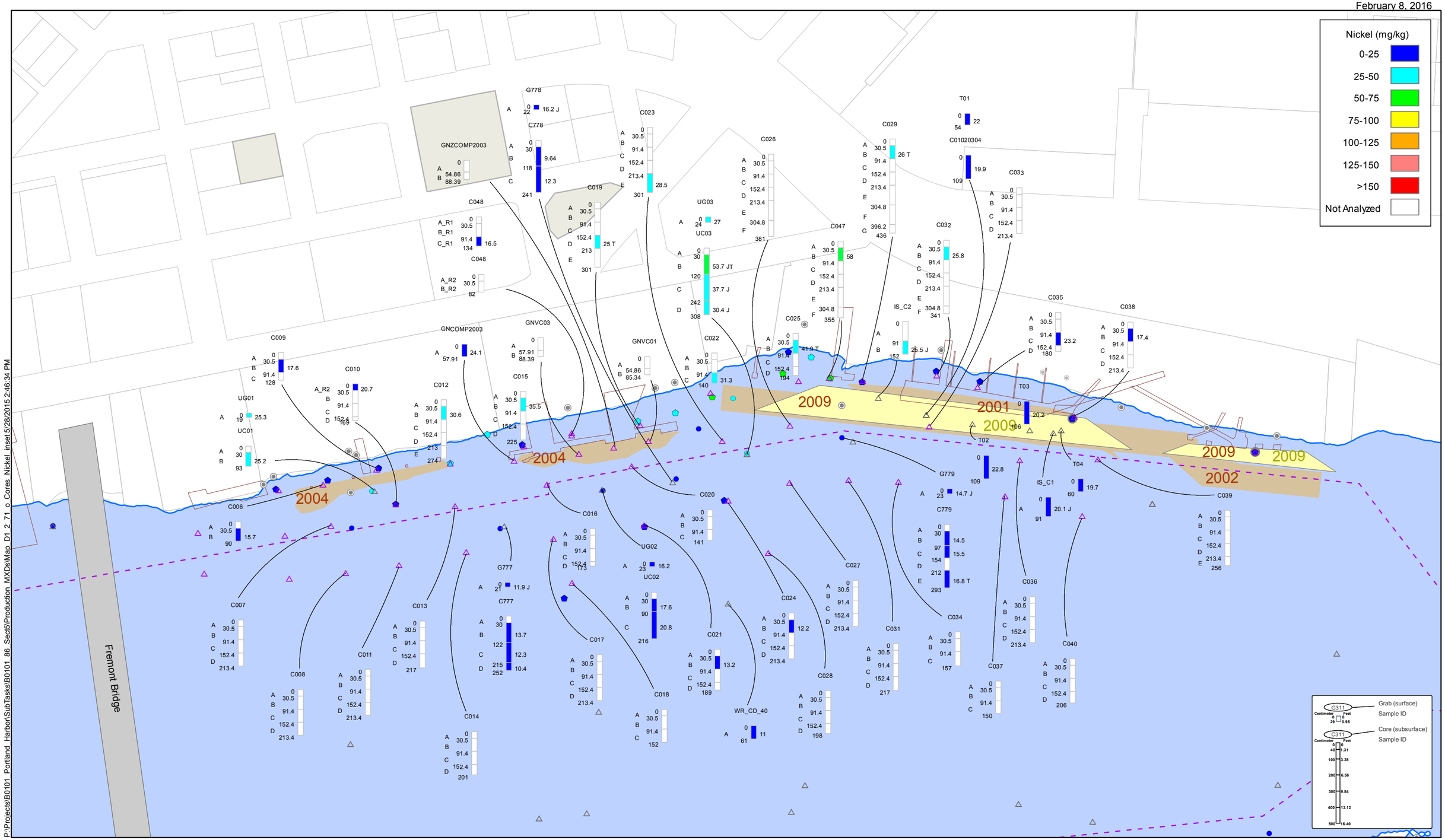


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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

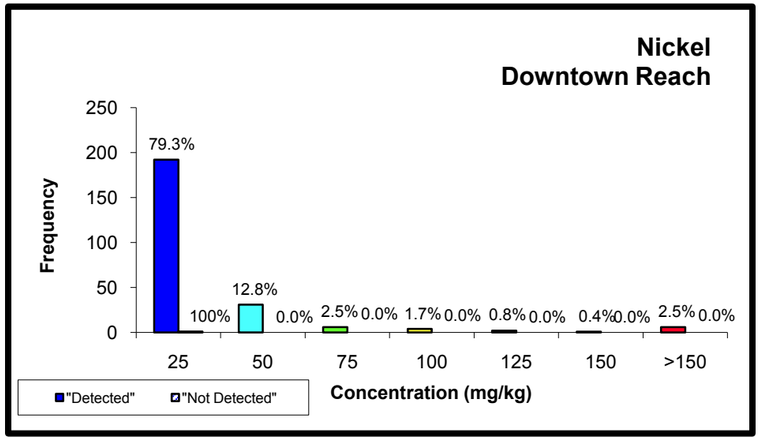
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

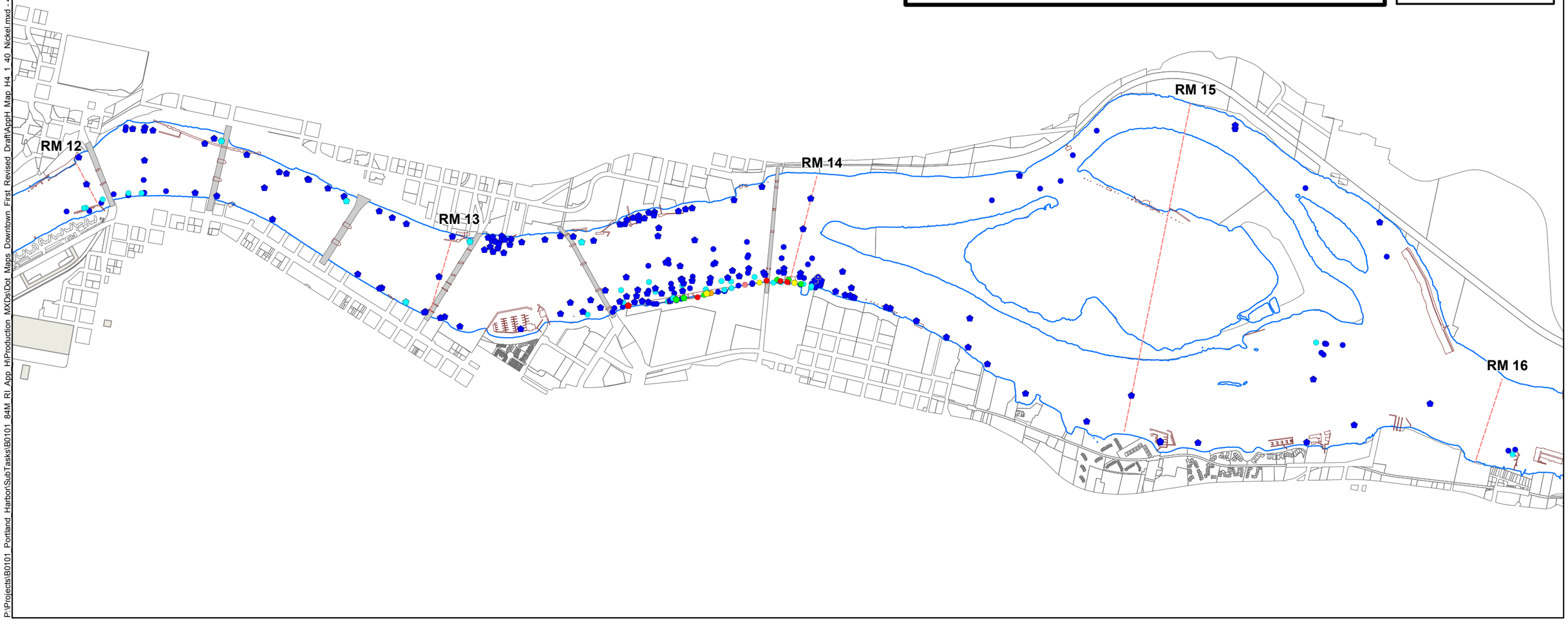
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-71o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Nickel (mg/kg)

River Mile 11.0 - 11.8 - Inset 1



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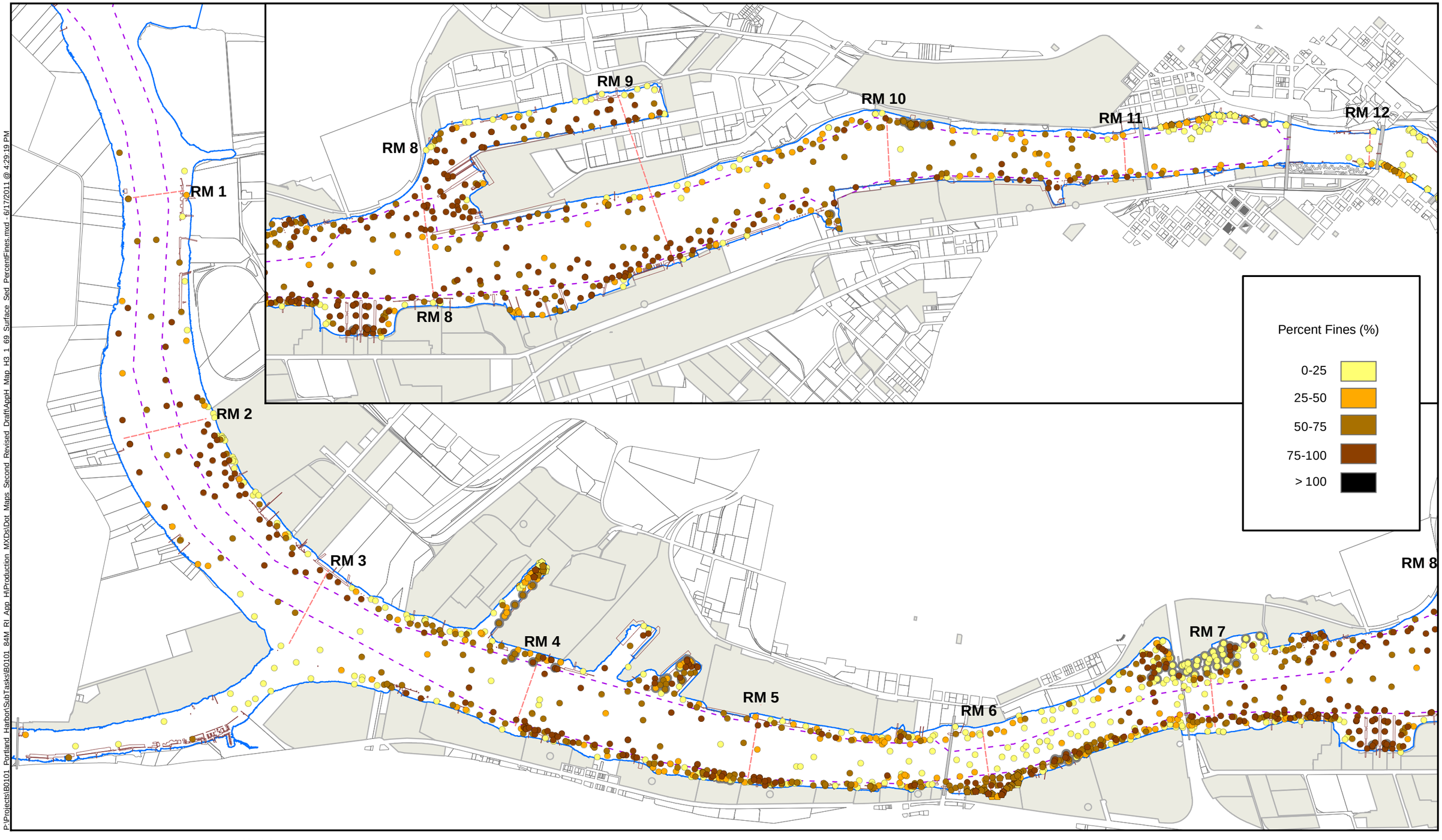
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-72**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Nickel (mg/kg)
Downtown Reach

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

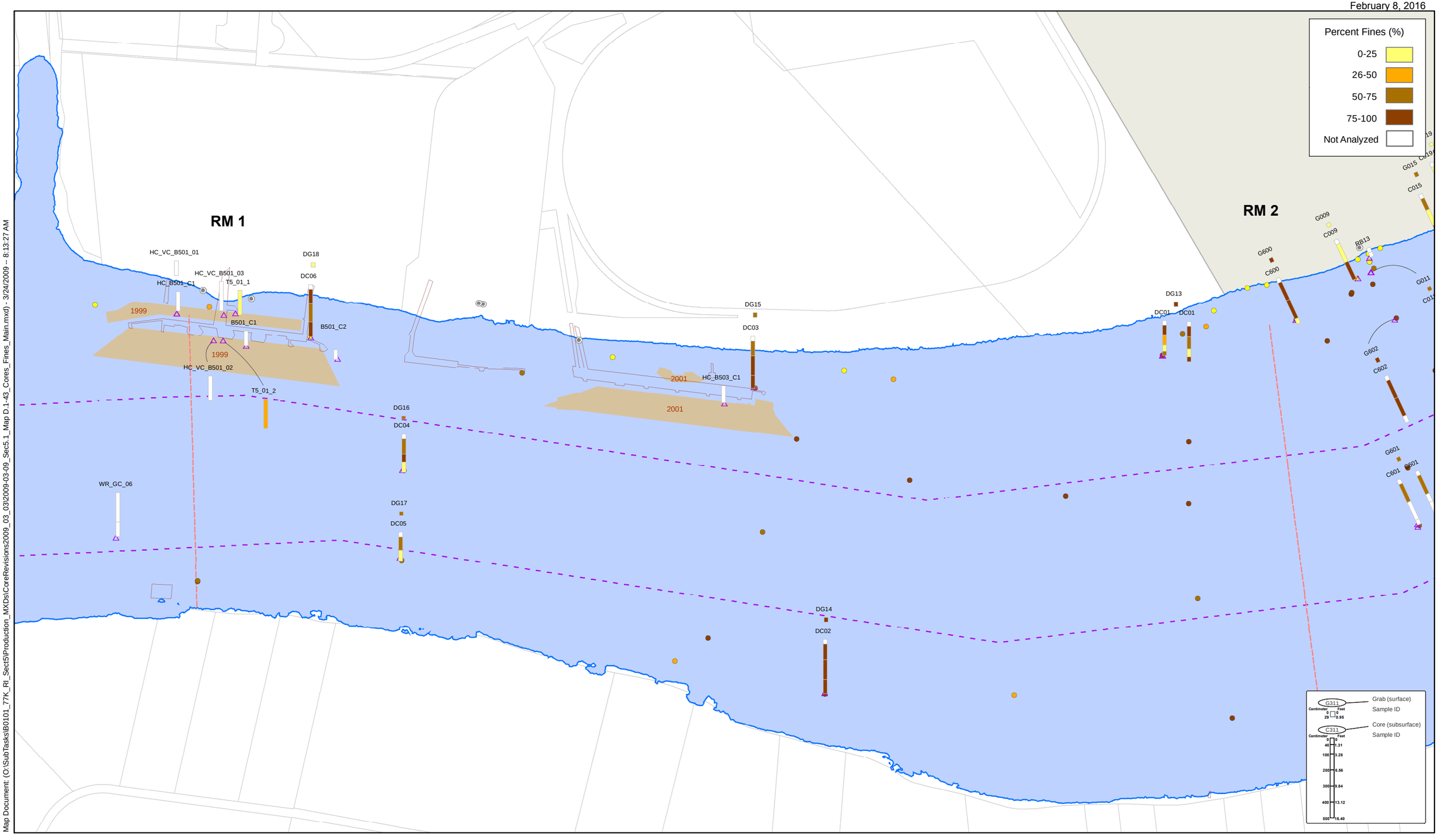
0 1,000 2,000 3,000 4,000 5,000 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-73**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Percent Fines (%)

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-43_Cores_Fines_Main.mxd) - 3/24/2009 -- 8:13:27 AM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

## Map Features

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

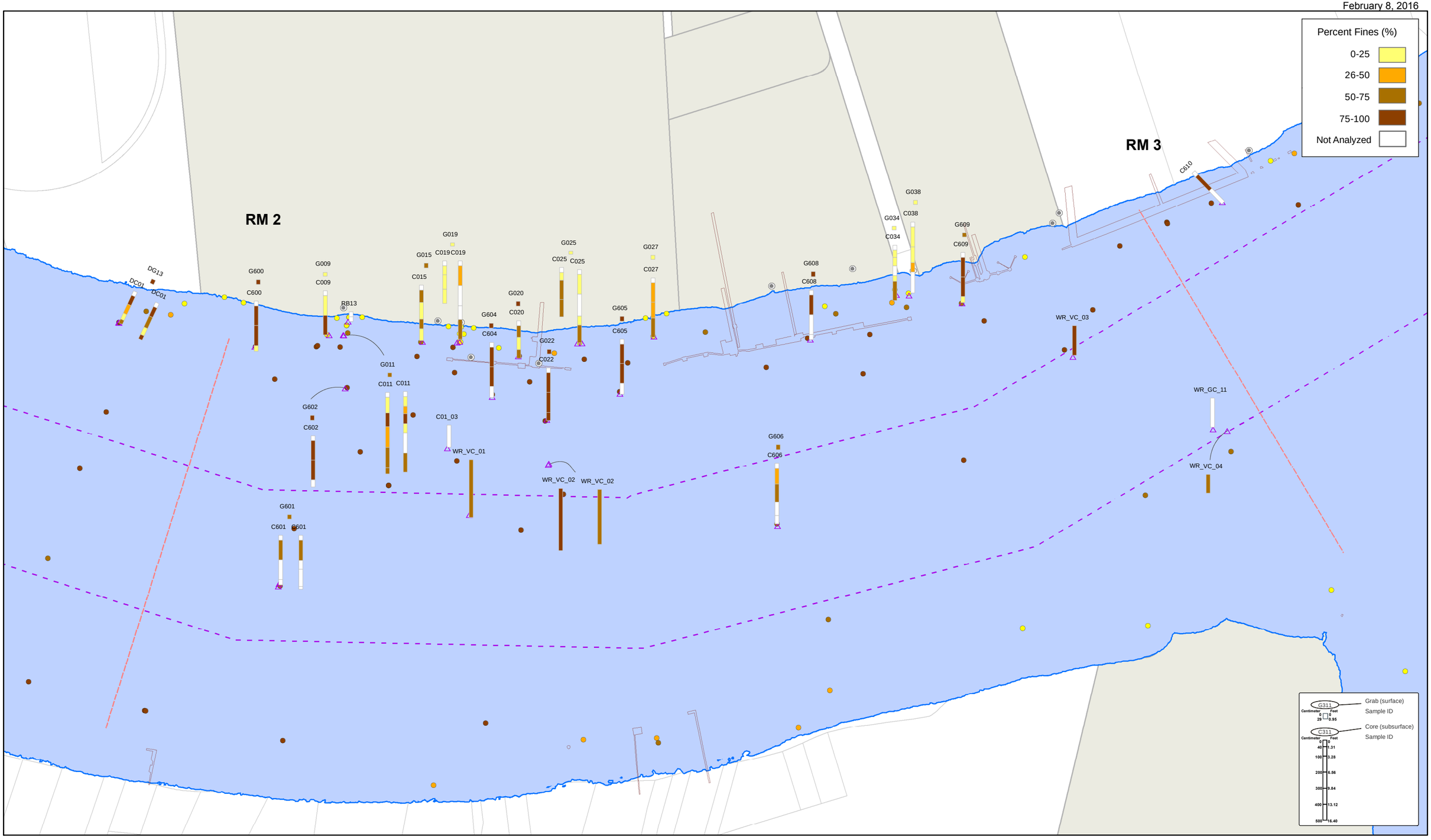
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-74a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Percent Fines (%)

River Mile 01 to 02

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

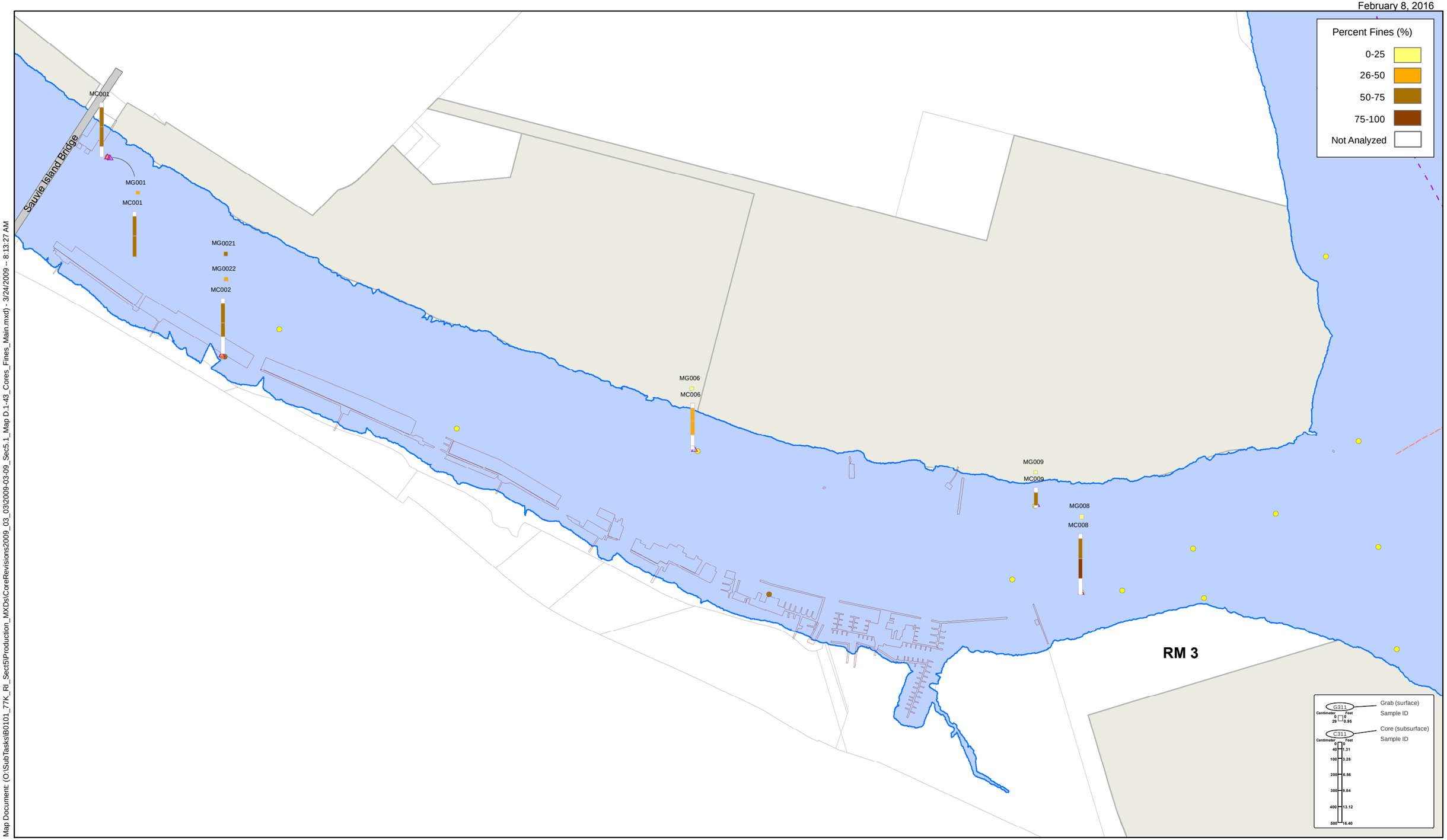
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-74 b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Percent Fines (%)

River Mile 02 to 03




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-43_Cores_Fines_Main.mxd) - 3/24/2009 -- 8:13:27 AM

N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-74c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Percent Fines (%)

River Mile 03 - Multnomah Channel

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_032009-03-09_Sec5.1_Map D.1-43_Cores_Fines_Main.mxd) - 3/24/2009 -- 8:13:27 AM

RM 3

RM 4

Percent Fines (%)
- 0-25
- 26-50
- 50-75
- 75-100
- Not Analyzed

2004

2004

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

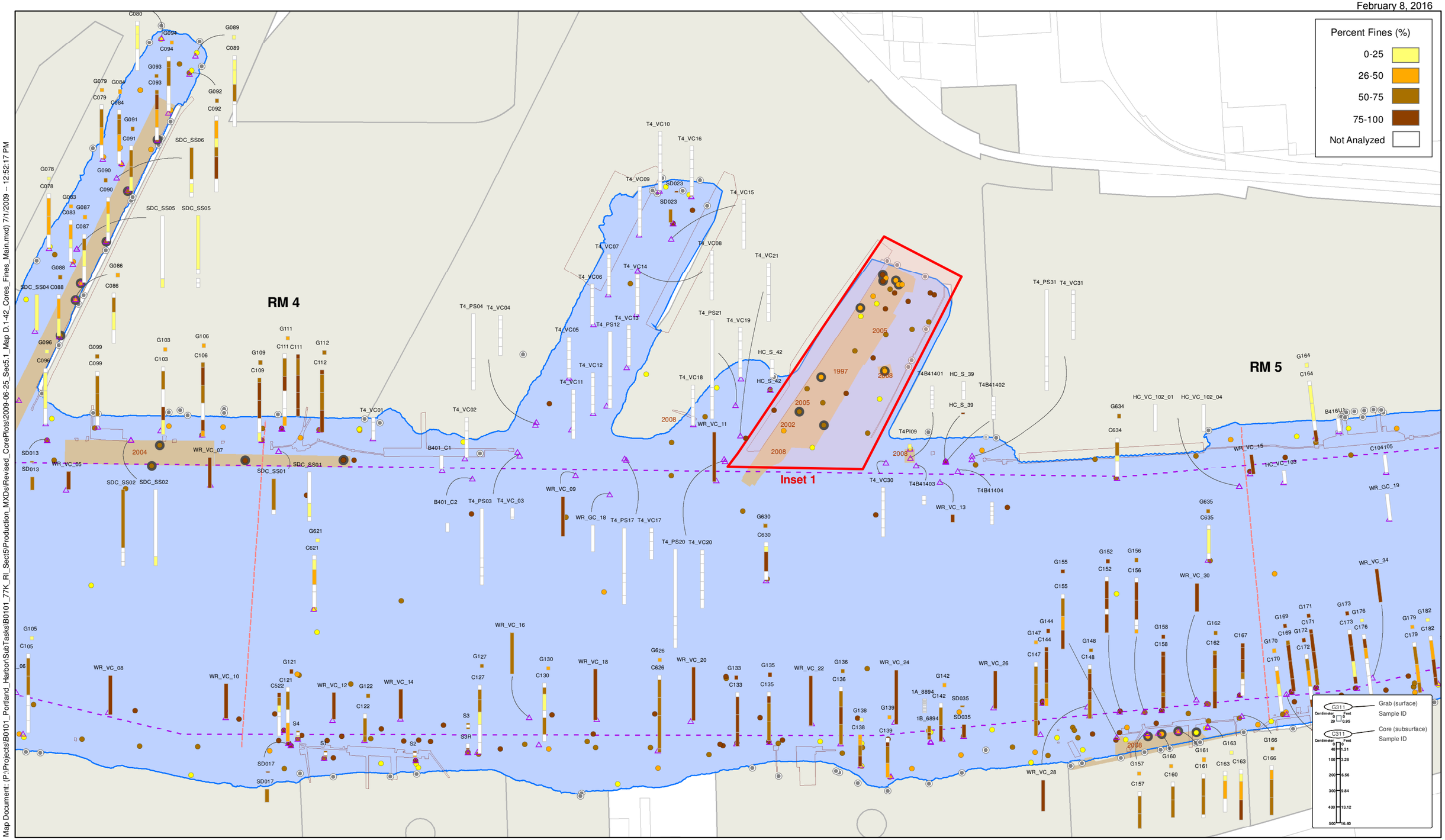
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-74 d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Percent Fines (%)

River Mile 03 to 04




Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-42_Cores_Fines_Main.mxd) 7/1/2009 -- 12:52:17 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-74e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Percent Fines (%)

River Mile 04 to 05 - Slips

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-42_Cores_Fines_Insets.mxd) 7/1/2009 -- 12:51:40 PM

Percent Fines (%)
- 0-25
- 26-50
- 50-75
- 75-100
- Not Analyzed

T4_VC24 T4PI02 HC_S_11 HC_S_11 T4B41106 T4PI042 T4PI032 T4S301 T4PI01 T4B41104 T4B41103 T4PI03 T4PI04 T4_VC29 HC_S_07 HC_S_07 T4S302 T4_PS33 HC_S_18 HC_S_18 T4PI07 HC_S_13 HC_S_13 T4B41102 T4S303 T4B41101 T4S304 SD031 SD031 2005 HC_S_22 HC_S_22 T4S308 T4S305 T4_VC03 T4PI08 T4_PS28 T4_VC28 T4_VC23 HC_S_32 HC_S_32 T4_3 T4S306 1997 2008 T4MD01 T4_VC32 T4_PS32 T4COMP T4_VC_02 T4S307 T4_VC27 T4_2 2005 T4_VC22 HC_S_27 HC_S_27 T4_UP10 T4_VC25 T4_UP09 T4_1 2008 T4_PS22 T4_VC26 T4_VC26 T4MD02 2008 2002 T4_VC_01

G311 Grab (surface) Sample ID
C311 Core (subsurface) Sample ID

| Centimeter | Feet |
|---|---|
| 0 | 0 |
| 40 | 1.31 |
| 100 | 3.28 |
| 200 | 6.56 |
| 300 | 9.84 |
| 400 | 13.12 |
| 500 | 16.40 |

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

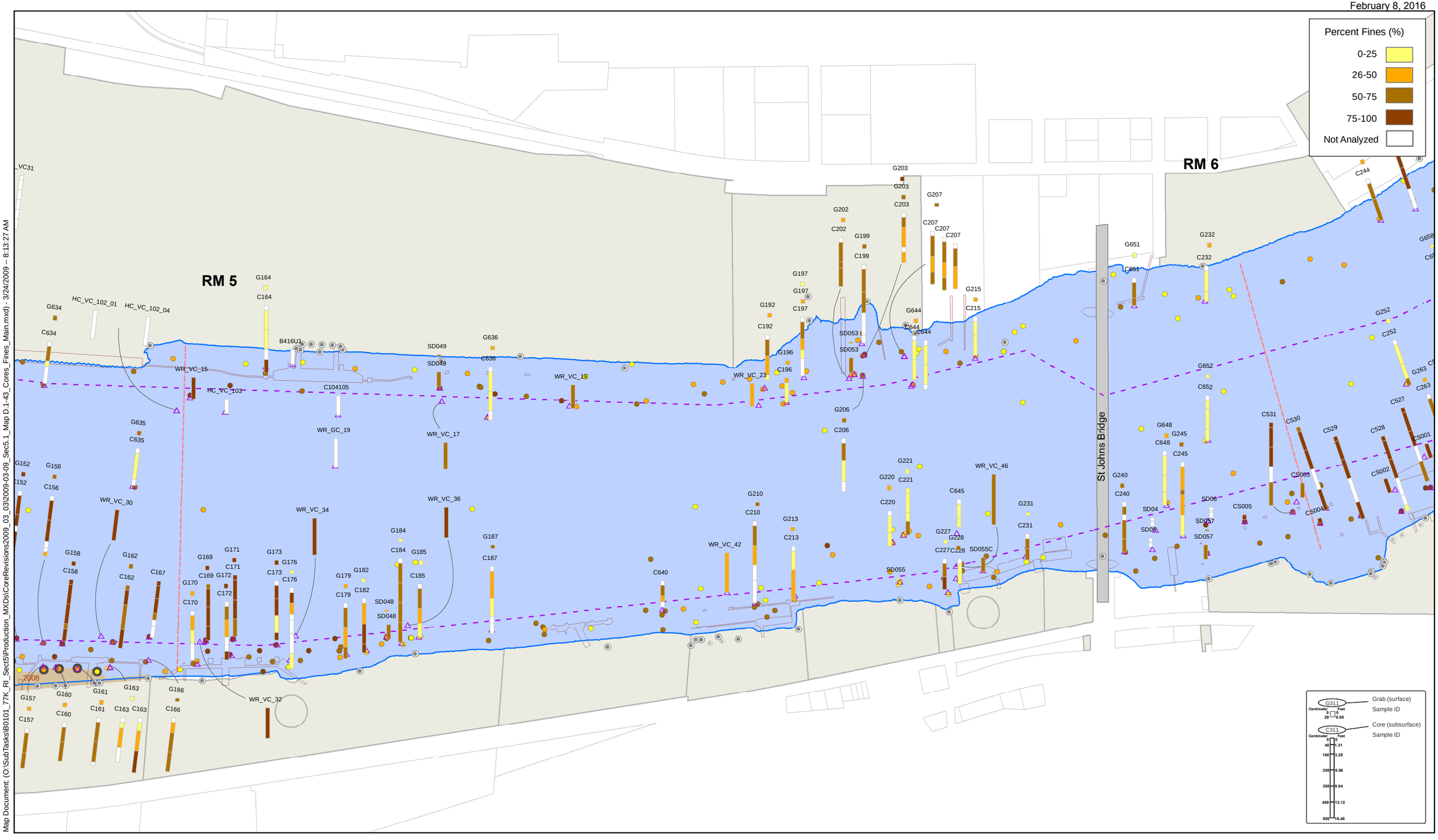
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-74e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Percent Fines (%)

River Mile 04 to 05 - Slips - Inset 1




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-43_Cores_Fines_Main.mxd) - 3/24/2009 -- 8:13:27 AM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

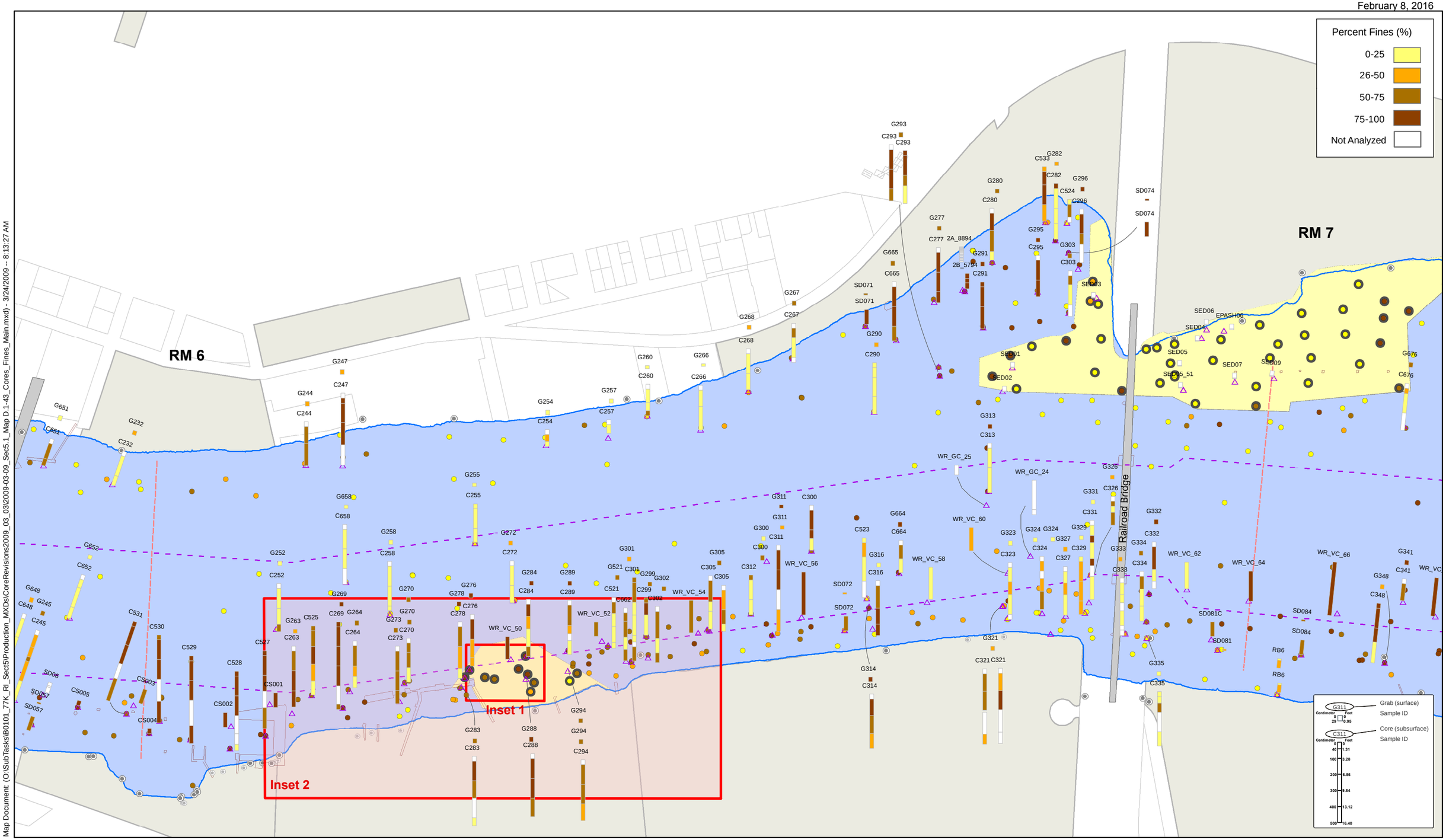
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-74 f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Percent Fines (%)

River Mile 05 to 06

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

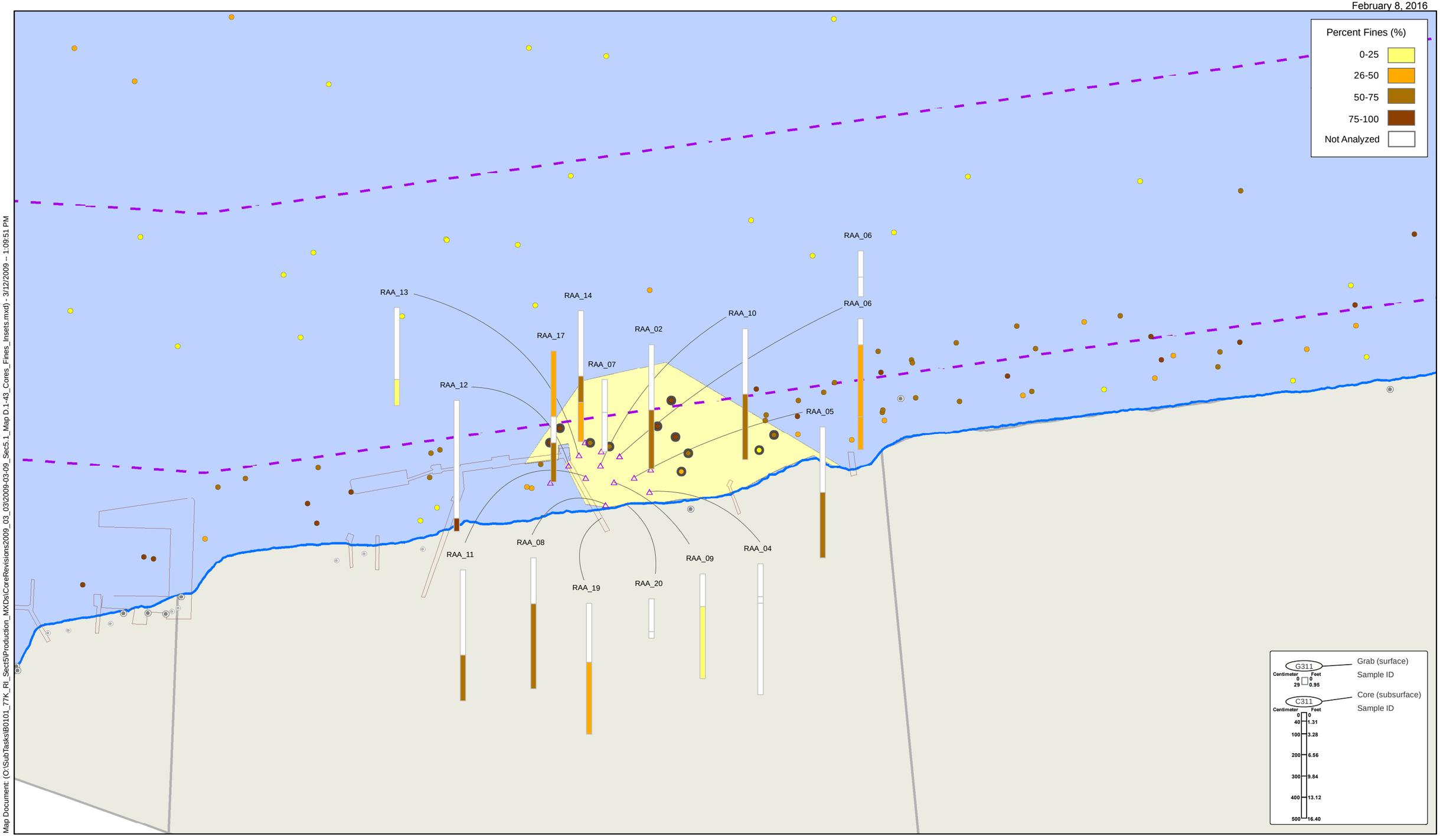
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-74g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Percent Fines (%)

River Mile 06 to 07

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-43_Cores_Fines_Insets.mxd) - 3/12/2009 -- 1:09:51 PM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

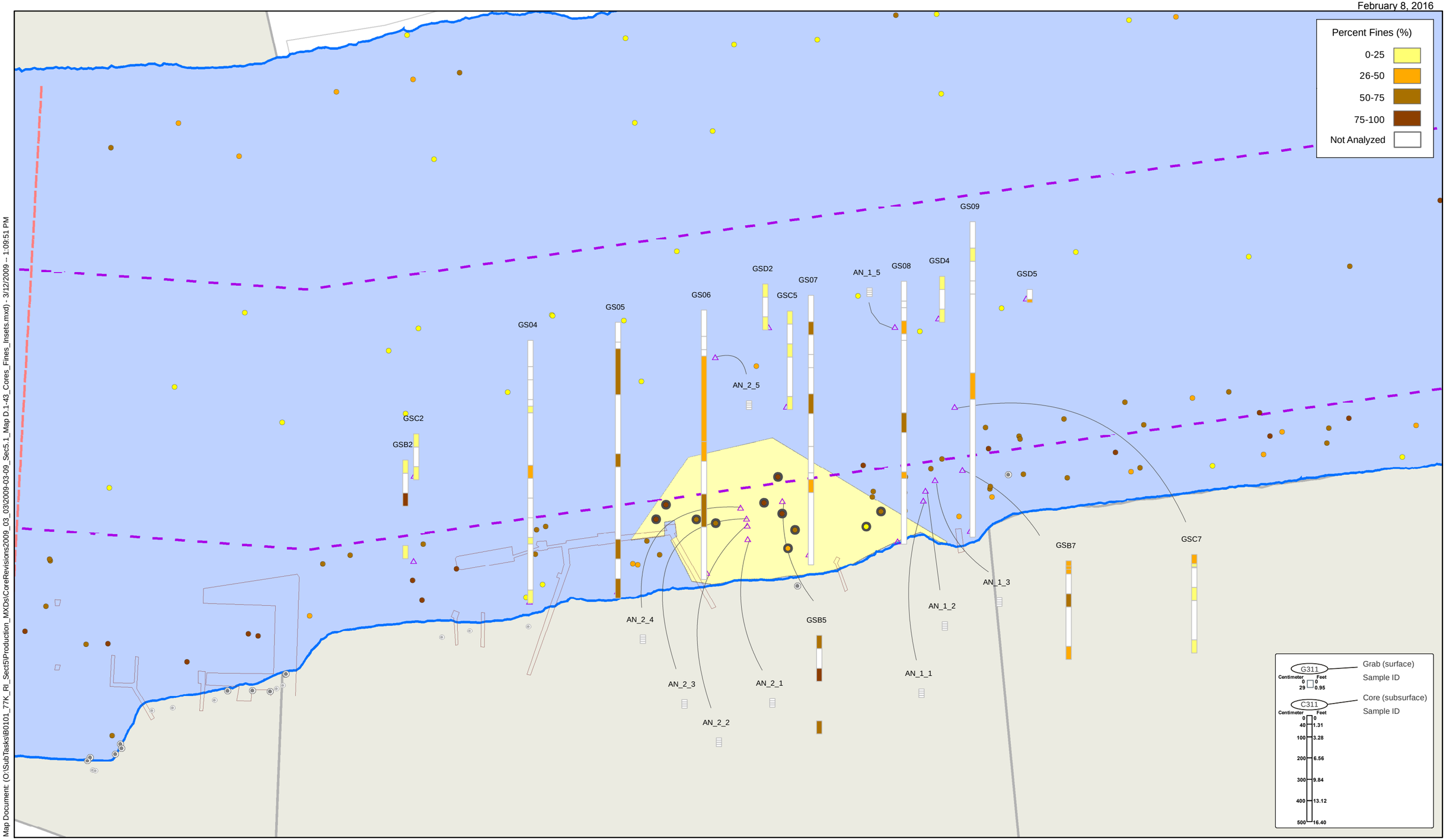
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-74 g1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Percent Fines (%)

River Mile 06 to 07 - Inset 1

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

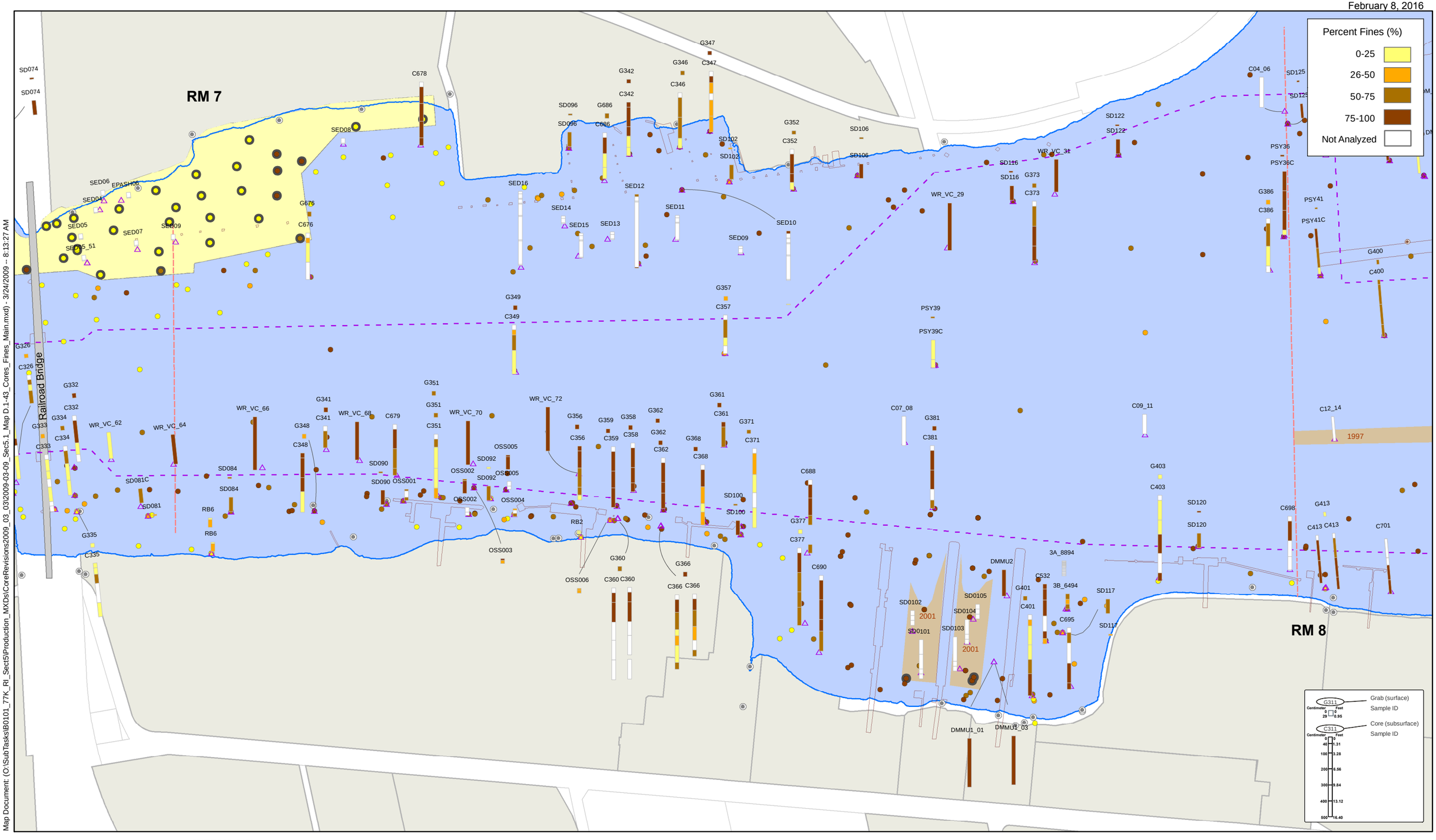
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-74 g2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Percent Fines (%)

River Mile 06 to 07 - Inset 2

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N

0 150 300 450 600 750 Feet

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

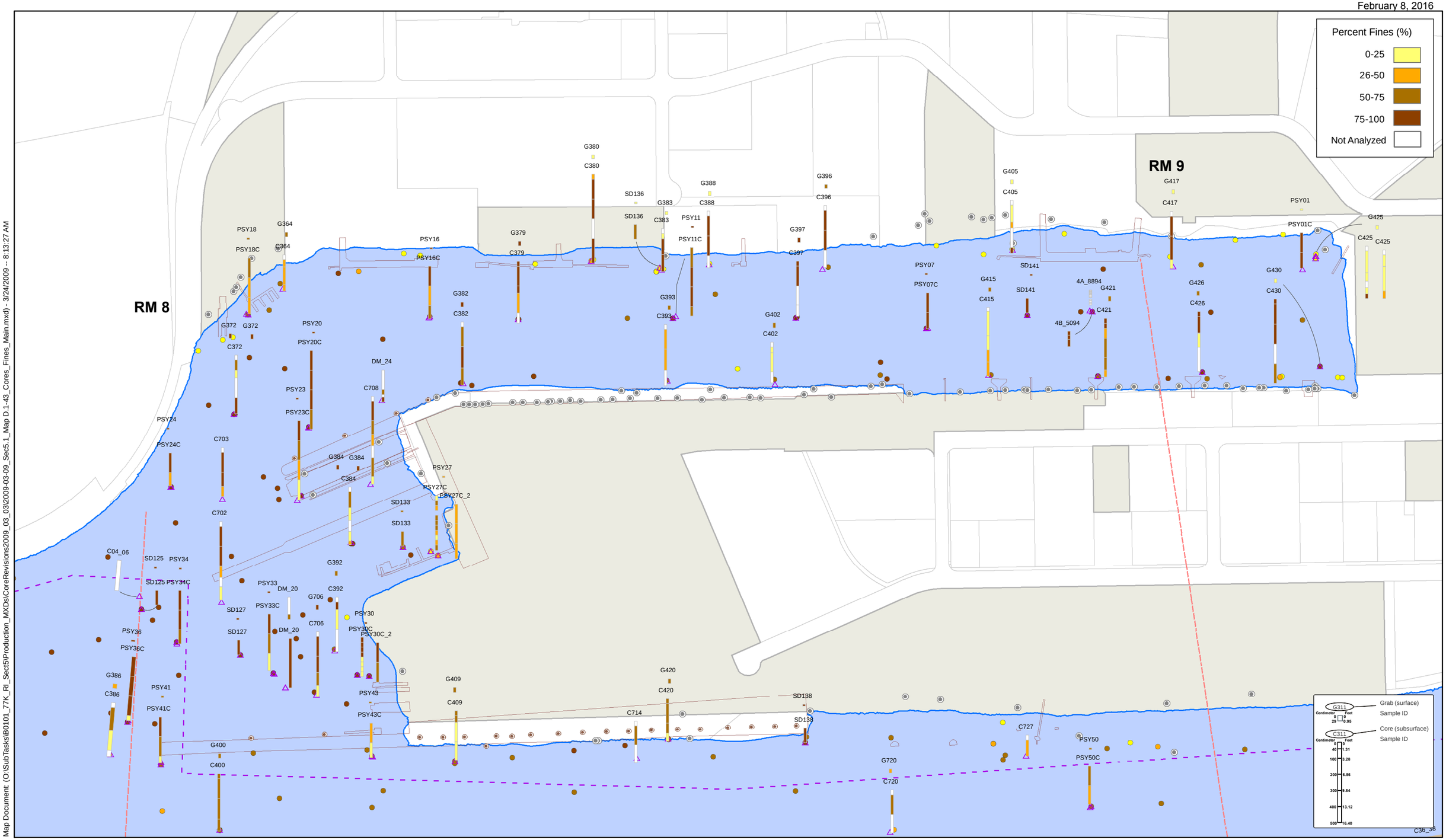
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-74 h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Percent Fines (%)

River Mile 07 to 08

Map Document: (O:\Sub\Tasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-43_Cores_Fines_Main.mxd) - 3/24/2009 -- 8:13:27 AM




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

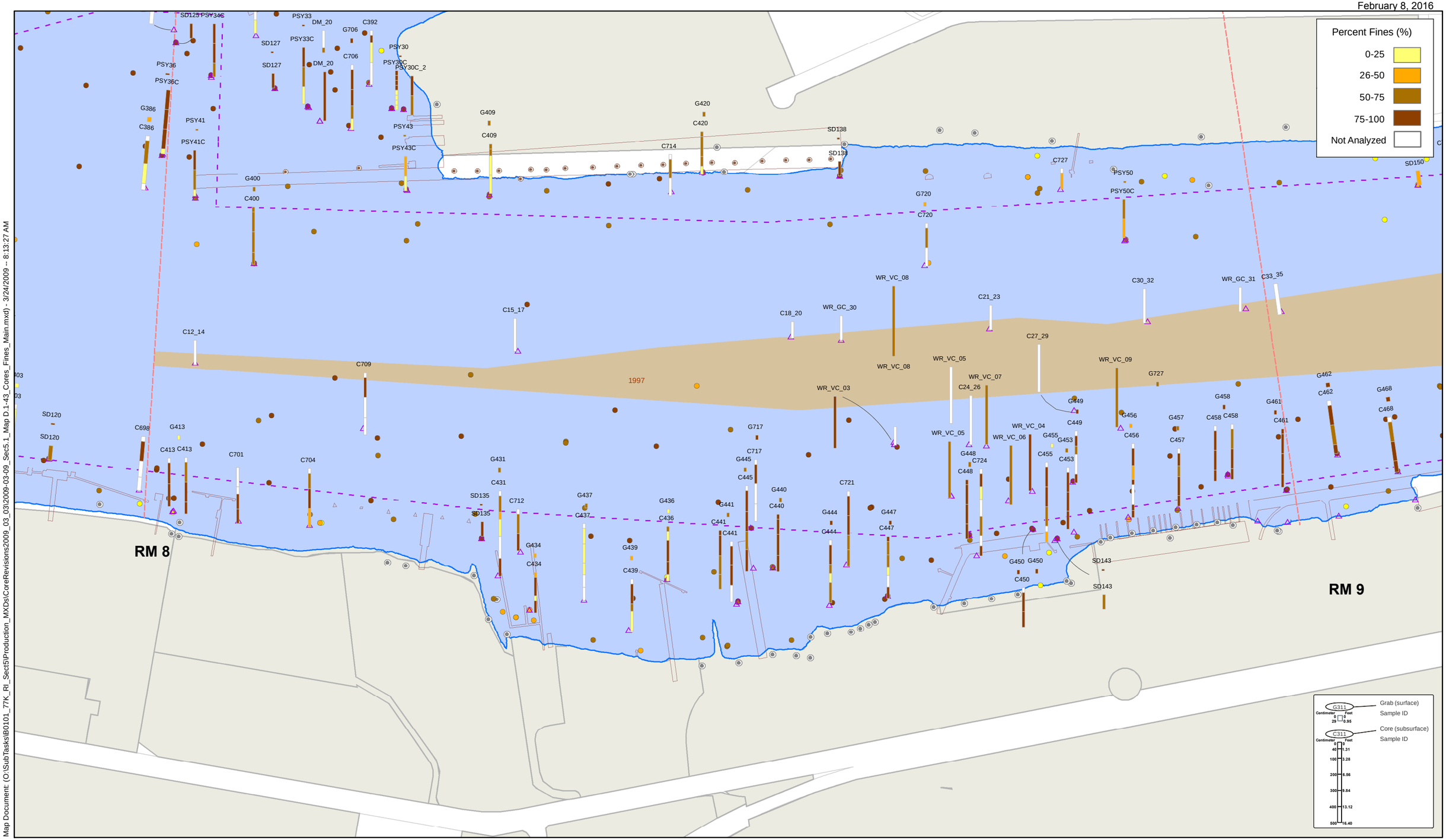
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-74 i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Percent Fines (%)

River Mile 08 to 09 - Swan Is. East

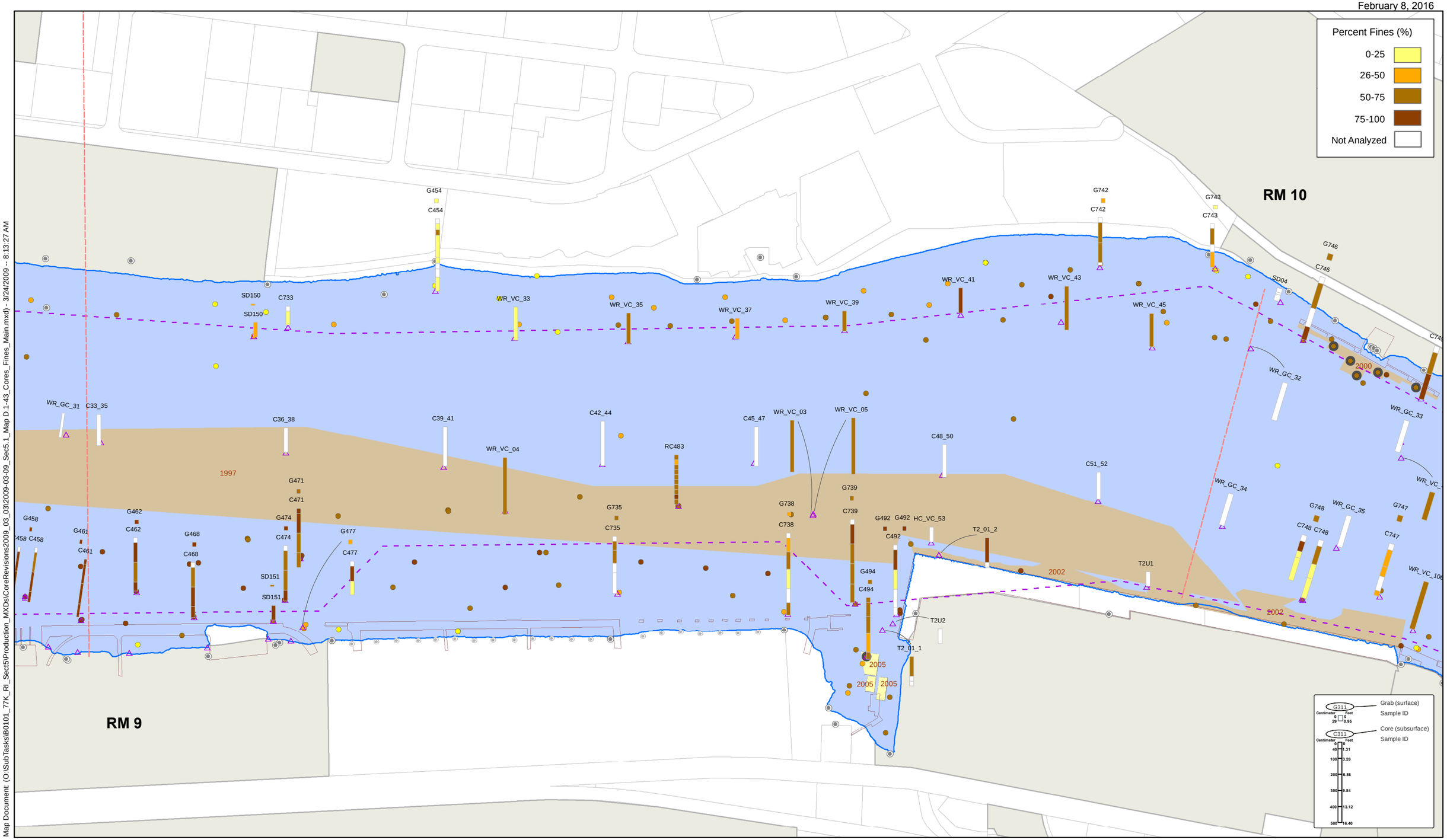
Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-43_Cores_Fines_Main.mxd) - 3/24/2009 -- 8:13:27 AM




**Map D1.2-74j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Percent Fines (%)

River Mile 08 to 09 - Swan Is. West

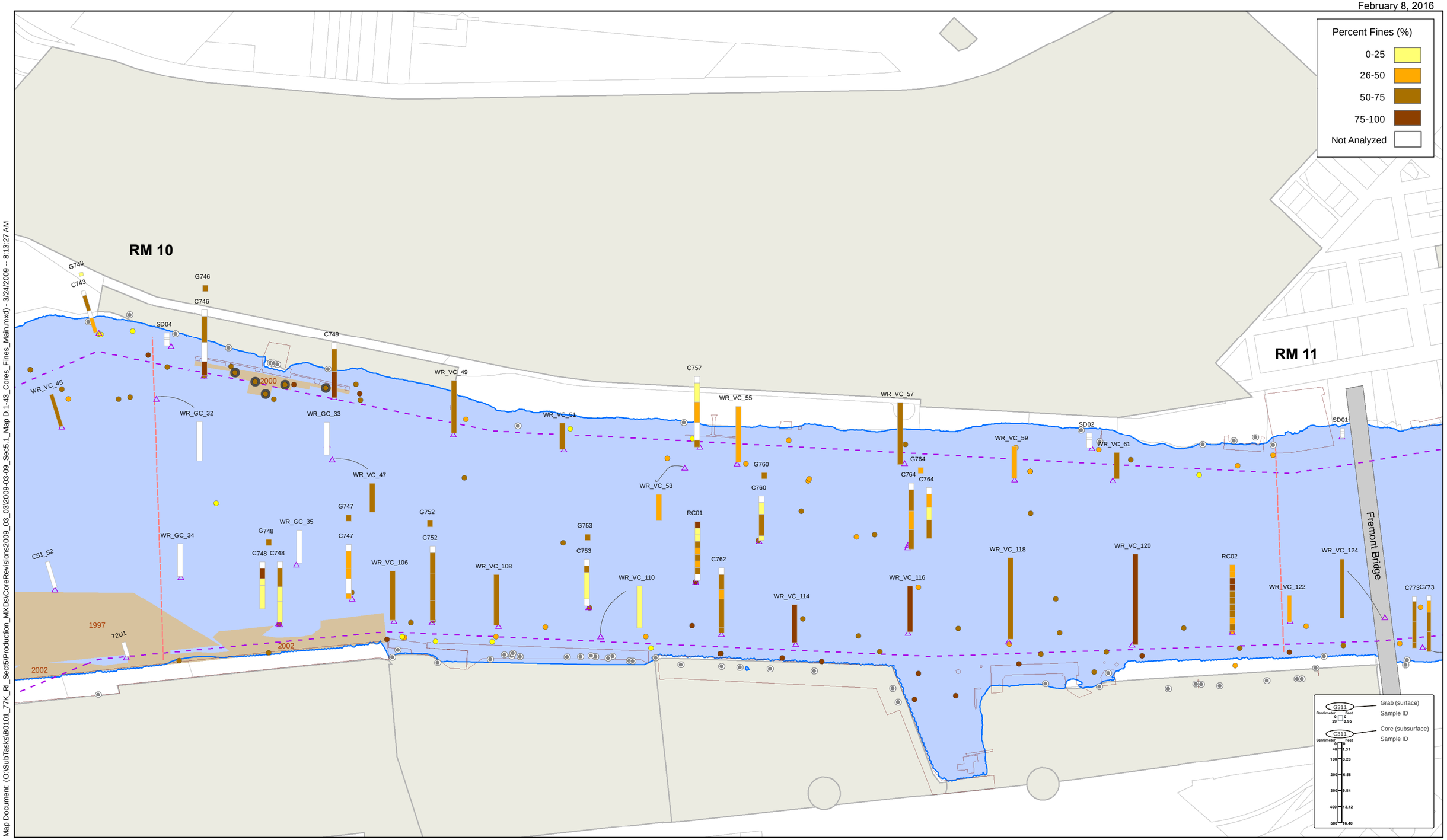
Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-43_Cores_Fines_Main.mxd) - 3/24/2009 -- 8:13:27 AM




**Map D1.2-74k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Percent Fines (%)

River Mile 09 to 10

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-43_Cores_Fines_Main.mxd) - 3/24/2009 -- 8:13:27 AM




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

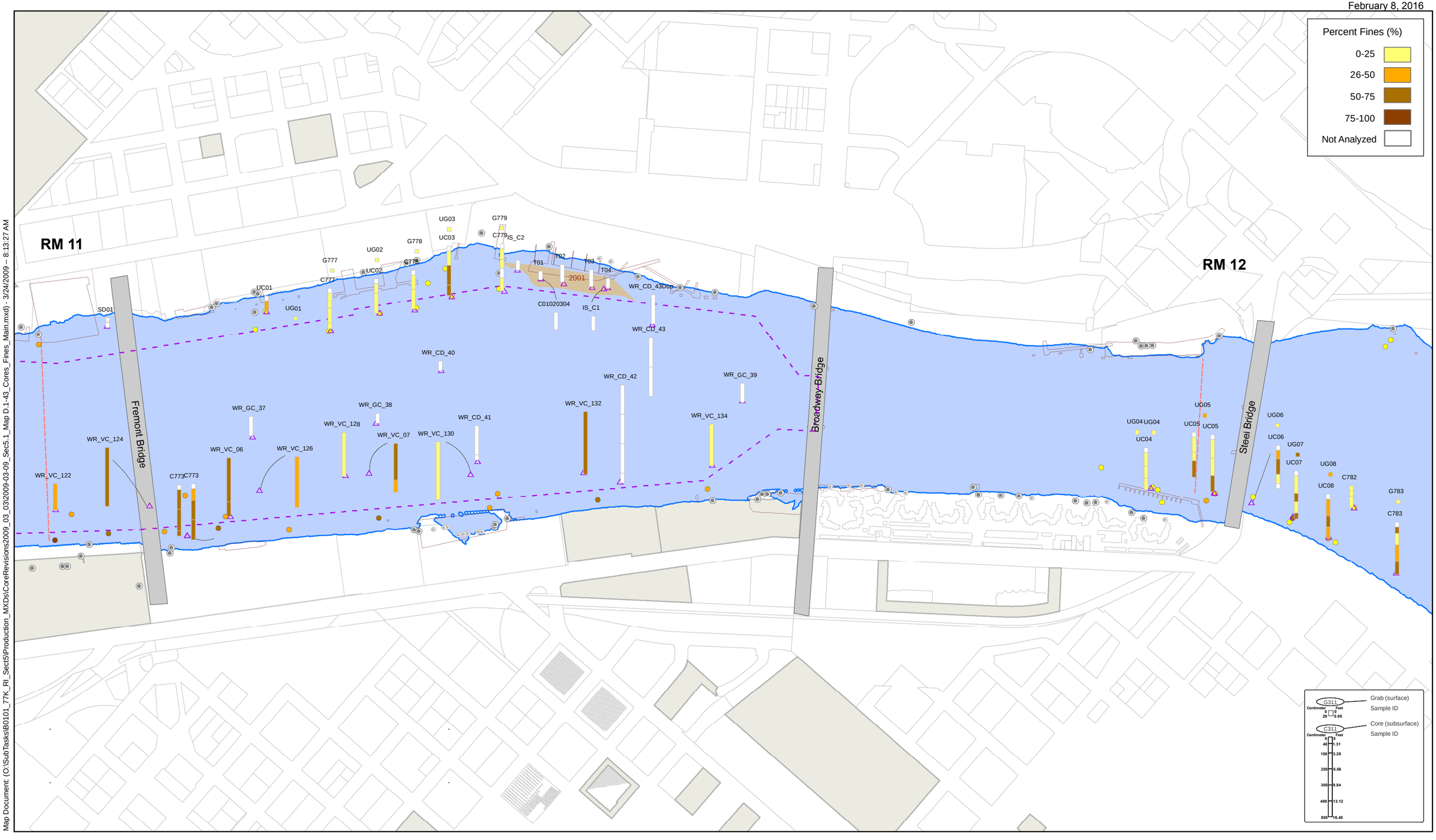
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-74I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Percent Fines (%)

River Mile 10 to 11

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-43_Cores_Fines_Main.mxd) - 3/24/2009 -- 8:13:27 AM




**Map D1.2-74m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Percent Fines (%)

River Mile 11 to 12

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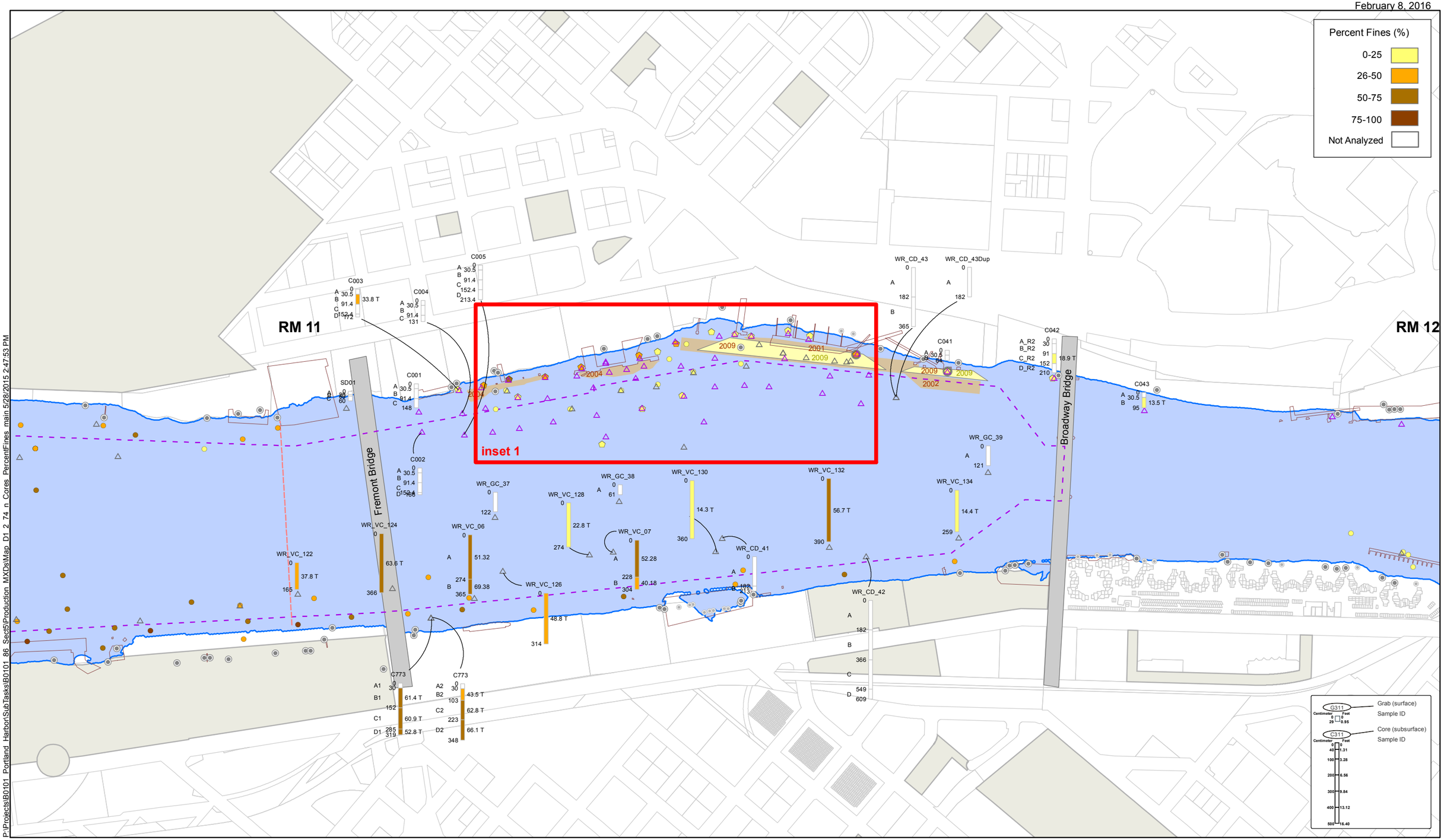



FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

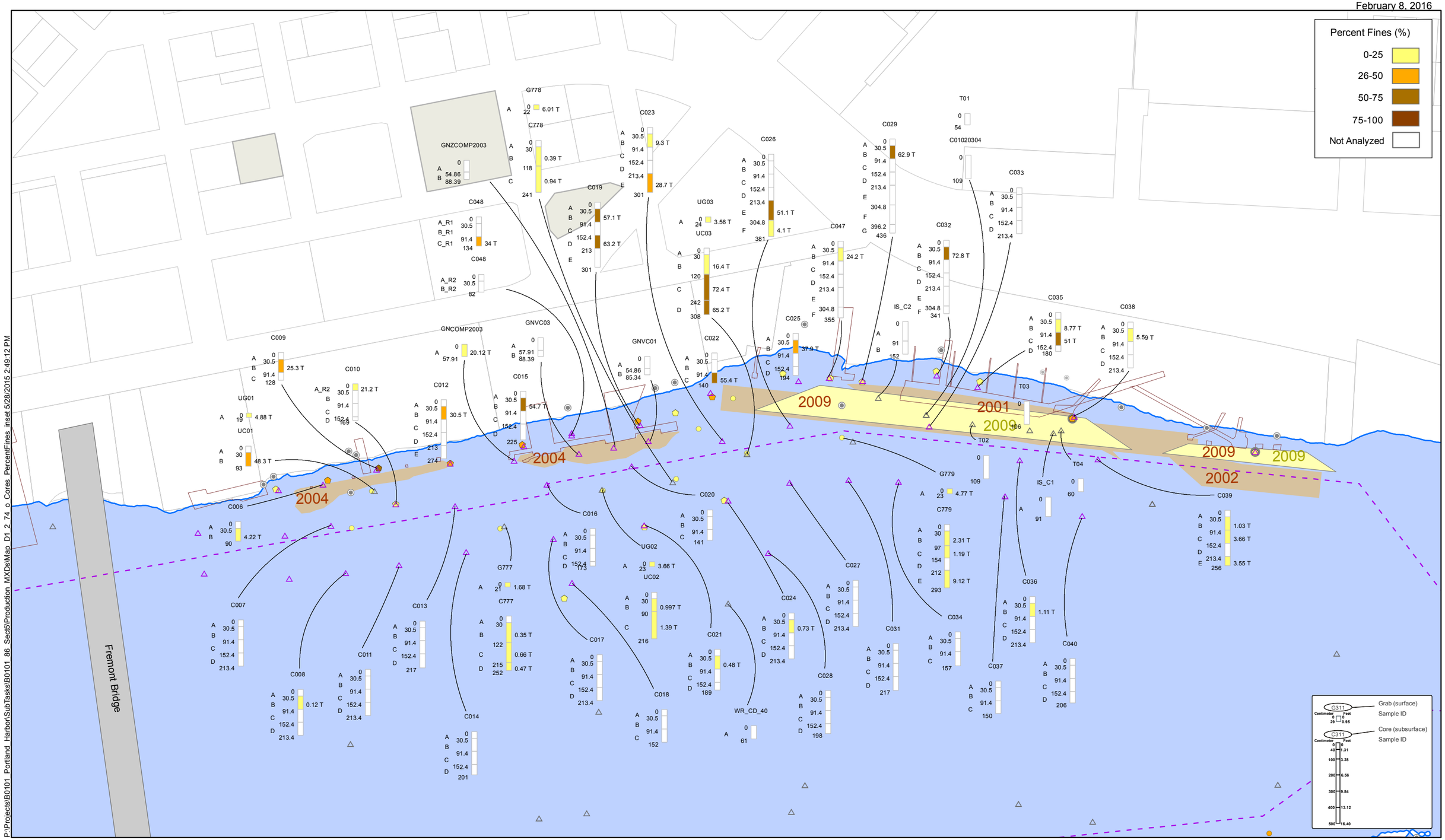
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-74n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Percent Fines (%)

River Mile 11.0 - 11.8




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

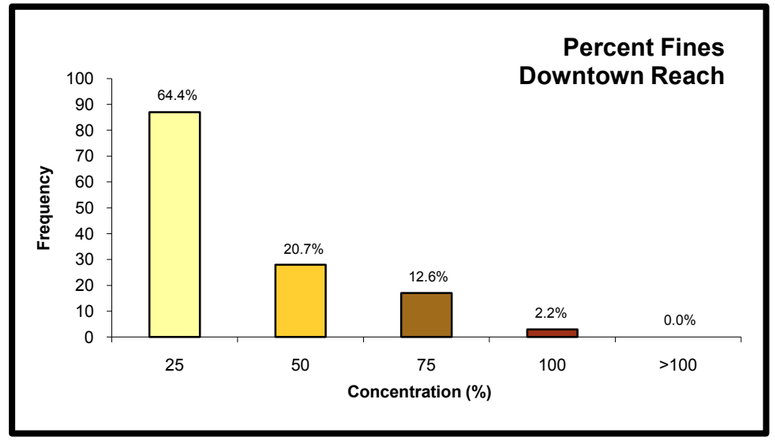
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

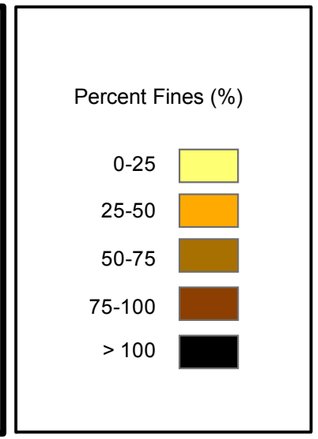
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-74o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Percent Fines (%)

River Mile 11.0 - 11.8 - Inset 1



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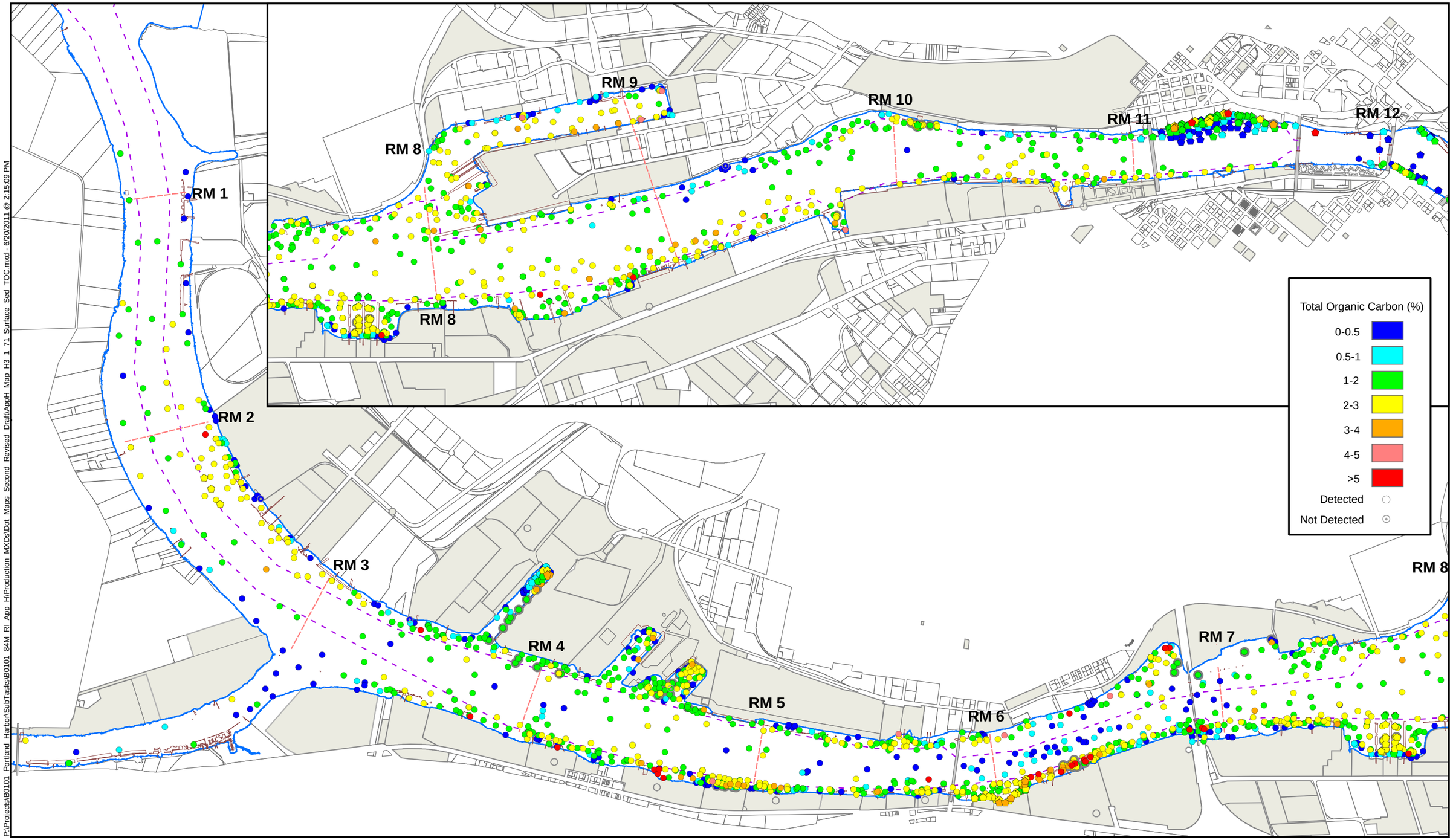
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-75**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Percent Fines (%)
Downtown Reach

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N

0 1,000 2,000 3,000 4,000 5,000 Feet

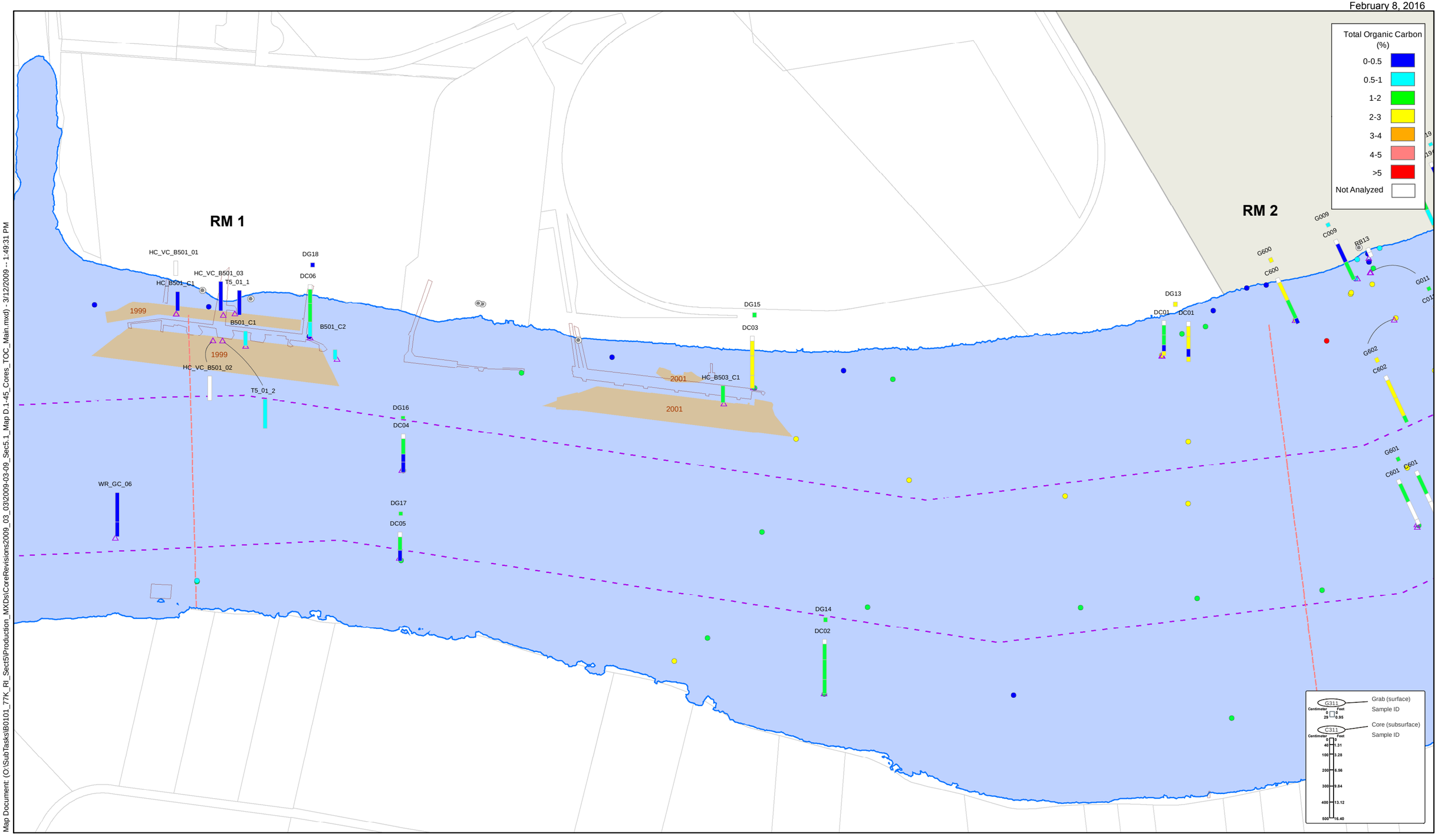
FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-76**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Total Organic Carbon (%)

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-45_Cores_TOC_Main.mxd) - 3/12/2009 -- 1:49:31 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

## Map Features

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

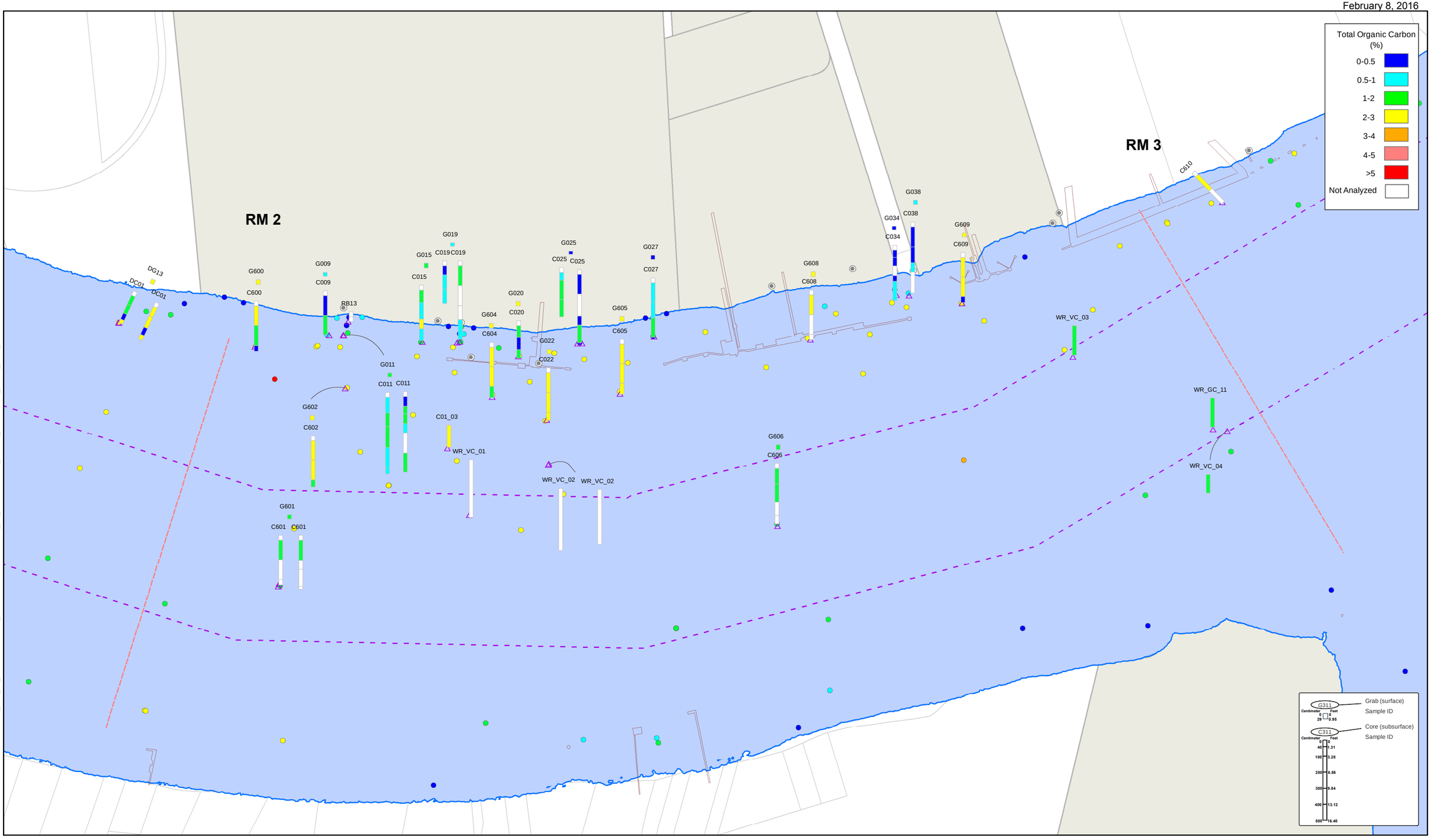
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-77a**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Organic Carbon (%)

River Mile 01 to 02

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-45_Cores_TOC_Main.mxd) - 3/12/2009 -- 1:49:31 PM




FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

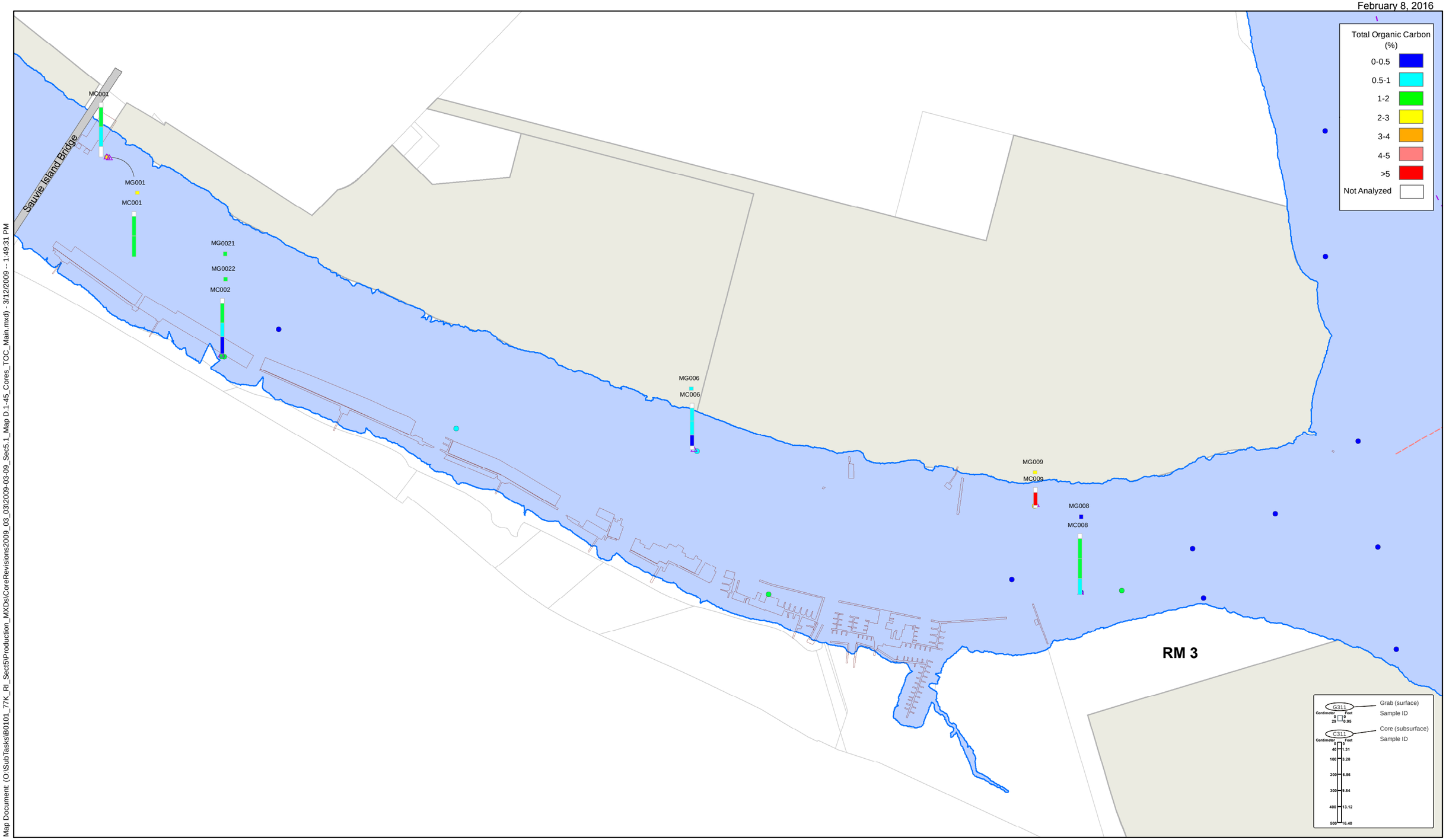
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-77 b**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Organic Carbon (%)
River Mile 02 to 03

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-77c**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Organic Carbon (%)
River Mile 03 - Multnomah Channel

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_032009-03-09_Sec5.1_Map D.1-45_Cores_TOC_Main.mxd) - 3/12/2009 -- 1:49:31 PM

RM 3

RM 4

Total Organic Carbon (%)
- 0-0.5
- 0.5-1
- 1-2
- 2-3
- 3-4
- 4-5
- >5
- Not Analyzed

2004

Grab (surface) Sample ID

Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-77 d**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Organic Carbon (%)
River Mile 03 to 04

Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sec4\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-44_Cores_TOC_Main.mxd) 7/1/2009 -- 12:54:21 PM

Total Organic Carbon (%)
- 0-0.5
- 0.5-1
- 1-2
- 2-3
- 3-4
- 4-5
- >5
- Not Analyzed

RM 4

RM 5

Inset 1

Inset 2

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

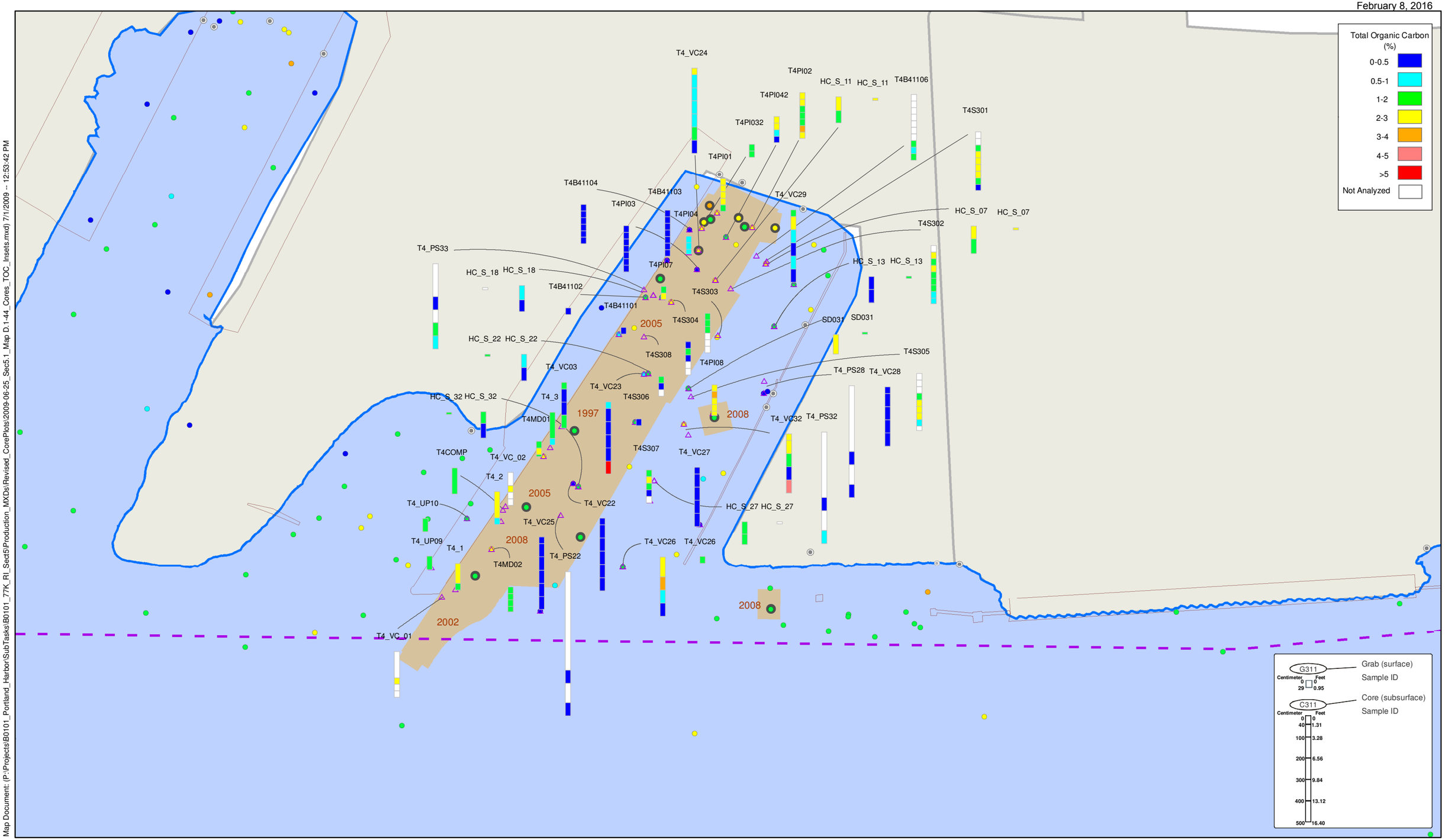
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

Grab (surface) Sample ID

Core (subsurface) Sample ID

**Map D1.2-77e**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Organic Carbon (%)
River Mile 04 to 05 - Slips




Map Document: (P:\Projects\B0101_Portland_Harbor\SubTasks\B0101_77K_RI_Sec5\Production_MXDs\Revised_CorePlots\2009-06-25_Sec5.1_Map D.1-44_Cores_TOC_Insets.mxd) 7/1/2009 -- 12:53:42 PM

N

0 125 250 500 Feet

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

**Map Features:**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-77e1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Organic Carbon (%)

River Mile 04 to 05 - Slips - Inset 1

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-45_Cores_TOC_Insets.mxd) - 3/12/2009 -- 1:52:38 PM

Total Organic Carbon (%)
- 0-0.5
- 0.5-1
- 1-2
- 2-3
- 3-4
- 4-5
- >5
- Not Analyzed

SGP08
SGP10
SGP17
SGP14
SGP13
SGP06
SGP12
SGP20
SGP15
SGP22
SGP24
SGP23
SGP21
SGP16
SGP18
2008
SGP05
SGP03
SGP19
SGP04
SGP09
SGP01
SGP07
SGP02

G311 — Grab (surface) Sample ID
C311 — Core (subsurface) Sample ID

| Centimeter | Feet |
|---|---|
| 0 | 0 |
| 29 | 0.95 |
| 40 | 1.31 |
| 100 | 3.28 |
| 200 | 6.56 |
| 300 | 9.84 |
| 400 | 13.12 |
| 500 | 16.40 |

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 125 250 500 Feet

**Map Features:**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

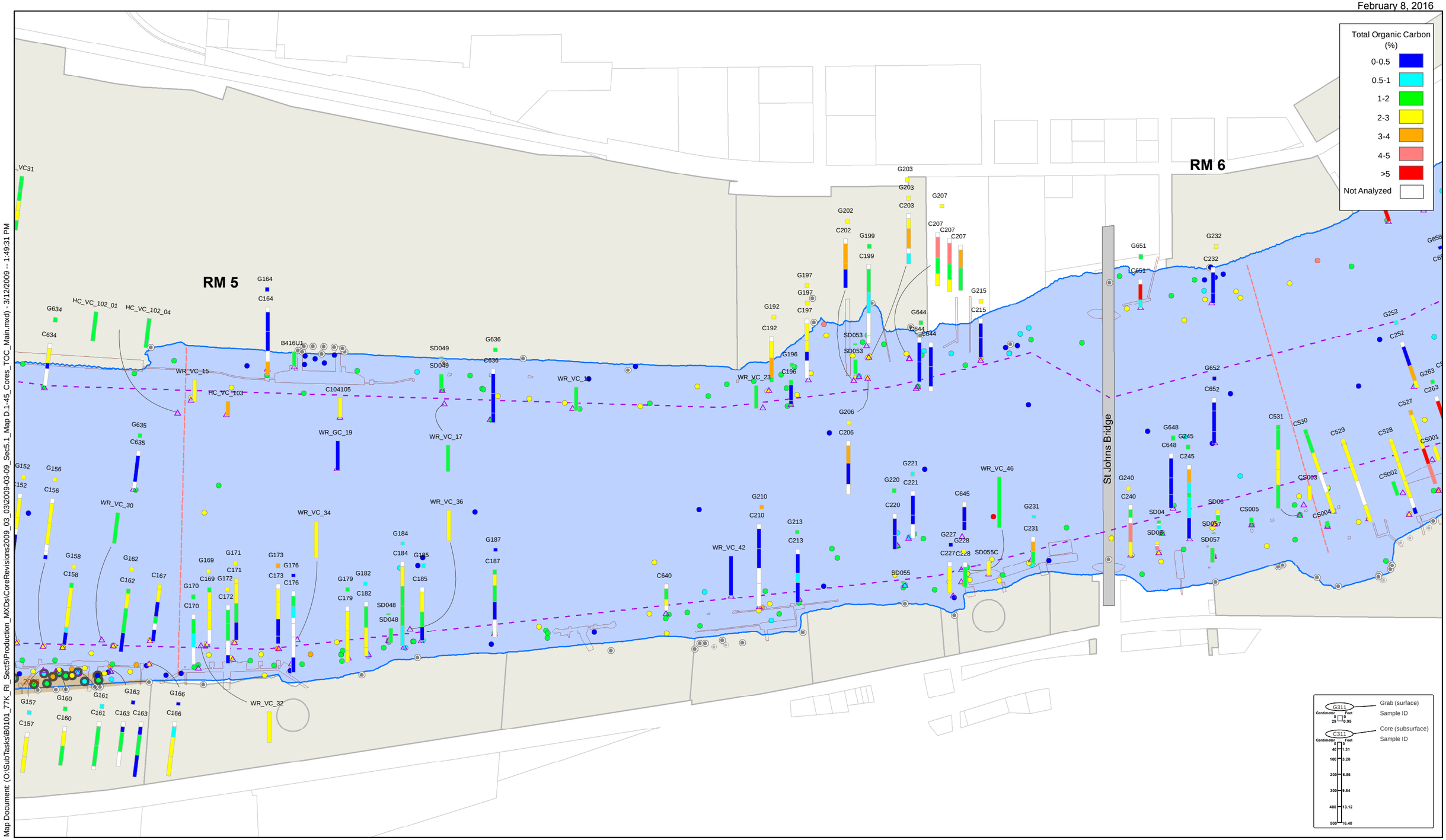
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-77e2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Organic Carbon (%)

River Mile 04 to 05 - Slips - Inset 2

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

## Map Features

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

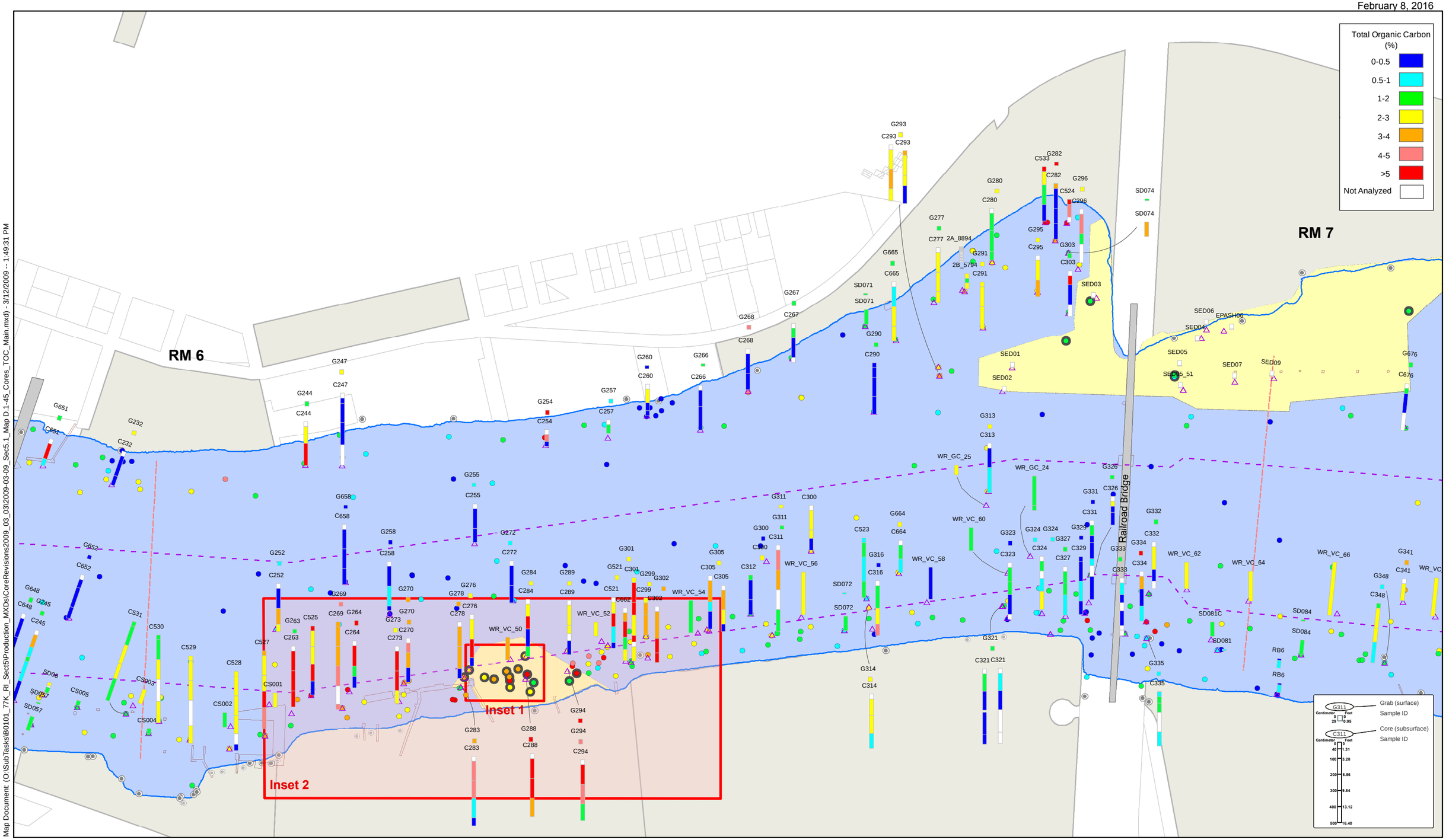
**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-77 f**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Organic Carbon (%)
River Mile 05 to 06

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-45_Cores_TOC_Main.mxd) - 3/12/2009 -- 1:49:31 PM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

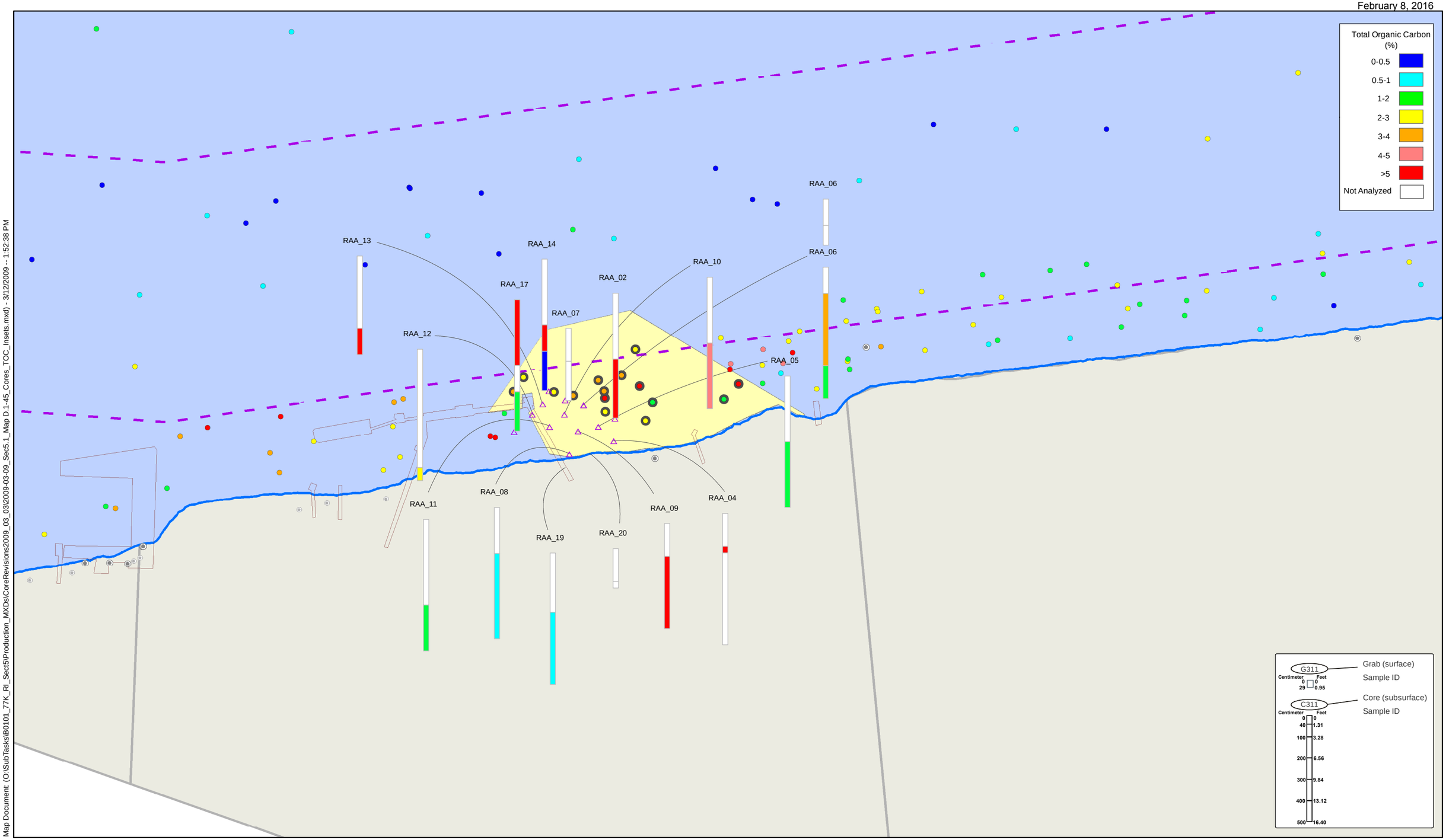
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-77 g**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Organic Carbon (%)

River Mile 06 to 07

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-45_Cores_TOC_Insets.mxd) - 3/12/2009 -- 1:52:38 PM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features:**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

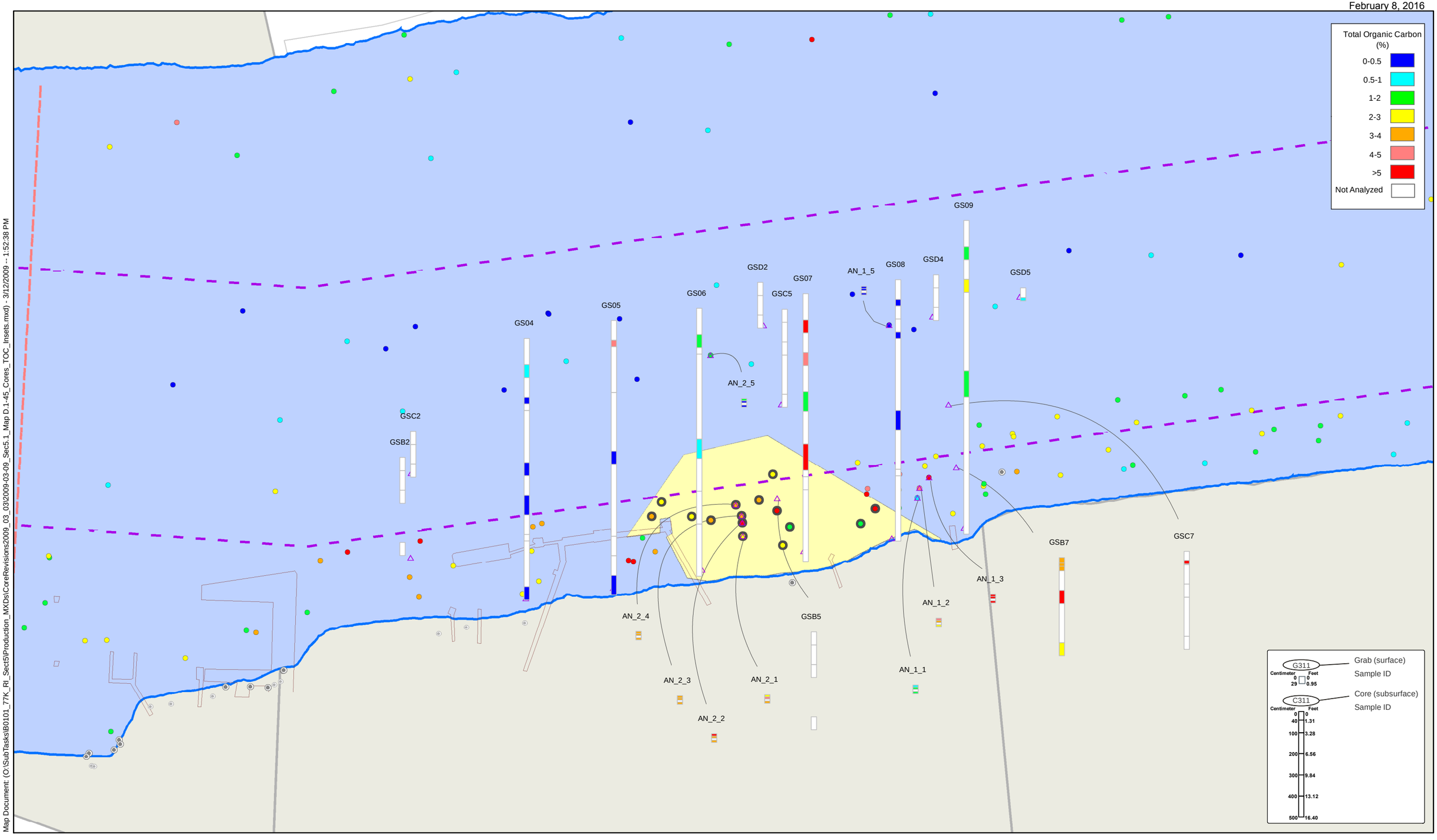
- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-77 g1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Organic Carbon (%)

River Mile 06 to 07 - Inset 1

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-45_Cores_TOC_Insets.mxd) - 3/12/2009 -- 1:52:38 PM

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features:**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

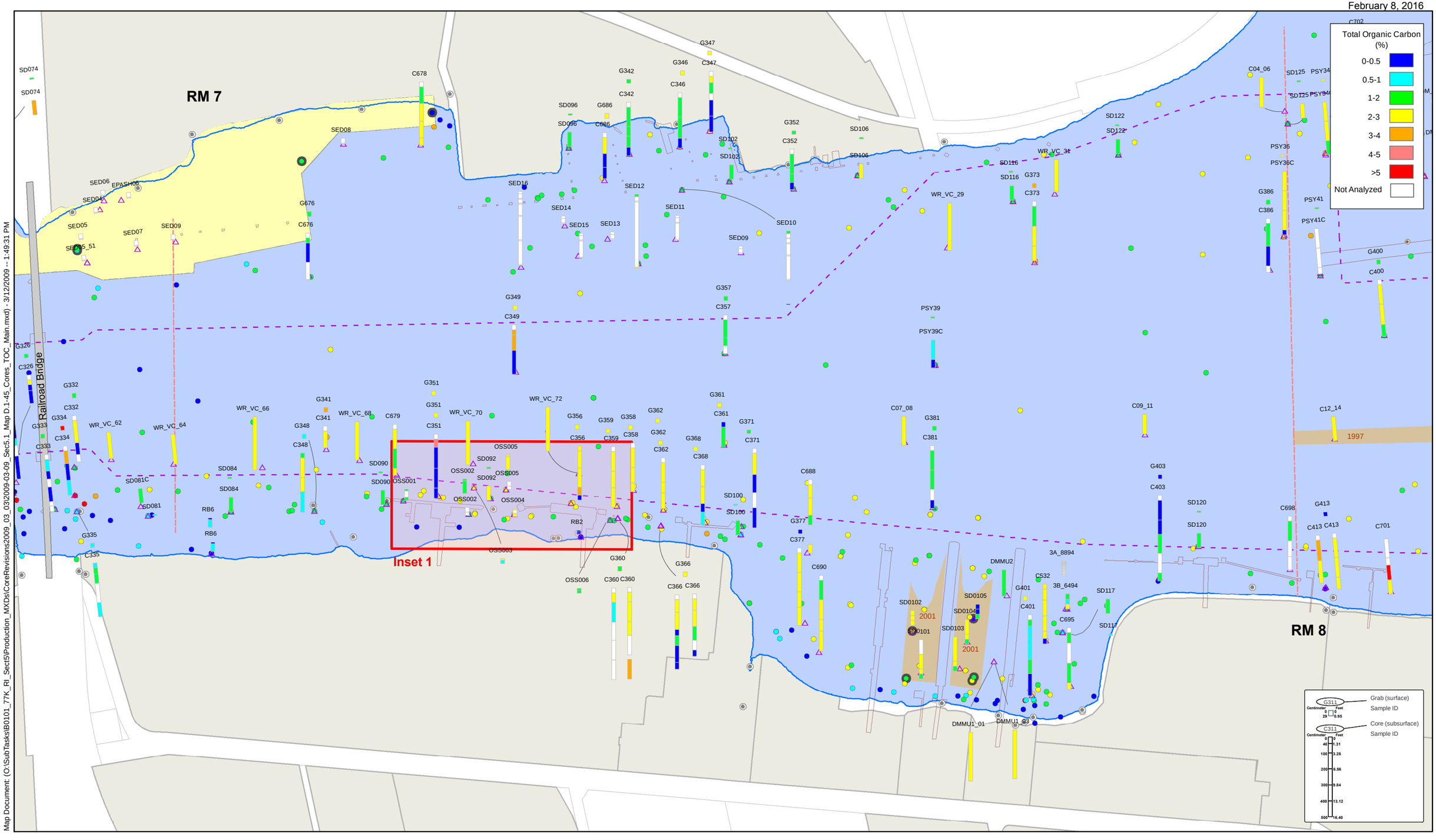
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-77 g2**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Organic Carbon (%)

River Mile 06 to 07 - Inset 2




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-45_Cores_TOC_Main.mxd) - 3/12/2009 -- 1:49:31 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

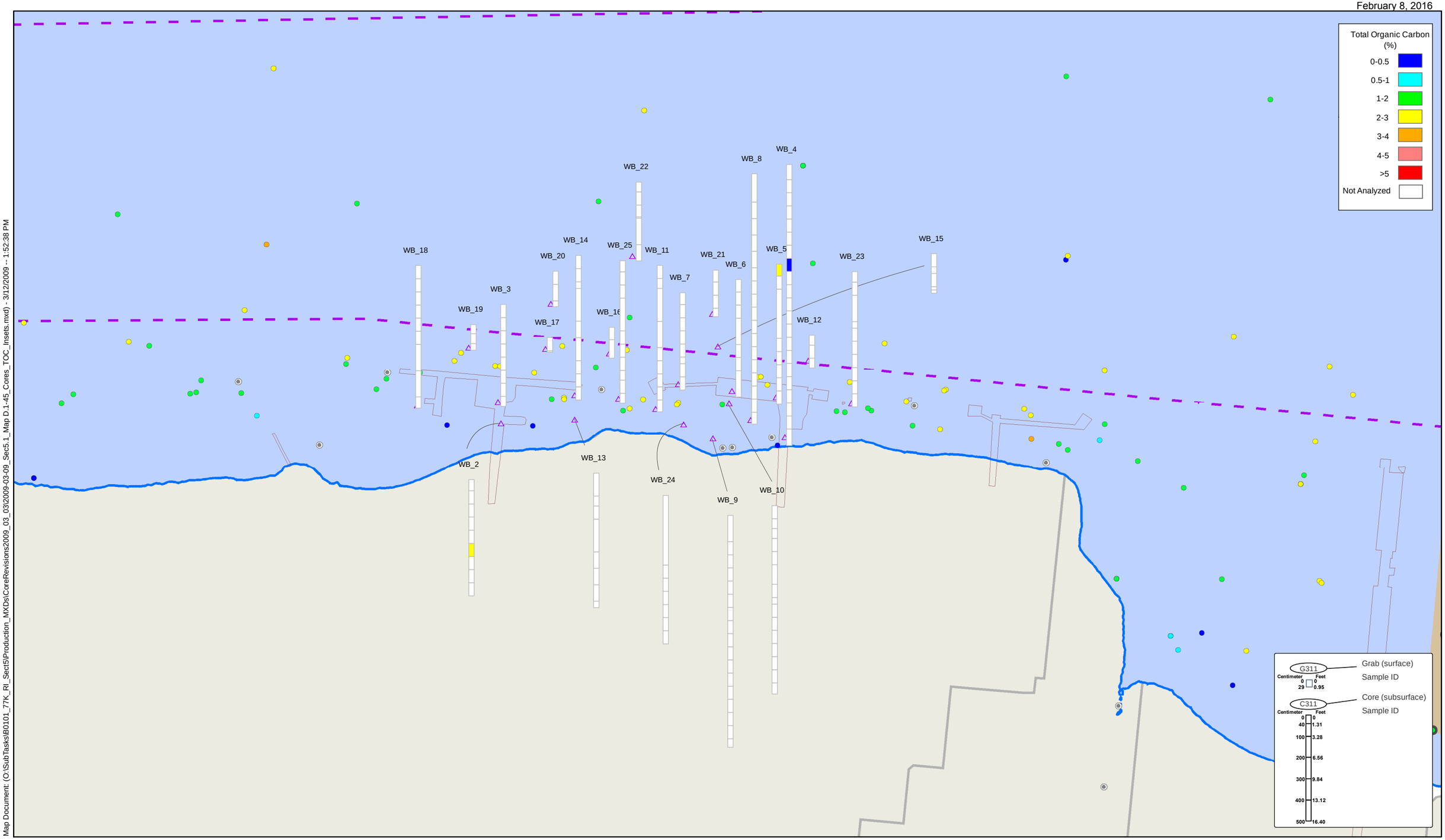
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-77 h**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Organic Carbon (%)
River Mile 07 to 08




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-45_Cores_TOC_Insets.mxd) - 3/12/2009 -- 1:52:38 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 125 250 500 Feet

**Map Features:**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-77h1**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Organic Carbon (%)

River Mile 07 to 08 - Inset 1

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-45_Cores_TOC_Main.mxd) - 3/12/2009 -- 1:49:31 PM

RM 8

RM 9

Total Organic Carbon (%)
- 0-0.5
- 0.5-1
- 1-2
- 2-3
- 3-4
- 4-5
- >5
- Not Analyzed

Grab (surface) Sample ID
Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

N

0 150 300 450 600 750 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-77i**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Organic Carbon (%)
River Mile 08 to 09 - Swan Is. East

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-45_Cores_TOC_Main.mxd) - 3/12/2009 -- 1:49:31 PM

Total Organic Carbon (%)
- 0-0.5
- 0.5-1
- 1-2
- 2-3
- 3-4
- 4-5
- >5
- Not Analyzed

RM 8

RM 9

1997

G311 — Grab (surface) Sample ID

C311 — Core (subsurface) Sample ID

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

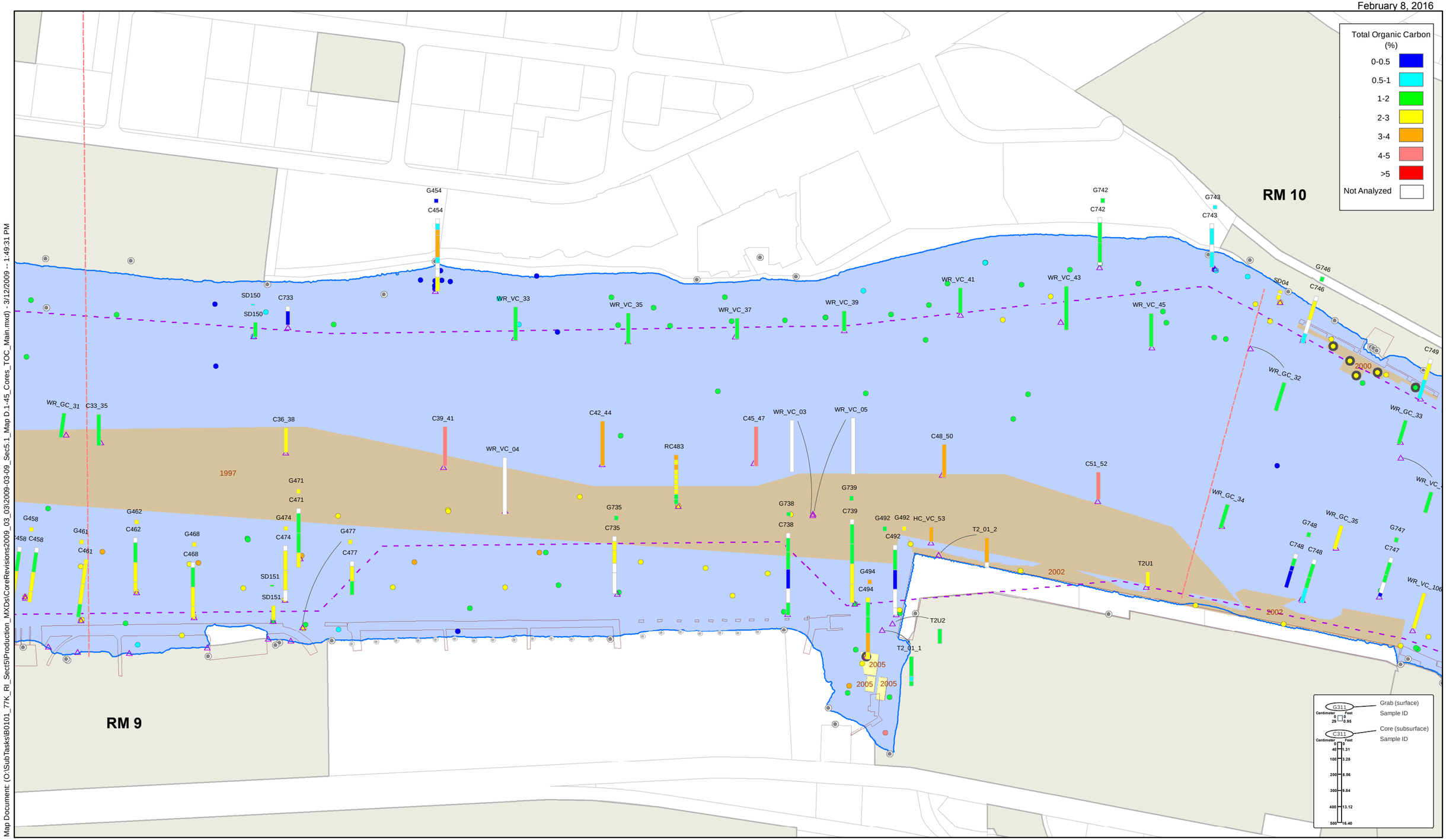
**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-77j**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Organic Carbon (%)
River Mile 08 to 09 - Swan Is. West




Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-45_Cores_TOC_Main.mxd) - 3/12/2009 -- 1:49:31 PM

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

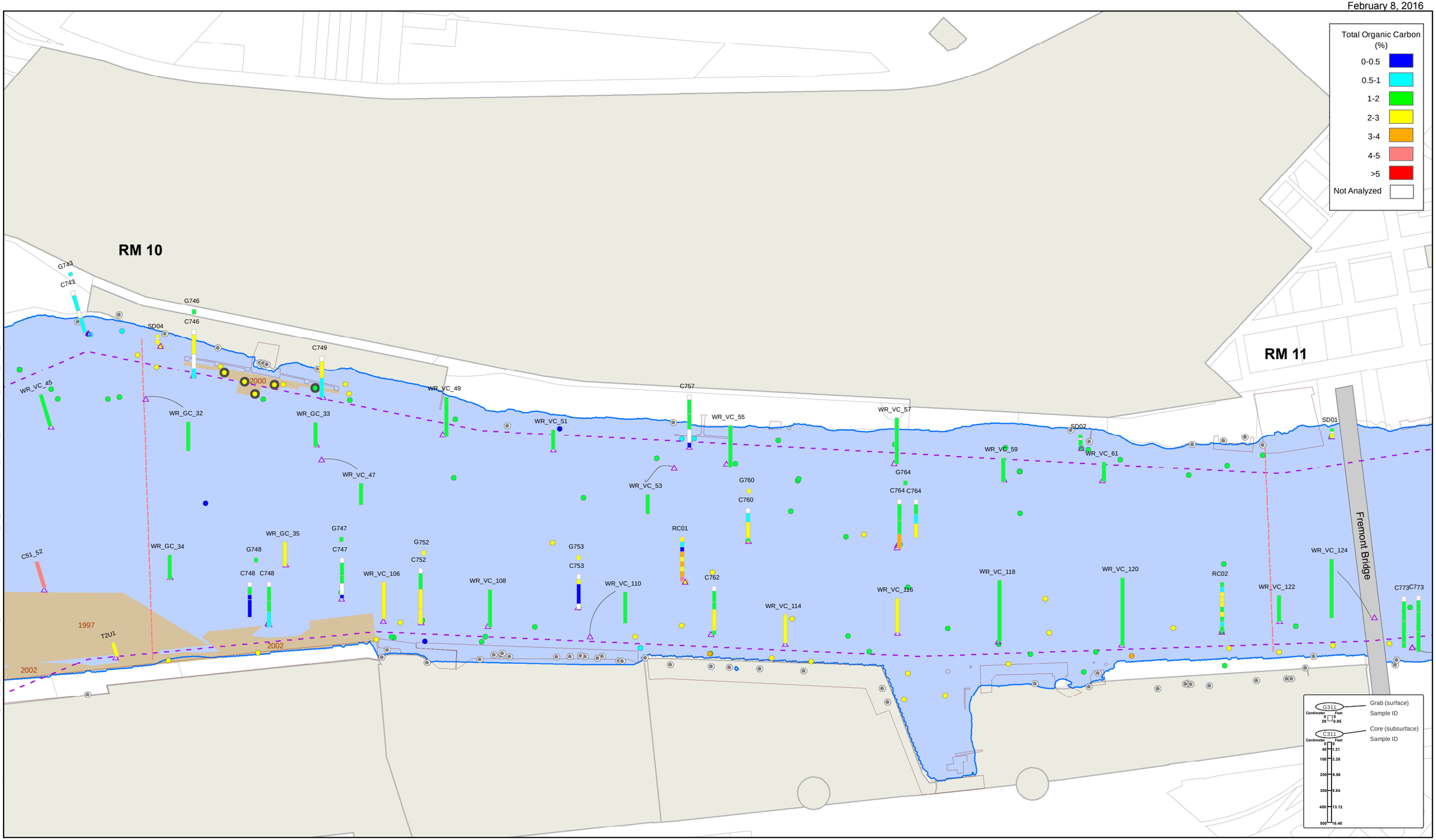
**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-77k**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Organic Carbon (%)
River Mile 09 to 10

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

**Map Features**

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

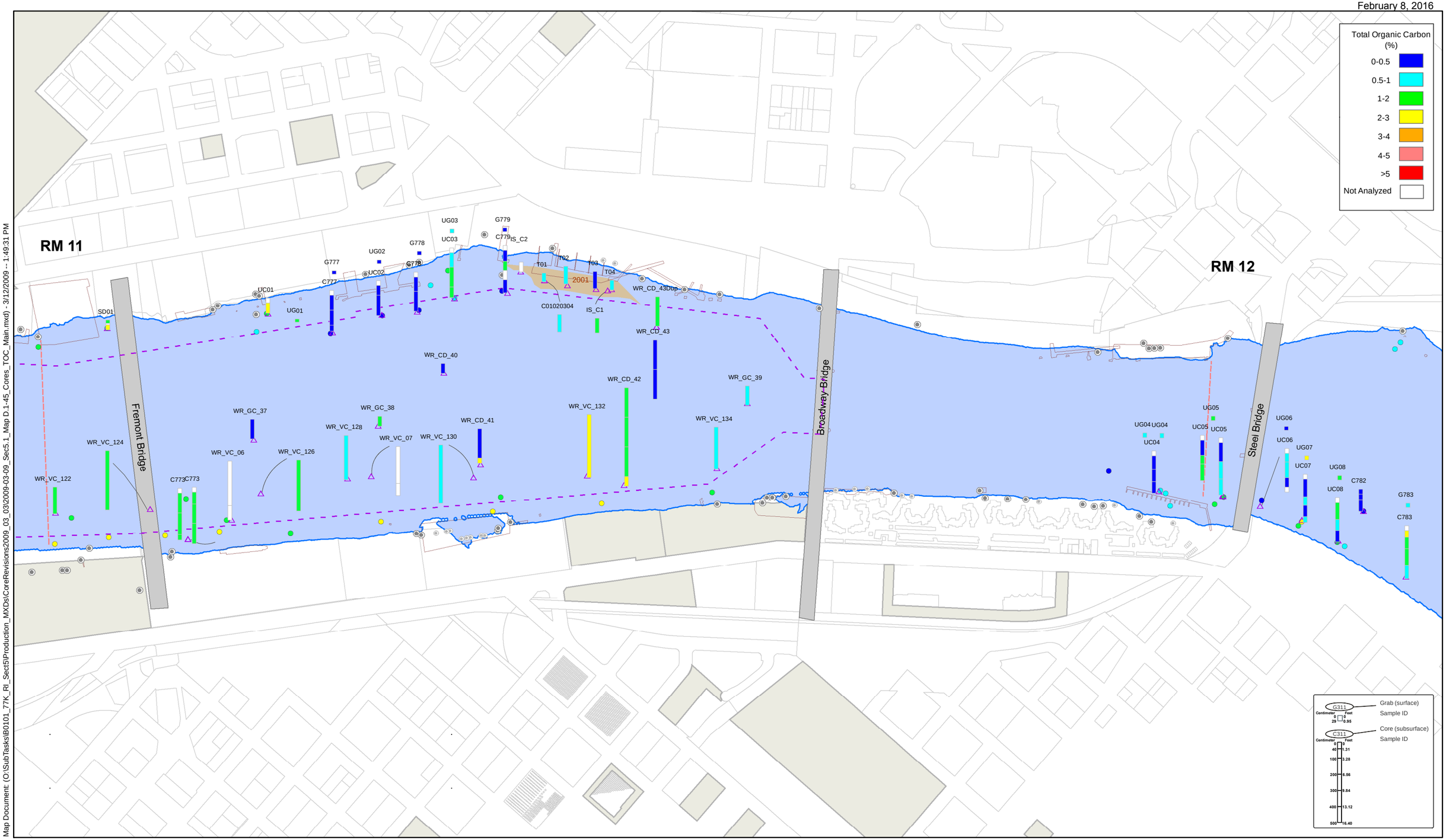
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-77I**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Organic Carbon (%)
River Mile 10 to 11

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\CoreRevisions2009_03_03\2009-03-09_Sec5.1_Map D.1-45_Cores_TOC_Main.mxd) - 3/12/2009 -- 1:49:31 PM




N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 150 300 450 600 750 Feet

## Map Features

- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry
- Core Locations
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-77 m**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Organic Carbon (%)
River Mile 11 to 12

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Total Organic Carbon (%)
- 0-0.5
- 0.5-1
- 1-2
- 2-3
- 3-4
- 4-5
- >5
- Not Analyzed

RM 11

RM 12

inset 1

Fremont Bridge

Broadway Bridge

C003 A 0 30.5 2.27; B 91.4 0.25; C 152.4 2.63; D 172

C004 A 0 30.5; B 91.4 0.11; C 131 0.04 J

C005 A 0 30.5; B 91.4 0.04 JT; C 152.4 0.04 J; D 213.4 0.04 J

SD01 A 0 30 1.14; C 60 2.6

C001 A 0 30.5; B 91.4 0.15; C 148 0.3

C002 A 0 30.5; B 91.4 0.66; C 152.4 0.58; D 166 0.14

WR_CD_43 A 0 182 0.38; B 365 0.1

WR_CD_43Dup A 0 182 1.21

C041 A 0 30.5 64 1.55

C042 A_R2 0 30; B_R2 91 0.15; C_R2 152 0.84; D_R2 210 0.65

C043 A 0 30.5 0.23; B 95 0.83

WR_GC_39 A 0 121 0.77

WR_VC_134 0 259 0.73

WR_VC_132 0 390 2.13

WR_VC_130 0 360 0.71

WR_GC_38 A 0 61 1.04

WR_VC_128 0 274 0.84

WR_GC_37 0 122 0.07

WR_VC_124 0 366 1.9

WR_VC_122 0 165 1.17

WR_VC_06 A 0 274; B 365

WR_VC_07 A 0 228; B 304

WR_VC_126 0 314 1.67

WR_CD_41 A 0 182 0.44; B 273 2.74

WR_CD_42 A 0 182 1.51; B 366 1.44; C 549 1.98; D 609 2.09

C773 A1 0 30; B1 152 1.96; C1 285 1.63; D1 319 1.53

C773 A2 0 30; B2 103 1.13 T; C2 223 1.99 T; D2 348 1.93 T

2009 2001 2009 2004 2009 2009 2002

Grab (surface) Sample ID

Core (subsurface) Sample ID

C311 Centimeter 0 40 100 200 300 400 500; Feet 0 1.31 3.28 6.56 9.84 13.12 16.40

G311 Centimeter 0 29; Feet 0 0.95

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**MapD1.2-77n**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Organic Carbon (%)

River Mile 11.0 - 11.8

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Total Organic Carbon (%)
- 0-0.5
- 0.5-1
- 1-2
- 2-3
- 3-4
- 4-5
- >5
- Not Analyzed

GNZCOMP2003 · G778 · C778 · C023 · C019 · C048 · UG03 · UC03 · C026 · C029 · T01 · C01020304 · C033 · C047 · C032 · C025 · IS_C2 · C035 · C038 · GNCOMP2003 · GNVC03 · GNVC01 · C009 · C010 · UG01 · UC01 · C012 · C015 · C022 · T03 · T02 · T04 · G779 · C779 · IS_C1 · C039 · C006 · C020 · C016 · UG02 · UC02 · G777 · C777 · C027 · C024 · C031 · C034 · C036 · C037 · C040 · C007 · C013 · C011 · C017 · C021 · C028 · C008 · C014 · C018 · WR_CD_40

2009 · 2001 · 2009 · 2009 · 2009 · 2002 · 2004 · 2004

Fremont Bridge

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River Miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
NOTE: Bottom of cores are generally placed at core sample station, if not possible a tag line indicates the sample location.

0 100 200 300 400 500 Feet

**Map Features**
- River MIles
- Navigation Channel
- Bridges
- Docks and Structures
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

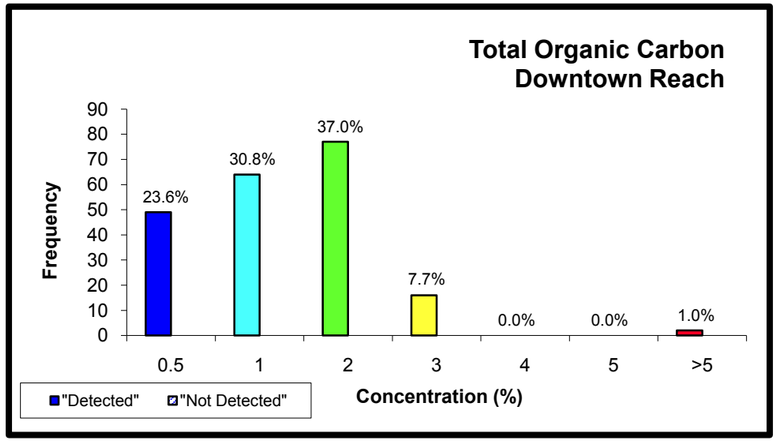
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Chemistry (2008 RI Data Set)
- Core Locations (Updated 2010 RI Data Set)
- Core Locations (2008 RI Data Set)

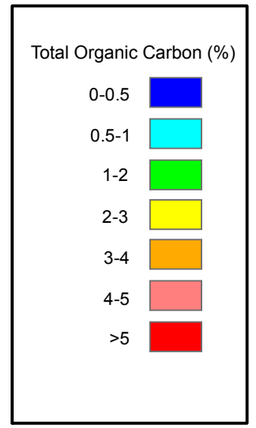
- Capping Areas
- Dredging Areas
- Surface Dredge/Cap Locations
- Upland ECSI Sites (2008)
- Waterfront Taxlots

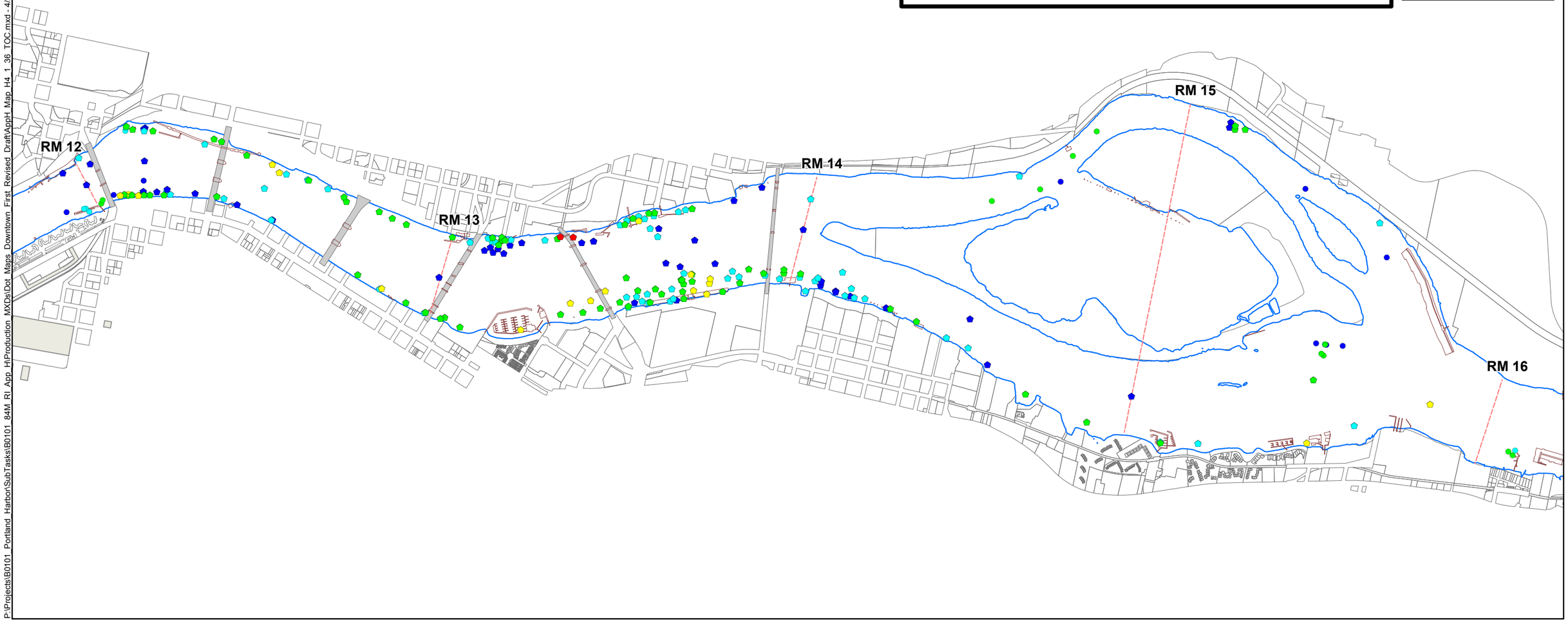
Grab (surface) Sample ID
Core (subsurface) Sample ID

**Map D1.2-77o**
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total Organic Carbon (%)

River Mile 11.0 - 11.8 - Inset 1

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N

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS.
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.
ECSI Locations: City of Portland

0 700 1,400 2,800 Feet

**Map Features**

- River Miles
- Navigation Channel
- River Edge +13 ft NAVD
- Surface Chemistry (2008 RI Data Set)
- Surface Chemistry (Updated 2010 RI Data Set)
- Surface Dredge/Cap Locations
- Bridges
- Docks and Structures
- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.2-78**
Portland Harbor RI/FS
Remedial Investigation Report
Surface Sediment Chemistry
Total Organic Carbon (%)
Downtown Reach

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D1.3
# SUMMARY STATISTICS FOR ALL COIS AND PHYSICAL PARAMETERS IN BEDDED SEDIMENT—TABLES

**FINAL**

February 8, 2016

# LIST OF TABLES

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach
Table D1.3-2. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8)
TableD1.3-3. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8)
Table D1.3-4. Summary Statistics for All Chemicals in Surface Sediment, Upriver Reach (RM 15.3-28.4)
Table D1.3-5. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Upriver Reach (RM 15.3-28.4)
Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3)
Table D1.3-7. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downtown Reach (RM 11.8-15.3)
Table D1.3-8. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downstream Reach (RM 0-1.9)
Table D1.3-9. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downstream Reach (RM 0-1.9)
Table D1.3-10. Summary Statistics for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8)
Table D1.3-11. Summary Statistics for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8)
Table D1.3-12. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Eastern Nearshore
TableD1.3-13. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Eastern Nearshore
Table D1.3-14. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Navigation Channel
Table D1.3-15. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Navigation Channel
Table D1.3-16. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Western Nearshore
Table D1.3-17. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Western Nearshore
Table D1.3-18. Summary Statistics for Other Contaminants and Physical Parameters in Surface Sediment, Upriver Reach (RM 15.3-28.4)

Table D1.3-19. Summary Statistics for Other Contaminants and Physical Parameters in Subsurface Sediment, Upriver Reach (RM 15.3-28.4)
Table D1.3-20. Summary Statistics for Other Contaminants and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3)
Table D1.3-21. Summary Statistics for Other Contaminants and Physical Parameters in Subsurface Sediment, Downtown Reach (RM 11.8-15.3)
Table D1.3-22. Summary Statistics for Other Contaminants and Physical Parameters in Surface Sediment, Downstream Reach (RM 0-1.9)
Table D1.3-23. Summary Statistics for Other Contaminants and Physical Parameters in Subsurface Sediment, Downstream Reach (RM 0-1.9)
Table D1.3-24. Number of Surface and Subsurface Samples (Detected only) for Other Contaminants by Concentration Range, Study Area (RM 1.9-11.8)
Table D1.3-25. Number of Surface and Subsurface Samples (Detected and Not Detected) for Other Contaminants by Concentration Range, Study Area (RM 1.9-11.8)
Table D1.3-26. Number of Surface and Subsurface Samples (Detected Only) for Other Contaminants by Concentration Range, Upriver Reach (RM 15.3-28.4)
Table D1.3-27. Number of Surface and Subsurface Samples (Detected and Not Detected) for Other Contaminants by Concentration Range, Upriver Reach (RM 15.3-28.4)
Table D1.3-28. Number of Surface and Subsurface Samples (Detected Only) for Other Contaminants by Concentration Range, Downtown Reach (RM 11.8-15.3)
Table D1.3-29. Number of Surface and Subsurface Samples (Detected and Not Detected) for Other Contaminants by Concentration Range, Downtown Reach (RM 11.8-15.3)
Table D1.3-30. Number of Surface and Subsurface Samples (Detected Only) for Other Contaminants by Concentration Range, Downstream Reach (RM 0-1.9)
Table D1.3-31. Number of Surface and Subsurface Samples (Detected and Not Detected) for Other Contaminants by Concentration Range, Downstream Reach (RM 0-1.9)
Table D1.3-32. Surface and Subsurface Sediment Samples Excluded from Summary Statistics Tables per Exclusion Criteria

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Downstream (RM <1) | 0 | surface sediment | WLR0797WRBC01WRA |
| Downstream (RM <1) | 0 | surface sediment | WLR0797WRBC01WRBC01 |
| Downstream (RM <1) | 0.1 | subsurface sediment | WLR0797WRGC02RGC02A |
| Downstream (RM <1) | 0.1 | subsurface sediment | WLR0797WRGC02RGC02B |
| Downstream (RM <1) | 0.4 | subsurface sediment | WLR0797WRBC03WRBC03 |
| Downstream (RM <1) | 0.7 | subsurface sediment | LW3-DC07-B |
| Downstream (RM <1) | 0.7 | subsurface sediment | LW3-DC07-C |
| Downstream (RM <1) | 0.7 | subsurface sediment | LW3-DC07-D |
| Downstream (RM <1) | 0.7 | subsurface sediment | LW3-DC07-E |
| Downstream (RM <1) | 0.7 | surface sediment | LW3-DG19 |
| Downstream (RM <1) | 0.7 | subsurface sediment | WLR0797WRGC04RGC04A |
| Downstream (RM <1) | 0.7 | subsurface sediment | WLR0797WRGC04RGC04B |
| Downstream (RM <1) | 0.7 | subsurface sediment | WLR0797WRGC05RGC05A |
| Downstream (RM <1) | 0.7 | subsurface sediment | WLR0797WRGC05RGC05B |
| Downstream (RM <1) | 0.9 | surface sediment | LW3-DG12 |
| Downstream (RM <1) | 0.9 | subsurface sediment | WLCT5K99B50101B50101 |
| Downstream (RM <1) | 0.9 | subsurface sediment | WLCT5K99B501C1B501C1 |
| Downstream (RM <1) | 0.9 | subsurface sediment | WLR0797WRGC06RGC06A |
| Downstream (RM <1) | 0.9 | subsurface sediment | WLR0797WRGC06RGC06B |
| Downstream (RM 1 - 2) | 1 | surface sediment | LW3-DG11 |
| Downstream (RM 1 - 2) | 1 | surface sediment | LW3-DG11-2 |
| Downstream (RM 1 - 2) | 1 | surface sediment | LW3-GCR01E-ALT |
| Downstream (RM 1 - 2) | 1 | subsurface sediment | WLCT0F01T50101T5011A |
| Downstream (RM 1 - 2) | 1 | subsurface sediment | WLCT0F01T50102T5012A |
| Downstream (RM 1 - 2) | 1 | subsurface sediment | WLCT0I98B501C1B501C1 |
| Downstream (RM 1 - 2) | 1 | subsurface sediment | WLCT5K99B50102B50102 |
| Downstream (RM 1 - 2) | 1 | subsurface sediment | WLCT5K99B50103argeC1 |
| Downstream (RM 1 - 2) | 1.1 | subsurface sediment | LW3-DC06-B |
| Downstream (RM 1 - 2) | 1.1 | subsurface sediment | LW3-DC06-C |
| Downstream (RM 1 - 2) | 1.1 | subsurface sediment | LW3-DC06-D |
| Downstream (RM 1 - 2) | 1.1 | surface sediment | LW3-DG18 |
| Downstream (RM 1 - 2) | 1.1 | subsurface sediment | WLCT0I98B501C2B501C2 |
| Downstream (RM 1 - 2) | 1.2 | subsurface sediment | LW3-DC04-B |
| Downstream (RM 1 - 2) | 1.2 | subsurface sediment | LW3-DC04-C |
| Downstream (RM 1 - 2) | 1.2 | subsurface sediment | LW3-DC04-D |
| Downstream (RM 1 - 2) | 1.2 | subsurface sediment | LW3-DC05-B |
| Downstream (RM 1 - 2) | 1.2 | subsurface sediment | LW3-DC05-C |
| Downstream (RM 1 - 2) | 1.2 | surface sediment | LW3-DG10 |
| Downstream (RM 1 - 2) | 1.2 | surface sediment | LW3-DG16 |
| Downstream (RM 1 - 2) | 1.2 | surface sediment | LW3-DG17 |
| Downstream (RM 1 - 2) | 1.3 | surface sediment | LW3-GSP01E |
| Downstream (RM 1 - 2) | 1.4 | subsurface sediment | LW3-DC03-B |
| Downstream (RM 1 - 2) | 1.4 | subsurface sediment | LW3-DC03-C |
| Downstream (RM 1 - 2) | 1.4 | subsurface sediment | LW3-DC03-D |
| Downstream (RM 1 - 2) | 1.4 | surface sediment | LW3-DG09 |
| Downstream (RM 1 - 2) | 1.4 | surface sediment | LW3-DG15 |
| Downstream (RM 1 - 2) | 1.4 | surface sediment | LW3-GCRSP01W-1 |
| Downstream (RM 1 - 2) | 1.4 | subsurface sediment | WLCT5K99B503C1B503C1 |
| Downstream (RM 1 - 2) | 1.5 | subsurface sediment | LW3-DC02-B |
| Downstream (RM 1 - 2) | 1.5 | subsurface sediment | LW3-DC02-C |
| Downstream (RM 1 - 2) | 1.5 | subsurface sediment | LW3-DC02-D |
| Downstream (RM 1 - 2) | 1.5 | surface sediment | LW3-DG07 |
| Downstream (RM 1 - 2) | 1.5 | surface sediment | LW3-DG08 |
| Downstream (RM 1 - 2) | 1.5 | surface sediment | LW3-DG14 |
| Downstream (RM 1 - 2) | 1.5 | surface sediment | LW3-GCA01E-C00 |
| Downstream (RM 1 - 2) | 1.6 | surface sediment | LW3-DG05 |
| Downstream (RM 1 - 2) | 1.6 | surface sediment | LW3-DG06 |
| Downstream (RM 1 - 2) | 1.6 | surface sediment | WLR0797WRBC07WRBC07 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Downstream (RM 1 - 2) | 1.7 | surface sediment | LW3-DG03 |
| Downstream (RM 1 - 2) | 1.7 | surface sediment | LW3-DG04 |
| Downstream (RM 1 - 2) | 1.8 | surface sediment | WLR0797WRBC08WRBC08 |
| Study Area | 1.9 | surface sediment | LW2-B002 |
| Study Area | 1.9 | surface sediment | LW2-G001 |
| Study Area | 1.9 | surface sediment | LW2-G002 |
| Study Area | 1.9 | surface sediment | LW2-G004 |
| Study Area | 1.9 | surface sediment | LW2-GBT001 |
| Study Area | 1.9 | subsurface sediment | LW3-DC01-B1 |
| Study Area | 1.9 | subsurface sediment | LW3-DC01-B2 |
| Study Area | 1.9 | subsurface sediment | LW3-DC01-C1 |
| Study Area | 1.9 | subsurface sediment | LW3-DC01-C2 |
| Study Area | 1.9 | subsurface sediment | LW3-DC01-D1 |
| Study Area | 1.9 | subsurface sediment | LW3-DC01-D2 |
| Study Area | 1.9 | subsurface sediment | LW3-DC01-E1 |
| Study Area | 1.9 | subsurface sediment | LW3-DC01-E2 |
| Study Area | 1.9 | surface sediment | LW3-DG01 |
| Study Area | 1.9 | surface sediment | LW3-DG02 |
| Study Area | 1.9 | surface sediment | LW3-DG13 |
| Study Area | 2 | surface sediment | LW2-D1-1 |
| Study Area | 2 | surface sediment | LW2-D1-2 |
| Study Area | 2 | surface sediment | LW2-G006 |
| Study Area | 2 | subsurface sediment | LW3-C600-B |
| Study Area | 2 | subsurface sediment | LW3-C600-C |
| Study Area | 2 | subsurface sediment | LW3-C600-D |
| Study Area | 2 | surface sediment | LW3-G600 |
| Study Area | 2 | surface sediment | WLCOSJ00RB01SD0001 |
| Study Area | 2 | surface sediment | WLCOSJ00RB02SD0002 |
| Study Area | 2 | surface sediment | WLR0797WRBC09WRBC09 |
| Study Area | 2.1 | subsurface sediment | LW2-C009-B |
| Study Area | 2.1 | subsurface sediment | LW2-C009-C |
| Study Area | 2.1 | subsurface sediment | LW2-C011-B1 |
| Study Area | 2.1 | subsurface sediment | LW2-C011-B2 |
| Study Area | 2.1 | subsurface sediment | LW2-C011-C1 |
| Study Area | 2.1 | subsurface sediment | LW2-C011-C2 |
| Study Area | 2.1 | subsurface sediment | LW2-C011-D1 |
| Study Area | 2.1 | subsurface sediment | LW2-C011-D2 |
| Study Area | 2.1 | subsurface sediment | LW2-C011-E1 |
| Study Area | 2.1 | subsurface sediment | LW2-C011-E2 |
| Study Area | 2.1 | subsurface sediment | LW2-C011-F1 |
| Study Area | 2.1 | subsurface sediment | LW2-C011-G2 |
| Study Area | 2.1 | surface sediment | LW2-G003 |
| Study Area | 2.1 | surface sediment | LW2-G005 |
| Study Area | 2.1 | surface sediment | LW2-G007-1 |
| Study Area | 2.1 | surface sediment | LW2-G007-2 |
| Study Area | 2.1 | surface sediment | LW2-G008 |
| Study Area | 2.1 | surface sediment | LW2-G009 |
| Study Area | 2.1 | surface sediment | LW2-G010 |
| Study Area | 2.1 | surface sediment | LW2-G011 |
| Study Area | 2.1 | subsurface sediment | LW3-C601-B1 |
| Study Area | 2.1 | subsurface sediment | LW3-C601-B2 |
| Study Area | 2.1 | subsurface sediment | LW3-C602-B |
| Study Area | 2.1 | subsurface sediment | LW3-C602-C |
| Study Area | 2.1 | subsurface sediment | LW3-C602-D |
| Study Area | 2.1 | surface sediment | LW3-G601 |
| Study Area | 2.1 | surface sediment | LW3-G602 |
| Study Area | 2.1 | surface sediment | WLCOSJ00RB03SD0003 |
| Study Area | 2.1 | surface sediment | WLCOSJ00RB04SD0004 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 2.1 | surface sediment | WLCOSJ00RB04SD0014 |
| Study Area | 2.1 | surface sediment | WLCOSJ00RB05SD0005 |
| Study Area | 2.1 | surface sediment | WLCOSJ00RB06SD0006 |
| Study Area | 2.1 | surface sediment | WLCOSJ00RB06SD0007 |
| Study Area | 2.1 | surface sediment | WLCOSJ00RB13SD0015 |
| Study Area | 2.1 | subsurface sediment | WLCOSJ00RB13SD0016 |
| Study Area | 2.2 | subsurface sediment | 021108WRPB-VC-01A |
| Study Area | 2.2 | subsurface sediment | 021108WRPB-VC-01Z |
| Study Area | 2.2 | surface sediment | 021108WRPB-VC-02A |
| Study Area | 2.2 | subsurface sediment | 021108WRPB-VC-02B |
| Study Area | 2.2 | surface sediment | LW2-B001 |
| Study Area | 2.2 | subsurface sediment | LW2-C015-B |
| Study Area | 2.2 | subsurface sediment | LW2-C015-C |
| Study Area | 2.2 | subsurface sediment | LW2-C015-D |
| Study Area | 2.2 | subsurface sediment | LW2-C015-E |
| Study Area | 2.2 | surface sediment | LW2-G012 |
| Study Area | 2.2 | surface sediment | LW2-G013 |
| Study Area | 2.2 | surface sediment | LW2-G014 |
| Study Area | 2.2 | surface sediment | LW2-G015 |
| Study Area | 2.2 | surface sediment | LW2-G016 |
| Study Area | 2.2 | surface sediment | LW2-G017 |
| Study Area | 2.2 | surface sediment | LW3-G603 |
| Study Area | 2.2 | subsurface sediment | LWM-METCS1 |
| Study Area | 2.2 | subsurface sediment | LWM-TCLPC1 |
| Study Area | 2.2 | surface sediment | WLCDRD05PG00101 |
| Study Area | 2.2 | surface sediment | WLCDRD05PG141141Dup |
| Study Area | 2.2 | subsurface sediment | WLCDRI03C01-03CSS01 |
| Study Area | 2.2 | surface sediment | WLCOSJ00RB07SD0008 |
| Study Area | 2.2 | subsurface sediment | WLR0499WRVC01WRVC01 |
| Study Area | 2.3 | subsurface sediment | 021108WRPB-VC-03A |
| Study Area | 2.3 | subsurface sediment | 021108WRPB-VC-03Z |
| Study Area | 2.3 | surface sediment | 021108WRPB-VC-04A |
| Study Area | 2.3 | subsurface sediment | 021108WRPB-VC-04B |
| Study Area | 2.3 | subsurface sediment | 021108WRPB-VC-05A |
| Study Area | 2.3 | subsurface sediment | 021108WRPB-VC-05Z |
| Study Area | 2.3 | surface sediment | LW2-B004 |
| Study Area | 2.3 | subsurface sediment | LW2-C019-B1 |
| Study Area | 2.3 | subsurface sediment | LW2-C019-B2 |
| Study Area | 2.3 | subsurface sediment | LW2-C019-C1 |
| Study Area | 2.3 | subsurface sediment | LW2-C019-D1 |
| Study Area | 2.3 | subsurface sediment | LW2-C019-E2 |
| Study Area | 2.3 | subsurface sediment | LW2-C020-B |
| Study Area | 2.3 | subsurface sediment | LW2-C020-C |
| Study Area | 2.3 | subsurface sediment | LW2-C020-D |
| Study Area | 2.3 | subsurface sediment | LW2-C022-B |
| Study Area | 2.3 | subsurface sediment | LW2-C022-C |
| Study Area | 2.3 | subsurface sediment | LW2-C022-D |
| Study Area | 2.3 | surface sediment | LW2-G018 |
| Study Area | 2.3 | surface sediment | LW2-G019 |
| Study Area | 2.3 | surface sediment | LW2-G020 |
| Study Area | 2.3 | surface sediment | LW2-G021 |
| Study Area | 2.3 | surface sediment | LW2-G022 |
| Study Area | 2.3 | surface sediment | LW2-GBT002 |
| Study Area | 2.3 | subsurface sediment | LW3-C604-B |
| Study Area | 2.3 | subsurface sediment | LW3-C604-C |
| Study Area | 2.3 | subsurface sediment | LW3-C604-D |
| Study Area | 2.3 | surface sediment | LW3-G604 |
| Study Area | 2.3 | surface sediment | LW3-GCA02W-C10 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 2.3 | surface sediment | LWG0102R015SDS015C00 |
| Study Area | 2.3 | surface sediment | WLCDRD05PG00202 |
| Study Area | 2.3 | surface sediment | WLCOSJ00RB08SD0009 |
| Study Area | 2.3 | surface sediment | WLCOSJ00RB09SD0010 |
| Study Area | 2.3 | surface sediment | WLCOSJ00RB10SD0011 |
| Study Area | 2.3 | subsurface sediment | WLR0499WRVC02WRVC02 |
| Study Area | 2.3 | subsurface sediment | WLR1199WRVC02WRVC02 |
| Study Area | 2.4 | surface sediment | 021108WRPB-VC-06A |
| Study Area | 2.4 | subsurface sediment | 021108WRPB-VC-06B |
| Study Area | 2.4 | subsurface sediment | LW2-C025-B1 |
| Study Area | 2.4 | subsurface sediment | LW2-C025-B2 |
| Study Area | 2.4 | subsurface sediment | LW2-C025-C1 |
| Study Area | 2.4 | subsurface sediment | LW2-C025-D1 |
| Study Area | 2.4 | subsurface sediment | LW2-C025-D2 |
| Study Area | 2.4 | subsurface sediment | LW2-C025-E2 |
| Study Area | 2.4 | surface sediment | LW2-G023-1 |
| Study Area | 2.4 | surface sediment | LW2-G023-2 |
| Study Area | 2.4 | surface sediment | LW2-G024 |
| Study Area | 2.4 | surface sediment | LW2-G025 |
| Study Area | 2.4 | surface sediment | LW2-G026 |
| Study Area | 2.4 | subsurface sediment | LW3-C605-B |
| Study Area | 2.4 | subsurface sediment | LW3-C605-C |
| Study Area | 2.4 | subsurface sediment | LW3-C605-D |
| Study Area | 2.4 | surface sediment | LW3-G605 |
| Study Area | 2.4 | surface sediment | LWG0102R001SDS015C00 |
| Study Area | 2.4 | surface sediment | WLR0797WRBC10WRB |
| Study Area | 2.4 | surface sediment | WLR0797WRBC10WRBC10 |
| Study Area | 2.5 | surface sediment | LW2-B003 |
| Study Area | 2.5 | subsurface sediment | LW2-C027-B |
| Study Area | 2.5 | subsurface sediment | LW2-C027-C |
| Study Area | 2.5 | subsurface sediment | LW2-C027-D |
| Study Area | 2.5 | surface sediment | LW2-D2 |
| Study Area | 2.5 | surface sediment | LW2-G027 |
| Study Area | 2.5 | surface sediment | LW2-G028 |
| Study Area | 2.5 | surface sediment | LW2-G029 |
| Study Area | 2.5 | subsurface sediment | LW3-C606-B |
| Study Area | 2.5 | subsurface sediment | LW3-C606-C |
| Study Area | 2.5 | surface sediment | LW3-G606 |
| Study Area | 2.5 | surface sediment | WLCOSJ00RB11SD0012 |
| Study Area | 2.5 | surface sediment | WLCOSJ00RB12SD0013 |
| Study Area | 2.6 | surface sediment | LW2-B006 |
| Study Area | 2.6 | surface sediment | LW2-G030 |
| Study Area | 2.6 | surface sediment | LW2-G031 |
| Study Area | 2.6 | subsurface sediment | LW3-C608-B |
| Study Area | 2.6 | surface sediment | LW3-G607 |
| Study Area | 2.6 | surface sediment | LW3-G608 |
| Study Area | 2.7 | subsurface sediment | LW2-C034-B |
| Study Area | 2.7 | subsurface sediment | LW2-C034-C |
| Study Area | 2.7 | subsurface sediment | LW2-C034-E |
| Study Area | 2.7 | subsurface sediment | LW2-C034-F |
| Study Area | 2.7 | subsurface sediment | LW2-C038-B |
| Study Area | 2.7 | subsurface sediment | LW2-C038-C |
| Study Area | 2.7 | subsurface sediment | LW2-C038-D |
| Study Area | 2.7 | subsurface sediment | LW2-C038-E |
| Study Area | 2.7 | surface sediment | LW2-G032 |
| Study Area | 2.7 | surface sediment | LW2-G033 |
| Study Area | 2.7 | surface sediment | LW2-G034 |
| Study Area | 2.7 | surface sediment | LW2-G035 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 2.7 | surface sediment | LW2-G036 |
| Study Area | 2.7 | surface sediment | LW2-G037 |
| Study Area | 2.7 | surface sediment | LW2-G038 |
| Study Area | 2.8 | surface sediment | LW2-B005 |
| Study Area | 2.8 | surface sediment | LW2-G039 |
| Study Area | 2.8 | surface sediment | LW2-G040 |
| Study Area | 2.8 | surface sediment | LW2-G041 |
| Study Area | 2.8 | subsurface sediment | LW3-C609-B |
| Study Area | 2.8 | subsurface sediment | LW3-C609-C |
| Study Area | 2.8 | subsurface sediment | LW3-C609-D |
| Study Area | 2.8 | surface sediment | LW3-G609 |
| Study Area | 2.8 | subsurface sediment | WLCACF05C123Z |
| Study Area | 2.8 | surface sediment | WLCDRD05PG00303 |
| Study Area | 2.8 | subsurface sediment | WLCDRD05VC00303 |
| Study Area | 2.9 | surface sediment | LW2-G042 |
| Study Area | 2.9 | surface sediment | LW2-G043 |
| Study Area | 2.9 | surface sediment | WLCDRD05PG00404 |
| Study Area | 2.9 | subsurface sediment | WLCDRD05VC00404 |
| Study Area | 2.9 | subsurface sediment | WLR0797WRGC11RGC11A |
| Study Area | 3 | surface sediment | LW2-G044-1 |
| Study Area | 3 | surface sediment | LW2-G044-2 |
| Study Area | 3 | surface sediment | LW2-G046 |
| Study Area | 3 | subsurface sediment | LW3-C610-B |
| Study Area | 3.1 | surface sediment | LW2-G050 |
| Study Area | 3.1 | surface sediment | LW2-G051 |
| Study Area | 3.1 | surface sediment | LW2-G052 |
| Study Area | 3.1 | surface sediment | LWG0103R001SDS015C00 |
| Study Area | 3.1 | surface sediment | LWG0103R041SDS015C00 |
| Study Area | 3.2 | surface sediment | LW2-G053 |
| Study Area | 3.2 | surface sediment | LW2-G055 |
| Study Area | 3.2 | surface sediment | LW2-G056 |
| Study Area | 3.2 | surface sediment | LW2-GBT004 |
| Study Area | 3.2 | surface sediment | LWG0103R040SDS015C00 |
| Study Area | 3.3 | surface sediment | LW2-B008 |
| Study Area | 3.3 | surface sediment | LW2-C060-A |
| Study Area | 3.3 | subsurface sediment | LW2-C060-B |
| Study Area | 3.3 | subsurface sediment | LW2-C060-C |
| Study Area | 3.3 | surface sediment | LW2-G057 |
| Study Area | 3.3 | surface sediment | LW2-G058 |
| Study Area | 3.3 | surface sediment | LW2-G060 |
| Study Area | 3.3 | surface sediment | LW3-G611 |
| Study Area | 3.3 | surface sediment | LW3-G612-1 |
| Study Area | 3.3 | surface sediment | LW3-G612-2 |
| Study Area | 3.3 | surface sediment | LWG0103B031SDS015C00 |
| Study Area | 3.3 | surface sediment | WLR0797121314WRBC12 |
| Study Area | 3.3 | surface sediment | WR-WSI98SD0010 |
| Study Area | 3.3 | subsurface sediment | WR-WSI98SD0010000A |
| Study Area | 3.3 | surface sediment | WR-WSI98SD0020 |
| Study Area | 3.3 | surface sediment | WR-WSI98SD0030 |
| Study Area | 3.4 | subsurface sediment | LW2-C061-B |
| Study Area | 3.4 | subsurface sediment | LW2-C061-C |
| Study Area | 3.4 | subsurface sediment | LW2-C061-D |
| Study Area | 3.4 | subsurface sediment | LW2-C061-E |
| Study Area | 3.4 | subsurface sediment | LW2-C062-B |
| Study Area | 3.4 | subsurface sediment | LW2-C062-C |
| Study Area | 3.4 | subsurface sediment | LW2-C062-D |
| Study Area | 3.4 | subsurface sediment | LW2-C064-B |
| Study Area | 3.4 | subsurface sediment | LW2-C064-C |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 3.4 | subsurface sediment | LW2-C064-G |
| Study Area | 3.4 | surface sediment | LW2-C066-A |
| Study Area | 3.4 | subsurface sediment | LW2-C066-B |
| Study Area | 3.4 | subsurface sediment | LW2-C066-C |
| Study Area | 3.4 | subsurface sediment | LW2-C066-F |
| Study Area | 3.4 | surface sediment | LW2-G059 |
| Study Area | 3.4 | surface sediment | LW2-G061 |
| Study Area | 3.4 | surface sediment | LW2-G062 |
| Study Area | 3.4 | surface sediment | LW2-G063 |
| Study Area | 3.4 | surface sediment | LW2-G064 |
| Study Area | 3.4 | surface sediment | LW2-G066 |
| Study Area | 3.4 | subsurface sediment | LW3-C613-B |
| Study Area | 3.4 | subsurface sediment | LW3-C613-C |
| Study Area | 3.4 | subsurface sediment | LW3-C613-E |
| Study Area | 3.4 | surface sediment | LW3-G613 |
| Study Area | 3.4 | surface sediment | LW3-GCA03W-C00 |
| Study Area | 3.4 | surface sediment | LWG0103R002SDS015C00 |
| Study Area | 3.4 | surface sediment | LWG0103R003SDS015C10 |
| Study Area | 3.4 | surface sediment | LWG0103R003SDS015C20 |
| Study Area | 3.4 | surface sediment | LWG0103R003SDS015C31 |
| Study Area | 3.4 | surface sediment | WR-WSI98SD0040 |
| Study Area | 3.4 | surface sediment | WR-WSI98SD0050 |
| Study Area | 3.4 | surface sediment | WR-WSI98SD0060 |
| Study Area | 3.4 | surface sediment | WR-WSI98SD0070 |
| Study Area | 3.4 | subsurface sediment | WR-WSI98SD0070000A |
| Study Area | 3.5 | surface sediment | LW2-C067-A |
| Study Area | 3.5 | subsurface sediment | LW2-C067-B |
| Study Area | 3.5 | subsurface sediment | LW2-C067-D |
| Study Area | 3.5 | subsurface sediment | LW2-C067-E |
| Study Area | 3.5 | surface sediment | LW2-G065 |
| Study Area | 3.5 | surface sediment | LW2-G067 |
| Study Area | 3.5 | surface sediment | LW2-G068 |
| Study Area | 3.5 | surface sediment | LW2-G069 |
| Study Area | 3.5 | surface sediment | LW2-G070 |
| Study Area | 3.5 | surface sediment | LW2-G072 |
| Study Area | 3.5 | subsurface sediment | LW3-C614-B |
| Study Area | 3.5 | subsurface sediment | LW3-C614-C |
| Study Area | 3.5 | subsurface sediment | LW3-C614-D |
| Study Area | 3.5 | surface sediment | LW3-G614 |
| Study Area | 3.5 | surface sediment | LW3-GSP03E |
| Study Area | 3.5 | surface sediment | WR-WSI98SD0080 |
| Study Area | 3.6 | subsurface sediment | LW2-C073-B |
| Study Area | 3.6 | subsurface sediment | LW2-C073-C |
| Study Area | 3.6 | subsurface sediment | LW2-C073-D |
| Study Area | 3.6 | subsurface sediment | LW2-C074-B |
| Study Area | 3.6 | subsurface sediment | LW2-C074-C |
| Study Area | 3.6 | subsurface sediment | LW2-C074-D |
| Study Area | 3.6 | subsurface sediment | LW2-C074-F |
| Study Area | 3.6 | subsurface sediment | LW2-C077-C |
| Study Area | 3.6 | subsurface sediment | LW2-C077-D |
| Study Area | 3.6 | surface sediment | LW2-G071 |
| Study Area | 3.6 | surface sediment | LW2-G073 |
| Study Area | 3.6 | surface sediment | LW2-G074 |
| Study Area | 3.6 | surface sediment | LW2-G075-1 |
| Study Area | 3.6 | surface sediment | LW2-G075-2 |
| Study Area | 3.6 | surface sediment | LW2-G076 |
| Study Area | 3.6 | surface sediment | LW2-G077 |
| Study Area | 3.6 | surface sediment | LW2-G081 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 3.6 | surface sediment | LW2-G095 |
| Study Area | 3.6 | surface sediment | LW3-G784 |
| Study Area | 3.6 | surface sediment | WLCITH98SD02SD02 |
| Study Area | 3.6 | surface sediment | WLR0797WRBC15WRBC15 |
| Study Area | 3.6 | surface sediment | WR-WSI98SD0090 |
| Study Area | 3.6 | surface sediment | WR-WSI98SD0100 |
| Study Area | 3.7 | surface sediment | LW2-C078-A |
| Study Area | 3.7 | subsurface sediment | LW2-C078-B |
| Study Area | 3.7 | subsurface sediment | LW2-C078-C |
| Study Area | 3.7 | subsurface sediment | LW2-C078-D |
| Study Area | 3.7 | surface sediment | LW2-C079-A |
| Study Area | 3.7 | subsurface sediment | LW2-C079-B |
| Study Area | 3.7 | subsurface sediment | LW2-C079-C |
| Study Area | 3.7 | subsurface sediment | LW2-C079-D |
| Study Area | 3.7 | surface sediment | LW2-C080-A |
| Study Area | 3.7 | subsurface sediment | LW2-C080-B |
| Study Area | 3.7 | subsurface sediment | LW2-C080-C |
| Study Area | 3.7 | subsurface sediment | LW2-C080-D |
| Study Area | 3.7 | surface sediment | LW2-C082-A1 |
| Study Area | 3.7 | surface sediment | LW2-C082-A2 |
| Study Area | 3.7 | subsurface sediment | LW2-C082-B1 |
| Study Area | 3.7 | subsurface sediment | LW2-C082-B2 |
| Study Area | 3.7 | subsurface sediment | LW2-C082-C1 |
| Study Area | 3.7 | subsurface sediment | LW2-C082-C2 |
| Study Area | 3.7 | subsurface sediment | LW2-C082-D1 |
| Study Area | 3.7 | subsurface sediment | LW2-C082-D2 |
| Study Area | 3.7 | surface sediment | LW2-C083-A |
| Study Area | 3.7 | subsurface sediment | LW2-C083-B |
| Study Area | 3.7 | subsurface sediment | LW2-C083-C |
| Study Area | 3.7 | subsurface sediment | LW2-C083-D |
| Study Area | 3.7 | surface sediment | LW2-C084-A |
| Study Area | 3.7 | subsurface sediment | LW2-C084-B |
| Study Area | 3.7 | subsurface sediment | LW2-C084-C |
| Study Area | 3.7 | subsurface sediment | LW2-C084-D |
| Study Area | 3.7 | subsurface sediment | LW2-C084-E |
| Study Area | 3.7 | surface sediment | LW2-C087-A |
| Study Area | 3.7 | subsurface sediment | LW2-C087-B |
| Study Area | 3.7 | subsurface sediment | LW2-C087-C |
| Study Area | 3.7 | subsurface sediment | LW2-C087-D |
| Study Area | 3.7 | surface sediment | LW2-C088-A |
| Study Area | 3.7 | subsurface sediment | LW2-C088-B |
| Study Area | 3.7 | subsurface sediment | LW2-C088-C |
| Study Area | 3.7 | surface sediment | LW2-C089-A |
| Study Area | 3.7 | subsurface sediment | LW2-C089-B |
| Study Area | 3.7 | subsurface sediment | LW2-C089-C |
| Study Area | 3.7 | subsurface sediment | LW2-C089-D |
| Study Area | 3.7 | subsurface sediment | LW2-C089-F |
| Study Area | 3.7 | surface sediment | LW2-C090-A |
| Study Area | 3.7 | subsurface sediment | LW2-C090-B |
| Study Area | 3.7 | subsurface sediment | LW2-C090-C |
| Study Area | 3.7 | subsurface sediment | LW2-C090-D |
| Study Area | 3.7 | surface sediment | LW2-C091-A |
| Study Area | 3.7 | subsurface sediment | LW2-C091-B |
| Study Area | 3.7 | subsurface sediment | LW2-C091-C |
| Study Area | 3.7 | subsurface sediment | LW2-C091-D |
| Study Area | 3.7 | surface sediment | LW2-C092-A |
| Study Area | 3.7 | subsurface sediment | LW2-C092-B |
| Study Area | 3.7 | subsurface sediment | LW2-C092-C |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 3.7 | subsurface sediment | LW2-C092-D |
| Study Area | 3.7 | subsurface sediment | LW2-C092-E |
| Study Area | 3.7 | subsurface sediment | LW2-C092-F |
| Study Area | 3.7 | surface sediment | LW2-C094-A |
| Study Area | 3.7 | subsurface sediment | LW2-C094-B |
| Study Area | 3.7 | subsurface sediment | LW2-C094-C |
| Study Area | 3.7 | subsurface sediment | LW2-C094-E |
| Study Area | 3.7 | surface sediment | LW2-C096-A |
| Study Area | 3.7 | subsurface sediment | LW2-C096-B |
| Study Area | 3.7 | subsurface sediment | LW2-C096-C |
| Study Area | 3.7 | subsurface sediment | LW2-C096-D |
| Study Area | 3.7 | subsurface sediment | LW2-C105-B |
| Study Area | 3.7 | subsurface sediment | LW2-C105-C |
| Study Area | 3.7 | subsurface sediment | LW2-C105-F |
| Study Area | 3.7 | surface sediment | LW2-G078 |
| Study Area | 3.7 | surface sediment | LW2-G079 |
| Study Area | 3.7 | surface sediment | LW2-G080 |
| Study Area | 3.7 | surface sediment | LW2-G082 |
| Study Area | 3.7 | surface sediment | LW2-G083 |
| Study Area | 3.7 | surface sediment | LW2-G084 |
| Study Area | 3.7 | surface sediment | LW2-G085 |
| Study Area | 3.7 | surface sediment | LW2-G089 |
| Study Area | 3.7 | surface sediment | LW2-G092 |
| Study Area | 3.7 | surface sediment | LW2-G093 |
| Study Area | 3.7 | surface sediment | LW2-G094 |
| Study Area | 3.7 | surface sediment | LW2-G096 |
| Study Area | 3.7 | surface sediment | LW2-G097 |
| Study Area | 3.7 | surface sediment | LW2-G098 |
| Study Area | 3.7 | surface sediment | LW2-G100 |
| Study Area | 3.7 | surface sediment | LW2-G101 |
| Study Area | 3.7 | surface sediment | LW2-G105 |
| Study Area | 3.7 | surface sediment | LW2-GBT005 |
| Study Area | 3.7 | surface sediment | LW2-GBT006-1 |
| Study Area | 3.7 | surface sediment | LW2-GBT006-2 |
| Study Area | 3.7 | subsurface sediment | LW3-C615-B |
| Study Area | 3.7 | subsurface sediment | LW3-C617-B |
| Study Area | 3.7 | subsurface sediment | LW3-C617-C |
| Study Area | 3.7 | surface sediment | LW3-G616 |
| Study Area | 3.7 | surface sediment | LW3-G617 |
| Study Area | 3.7 | surface sediment | LWG0103R005SDS015C00 |
| Study Area | 3.7 | surface sediment | LWG0103R032SDS015C00 |
| Study Area | 3.7 | surface sediment | LWG0103R034SDS015C00 |
| Study Area | 3.7 | subsurface sediment | LWM-METCS3 |
| Study Area | 3.7 | surface sediment | WLCDRD05PG00606 |
| Study Area | 3.7 | surface sediment | WLCDRD05PG140140Dup |
| Study Area | 3.7 | subsurface sediment | WLCDRD05VC00505 |
| Study Area | 3.7 | subsurface sediment | WLCDRD05VC00606 |
| Study Area | 3.7 | subsurface sediment | WLCITG08SED01-0.5-2.5A |
| Study Area | 3.7 | surface sediment | WLCITG08SED01-0-A |
| Study Area | 3.7 | subsurface sediment | WLCITG08SED01-2.5-5-A |
| Study Area | 3.7 | subsurface sediment | WLCITG08SED01-5-6.5-A |
| Study Area | 3.7 | subsurface sediment | WLCITG08SED02-0.5-2.5A |
| Study Area | 3.7 | surface sediment | WLCITG08SED02-0-A |
| Study Area | 3.7 | subsurface sediment | WLCITG08SED02-2.5-5-A |
| Study Area | 3.7 | subsurface sediment | WLCITG08SED02-5-8.5-A |
| Study Area | 3.7 | surface sediment | WLCITG08SED03-0-A |
| Study Area | 3.7 | surface sediment | WLCITG08SED04-0-A |
| Study Area | 3.7 | surface sediment | WLCITG08SED05-0-A |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 3.7 | surface sediment | WLCITG08SED06-0-A |
| Study Area | 3.7 | surface sediment | WLCITG08SED07-0-A |
| Study Area | 3.7 | surface sediment | WLCITG08SED08-0-A |
| Study Area | 3.7 | surface sediment | WLCITG08SED09-0-A |
| Study Area | 3.7 | subsurface sediment | WLCITG08SED10-0.5-2.5-B |
| Study Area | 3.7 | surface sediment | WLCITG08SED10-0-A |
| Study Area | 3.7 | subsurface sediment | WLCITG08SED11-0.5-2.5-A |
| Study Area | 3.7 | surface sediment | WLCITG08SED11-0-A |
| Study Area | 3.7 | surface sediment | WLCITG08SED12-0-A |
| Study Area | 3.7 | surface sediment | WLCITG08SED13-0-A |
| Study Area | 3.7 | subsurface sediment | WLCITG08SED14-0.5-2-A |
| Study Area | 3.7 | surface sediment | WLCITG08SED14-0-A |
| Study Area | 3.7 | subsurface sediment | WLCITG08SED14-2-3.5-A |
| Study Area | 3.7 | surface sediment | WLCITH98SD03SD03 |
| Study Area | 3.7 | surface sediment | WLCITH98SD11SD11 |
| Study Area | 3.7 | surface sediment | WLCITH98SD12SD12 |
| Study Area | 3.7 | surface sediment | WR-WSI98SD0110 |
| Study Area | 3.7 | surface sediment | WR-WSI98SD0120 |
| Study Area | 3.7 | surface sediment | WR-WSI98SD0130 |
| Study Area | 3.7 | subsurface sediment | WR-WSI98SD0130000A |
| Study Area | 3.8 | surface sediment | LW2-C099-A |
| Study Area | 3.8 | subsurface sediment | LW2-C099-B |
| Study Area | 3.8 | subsurface sediment | LW2-C099-C |
| Study Area | 3.8 | subsurface sediment | LW2-C099-D |
| Study Area | 3.8 | surface sediment | LW2-C103-A |
| Study Area | 3.8 | subsurface sediment | LW2-C103-B |
| Study Area | 3.8 | subsurface sediment | LW2-C103-C |
| Study Area | 3.8 | subsurface sediment | LW2-C103-D |
| Study Area | 3.8 | subsurface sediment | LW2-C103-E |
| Study Area | 3.8 | surface sediment | LW2-G099 |
| Study Area | 3.8 | surface sediment | LW2-G102 |
| Study Area | 3.8 | surface sediment | LW2-G103 |
| Study Area | 3.8 | surface sediment | LW2-G107 |
| Study Area | 3.8 | surface sediment | LW2-G110 |
| Study Area | 3.8 | surface sediment | LW3-G618 |
| Study Area | 3.8 | subsurface sediment | WLCDRD05VC00808 |
| Study Area | 3.9 | surface sediment | LW2-C106-A |
| Study Area | 3.9 | subsurface sediment | LW2-C106-B |
| Study Area | 3.9 | subsurface sediment | LW2-C106-C |
| Study Area | 3.9 | subsurface sediment | LW2-C106-E |
| Study Area | 3.9 | subsurface sediment | LW2-C106-F |
| Study Area | 3.9 | surface sediment | LW2-C109-A |
| Study Area | 3.9 | subsurface sediment | LW2-C109-B |
| Study Area | 3.9 | subsurface sediment | LW2-C109-C |
| Study Area | 3.9 | subsurface sediment | LW2-C109-D |
| Study Area | 3.9 | subsurface sediment | LW2-C109-E |
| Study Area | 3.9 | surface sediment | LW2-G106 |
| Study Area | 3.9 | surface sediment | LW2-G109 |
| Study Area | 3.9 | surface sediment | LW2-G113 |
| Study Area | 3.9 | surface sediment | LW3-G619 |
| Study Area | 3.9 | surface sediment | LWG0103B033SDS015C00 |
| Study Area | 3.9 | subsurface sediment | WLCDRD05VC00707 |
| Study Area | 3.9 | subsurface sediment | WLCDRD05VC01010 |
| Study Area | 3.9 | surface sediment | WR-WSI98SD0150 |
| Study Area | 4 | surface sediment | LW2-C111-A2 |
| Study Area | 4 | subsurface sediment | LW2-C111-B |
| Study Area | 4 | subsurface sediment | LW2-C111-B2 |
| Study Area | 4 | subsurface sediment | LW2-C111-C |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 4 | subsurface sediment | LW2-C111-C2 |
| Study Area | 4 | subsurface sediment | LW2-C111-D2 |
| Study Area | 4 | subsurface sediment | LW2-C111-E2 |
| Study Area | 4 | subsurface sediment | LW2-C111-F |
| Study Area | 4 | surface sediment | LW2-C112-A |
| Study Area | 4 | subsurface sediment | LW2-C112-B |
| Study Area | 4 | subsurface sediment | LW2-C112-C |
| Study Area | 4 | subsurface sediment | LW2-C112-D |
| Study Area | 4 | subsurface sediment | LW2-C121-B |
| Study Area | 4 | subsurface sediment | LW2-C121-C |
| Study Area | 4 | subsurface sediment | LW2-C121-D |
| Study Area | 4 | surface sediment | LW2-C522-A |
| Study Area | 4 | subsurface sediment | LW2-C522-B |
| Study Area | 4 | subsurface sediment | LW2-C522-C |
| Study Area | 4 | subsurface sediment | LW2-C522-E |
| Study Area | 4 | surface sediment | LW2-G111 |
| Study Area | 4 | surface sediment | LW2-G112 |
| Study Area | 4 | surface sediment | LW2-G114 |
| Study Area | 4 | surface sediment | LW2-G115-1 |
| Study Area | 4 | surface sediment | LW2-G115-2 |
| Study Area | 4 | surface sediment | LW2-G116 |
| Study Area | 4 | surface sediment | LW2-G117 |
| Study Area | 4 | surface sediment | LW2-G121 |
| Study Area | 4 | subsurface sediment | LW3-C621-B |
| Study Area | 4 | subsurface sediment | LW3-C621-C |
| Study Area | 4 | surface sediment | LW3-G620 |
| Study Area | 4 | surface sediment | LW3-G621 |
| Study Area | 4 | surface sediment | LW3-G622 |
| Study Area | 4 | surface sediment | LW3-GCA04W-C00 |
| Study Area | 4 | surface sediment | WLCDRD05PG01212 |
| Study Area | 4 | subsurface sediment | WLCDRD05VC01212 |
| Study Area | 4 | surface sediment | WLCGXV99S1S1_10 |
| Study Area | 4 | subsurface sediment | WLCGXV99S1S1_30 |
| Study Area | 4 | surface sediment | WLCGXV99S4S4_10 |
| Study Area | 4 | subsurface sediment | WLCGXV99S4S4_30 |
| Study Area | 4 | surface sediment | WLR0797C1617WRBC16 |
| Study Area | 4 | surface sediment | WR-WSI98SD0170 |
| Study Area | 4 | subsurface sediment | WR-WSI98SD0170000A |
| Study Area | 4 | surface sediment | WR-WSI98SD0180 |
| Study Area | 4.1 | subsurface sediment | LW2-C122-B |
| Study Area | 4.1 | subsurface sediment | LW2-C122-C |
| Study Area | 4.1 | surface sediment | LW2-G118 |
| Study Area | 4.1 | surface sediment | LW2-G119 |
| Study Area | 4.1 | surface sediment | LW2-G120 |
| Study Area | 4.1 | surface sediment | LW2-G122 |
| Study Area | 4.1 | surface sediment | LW2-G123 |
| Study Area | 4.1 | surface sediment | LW2-G124 |
| Study Area | 4.1 | surface sediment | LW2-G126 |
| Study Area | 4.1 | surface sediment | LWG0103R004SDS015C11 |
| Study Area | 4.1 | surface sediment | LWG0103R004SDS015C20 |
| Study Area | 4.1 | surface sediment | LWG0103R004SDS015C30 |
| Study Area | 4.1 | surface sediment | LWG2-PG-KM8A |
| Study Area | 4.1 | surface sediment | LWG2-PG-R2KM2 |
| Study Area | 4.1 | subsurface sediment | LWM-METCS6 |
| Study Area | 4.1 | surface sediment | WLCDRD05PG01414 |
| Study Area | 4.1 | subsurface sediment | WLCDRD05VC01414 |
| Study Area | 4.1 | surface sediment | WLCGXV99S2S2_10 |
| Study Area | 4.1 | subsurface sediment | WLCGXV99S2S2_30 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 4.1 | subsurface sediment | WLCT0I98B401C1B401C1 |
| Study Area | 4.1 | surface sediment | WLCT0I98GRAB01GRAB01 |
| Study Area | 4.1 | surface sediment | WLCT4C04UP01UP0101 |
| Study Area | 4.1 | surface sediment | WLCT4C04VC01VC0101 |
| Study Area | 4.1 | subsurface sediment | WLCT4C04VC01VC0113 |
| Study Area | 4.1 | subsurface sediment | WLCT4C04VC01VC0135 |
| Study Area | 4.1 | surface sediment | WR-WSI98SD0160 |
| Study Area | 4.1 | surface sediment | WR-WSI98SD0190 |
| Study Area | 4.1 | surface sediment | WR-WSI98SD0200 |
| Study Area | 4.2 | subsurface sediment | LW2-C127-B |
| Study Area | 4.2 | subsurface sediment | LW2-C127-C |
| Study Area | 4.2 | subsurface sediment | LW2-C127-D |
| Study Area | 4.2 | subsurface sediment | LW2-C127-F |
| Study Area | 4.2 | surface sediment | LW2-G125 |
| Study Area | 4.2 | surface sediment | LW2-G127 |
| Study Area | 4.2 | surface sediment | LW2-GBT007 |
| Study Area | 4.2 | surface sediment | LW3-G623 |
| Study Area | 4.2 | surface sediment | WLCDRD05PG01616 |
| Study Area | 4.2 | subsurface sediment | WLCDRD05VC01616 |
| Study Area | 4.2 | surface sediment | WLCGXB02SED03SED03 |
| Study Area | 4.2 | surface sediment | WLCGXV99S3S3_10 |
| Study Area | 4.2 | subsurface sediment | WLCGXV99S3S3_30 |
| Study Area | 4.2 | subsurface sediment | WLCGXV99S3S3_30R |
| Study Area | 4.2 | subsurface sediment | WLCT0I98B401C2B401C2 |
| Study Area | 4.2 | subsurface sediment | WLCT4C04PS03031113 |
| Study Area | 4.2 | subsurface sediment | WLCT4C04PS03031517 |
| Study Area | 4.2 | subsurface sediment | WLCT4C04PS04041012 |
| Study Area | 4.2 | subsurface sediment | WLCT4C04PS04041517 |
| Study Area | 4.2 | surface sediment | WLCT4C04UP02UP0201 |
| Study Area | 4.2 | surface sediment | WLCT4C04VC02VC0201 |
| Study Area | 4.2 | subsurface sediment | WLCT4C04VC02VC0213 |
| Study Area | 4.2 | subsurface sediment | WLCT4C04VC02VC0235 |
| Study Area | 4.2 | subsurface sediment | WLCT4C04VC02VC0257 |
| Study Area | 4.2 | subsurface sediment | WLCT4C04VC02VC0279 |
| Study Area | 4.2 | surface sediment | WLCT4C04VC03VC0301 |
| Study Area | 4.2 | subsurface sediment | WLCT4C04VC03VC0313 |
| Study Area | 4.2 | subsurface sediment | WLCT4C04VC03VC0335 |
| Study Area | 4.2 | subsurface sediment | WLCT4C04VC03VC0357 |
| Study Area | 4.2 | surface sediment | WLCT4C04VC04VC0401 |
| Study Area | 4.2 | subsurface sediment | WLCT4C04VC04VC0413 |
| Study Area | 4.2 | subsurface sediment | WLCT4C04VC04VC0435 |
| Study Area | 4.2 | subsurface sediment | WLCT4C04VC04VC0457 |
| Study Area | 4.2 | subsurface sediment | WLCT4C04VC04VC0479 |
| Study Area | 4.2 | surface sediment | WR-WSI98SD0240 |
| Study Area | 4.3 | surface sediment | LW2-B009 |
| Study Area | 4.3 | subsurface sediment | LW2-C130-B |
| Study Area | 4.3 | subsurface sediment | LW2-C130-C |
| Study Area | 4.3 | subsurface sediment | LW2-C130-D |
| Study Area | 4.3 | subsurface sediment | LW2-C130-E |
| Study Area | 4.3 | subsurface sediment | LW2-C130-F |
| Study Area | 4.3 | surface sediment | LW2-G128 |
| Study Area | 4.3 | surface sediment | LW2-G129 |
| Study Area | 4.3 | surface sediment | LW2-G130 |
| Study Area | 4.3 | surface sediment | LW3-G624 |
| Study Area | 4.3 | surface sediment | LW3-G625 |
| Study Area | 4.3 | surface sediment | LWG0104B024SDS015C00 |
| Study Area | 4.3 | surface sediment | WLCASF97S030W4137 |
| Study Area | 4.3 | surface sediment | WLCDRD05PG00909 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 4.3 | surface sediment | WLCDRD05PG01818 |
| Study Area | 4.3 | subsurface sediment | WLCDRD05VC00909 |
| Study Area | 4.3 | subsurface sediment | WLCDRD05VC01818 |
| Study Area | 4.3 | surface sediment | WLCOFJ02240224020 |
| Study Area | 4.3 | surface sediment | WLCOFJ02240324030 |
| Study Area | 4.3 | surface sediment | WLCOFJ02240424040 |
| Study Area | 4.3 | surface sediment | WLCOFJ02240524050 |
| Study Area | 4.3 | surface sediment | WLCOFJ0252C0452C040 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04PS12121012 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04PS12121517 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04PS17171012 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04PS17171517 |
| Study Area | 4.3 | surface sediment | WLCT4C04UP03UP03 |
| Study Area | 4.3 | surface sediment | WLCT4C04UP04UP04 |
| Study Area | 4.3 | surface sediment | WLCT4C04UP05UP05 |
| Study Area | 4.3 | surface sediment | WLCT4C04UP06UP0601 |
| Study Area | 4.3 | surface sediment | WLCT4C04VC05VC0501 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC05VC0513 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC05VC0535 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC05VC0557 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC05VC0579 |
| Study Area | 4.3 | surface sediment | WLCT4C04VC06VC0601 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC06VC0613 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC06VC0635 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC06VC0657 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC06VC0679 |
| Study Area | 4.3 | surface sediment | WLCT4C04VC07VC0701 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC07VC0713 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC07VC0735 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC07VC0757 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC07VC0779 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC08C08911 |
| Study Area | 4.3 | surface sediment | WLCT4C04VC08VC0801 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC08VC0813 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC08VC0835 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC08VC0857 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC08VC0879 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC09C09911 |
| Study Area | 4.3 | surface sediment | WLCT4C04VC09VC0901 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC09VC0913 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC09VC0935 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC09VC0957 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC09VC0979 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC10101113 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC10C10911 |
| Study Area | 4.3 | surface sediment | WLCT4C04VC10VC1001 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC10VC1013 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC10VC1035 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC10VC1057 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC10VC1079 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC11C11911 |
| Study Area | 4.3 | surface sediment | WLCT4C04VC11VC1101 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC11VC1113 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC11VC1135 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC11VC1157 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC11VC1179 |
| Study Area | 4.3 | surface sediment | WLCT4C04VC12VC1201 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC12VC1213 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC12VC1235 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC12VC1257 |
| Study Area | 4.3 | surface sediment | WLCT4C04VC13VC1301 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC13VC1313 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC13VC1335 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC13VC1357 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC13VC1379 |
| Study Area | 4.3 | surface sediment | WLCT4C04VC14VC1401 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC14VC1413 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC14VC1435 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC14VC1457 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC14VC1479 |
| Study Area | 4.3 | surface sediment | WLCT4C04VC17VC1701 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC17VC1713 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC17VC1735 |
| Study Area | 4.3 | subsurface sediment | WLCT4C04VC17VC1757 |
| Study Area | 4.3 | subsurface sediment | WLR0797WRGC18RGC18A |
| Study Area | 4.3 | surface sediment | WR-WSI98SD0210000CC |
| Study Area | 4.3 | surface sediment | WR-WSI98SD0220 |
| Study Area | 4.4 | surface sediment | LW2-B010 |
| Study Area | 4.4 | surface sediment | LW2-B011 |
| Study Area | 4.4 | subsurface sediment | LW2-C133-B |
| Study Area | 4.4 | subsurface sediment | LW2-C133-C |
| Study Area | 4.4 | subsurface sediment | LW2-C133-D |
| Study Area | 4.4 | surface sediment | LW2-G131 |
| Study Area | 4.4 | surface sediment | LW2-G132 |
| Study Area | 4.4 | surface sediment | LW2-G133 |
| Study Area | 4.4 | surface sediment | LW2-GBT008 |
| Study Area | 4.4 | surface sediment | LW2-GBT009 |
| Study Area | 4.4 | subsurface sediment | LW3-C626-B |
| Study Area | 4.4 | subsurface sediment | LW3-C626-C |
| Study Area | 4.4 | subsurface sediment | LW3-C626-D |
| Study Area | 4.4 | subsurface sediment | LW3-C626-E |
| Study Area | 4.4 | surface sediment | LW3-G626 |
| Study Area | 4.4 | surface sediment | LW3-G627-1 |
| Study Area | 4.4 | surface sediment | LW3-G627-2 |
| Study Area | 4.4 | surface sediment | LW3-G628 |
| Study Area | 4.4 | surface sediment | LWG0104R003SDS015C00 |
| Study Area | 4.4 | surface sediment | WLCASF97S029W4138 |
| Study Area | 4.4 | surface sediment | WLCDRD05PG01111 |
| Study Area | 4.4 | subsurface sediment | WLCDRD05VC01111 |
| Study Area | 4.4 | subsurface sediment | WLCDRD05VC02020 |
| Study Area | 4.4 | surface sediment | WLCOFJ0252C0152C010 |
| Study Area | 4.4 | surface sediment | WLCOFJ0252C0252C020 |
| Study Area | 4.4 | surface sediment | WLCOFJ0252C0352C030 |
| Study Area | 4.4 | surface sediment | WLCOFJ0252C0552C050 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04PS20201517 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04PS20202022 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04PS21211517 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04PS21212022 |
| Study Area | 4.4 | surface sediment | WLCT4C04UP07UP0701 |
| Study Area | 4.4 | surface sediment | WLCT4C04UP08UP0801 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04VC15C15911 |
| Study Area | 4.4 | surface sediment | WLCT4C04VC15VC1501 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04VC15VC1513 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04VC15VC1535 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04VC15VC1557 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 4.4 | subsurface sediment | WLCT4C04VC15VC1579 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04VC16C16911 |
| Study Area | 4.4 | surface sediment | WLCT4C04VC16VC1601 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04VC16VC1613 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04VC16VC1635 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04VC16VC1657 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04VC16VC1679 |
| Study Area | 4.4 | surface sediment | WLCT4C04VC18VC1801 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04VC18VC1813 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04VC18VC1835 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04VC18VC1857 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04VC18VC1879 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04VC20201113 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04VC20C20911 |
| Study Area | 4.4 | surface sediment | WLCT4C04VC20VC2001 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04VC20VC2013 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04VC20VC2035 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04VC20VC2057 |
| Study Area | 4.4 | subsurface sediment | WLCT4C04VC20VC2079 |
| Study Area | 4.4 | surface sediment | WLCT4G06T4WB02 |
| Study Area | 4.4 | surface sediment | WLCT4G06T4WB03 |
| Study Area | 4.4 | surface sediment | WLCT4J98HCS43HCS43 |
| Study Area | 4.4 | surface sediment | WR-WSI98SD0230 |
| Study Area | 4.4 | subsurface sediment | WR-WSI98SD0230000A |
| Study Area | 4.4 | surface sediment | WR-WSI98SD0250 |
| Study Area | 4.4 | surface sediment | WR-WSI98SD0260 |
| Study Area | 4.4 | surface sediment | WR-WSI98SD0280 |
| Study Area | 4.5 | subsurface sediment | LW2-C135-B |
| Study Area | 4.5 | subsurface sediment | LW2-C135-C |
| Study Area | 4.5 | subsurface sediment | LW2-C135-D |
| Study Area | 4.5 | subsurface sediment | LW2-C136-B |
| Study Area | 4.5 | subsurface sediment | LW2-C136-C |
| Study Area | 4.5 | subsurface sediment | LW2-C136-D |
| Study Area | 4.5 | surface sediment | LW2-G134 |
| Study Area | 4.5 | surface sediment | LW2-G135 |
| Study Area | 4.5 | surface sediment | LW2-G136 |
| Study Area | 4.5 | subsurface sediment | LW3-C630-B |
| Study Area | 4.5 | subsurface sediment | LW3-C630-C |
| Study Area | 4.5 | surface sediment | LW3-G629 |
| Study Area | 4.5 | surface sediment | LW3-G630 |
| Study Area | 4.5 | surface sediment | LW3-GSP04W |
| Study Area | 4.5 | surface sediment | WLCDRD05PG02222 |
| Study Area | 4.5 | subsurface sediment | WLCDRD05VC02222 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04PS22221517 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04PS22222022 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04UP09UP0902 |
| Study Area | 4.5 | surface sediment | WLCT4C04UP10UP1001 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04UP10UP1002 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC19C19911 |
| Study Area | 4.5 | surface sediment | WLCT4C04VC19VC1901 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC19VC1913 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC19VC1935 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC19VC1957 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC19VC1979 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC21211113 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC21C21911 |
| Study Area | 4.5 | surface sediment | WLCT4C04VC21VC2101 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC21VC2113 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC21VC2135 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC21VC2157 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC21VC2179 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC22C22911 |
| Study Area | 4.5 | surface sediment | WLCT4C04VC22VC2201 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC22VC2213 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC22VC2235 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC22VC2257 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC22VC2279 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC25C25911 |
| Study Area | 4.5 | surface sediment | WLCT4C04VC25VC2501 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC25VC2513 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC25VC2535 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC25VC2557 |
| Study Area | 4.5 | subsurface sediment | WLCT4C04VC25VC2579 |
| Study Area | 4.5 | surface sediment | WLCT4G06T4WB01 |
| Study Area | 4.5 | surface sediment | WLCT4G06T4WB04 |
| Study Area | 4.5 | surface sediment | WLCT4J98HCS32HCS32 |
| Study Area | 4.5 | subsurface sediment | WLCT4J98HCS32VC32S1 |
| Study Area | 4.5 | subsurface sediment | WLCT4J98HCS32VC32S2 |
| Study Area | 4.5 | surface sediment | WLCT4J98HCS36HCS36 |
| Study Area | 4.5 | surface sediment | WLCT4J98HCS41HCS41 |
| Study Area | 4.5 | surface sediment | WLCT4J98HCS42HCS42 |
| Study Area | 4.5 | subsurface sediment | WLCT4J98HCS42VC42S1 |
| Study Area | 4.5 | subsurface sediment | WLCT4J98HCS42VC42S2 |
| Study Area | 4.5 | surface sediment | WLCT4J98HCS44HCS44 |
| Study Area | 4.5 | surface sediment | WR-WSI98SD0270 |
| Study Area | 4.5 | surface sediment | WR-WSI98SD0300 |
| Study Area | 4.6 | surface sediment | LW2-B012 |
| Study Area | 4.6 | surface sediment | LW2-C138-A |
| Study Area | 4.6 | subsurface sediment | LW2-C138-B |
| Study Area | 4.6 | subsurface sediment | LW2-C138-C |
| Study Area | 4.6 | subsurface sediment | LW2-C138-D |
| Study Area | 4.6 | subsurface sediment | LW2-C139-B |
| Study Area | 4.6 | subsurface sediment | LW2-C139-C |
| Study Area | 4.6 | subsurface sediment | LW2-C139-D |
| Study Area | 4.6 | subsurface sediment | LW2-C142-B |
| Study Area | 4.6 | subsurface sediment | LW2-C142-C |
| Study Area | 4.6 | surface sediment | LW2-G137 |
| Study Area | 4.6 | surface sediment | LW2-G138 |
| Study Area | 4.6 | surface sediment | LW2-G139 |
| Study Area | 4.6 | surface sediment | LW2-G140-1 |
| Study Area | 4.6 | surface sediment | LW2-G140-2 |
| Study Area | 4.6 | surface sediment | LW2-GBT011 |
| Study Area | 4.6 | surface sediment | LW3-G631 |
| Study Area | 4.6 | surface sediment | LW3-G632 |
| Study Area | 4.6 | surface sediment | LWG0104R004SDS015C00 |
| Study Area | 4.6 | surface sediment | NA-1A-0005 |
| Study Area | 4.6 | subsurface sediment | NA-1A-0508 |
| Study Area | 4.6 | subsurface sediment | NA-1A-0812 |
| Study Area | 4.6 | subsurface sediment | NA-1A-1216 |
| Study Area | 4.6 | subsurface sediment | NA-1A-1620 |
| Study Area | 4.6 | subsurface sediment | NA-1A-2024 |
| Study Area | 4.6 | subsurface sediment | NA-1A-2428 |
| Study Area | 4.6 | subsurface sediment | NA-1A-2832 |
| Study Area | 4.6 | subsurface sediment | NA-1A-3238 |
| Study Area | 4.6 | subsurface sediment | NA-1A-3844 |
| Study Area | 4.6 | subsurface sediment | NA-1A-4854 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 4.6 | subsurface sediment | NA-1A-5864 |
| Study Area | 4.6 | subsurface sediment | NA-1A-6874 |
| Study Area | 4.6 | subsurface sediment | NA-1A-7884 |
| Study Area | 4.6 | subsurface sediment | NA-1A-8894 |
| Study Area | 4.6 | subsurface sediment | NA-1B-0046 |
| Study Area | 4.6 | subsurface sediment | NA-1B-4668 |
| Study Area | 4.6 | subsurface sediment | NA-1B-6894 |
| Study Area | 4.6 | surface sediment | WLCDRD05PG02424 |
| Study Area | 4.6 | subsurface sediment | WLCDRD05VC02424 |
| Study Area | 4.6 | surface sediment | WLCT0I98GRAB02GRAB02 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04PS28281012 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04PS28281517 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04PS32321012 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04PS32321517 |
| Study Area | 4.6 | surface sediment | WLCT4C04UP12UP1201 |
| Study Area | 4.6 | surface sediment | WLCT4C04UP13UP1301 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC23C23911 |
| Study Area | 4.6 | surface sediment | WLCT4C04VC23VC2301 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC23VC2313 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC23VC2335 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC23VC2357 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC23VC2379 |
| Study Area | 4.6 | surface sediment | WLCT4C04VC26V2601 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC26V2613 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC26VC2635 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC26VC2657 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC26VC2679 |
| Study Area | 4.6 | surface sediment | WLCT4C04VC27VC2701 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC27VC2713 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC27VC2735 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC27VC2757 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC27VC2779 |
| Study Area | 4.6 | surface sediment | WLCT4C04VC28VC2801 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC28VC2813 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC28VC2835 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC28VC2857 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC28VC2879 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC29C29911 |
| Study Area | 4.6 | surface sediment | WLCT4C04VC29VC2901 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC29VC2913 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC29VC2935 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC29VC2957 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC29VC2979 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC30C30911 |
| Study Area | 4.6 | surface sediment | WLCT4C04VC30VC3001 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC30VC3013 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC30VC3035 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC30VC3057 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC30VC3079 |
| Study Area | 4.6 | surface sediment | WLCT4C04VC32VC3201 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC32VC3213 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC32VC3235 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC32VC3257 |
| Study Area | 4.6 | subsurface sediment | WLCT4C04VC32VC3279 |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4B41106A |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4B41106B |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4B41106C |
| Study Area | 4.6 | surface sediment | WLCT4G06T4B41403A |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4B41403B |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4B41403C |
| Study Area | 4.6 | surface sediment | WLCT4G06T4PI09A |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4PI09B |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S301D |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S301E |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S301F |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S301G |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S301H |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S301J |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S301K |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S302C |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S302D |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S302E |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S302F |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S302G |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S302H |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S302J |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S302K |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S303B |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S303C |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S303D |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S303E |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S303F |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S303G |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S305E |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S305F |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S305G |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S305H |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S305J |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S305K |
| Study Area | 4.6 | surface sediment | WLCT4G06T4S306A |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S306B |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S307B |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S307C |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S307D |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S307E |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S307F |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S308B |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S308C |
| Study Area | 4.6 | subsurface sediment | WLCT4G06T4S308D |
| Study Area | 4.6 | surface sediment | WLCT4J98HCS06HCS06 |
| Study Area | 4.6 | surface sediment | WLCT4J98HCS07HCS07 |
| Study Area | 4.6 | subsurface sediment | WLCT4J98HCS07VC07S1 |
| Study Area | 4.6 | subsurface sediment | WLCT4J98HCS07VC07S2 |
| Study Area | 4.6 | surface sediment | WLCT4J98HCS08HCS08 |
| Study Area | 4.6 | surface sediment | WLCT4J98HCS11HCS11 |
| Study Area | 4.6 | subsurface sediment | WLCT4J98HCS11VC11S1 |
| Study Area | 4.6 | subsurface sediment | WLCT4J98HCS11VC11S2 |
| Study Area | 4.6 | surface sediment | WLCT4J98HCS12HCS12 |
| Study Area | 4.6 | surface sediment | WLCT4J98HCS13HCS13 |
| Study Area | 4.6 | subsurface sediment | WLCT4J98HCS13VC13S1 |
| Study Area | 4.6 | subsurface sediment | WLCT4J98HCS13VC13S2 |
| Study Area | 4.6 | surface sediment | WLCT4J98HCS14HCS14 |
| Study Area | 4.6 | surface sediment | WLCT4J98HCS15HCS15 |
| Study Area | 4.6 | surface sediment | WLCT4J98HCS16HCS16 |
| Study Area | 4.6 | surface sediment | WLCT4J98HCS17HCS17 |
| Study Area | 4.6 | surface sediment | WLCT4J98HCS20HCS20 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 4.6 | surface sediment | WLCT4J98HCS21HCS21 |
| Study Area | 4.6 | surface sediment | WLCT4J98HCS22HCS22 |
| Study Area | 4.6 | subsurface sediment | WLCT4J98HCS22VC22S1 |
| Study Area | 4.6 | subsurface sediment | WLCT4J98HCS22VC22S2 |
| Study Area | 4.6 | surface sediment | WLCT4J98HCS23HCS23 |
| Study Area | 4.6 | surface sediment | WLCT4J98HCS25HCS25 |
| Study Area | 4.6 | surface sediment | WLCT4J98HCS26HCS26 |
| Study Area | 4.6 | surface sediment | WLCT4J98HCS27HCS27 |
| Study Area | 4.6 | subsurface sediment | WLCT4J98HCS27VC27S1 |
| Study Area | 4.6 | subsurface sediment | WLCT4J98HCS27VC27S2 |
| Study Area | 4.6 | surface sediment | WLCT4J98HCS28HCS28 |
| Study Area | 4.6 | surface sediment | WLCT4J98HCS29HCS29 |
| Study Area | 4.6 | surface sediment | WLCT4J98HCS33HCS33 |
| Study Area | 4.6 | surface sediment | WLCT4J98HCS34HCS34 |
| Study Area | 4.6 | surface sediment | WLCT4L08T4IM01SS081230 |
| Study Area | 4.6 | surface sediment | WLCT4L08T4IM02SS081230 |
| Study Area | 4.6 | surface sediment | WLCT4L08T4IM03SS081230 |
| Study Area | 4.6 | surface sediment | WLCT4L08T4IM04SS081230 |
| Study Area | 4.6 | surface sediment | WLCT4L08T4IM05SS081230 |
| Study Area | 4.6 | surface sediment | WLCT4L08T4IM06SS081230 |
| Study Area | 4.6 | surface sediment | WLCT4L08T4IM07SS081230 |
| Study Area | 4.6 | surface sediment | WLCT4L08T4IM08SS081230 |
| Study Area | 4.6 | surface sediment | WLCT4L08T4IM09SS081230 |
| Study Area | 4.6 | surface sediment | WLCT4L08T4IM10SS081230 |
| Study Area | 4.6 | surface sediment | WLCT4L08T4IM11SS081229 |
| Study Area | 4.6 | surface sediment | WLCT4L08T4IM12SS081229 |
| Study Area | 4.6 | surface sediment | WLCT4L08T4IM13SS081229 |
| Study Area | 4.6 | surface sediment | WLCT4L08T4IM14SS081229 |
| Study Area | 4.6 | surface sediment | WLCT4L08T4IM414SS081229 |
| Study Area | 4.6 | surface sediment | WLCT4L08T4IMS3ACSS081230 |
| Study Area | 4.6 | surface sediment | WLCT4L08T4IMS3ADSS081230 |
| Study Area | 4.6 | surface sediment | WLCT4L08T4IMS3CSS081229 |
| Study Area | 4.6 | surface sediment | WR-WSI98SD0310 |
| Study Area | 4.6 | subsurface sediment | WR-WSI98SD0310000A |
| Study Area | 4.7 | surface sediment | LW2-C144-A |
| Study Area | 4.7 | subsurface sediment | LW2-C144-B |
| Study Area | 4.7 | subsurface sediment | LW2-C144-C |
| Study Area | 4.7 | subsurface sediment | LW2-C144-D |
| Study Area | 4.7 | subsurface sediment | LW2-C144-E |
| Study Area | 4.7 | subsurface sediment | LW2-C147-B |
| Study Area | 4.7 | subsurface sediment | LW2-C147-C |
| Study Area | 4.7 | subsurface sediment | LW2-C147-D |
| Study Area | 4.7 | subsurface sediment | LW2-C147-E |
| Study Area | 4.7 | surface sediment | LW2-G141 |
| Study Area | 4.7 | surface sediment | LW2-G142 |
| Study Area | 4.7 | surface sediment | LW2-G143 |
| Study Area | 4.7 | surface sediment | LW2-G144 |
| Study Area | 4.7 | surface sediment | LW2-G145 |
| Study Area | 4.7 | surface sediment | LW2-G147 |
| Study Area | 4.7 | surface sediment | LW2-GBT010 |
| Study Area | 4.7 | surface sediment | LW3-G633 |
| Study Area | 4.7 | surface sediment | LWG0104B023SDS015C00 |
| Study Area | 4.7 | surface sediment | LWG2-PG-AR2A |
| Study Area | 4.7 | surface sediment | WLCDRD05PG01313 |
| Study Area | 4.7 | surface sediment | WLCDRD05PG02626 |
| Study Area | 4.7 | subsurface sediment | WLCDRD05VC01313 |
| Study Area | 4.7 | subsurface sediment | WLCDRD05VC02626 |
| Study Area | 4.7 | subsurface sediment | WLCT4C04PS31.522.5 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 4.7 | subsurface sediment | WLCT4C04PS31311517 |
| Study Area | 4.7 | surface sediment | WLCT4C04UP14UP14 |
| Study Area | 4.7 | subsurface sediment | WLCT4C04VC31C31911 |
| Study Area | 4.7 | surface sediment | WLCT4C04VC31VC3101 |
| Study Area | 4.7 | subsurface sediment | WLCT4C04VC31VC3113 |
| Study Area | 4.7 | subsurface sediment | WLCT4C04VC31VC3135 |
| Study Area | 4.7 | subsurface sediment | WLCT4C04VC31VC3157 |
| Study Area | 4.7 | subsurface sediment | WLCT4C04VC31VC3179 |
| Study Area | 4.7 | surface sediment | WLCT4G06T4B41402A |
| Study Area | 4.7 | subsurface sediment | WLCT4G06T4B41402B |
| Study Area | 4.7 | subsurface sediment | WLCT4G06T4B41402C |
| Study Area | 4.7 | subsurface sediment | WLCT4G06T4B41402D |
| Study Area | 4.7 | subsurface sediment | WLCT4G06T4B41402E |
| Study Area | 4.7 | subsurface sediment | WLCT4G06T4B41402F |
| Study Area | 4.7 | surface sediment | WLCT4G06T4B41404A |
| Study Area | 4.7 | subsurface sediment | WLCT4G06T4B41404B |
| Study Area | 4.7 | subsurface sediment | WLCT4G06T4B41404C |
| Study Area | 4.7 | subsurface sediment | WLCT4G06T4B41404D |
| Study Area | 4.7 | subsurface sediment | WLCT4G06T4B41404E |
| Study Area | 4.7 | subsurface sediment | WLCT4G06T4B41404F |
| Study Area | 4.7 | surface sediment | WLCT4J98HCS04HCS04 |
| Study Area | 4.7 | surface sediment | WLCT4J98HCS05HCS05 |
| Study Area | 4.7 | surface sediment | WLCT4J98HCS39HCS39 |
| Study Area | 4.7 | subsurface sediment | WLCT4J98HCS39VC39S1 |
| Study Area | 4.7 | subsurface sediment | WLCT4J98HCS39VC39S2 |
| Study Area | 4.7 | surface sediment | WLCT4J98HCS40HCS40 |
| Study Area | 4.7 | surface sediment | WR-WSI98SD0330 |
| Study Area | 4.7 | surface sediment | WR-WSI98SD0340 |
| Study Area | 4.7 | surface sediment | WR-WSI98SD0350 |
| Study Area | 4.7 | subsurface sediment | WR-WSI98SD0350000A |
| Study Area | 4.8 | subsurface sediment | LW2-C148-B |
| Study Area | 4.8 | subsurface sediment | LW2-C148-C |
| Study Area | 4.8 | subsurface sediment | LW2-C148-D |
| Study Area | 4.8 | subsurface sediment | LW2-C148-E |
| Study Area | 4.8 | subsurface sediment | LW2-C152-B |
| Study Area | 4.8 | subsurface sediment | LW2-C152-C |
| Study Area | 4.8 | subsurface sediment | LW2-C152-E |
| Study Area | 4.8 | subsurface sediment | LW2-C156-B |
| Study Area | 4.8 | subsurface sediment | LW2-C156-C |
| Study Area | 4.8 | subsurface sediment | LW2-C156-F |
| Study Area | 4.8 | subsurface sediment | LW2-C157-B |
| Study Area | 4.8 | subsurface sediment | LW2-C157-C |
| Study Area | 4.8 | subsurface sediment | LW2-C160-B |
| Study Area | 4.8 | subsurface sediment | LW2-C160-C |
| Study Area | 4.8 | surface sediment | LW2-G146 |
| Study Area | 4.8 | surface sediment | LW2-G148 |
| Study Area | 4.8 | surface sediment | LW2-G150 |
| Study Area | 4.8 | surface sediment | LW2-G152 |
| Study Area | 4.8 | surface sediment | LW2-G153 |
| Study Area | 4.8 | surface sediment | LW2-G155 |
| Study Area | 4.8 | surface sediment | LW2-G156 |
| Study Area | 4.8 | surface sediment | LW2-GBT012 |
| Study Area | 4.8 | subsurface sediment | LW3-C634-B |
| Study Area | 4.8 | subsurface sediment | LW3-C634-C |
| Study Area | 4.8 | surface sediment | LW3-G634 |
| Study Area | 4.8 | surface sediment | LWG2-PG-R2AR1 |
| Study Area | 4.8 | surface sediment | LWG2-PG-R2AR1-2 |
| Study Area | 4.8 | surface sediment | LWG2-PG-R2AR2 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 4.8 | surface sediment | WLCASF97S028W4139 |
| Study Area | 4.8 | subsurface sediment | WLCBPE06SGP061012 |
| Study Area | 4.8 | subsurface sediment | WLCBPE06SGP061415 |
| Study Area | 4.8 | subsurface sediment | WLCBPE06SGP0624 |
| Study Area | 4.8 | subsurface sediment | WLCBPE06SGP1357 |
| Study Area | 4.8 | subsurface sediment | WLCBPE06SGP13810 |
| Study Area | 4.8 | surface sediment | WLCBPE06SGP1601 |
| Study Area | 4.8 | subsurface sediment | WLCBPE06SGP1624 |
| Study Area | 4.8 | surface sediment | WLCBPE06SS01 |
| Study Area | 4.8 | surface sediment | WLCBPE06SS02 |
| Study Area | 4.8 | surface sediment | WLCBPE06SS03 |
| Study Area | 4.8 | surface sediment | WLCBPE06SS04 |
| Study Area | 4.8 | surface sediment | WLCBPE06SS29 |
| Study Area | 4.8 | surface sediment | WLCBPE06SS30 |
| Study Area | 4.8 | surface sediment | WLCBPE06SS31 |
| Study Area | 4.8 | surface sediment | WLCBPE06SS32 |
| Study Area | 4.8 | surface sediment | WLCBPE06SS33 |
| Study Area | 4.8 | surface sediment | WLCBPE06SS34 |
| Study Area | 4.8 | surface sediment | WLCBPE06SS35 |
| Study Area | 4.8 | surface sediment | WLCBPE06SS36 |
| Study Area | 4.8 | surface sediment | WLCBPE06SS37 |
| Study Area | 4.8 | surface sediment | WLCBPE06SS38 |
| Study Area | 4.8 | surface sediment | WLCBPE06SS46 |
| Study Area | 4.8 | surface sediment | WLCBPE06SS47 |
| Study Area | 4.8 | surface sediment | WLCBPE06SS48 |
| Study Area | 4.8 | surface sediment | WLCBPE06SS49 |
| Study Area | 4.8 | surface sediment | WLCBPE06SS50 |
| Study Area | 4.8 | subsurface sediment | WLCDRD05VC02828 |
| Study Area | 4.8 | surface sediment | WR-WSI98SD0360 |
| Study Area | 4.8 | surface sediment | WR-WSI98SD0370 |
| Study Area | 4.8 | surface sediment | WR-WSI98SD0380 |
| Study Area | 4.8 | surface sediment | WR-WSI98SD0390 |
| Study Area | 4.9 | surface sediment | LW2-C158-A |
| Study Area | 4.9 | subsurface sediment | LW2-C158-B |
| Study Area | 4.9 | subsurface sediment | LW2-C158-C |
| Study Area | 4.9 | subsurface sediment | LW2-C158-D |
| Study Area | 4.9 | subsurface sediment | LW2-C158-E |
| Study Area | 4.9 | surface sediment | LW2-C162-A |
| Study Area | 4.9 | subsurface sediment | LW2-C162-B |
| Study Area | 4.9 | subsurface sediment | LW2-C162-C |
| Study Area | 4.9 | subsurface sediment | LW2-C162-D |
| Study Area | 4.9 | subsurface sediment | LW2-C163-B1 |
| Study Area | 4.9 | subsurface sediment | LW2-C163-B2 |
| Study Area | 4.9 | subsurface sediment | LW2-C163-C1 |
| Study Area | 4.9 | subsurface sediment | LW2-C163-C2 |
| Study Area | 4.9 | subsurface sediment | LW2-C163-D1 |
| Study Area | 4.9 | subsurface sediment | LW2-C163-D2 |
| Study Area | 4.9 | subsurface sediment | LW2-C166-B |
| Study Area | 4.9 | subsurface sediment | LW2-C166-C |
| Study Area | 4.9 | subsurface sediment | LW2-C166-D |
| Study Area | 4.9 | surface sediment | LW2-C167-A |
| Study Area | 4.9 | subsurface sediment | LW2-C167-B |
| Study Area | 4.9 | subsurface sediment | LW2-C167-C |
| Study Area | 4.9 | subsurface sediment | LW2-C167-D |
| Study Area | 4.9 | subsurface sediment | LW2-C167-F |
| Study Area | 4.9 | surface sediment | LW2-G149 |
| Study Area | 4.9 | surface sediment | LW2-G158 |
| Study Area | 4.9 | surface sediment | LW2-G162 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 4.9 | surface sediment | LW2-G163 |
| Study Area | 4.9 | surface sediment | LW2-G166 |
| Study Area | 4.9 | subsurface sediment | LW3-C635-B |
| Study Area | 4.9 | surface sediment | LW3-G635 |
| Study Area | 4.9 | surface sediment | LWG2-PG-EM2A |
| Study Area | 4.9 | surface sediment | LWPTZSARCO2B2 |
| Study Area | 4.9 | surface sediment | LWPTZSARCO3B |
| Study Area | 4.9 | surface sediment | LWPTZSARCO6B-1 |
| Study Area | 4.9 | surface sediment | WLCBPE06SGP0501 |
| Study Area | 4.9 | subsurface sediment | WLCBPE06SGP0524 |
| Study Area | 4.9 | subsurface sediment | WLCBPE06SGP0568 |
| Study Area | 4.9 | subsurface sediment | WLCBPE06SGP05910 |
| Study Area | 4.9 | subsurface sediment | WLCBPE06SGP1013 |
| Study Area | 4.9 | subsurface sediment | WLCBPE06SGP1057 |
| Study Area | 4.9 | subsurface sediment | WLCBPE06SGP1424 |
| Study Area | 4.9 | subsurface sediment | WLCBPE06SGP1445 |
| Study Area | 4.9 | subsurface sediment | WLCBPE06SGP1479 |
| Study Area | 4.9 | surface sediment | WLCBPE06SGP1501 |
| Study Area | 4.9 | subsurface sediment | WLCBPE06SGP1524 |
| Study Area | 4.9 | surface sediment | WLCBPE06SGP2201 |
| Study Area | 4.9 | subsurface sediment | WLCBPE06SGP2224 |
| Study Area | 4.9 | surface sediment | WLCBPE06SGP2301 |
| Study Area | 4.9 | subsurface sediment | WLCBPE06SGP2324 |
| Study Area | 4.9 | surface sediment | WLCBPE06SGP2401 |
| Study Area | 4.9 | subsurface sediment | WLCBPE06SGP2424 |
| Study Area | 4.9 | surface sediment | WLCBPE06SS17 |
| Study Area | 4.9 | surface sediment | WLCBPE06SS18 |
| Study Area | 4.9 | surface sediment | WLCBPE06SS19 |
| Study Area | 4.9 | surface sediment | WLCBPE06SS39 |
| Study Area | 4.9 | surface sediment | WLCBPE06SS40 |
| Study Area | 4.9 | surface sediment | WLCBPE06SS41 |
| Study Area | 4.9 | surface sediment | WLCBPE06SS42 |
| Study Area | 4.9 | surface sediment | WLCBPE06SS43 |
| Study Area | 4.9 | surface sediment | WLCBPE06SS44 |
| Study Area | 4.9 | surface sediment | WLCBPE06SS45 |
| Study Area | 4.9 | surface sediment | WLCDRD05PG03030 |
| Study Area | 4.9 | subsurface sediment | WLCDRD05VC03030 |
| Study Area | 4.9 | surface sediment | WR-WSI98SD0400 |
| Study Area | 4.9 | surface sediment | WR-WSI98SD0410 |
| Study Area | 5 | subsurface sediment | LW2-C164-B |
| Study Area | 5 | subsurface sediment | LW2-C164-C |
| Study Area | 5 | subsurface sediment | LW2-C164-E |
| Study Area | 5 | surface sediment | LW2-C169-A |
| Study Area | 5 | subsurface sediment | LW2-C169-B |
| Study Area | 5 | subsurface sediment | LW2-C169-C |
| Study Area | 5 | subsurface sediment | LW2-C169-D |
| Study Area | 5 | subsurface sediment | LW2-C170-B |
| Study Area | 5 | subsurface sediment | LW2-C170-C |
| Study Area | 5 | subsurface sediment | LW2-C170-D |
| Study Area | 5 | surface sediment | LW2-C171-A |
| Study Area | 5 | subsurface sediment | LW2-C171-B |
| Study Area | 5 | subsurface sediment | LW2-C171-C |
| Study Area | 5 | subsurface sediment | LW2-C171-D |
| Study Area | 5 | subsurface sediment | LW2-C172-B |
| Study Area | 5 | subsurface sediment | LW2-C172-C |
| Study Area | 5 | subsurface sediment | LW2-C172-E |
| Study Area | 5 | subsurface sediment | LW2-C173-B |
| Study Area | 5 | subsurface sediment | LW2-C173-C |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 5 | subsurface sediment | LW2-C173-D |
| Study Area | 5 | subsurface sediment | LW2-C173-E |
| Study Area | 5 | subsurface sediment | LW2-C176-B |
| Study Area | 5 | subsurface sediment | LW2-C176-C |
| Study Area | 5 | subsurface sediment | LW2-C176-G |
| Study Area | 5 | surface sediment | LW2-G154 |
| Study Area | 5 | surface sediment | LW2-G159 |
| Study Area | 5 | surface sediment | LW2-G169 |
| Study Area | 5 | surface sediment | LW2-G170 |
| Study Area | 5 | surface sediment | LW2-G171 |
| Study Area | 5 | surface sediment | LW2-G172 |
| Study Area | 5 | surface sediment | LW2-G173 |
| Study Area | 5 | surface sediment | LW2-G174 |
| Study Area | 5 | surface sediment | LW2-G176 |
| Study Area | 5 | surface sediment | LWG0105R041SDS015C00 |
| Study Area | 5 | surface sediment | LWG2-PG-EM3A |
| Study Area | 5 | surface sediment | WLCASF97S025W4142 |
| Study Area | 5 | surface sediment | WLCASF97S026W4141 |
| Study Area | 5 | surface sediment | WLCASF97S027W4140 |
| Study Area | 5 | surface sediment | WLCDRD05PG01515 |
| Study Area | 5 | subsurface sediment | WLCDRD05VC01515 |
| Study Area | 5 | subsurface sediment | WLCDRD05VC03232 |
| Study Area | 5 | surface sediment | WLCT0I98GRAB03GRAB03 |
| Study Area | 5 | surface sediment | WR-WSI98SD0420 |
| Study Area | 5 | surface sediment | WR-WSI98SD0430 |
| Study Area | 5 | surface sediment | WR-WSI98SD0440 |
| Study Area | 5.1 | subsurface sediment | LW2-C179-B |
| Study Area | 5.1 | subsurface sediment | LW2-C179-C |
| Study Area | 5.1 | subsurface sediment | LW2-C179-D |
| Study Area | 5.1 | subsurface sediment | LW2-C182-B |
| Study Area | 5.1 | subsurface sediment | LW2-C182-C |
| Study Area | 5.1 | subsurface sediment | LW2-C182-D |
| Study Area | 5.1 | subsurface sediment | LW2-C184-B |
| Study Area | 5.1 | subsurface sediment | LW2-C184-C |
| Study Area | 5.1 | subsurface sediment | LW2-C184-D |
| Study Area | 5.1 | subsurface sediment | LW2-C184-E |
| Study Area | 5.1 | surface sediment | LW2-G164 |
| Study Area | 5.1 | surface sediment | LW2-G165 |
| Study Area | 5.1 | surface sediment | LW2-G168 |
| Study Area | 5.1 | surface sediment | LW2-G177 |
| Study Area | 5.1 | surface sediment | LW2-G178 |
| Study Area | 5.1 | surface sediment | LW2-G179 |
| Study Area | 5.1 | surface sediment | LW2-G182 |
| Study Area | 5.1 | surface sediment | LW2-G184 |
| Study Area | 5.1 | surface sediment | WLCASF97S045W4161 |
| Study Area | 5.1 | surface sediment | WLCASF97S045W4162 |
| Study Area | 5.1 | surface sediment | WLCASF97S046W4163 |
| Study Area | 5.1 | surface sediment | WLCASF97S047W4164 |
| Study Area | 5.1 | surface sediment | WLCDRD05PG03434 |
| Study Area | 5.1 | surface sediment | WLCDRD05PG03636 |
| Study Area | 5.1 | surface sediment | WLCDRD05PG139139Dup |
| Study Area | 5.1 | subsurface sediment | WLCDRD05VC03434 |
| Study Area | 5.1 | subsurface sediment | WLCDRD05VC03636 |
| Study Area | 5.1 | surface sediment | WLCOFJ02530253020 |
| Study Area | 5.1 | surface sediment | WLCOFJ02530353030 |
| Study Area | 5.1 | surface sediment | WLCOFJ02530453040 |
| Study Area | 5.1 | surface sediment | WLCOFJ02530553050 |
| Study Area | 5.1 | subsurface sediment | WLR0797WRGC19RGC19A |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 5.1 | surface sediment | WR-WSI98SD0450 |
| Study Area | 5.1 | surface sediment | WR-WSI98SD0460 |
| Study Area | 5.1 | surface sediment | WR-WSI98SD0470 |
| Study Area | 5.1 | surface sediment | WR-WSI98SD0480000CC |
| Study Area | 5.1 | subsurface sediment | WR-WSI98SD048000ACC |
| Study Area | 5.2 | subsurface sediment | LW2-C185-B |
| Study Area | 5.2 | subsurface sediment | LW2-C185-C |
| Study Area | 5.2 | subsurface sediment | LW2-C185-D |
| Study Area | 5.2 | surface sediment | LW2-C187-A |
| Study Area | 5.2 | subsurface sediment | LW2-C187-B |
| Study Area | 5.2 | subsurface sediment | LW2-C187-C |
| Study Area | 5.2 | subsurface sediment | LW2-C187-D |
| Study Area | 5.2 | subsurface sediment | LW2-C187-E |
| Study Area | 5.2 | surface sediment | LW2-G175 |
| Study Area | 5.2 | surface sediment | LW2-G180 |
| Study Area | 5.2 | surface sediment | LW2-G183 |
| Study Area | 5.2 | surface sediment | LW2-G185 |
| Study Area | 5.2 | surface sediment | LW2-G187 |
| Study Area | 5.2 | subsurface sediment | LW3-C636-B |
| Study Area | 5.2 | subsurface sediment | LW3-C636-C |
| Study Area | 5.2 | subsurface sediment | LW3-C636-D |
| Study Area | 5.2 | surface sediment | LW3-G636 |
| Study Area | 5.2 | surface sediment | LW3-G637-1 |
| Study Area | 5.2 | surface sediment | LW3-G637-2 |
| Study Area | 5.2 | surface sediment | LWG0105R001SDS015C00 |
| Study Area | 5.2 | surface sediment | WLCDRD05PG01717 |
| Study Area | 5.2 | subsurface sediment | WLCDRD05VC01717 |
| Study Area | 5.2 | surface sediment | WLR0797WRBC20WRBC20 |
| Study Area | 5.2 | surface sediment | WR-WSI98SD0490 |
| Study Area | 5.2 | subsurface sediment | WR-WSI98SD0490000A |
| Study Area | 5.3 | surface sediment | LW2-G181 |
| Study Area | 5.3 | surface sediment | LW2-G186 |
| Study Area | 5.3 | surface sediment | LW2-G189 |
| Study Area | 5.3 | surface sediment | LW2-G191 |
| Study Area | 5.3 | surface sediment | LW3-G638 |
| Study Area | 5.3 | surface sediment | WLCASF97S023W4144 |
| Study Area | 5.3 | surface sediment | WLCASF97S024W4143 |
| Study Area | 5.3 | surface sediment | WLCDRD05PG01919 |
| Study Area | 5.3 | subsurface sediment | WLCDRD05VC01919 |
| Study Area | 5.3 | surface sediment | WR-WSI98SD0500 |
| Study Area | 5.4 | surface sediment | LW2-G188 |
| Study Area | 5.4 | surface sediment | LW2-G190 |
| Study Area | 5.4 | surface sediment | LW2-G194 |
| Study Area | 5.4 | surface sediment | LW2-G195 |
| Study Area | 5.4 | surface sediment | LW2-G200 |
| Study Area | 5.4 | surface sediment | LW2-G205 |
| Study Area | 5.4 | subsurface sediment | LW3-C640-B |
| Study Area | 5.4 | subsurface sediment | LW3-C640-C |
| Study Area | 5.4 | surface sediment | LW3-G639 |
| Study Area | 5.4 | surface sediment | LWG0105B019SDS015C00 |
| Study Area | 5.4 | surface sediment | WLCASF97S020W4147 |
| Study Area | 5.4 | surface sediment | WLCASF97S021W4146 |
| Study Area | 5.4 | surface sediment | WLCASF97S022W4145 |
| Study Area | 5.4 | surface sediment | WLCDRD05PG02121 |
| Study Area | 5.4 | subsurface sediment | WLCDRD05VC04242 |
| Study Area | 5.4 | surface sediment | WR-WSI98SD0510 |
| Study Area | 5.4 | surface sediment | WR-WSI98SD0520 |
| Study Area | 5.5 | subsurface sediment | LW2-C192-B |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 5.5 | subsurface sediment | LW2-C192-C |
| Study Area | 5.5 | subsurface sediment | LW2-C192-D |
| Study Area | 5.5 | surface sediment | LW2-C196-A |
| Study Area | 5.5 | subsurface sediment | LW2-C196-B |
| Study Area | 5.5 | subsurface sediment | LW2-C196-C |
| Study Area | 5.5 | subsurface sediment | LW2-C197-B |
| Study Area | 5.5 | subsurface sediment | LW2-C197-C |
| Study Area | 5.5 | subsurface sediment | LW2-C197-D |
| Study Area | 5.5 | subsurface sediment | LW2-C197-E |
| Study Area | 5.5 | subsurface sediment | LW2-C210-B |
| Study Area | 5.5 | subsurface sediment | LW2-C210-C |
| Study Area | 5.5 | subsurface sediment | LW2-C210-E |
| Study Area | 5.5 | subsurface sediment | LW2-C213-B |
| Study Area | 5.5 | subsurface sediment | LW2-C213-C |
| Study Area | 5.5 | subsurface sediment | LW2-C213-D |
| Study Area | 5.5 | surface sediment | LW2-G192 |
| Study Area | 5.5 | surface sediment | LW2-G193 |
| Study Area | 5.5 | surface sediment | LW2-G196 |
| Study Area | 5.5 | surface sediment | LW2-G197-1 |
| Study Area | 5.5 | surface sediment | LW2-G197-2 |
| Study Area | 5.5 | surface sediment | LW2-G208 |
| Study Area | 5.5 | surface sediment | LW2-G210 |
| Study Area | 5.5 | surface sediment | LW2-G212-1 |
| Study Area | 5.5 | surface sediment | LW2-G212-2 |
| Study Area | 5.5 | surface sediment | LW2-G213 |
| Study Area | 5.5 | surface sediment | LW2-G217 |
| Study Area | 5.5 | surface sediment | LW3-G641-1 |
| Study Area | 5.5 | surface sediment | LW3-G641-2 |
| Study Area | 5.5 | surface sediment | LW3-G642 |
| Study Area | 5.5 | surface sediment | LW3-G643 |
| Study Area | 5.5 | surface sediment | LW3-GCA05E-C00 |
| Study Area | 5.5 | surface sediment | LW3-GSP05E |
| Study Area | 5.5 | surface sediment | WLCASF97S018W4160 |
| Study Area | 5.5 | surface sediment | WLCDRD05PG02323 |
| Study Area | 5.5 | surface sediment | WLCDRD05PG04242 |
| Study Area | 5.5 | subsurface sediment | WLCDRD05VC02323 |
| Study Area | 5.5 | surface sediment | WLCMCB02SED03SED03 |
| Study Area | 5.5 | surface sediment | WLCOFJ0252A0552A050 |
| Study Area | 5.6 | subsurface sediment | LW2-C199-B |
| Study Area | 5.6 | subsurface sediment | LW2-C199-C |
| Study Area | 5.6 | subsurface sediment | LW2-C199-E |
| Study Area | 5.6 | subsurface sediment | LW2-C202-B |
| Study Area | 5.6 | subsurface sediment | LW2-C202-C |
| Study Area | 5.6 | subsurface sediment | LW2-C202-D |
| Study Area | 5.6 | subsurface sediment | LW2-C203-B |
| Study Area | 5.6 | subsurface sediment | LW2-C203-C |
| Study Area | 5.6 | subsurface sediment | LW2-C203-E |
| Study Area | 5.6 | subsurface sediment | LW2-C206-B |
| Study Area | 5.6 | subsurface sediment | LW2-C206-C |
| Study Area | 5.6 | subsurface sediment | LW2-C206-D |
| Study Area | 5.6 | subsurface sediment | LW2-C207-B |
| Study Area | 5.6 | subsurface sediment | LW2-C207-B2 |
| Study Area | 5.6 | subsurface sediment | LW2-C207-C |
| Study Area | 5.6 | subsurface sediment | LW2-C207-C2 |
| Study Area | 5.6 | subsurface sediment | LW2-C207-D |
| Study Area | 5.6 | subsurface sediment | LW2-C220-B |
| Study Area | 5.6 | subsurface sediment | LW2-C220-C |
| Study Area | 5.6 | surface sediment | LW2-C221-A |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 5.6 | subsurface sediment | LW2-C221-B |
| Study Area | 5.6 | subsurface sediment | LW2-C221-C |
| Study Area | 5.6 | subsurface sediment | LW2-C221-D |
| Study Area | 5.6 | subsurface sediment | LW2-C227-B |
| Study Area | 5.6 | subsurface sediment | LW2-C227-C |
| Study Area | 5.6 | subsurface sediment | LW2-C228-B |
| Study Area | 5.6 | surface sediment | LW2-G198 |
| Study Area | 5.6 | surface sediment | LW2-G199 |
| Study Area | 5.6 | surface sediment | LW2-G202 |
| Study Area | 5.6 | surface sediment | LW2-G203-1 |
| Study Area | 5.6 | surface sediment | LW2-G203-2 |
| Study Area | 5.6 | surface sediment | LW2-G204 |
| Study Area | 5.6 | surface sediment | LW2-G206 |
| Study Area | 5.6 | surface sediment | LW2-G207 |
| Study Area | 5.6 | surface sediment | LW2-G209 |
| Study Area | 5.6 | surface sediment | LW2-G216 |
| Study Area | 5.6 | surface sediment | LW2-G219 |
| Study Area | 5.6 | surface sediment | LW2-G220 |
| Study Area | 5.6 | surface sediment | LW2-G221 |
| Study Area | 5.6 | surface sediment | LW2-G222 |
| Study Area | 5.6 | surface sediment | LW2-G223 |
| Study Area | 5.6 | surface sediment | LW2-G227 |
| Study Area | 5.6 | surface sediment | LW2-G228 |
| Study Area | 5.6 | surface sediment | LW2-G520 |
| Study Area | 5.6 | subsurface sediment | LW3-C644-B1 |
| Study Area | 5.6 | subsurface sediment | LW3-C644-B2 |
| Study Area | 5.6 | subsurface sediment | LW3-C644-C1 |
| Study Area | 5.6 | subsurface sediment | LW3-C644-C2 |
| Study Area | 5.6 | subsurface sediment | LW3-C645-B |
| Study Area | 5.6 | subsurface sediment | LW3-C645-C |
| Study Area | 5.6 | surface sediment | LW3-G644 |
| Study Area | 5.6 | surface sediment | LW3-GCA05W-C00 |
| Study Area | 5.6 | surface sediment | LW3-GCR05W |
| Study Area | 5.6 | surface sediment | LWG0105R003SDS015C00 |
| Study Area | 5.6 | surface sediment | LWG0105R040SDS015C00 |
| Study Area | 5.6 | subsurface sediment | LWM-METCS7 |
| Study Area | 5.6 | subsurface sediment | LWM-TCLPC7 |
| Study Area | 5.6 | surface sediment | WLCASF97S019W4148 |
| Study Area | 5.6 | surface sediment | WLCDRD05PG04848 |
| Study Area | 5.6 | surface sediment | WLCDRD05PG138138Dup |
| Study Area | 5.6 | subsurface sediment | WLCDRD05VC04646 |
| Study Area | 5.6 | surface sediment | WLCMCB02SED01SED01 |
| Study Area | 5.6 | surface sediment | WLCMCB02SED02SED02 |
| Study Area | 5.6 | surface sediment | WLCMFH00SD02SD02 |
| Study Area | 5.6 | surface sediment | WLCOFJ0252A0252A020 |
| Study Area | 5.6 | surface sediment | WLCOFJ0252A0352A030 |
| Study Area | 5.6 | surface sediment | WLCOFJ0252A0452A040 |
| Study Area | 5.6 | surface sediment | WR-WSI98SD0530 |
| Study Area | 5.6 | subsurface sediment | WR-WSI98SD0530000A |
| Study Area | 5.6 | surface sediment | WR-WSI98SD0550 |
| Study Area | 5.6 | subsurface sediment | WR-WSI98SD055C0000A |
| Study Area | 5.7 | subsurface sediment | LW2-C215-B |
| Study Area | 5.7 | subsurface sediment | LW2-C215-C |
| Study Area | 5.7 | subsurface sediment | LW2-C231-B |
| Study Area | 5.7 | subsurface sediment | LW2-C231-C |
| Study Area | 5.7 | surface sediment | LW2-G214-1 |
| Study Area | 5.7 | surface sediment | LW2-G215 |
| Study Area | 5.7 | surface sediment | LW2-G218 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 5.7 | surface sediment | LW2-G225 |
| Study Area | 5.7 | surface sediment | LW2-G229 |
| Study Area | 5.7 | surface sediment | LW2-G230 |
| Study Area | 5.7 | surface sediment | LW2-G231 |
| Study Area | 5.7 | surface sediment | LW2-G234 |
| Study Area | 5.7 | surface sediment | LW2-GBT013 |
| Study Area | 5.7 | surface sediment | LW3-G646 |
| Study Area | 5.7 | surface sediment | LW3-G647 |
| Study Area | 5.7 | surface sediment | LWG0105R020SDS015C00 |
| Study Area | 5.7 | surface sediment | WLCDRD05PG02727 |
| Study Area | 5.7 | surface sediment | WLCDRD05PG137137Dup |
| Study Area | 5.7 | surface sediment | WLCMFH00SD03SD03 |
| Study Area | 5.7 | surface sediment | WLCOFJ02520152010 |
| Study Area | 5.7 | surface sediment | WLCOFJ02520252020 |
| Study Area | 5.7 | surface sediment | WLCOFJ02520352030 |
| Study Area | 5.7 | surface sediment | WR-WSI98SD0560 |
| Study Area | 5.8 | subsurface sediment | LW2-C240-B |
| Study Area | 5.8 | subsurface sediment | LW2-C240-D |
| Study Area | 5.8 | subsurface sediment | LW2-C240-E |
| Study Area | 5.8 | subsurface sediment | LW2-C245-B |
| Study Area | 5.8 | subsurface sediment | LW2-C245-C |
| Study Area | 5.8 | subsurface sediment | LW2-C245-D |
| Study Area | 5.8 | subsurface sediment | LW2-C245-E |
| Study Area | 5.8 | subsurface sediment | LW2-C245-F |
| Study Area | 5.8 | surface sediment | LW2-G224 |
| Study Area | 5.8 | surface sediment | LW2-G226 |
| Study Area | 5.8 | surface sediment | LW2-G235 |
| Study Area | 5.8 | surface sediment | LW2-G237 |
| Study Area | 5.8 | surface sediment | LW2-G240 |
| Study Area | 5.8 | surface sediment | LW2-G241 |
| Study Area | 5.8 | surface sediment | LW2-G242 |
| Study Area | 5.8 | surface sediment | LW2-G245 |
| Study Area | 5.8 | subsurface sediment | LW3-C648-B |
| Study Area | 5.8 | subsurface sediment | LW3-C648-C |
| Study Area | 5.8 | subsurface sediment | LW3-C648-D |
| Study Area | 5.8 | subsurface sediment | LW3-C651-B |
| Study Area | 5.8 | subsurface sediment | LW3-C651-C |
| Study Area | 5.8 | surface sediment | LW3-G648 |
| Study Area | 5.8 | surface sediment | LWG0105B018SDS015C00 |
| Study Area | 5.8 | subsurface sediment | WLCMFH00SD04SD04D |
| Study Area | 5.8 | surface sediment | WLCMFH00SD04SD04S |
| Study Area | 5.8 | subsurface sediment | WLCMFH00SD05SD05D |
| Study Area | 5.8 | surface sediment | WLCMFH00SD05SD05S |
| Study Area | 5.8 | surface sediment | WLCMRD08BH16-1 |
| Study Area | 5.8 | surface sediment | WLR0797WRBC21WRBC21 |
| Study Area | 5.8 | surface sediment | WR-WSI98SD0570 |
| Study Area | 5.8 | subsurface sediment | WR-WSI98SD0570000A |
| Study Area | 5.9 | subsurface sediment | LW2-C232-B |
| Study Area | 5.9 | subsurface sediment | LW2-C232-C |
| Study Area | 5.9 | surface sediment | LW2-C531-A |
| Study Area | 5.9 | subsurface sediment | LW2-C531-B |
| Study Area | 5.9 | subsurface sediment | LW2-C531-C |
| Study Area | 5.9 | subsurface sediment | LW2-C531-D |
| Study Area | 5.9 | subsurface sediment | LW2-C531-E |
| Study Area | 5.9 | surface sediment | LW2-G232 |
| Study Area | 5.9 | surface sediment | LW2-G233 |
| Study Area | 5.9 | surface sediment | LW2-G236 |
| Study Area | 5.9 | surface sediment | LW2-G246 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 5.9 | surface sediment | LW2-GBT014 |
| Study Area | 5.9 | subsurface sediment | LW3-C652-B |
| Study Area | 5.9 | subsurface sediment | LW3-C652-C |
| Study Area | 5.9 | subsurface sediment | LW3-C652-D |
| Study Area | 5.9 | surface sediment | LW3-G649 |
| Study Area | 5.9 | surface sediment | LW3-G650 |
| Study Area | 5.9 | surface sediment | LW3-G651 |
| Study Area | 5.9 | surface sediment | LW3-G652 |
| Study Area | 5.9 | surface sediment | LW3-G653 |
| Study Area | 5.9 | surface sediment | LW3-G654 |
| Study Area | 5.9 | subsurface sediment | WLCMFH00SD06SD06D |
| Study Area | 5.9 | surface sediment | WLCMFH00SD06SD06S |
| Study Area | 5.9 | surface sediment | WLCMRD08BH11-1 |
| Study Area | 5.9 | surface sediment | WLCMRD08BH12-1 |
| Study Area | 5.9 | surface sediment | WLCMRD08BH13-1 |
| Study Area | 5.9 | surface sediment | WLCMRD08BH14-1 |
| Study Area | 5.9 | surface sediment | WLCMRD08BH15-1 |
| Study Area | 5.9 | subsurface sediment | WLCMRI02CS003CS003 |
| Study Area | 5.9 | surface sediment | WLCMRI02CS005CS005 |
| Study Area | 5.9 | surface sediment | WLCOFJ02500150010 |
| Study Area | 5.9 | surface sediment | WLCOFJ02500250020 |
| Study Area | 5.9 | surface sediment | WLCOFJ02500350030 |
| Study Area | 5.9 | surface sediment | WLCOFJ02500450040 |
| Study Area | 5.9 | surface sediment | WLCOFJ02500550050 |
| Study Area | 5.9 | surface sediment | WLCOFJ02500650060 |
| Study Area | 5.9 | surface sediment | WR-WSI98SD0580 |
| Study Area | 5.9 | surface sediment | WR-WSI98SD0590 |
| Study Area | 6 | surface sediment | LW2-C528-A |
| Study Area | 6 | subsurface sediment | LW2-C528-B |
| Study Area | 6 | subsurface sediment | LW2-C528-C |
| Study Area | 6 | subsurface sediment | LW2-C528-D |
| Study Area | 6 | subsurface sediment | LW2-C528-F |
| Study Area | 6 | surface sediment | LW2-C529-A |
| Study Area | 6 | subsurface sediment | LW2-C529-B |
| Study Area | 6 | subsurface sediment | LW2-C529-C |
| Study Area | 6 | subsurface sediment | LW2-C529-E |
| Study Area | 6 | surface sediment | LW2-C530-A |
| Study Area | 6 | subsurface sediment | LW2-C530-B |
| Study Area | 6 | subsurface sediment | LW2-C530-C |
| Study Area | 6 | subsurface sediment | LW2-C530-E |
| Study Area | 6 | surface sediment | LW2-G238 |
| Study Area | 6 | surface sediment | LW2-G239 |
| Study Area | 6 | surface sediment | LW2-G248 |
| Study Area | 6 | surface sediment | LW2-G251-1 |
| Study Area | 6 | surface sediment | LW2-G251-2 |
| Study Area | 6 | surface sediment | LW3-G655 |
| Study Area | 6 | surface sediment | LW3-G656 |
| Study Area | 6 | surface sediment | LWG0106R001SDS015C00 |
| Study Area | 6 | surface sediment | WLCMRD08BH10-1 |
| Study Area | 6 | surface sediment | WLCMRD08BH4-1 |
| Study Area | 6 | surface sediment | WLCMRD08BH5-1 |
| Study Area | 6 | surface sediment | WLCMRD08BH6-1 |
| Study Area | 6 | surface sediment | WLCMRD08BH7-1 |
| Study Area | 6 | surface sediment | WLCMRD08BH8-1 |
| Study Area | 6 | surface sediment | WLCMRD08BH9-1 |
| Study Area | 6 | surface sediment | WLCMRD08DA18-1 |
| Study Area | 6 | subsurface sediment | WLCMRD08DA18-2 |
| Study Area | 6 | subsurface sediment | WLCMRD08DA18-3 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 6 | subsurface sediment | WLCMRD08DA18-4 |
| Study Area | 6 | surface sediment | WLCMRD08DA19-1 |
| Study Area | 6 | subsurface sediment | WLCMRD08DA19-2 |
| Study Area | 6 | subsurface sediment | WLCMRD08DA19-3 |
| Study Area | 6 | subsurface sediment | WLCMRD08DA19-4 |
| Study Area | 6 | subsurface sediment | WLCMRD08DB20-3 |
| Study Area | 6 | subsurface sediment | WLCMRD08DB20-4 |
| Study Area | 6 | subsurface sediment | WLCMRD08DB21-3 |
| Study Area | 6 | subsurface sediment | WLCMRD08DB21-4 |
| Study Area | 6 | subsurface sediment | WLCMRD08DB22-3 |
| Study Area | 6 | subsurface sediment | WLCMRD08DB22-4 |
| Study Area | 6 | surface sediment | WLCMRD08OF28-1 |
| Study Area | 6 | subsurface sediment | WLCMRD08OF28-2 |
| Study Area | 6 | subsurface sediment | WLCMRI02CS002CS002 |
| Study Area | 6 | surface sediment | WLCMRI02CS004CS004 |
| Study Area | 6.1 | subsurface sediment | LW2-C244-B |
| Study Area | 6.1 | subsurface sediment | LW2-C244-C |
| Study Area | 6.1 | subsurface sediment | LW2-C247-B |
| Study Area | 6.1 | subsurface sediment | LW2-C247-C |
| Study Area | 6.1 | subsurface sediment | LW2-C247-D |
| Study Area | 6.1 | subsurface sediment | LW2-C247-E |
| Study Area | 6.1 | subsurface sediment | LW2-C252-B |
| Study Area | 6.1 | subsurface sediment | LW2-C252-C |
| Study Area | 6.1 | subsurface sediment | LW2-C252-D |
| Study Area | 6.1 | subsurface sediment | LW2-C263-B |
| Study Area | 6.1 | subsurface sediment | LW2-C263-C |
| Study Area | 6.1 | subsurface sediment | LW2-C263-D |
| Study Area | 6.1 | subsurface sediment | LW2-C264-B |
| Study Area | 6.1 | subsurface sediment | LW2-C264-C |
| Study Area | 6.1 | subsurface sediment | LW2-C264-D |
| Study Area | 6.1 | surface sediment | LW2-C269-A |
| Study Area | 6.1 | subsurface sediment | LW2-C269-B |
| Study Area | 6.1 | subsurface sediment | LW2-C269-C |
| Study Area | 6.1 | subsurface sediment | LW2-C269-D |
| Study Area | 6.1 | subsurface sediment | LW2-C269-F |
| Study Area | 6.1 | surface sediment | LW2-C525-A |
| Study Area | 6.1 | subsurface sediment | LW2-C525-B |
| Study Area | 6.1 | subsurface sediment | LW2-C525-C |
| Study Area | 6.1 | subsurface sediment | LW2-C525-D |
| Study Area | 6.1 | subsurface sediment | LW2-C525-E |
| Study Area | 6.1 | surface sediment | LW2-C527-A |
| Study Area | 6.1 | subsurface sediment | LW2-C527-B |
| Study Area | 6.1 | subsurface sediment | LW2-C527-C |
| Study Area | 6.1 | subsurface sediment | LW2-C527-D |
| Study Area | 6.1 | subsurface sediment | LW2-C527-E |
| Study Area | 6.1 | surface sediment | LW2-G243 |
| Study Area | 6.1 | surface sediment | LW2-G244 |
| Study Area | 6.1 | surface sediment | LW2-G247 |
| Study Area | 6.1 | surface sediment | LW2-G252 |
| Study Area | 6.1 | surface sediment | LW2-G253 |
| Study Area | 6.1 | surface sediment | LW2-G256 |
| Study Area | 6.1 | surface sediment | LW2-G259 |
| Study Area | 6.1 | surface sediment | LW2-G263 |
| Study Area | 6.1 | surface sediment | LW2-G264 |
| Study Area | 6.1 | surface sediment | LW2-G269 |
| Study Area | 6.1 | subsurface sediment | LW3-C658-B |
| Study Area | 6.1 | subsurface sediment | LW3-C658-C |
| Study Area | 6.1 | subsurface sediment | LW3-C658-D |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 6.1 | surface sediment | LW3-G657 |
| Study Area | 6.1 | surface sediment | LW3-G658 |
| Study Area | 6.1 | surface sediment | LWG0106B030SDS015C00 |
| Study Area | 6.1 | subsurface sediment | WLCGSG07GSB2S02 |
| Study Area | 6.1 | subsurface sediment | WLCGSG07GSB2S1315 |
| Study Area | 6.1 | subsurface sediment | WLCGSG07GSB2S57 |
| Study Area | 6.1 | subsurface sediment | WLCGSG07GSC2S02 |
| Study Area | 6.1 | subsurface sediment | WLCGSG07GSC2S57 |
| Study Area | 6.1 | surface sediment | WLCMRD08DA17-1 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08DA17-2 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08DA17-3 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08DA17-4 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08DC23-3 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08DC23-4 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08DC24-3 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08DC24-4 |
| Study Area | 6.1 | surface sediment | WLCMRD08DC25-1 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08DC25-3 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08DC25-4 |
| Study Area | 6.1 | surface sediment | WLCMRD08UD1-1 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08UD1-2 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08UD1-3 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08UD1-4 |
| Study Area | 6.1 | surface sediment | WLCMRD08UD2-1 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08UD2-2 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08UD2-3 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08UD2-4 |
| Study Area | 6.1 | surface sediment | WLCMRD08UD26-1 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08UD26-2 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08UD26-3 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08UD26-4 |
| Study Area | 6.1 | surface sediment | WLCMRD08UD27-1 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08UD27-2 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08UD27-3 |
| Study Area | 6.1 | subsurface sediment | WLCMRD08UD27-4 |
| Study Area | 6.1 | subsurface sediment | WLCMRI02CS001CS001 |
| Study Area | 6.1 | surface sediment | WLCT0I98GRAB04GRAB04 |
| Study Area | 6.1 | surface sediment | WLCT0I98GRAB05GRAB05 |
| Study Area | 6.1 | surface sediment | WR-WSI98SD0610 |
| Study Area | 6.1 | surface sediment | WR-WSI98SD0620 |
| Study Area | 6.2 | subsurface sediment | LW2-C258-B |
| Study Area | 6.2 | subsurface sediment | LW2-C258-C |
| Study Area | 6.2 | subsurface sediment | LW2-C258-D |
| Study Area | 6.2 | subsurface sediment | LW2-C270-B |
| Study Area | 6.2 | subsurface sediment | LW2-C270-C |
| Study Area | 6.2 | subsurface sediment | LW2-C270-D |
| Study Area | 6.2 | subsurface sediment | LW2-C273-B |
| Study Area | 6.2 | subsurface sediment | LW2-C273-C |
| Study Area | 6.2 | subsurface sediment | LW2-C273-D |
| Study Area | 6.2 | subsurface sediment | LW2-C283-B |
| Study Area | 6.2 | subsurface sediment | LW2-C283-C |
| Study Area | 6.2 | subsurface sediment | LW2-C283-D |
| Study Area | 6.2 | subsurface sediment | LW2-C283-E |
| Study Area | 6.2 | surface sediment | LW2-G249 |
| Study Area | 6.2 | surface sediment | LW2-G250 |
| Study Area | 6.2 | surface sediment | LW2-G258 |
| Study Area | 6.2 | surface sediment | LW2-G261 |
| Study Area | 6.2 | surface sediment | LW2-G265 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 6.2 | surface sediment | LW2-G270-1 |
| Study Area | 6.2 | surface sediment | LW2-G270-2 |
| Study Area | 6.2 | surface sediment | LW2-G273 |
| Study Area | 6.2 | surface sediment | LW2-G274 |
| Study Area | 6.2 | surface sediment | LW2-G283 |
| Study Area | 6.2 | surface sediment | LW3-G659-1 |
| Study Area | 6.2 | surface sediment | LW3-G659-2 |
| Study Area | 6.2 | surface sediment | LW3-G660 |
| Study Area | 6.2 | surface sediment | LWG0106B025SDS015C00 |
| Study Area | 6.2 | surface sediment | LWG2-PG-GS4A |
| Study Area | 6.2 | surface sediment | LWG2-PG-GS4A-2 |
| Study Area | 6.2 | subsurface sediment | LWM-METCS11 |
| Study Area | 6.2 | subsurface sediment | LWM-METCS11-2 |
| Study Area | 6.2 | subsurface sediment | LWM-TCLPC11A |
| Study Area | 6.2 | subsurface sediment | LWM-TCLPC11B |
| Study Area | 6.2 | subsurface sediment | LWM-TCLPC11C |
| Study Area | 6.2 | subsurface sediment | WLCGSG04RAA17SD0010 |
| Study Area | 6.2 | subsurface sediment | WLCGSG04RAA17SD1420 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS04S1011 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS04S109110 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS04S130131 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS04S147148 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS04S1921 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS04S2427 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS04S3031 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS04S3840 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS04S4548 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS04S46 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS04S5051 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS04S6061 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS04S6970 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS04S7071 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS04S7881 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS04S911 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS04S9193 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS04S9598 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS05S110111 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS05S120123 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS05S130131 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS05S145148 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS05S150151 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS05S170171 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS05S170173 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS05S190191 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS05S2022 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS05S3336 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS05S34 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS05S3942 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS05S411 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS05S4548 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS05S5964 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS05S6973 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS05S7982 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS05S8992 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS05S911 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS05S9598 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS06S2023 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS06S2833 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS06S4144 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS06S46 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS06S4852 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS06S6164 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS06S6569 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS06S6973 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS06S720 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS06S8083 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS06S9092 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS06S911 |
| Study Area | 6.2 | subsurface sediment | WLCGSJ06GS06S9598 |
| Study Area | 6.2 | surface sediment | WLR0797WRBC22WRBC22 |
| Study Area | 6.2 | surface sediment | WR-WSI98SD0600 |
| Study Area | 6.2 | surface sediment | WR-WSI98SD0630 |
| Study Area | 6.3 | subsurface sediment | LW2-C254-B |
| Study Area | 6.3 | subsurface sediment | LW2-C254-C |
| Study Area | 6.3 | surface sediment | LW2-C255-A |
| Study Area | 6.3 | subsurface sediment | LW2-C255-B |
| Study Area | 6.3 | subsurface sediment | LW2-C255-C |
| Study Area | 6.3 | subsurface sediment | LW2-C272-B |
| Study Area | 6.3 | subsurface sediment | LW2-C272-C |
| Study Area | 6.3 | subsurface sediment | LW2-C289-B |
| Study Area | 6.3 | subsurface sediment | LW2-C289-C |
| Study Area | 6.3 | subsurface sediment | LW2-C289-E |
| Study Area | 6.3 | surface sediment | LW2-G254 |
| Study Area | 6.3 | surface sediment | LW2-G255 |
| Study Area | 6.3 | surface sediment | LW2-G271 |
| Study Area | 6.3 | surface sediment | LW2-G272 |
| Study Area | 6.3 | surface sediment | LW2-G289 |
| Study Area | 6.3 | surface sediment | LW2-G294-1 |
| Study Area | 6.3 | surface sediment | LW2-G294-2 |
| Study Area | 6.3 | surface sediment | LWG0106R040SDS015C00 |
| Study Area | 6.3 | surface sediment | LWG2-PG-GS7B |
| Study Area | 6.3 | surface sediment | LWG2-PG-GS7D |
| Study Area | 6.3 | surface sediment | WLCGSD01AN0101_00-10 |
| Study Area | 6.3 | subsurface sediment | WLCGSD01AN0101_10-20 |
| Study Area | 6.3 | subsurface sediment | WLCGSD01AN0101_30-40 |
| Study Area | 6.3 | surface sediment | WLCGSD01AN0102_00-10 |
| Study Area | 6.3 | subsurface sediment | WLCGSD01AN0102_10-20 |
| Study Area | 6.3 | subsurface sediment | WLCGSD01AN0102_30-40 |
| Study Area | 6.3 | surface sediment | WLCGSD01AN0105_00-10 |
| Study Area | 6.3 | subsurface sediment | WLCGSD01AN0105_10-20 |
| Study Area | 6.3 | subsurface sediment | WLCGSD01AN0105_30-40 |
| Study Area | 6.3 | surface sediment | WLCGSD01AN0205_00-10 |
| Study Area | 6.3 | subsurface sediment | WLCGSD01AN0205_10-20 |
| Study Area | 6.3 | subsurface sediment | WLCGSD01AN0205_30-40 |
| Study Area | 6.3 | subsurface sediment | WLCGSG07GSB5S02 |
| Study Area | 6.3 | subsurface sediment | WLCGSG07GSB5S1315 |
| Study Area | 6.3 | subsurface sediment | WLCGSG07GSB5S57 |
| Study Area | 6.3 | subsurface sediment | WLCGSG07GSC5S02 |
| Study Area | 6.3 | subsurface sediment | WLCGSG07GSC5S1315 |
| Study Area | 6.3 | subsurface sediment | WLCGSG07GSC5S57 |
| Study Area | 6.3 | subsurface sediment | WLCGSG07GSD2S02 |
| Study Area | 6.3 | subsurface sediment | WLCGSG07GSD2S57 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS07S123127 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS07S145148 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS07S1518 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS07S170173 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS07S2327 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS07S2830 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS07S4143 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS07S46 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS07S4852 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS07S5355 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS07S6263 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS07S7072 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS07S8082 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS07S9092 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS07S911 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS07S98102 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS08S2023 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS08S2930 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS08S34 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS08S4043 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS08S5053 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS08S6365 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS08S68 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS08S6970 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS08S8284 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS08S89 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS08S9092 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS58S4345 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS8S4345 |
| Study Area | 6.3 | subsurface sediment | WLCGSJ06GS8S9598 |
| Study Area | 6.3 | surface sediment | WLCT0I98GRAB06GRAB06 |
| Study Area | 6.3 | surface sediment | WR-WSI98SD0670 |
| Study Area | 6.4 | subsurface sediment | LW2-C257-B |
| Study Area | 6.4 | subsurface sediment | LW2-C260-B |
| Study Area | 6.4 | subsurface sediment | LW2-C260-C |
| Study Area | 6.4 | subsurface sediment | LW2-C260-D |
| Study Area | 6.4 | surface sediment | LW2-C299-A |
| Study Area | 6.4 | subsurface sediment | LW2-C299-B |
| Study Area | 6.4 | subsurface sediment | LW2-C299-C |
| Study Area | 6.4 | surface sediment | LW2-C301-A |
| Study Area | 6.4 | subsurface sediment | LW2-C301-B |
| Study Area | 6.4 | subsurface sediment | LW2-C301-C |
| Study Area | 6.4 | subsurface sediment | LW2-C301-D |
| Study Area | 6.4 | subsurface sediment | LW2-C301-E |
| Study Area | 6.4 | subsurface sediment | LW2-C301-G |
| Study Area | 6.4 | subsurface sediment | LW2-C302-B |
| Study Area | 6.4 | subsurface sediment | LW2-C302-C |
| Study Area | 6.4 | subsurface sediment | LW2-C302-D |
| Study Area | 6.4 | subsurface sediment | LW2-C305-B1 |
| Study Area | 6.4 | subsurface sediment | LW2-C305-B2 |
| Study Area | 6.4 | subsurface sediment | LW2-C305-C1 |
| Study Area | 6.4 | subsurface sediment | LW2-C305-C2 |
| Study Area | 6.4 | subsurface sediment | LW2-C305-D1 |
| Study Area | 6.4 | subsurface sediment | LW2-C305-D2 |
| Study Area | 6.4 | subsurface sediment | LW2-C521-B |
| Study Area | 6.4 | subsurface sediment | LW2-C521-C |
| Study Area | 6.4 | subsurface sediment | LW2-C521-D |
| Study Area | 6.4 | subsurface sediment | LW2-C521-E |
| Study Area | 6.4 | surface sediment | LW2-G257 |
| Study Area | 6.4 | surface sediment | LW2-G260 |
| Study Area | 6.4 | surface sediment | LW2-G262 |
| Study Area | 6.4 | surface sediment | LW2-G281 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 6.4 | surface sediment | LW2-G285 |
| Study Area | 6.4 | surface sediment | LW2-G287 |
| Study Area | 6.4 | surface sediment | LW2-G297 |
| Study Area | 6.4 | surface sediment | LW2-G299 |
| Study Area | 6.4 | surface sediment | LW2-G301 |
| Study Area | 6.4 | surface sediment | LW2-G302 |
| Study Area | 6.4 | surface sediment | LW2-G305 |
| Study Area | 6.4 | surface sediment | LW2-G308 |
| Study Area | 6.4 | surface sediment | LW2-G521 |
| Study Area | 6.4 | surface sediment | LW2-GBT015 |
| Study Area | 6.4 | subsurface sediment | LW3-C662-B |
| Study Area | 6.4 | subsurface sediment | LW3-C662-C |
| Study Area | 6.4 | subsurface sediment | LW3-C662-D |
| Study Area | 6.4 | subsurface sediment | LW3-C662-E |
| Study Area | 6.4 | surface sediment | LW3-GCRSP06W |
| Study Area | 6.4 | surface sediment | LWG2-PG-SL2A |
| Study Area | 6.4 | surface sediment | LWG2-PG-SL2E |
| Study Area | 6.4 | surface sediment | LWG2-PG-SL3F |
| Study Area | 6.4 | surface sediment | WLCDRD05PG05252 |
| Study Area | 6.4 | surface sediment | WLCDRD05PG05454 |
| Study Area | 6.4 | subsurface sediment | WLCDRD05VC05252 |
| Study Area | 6.4 | subsurface sediment | WLCDRD05VC05454 |
| Study Area | 6.4 | surface sediment | WLCGSD01AN0103_00-10 |
| Study Area | 6.4 | subsurface sediment | WLCGSD01AN0103_10-20 |
| Study Area | 6.4 | subsurface sediment | WLCGSD01AN0103_30-40 |
| Study Area | 6.4 | subsurface sediment | WLCGSG07GSB7S02 |
| Study Area | 6.4 | subsurface sediment | WLCGSG07GSB7S1315 |
| Study Area | 6.4 | subsurface sediment | WLCGSG07GSB7S57 |
| Study Area | 6.4 | subsurface sediment | WLCGSG07GSB7SC071011 |
| Study Area | 6.4 | subsurface sediment | WLCGSG07GSC7S02 |
| Study Area | 6.4 | subsurface sediment | WLCGSG07GSC7S1315 |
| Study Area | 6.4 | subsurface sediment | WLCGSG07GSC7S57 |
| Study Area | 6.4 | subsurface sediment | WLCGSG07GSC7SC071011 |
| Study Area | 6.4 | subsurface sediment | WLCGSG07GSD4S02 |
| Study Area | 6.4 | subsurface sediment | WLCGSG07GSD4S57 |
| Study Area | 6.4 | subsurface sediment | WLCGSG07GSD5SC071011 |
| Study Area | 6.4 | subsurface sediment | WLCGSJ06GS09S123127 |
| Study Area | 6.4 | subsurface sediment | WLCGSJ06GS09S148152 |
| Study Area | 6.4 | subsurface sediment | WLCGSJ06GS09S173177 |
| Study Area | 6.4 | subsurface sediment | WLCGSJ06GS09S2327 |
| Study Area | 6.4 | subsurface sediment | WLCGSJ06GS09S46 |
| Study Area | 6.4 | subsurface sediment | WLCGSJ06GS09S4852 |
| Study Area | 6.4 | subsurface sediment | WLCGSJ06GS09S6566 |
| Study Area | 6.4 | subsurface sediment | WLCGSJ06GS09S911 |
| Study Area | 6.4 | subsurface sediment | WLCGSJ06GS09S9798 |
| Study Area | 6.4 | subsurface sediment | WLCGSJ06GS09S98102 |
| Study Area | 6.4 | surface sediment | WLCOFJ02490149010 |
| Study Area | 6.4 | surface sediment | WLCOFJ02490249020 |
| Study Area | 6.4 | surface sediment | WLCOFJ02490349030 |
| Study Area | 6.4 | surface sediment | WLCOFJ02490449040 |
| Study Area | 6.4 | surface sediment | WLCOFJ02490549050 |
| Study Area | 6.4 | surface sediment | WLCOFJ02490649060 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP25S1 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP25S11 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP25S146 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP25S16 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP25S21 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP25S26 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP25S31 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP25S36 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP25S41 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP25S6 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP25S91 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP26S1 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP26S118 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP26S13 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP26S18 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP26S23 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP26S28 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP26S58 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP26S63 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP26S8 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP26S83 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP27S1 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP27S10 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP27S100 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP27S15 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP27S20 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP27S25 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP27S30 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP27S35 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP27S40 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP27S45 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP27S50 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP27S55 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP27S60 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP28S1 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP28S10 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP28S15 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP28S20 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP28S25 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP28S30 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP28S35 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP28S5 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP29S1 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP29S12 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP29S17 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP29S27 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP29S32 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP29S37 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP29S42 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP29S47 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP29S52 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP29S57 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP29S62 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP29S67 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP29S72 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP29S77 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP30S1 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP30S13 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP30S18 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP30S23 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP30S8 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP31S1 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP31S12 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP31S17 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP31S22 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP31S27 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP31S32 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP31S37 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP31S7 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP32S1 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP32S16 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP32S21 |
| Study Area | 6.4 | subsurface sediment | WLCSLH01GP32S6 |
| Study Area | 6.4 | surface sediment | WR-WSI98SD0660 |
| Study Area | 6.4 | surface sediment | WR-WSI98SD0680 |
| Study Area | 6.4 | surface sediment | WR-WSI98SD0690 |
| Study Area | 6.5 | subsurface sediment | LW2-C266-B |
| Study Area | 6.5 | subsurface sediment | LW2-C266-C |
| Study Area | 6.5 | subsurface sediment | LW2-C267-B |
| Study Area | 6.5 | subsurface sediment | LW2-C267-C |
| Study Area | 6.5 | subsurface sediment | LW2-C268-B |
| Study Area | 6.5 | subsurface sediment | LW2-C268-C |
| Study Area | 6.5 | surface sediment | LW2-C300-A |
| Study Area | 6.5 | subsurface sediment | LW2-C300-B |
| Study Area | 6.5 | subsurface sediment | LW2-C300-C |
| Study Area | 6.5 | subsurface sediment | LW2-C300-D |
| Study Area | 6.5 | subsurface sediment | LW2-C311-B |
| Study Area | 6.5 | subsurface sediment | LW2-C311-C |
| Study Area | 6.5 | subsurface sediment | LW2-C311-E |
| Study Area | 6.5 | surface sediment | LW2-C312-A |
| Study Area | 6.5 | subsurface sediment | LW2-C312-B |
| Study Area | 6.5 | subsurface sediment | LW2-C312-C |
| Study Area | 6.5 | surface sediment | LW2-G266 |
| Study Area | 6.5 | surface sediment | LW2-G267 |
| Study Area | 6.5 | surface sediment | LW2-G268 |
| Study Area | 6.5 | surface sediment | LW2-G300 |
| Study Area | 6.5 | surface sediment | LW2-G309 |
| Study Area | 6.5 | surface sediment | LW2-G311-1 |
| Study Area | 6.5 | surface sediment | LW2-G311-2 |
| Study Area | 6.5 | surface sediment | LW3-G663 |
| Study Area | 6.5 | surface sediment | LWG2-PG-SL4A |
| Study Area | 6.5 | surface sediment | LWG2-PG-SL4F |
| Study Area | 6.5 | surface sediment | LWG2-PG-SL5A |
| Study Area | 6.5 | surface sediment | WLCASF97S016W4150 |
| Study Area | 6.5 | surface sediment | WLCDRD05PG05656 |
| Study Area | 6.5 | subsurface sediment | WLCDRD05VC05656 |
| Study Area | 6.5 | surface sediment | WLR0797WRBC23WRBC23 |
| Study Area | 6.5 | surface sediment | WR-WSI98SD0700000CC |
| Study Area | 6.6 | surface sediment | LW2-B015 |
| Study Area | 6.6 | surface sediment | LW2-C290-A |
| Study Area | 6.6 | subsurface sediment | LW2-C290-B |
| Study Area | 6.6 | subsurface sediment | LW2-C290-C |
| Study Area | 6.6 | subsurface sediment | LW2-C290-D |
| Study Area | 6.6 | subsurface sediment | LW2-C314-B |
| Study Area | 6.6 | subsurface sediment | LW2-C314-C |
| Study Area | 6.6 | subsurface sediment | LW2-C314-D |
| Study Area | 6.6 | subsurface sediment | LW2-C316-B |
| Study Area | 6.6 | subsurface sediment | LW2-C316-C |
| Study Area | 6.6 | subsurface sediment | LW2-C316-D |
| Study Area | 6.6 | surface sediment | LW2-C523-A |
| Study Area | 6.6 | subsurface sediment | LW2-C523-B |
| Study Area | 6.6 | subsurface sediment | LW2-C523-C |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 6.6 | subsurface sediment | LW2-C523-D |
| Study Area | 6.6 | surface sediment | LW2-G275-1 |
| Study Area | 6.6 | surface sediment | LW2-G275-2 |
| Study Area | 6.6 | surface sediment | LW2-G290 |
| Study Area | 6.6 | surface sediment | LW2-G306 |
| Study Area | 6.6 | surface sediment | LW2-G307 |
| Study Area | 6.6 | surface sediment | LW2-G314 |
| Study Area | 6.6 | surface sediment | LW2-G315 |
| Study Area | 6.6 | surface sediment | LW2-G316 |
| Study Area | 6.6 | surface sediment | LW2-G318 |
| Study Area | 6.6 | subsurface sediment | LW3-C664-B |
| Study Area | 6.6 | subsurface sediment | LW3-C664-C |
| Study Area | 6.6 | subsurface sediment | LW3-C665-B |
| Study Area | 6.6 | subsurface sediment | LW3-C665-C |
| Study Area | 6.6 | subsurface sediment | LW3-C665-D |
| Study Area | 6.6 | surface sediment | LW3-G664 |
| Study Area | 6.6 | surface sediment | LW3-G665 |
| Study Area | 6.6 | surface sediment | LWG0106B029SDS015C00 |
| Study Area | 6.6 | surface sediment | WLCDRD05PG05858 |
| Study Area | 6.6 | subsurface sediment | WLCDRD05VC05858 |
| Study Area | 6.6 | surface sediment | WR-WSI98SD0710 |
| Study Area | 6.6 | subsurface sediment | WR-WSI98SD0710000A |
| Study Area | 6.6 | surface sediment | WR-WSI98SD0720 |
| Study Area | 6.6 | subsurface sediment | WR-WSI98SD0720000A |
| Study Area | 6.6 | surface sediment | WR-WSI98SD0750 |
| Study Area | 6.7 | subsurface sediment | LW2-C277-B |
| Study Area | 6.7 | subsurface sediment | LW2-C277-C |
| Study Area | 6.7 | subsurface sediment | LW2-C277-D |
| Study Area | 6.7 | subsurface sediment | LW2-C280-B |
| Study Area | 6.7 | subsurface sediment | LW2-C280-C |
| Study Area | 6.7 | subsurface sediment | LW2-C280-D |
| Study Area | 6.7 | surface sediment | LW2-C291-A |
| Study Area | 6.7 | subsurface sediment | LW2-C291-B |
| Study Area | 6.7 | subsurface sediment | LW2-C291-C |
| Study Area | 6.7 | surface sediment | LW2-C293-A2 |
| Study Area | 6.7 | subsurface sediment | LW2-C293-B |
| Study Area | 6.7 | subsurface sediment | LW2-C293-B2 |
| Study Area | 6.7 | subsurface sediment | LW2-C293-C |
| Study Area | 6.7 | subsurface sediment | LW2-C293-C2 |
| Study Area | 6.7 | subsurface sediment | LW2-C293-D |
| Study Area | 6.7 | subsurface sediment | LW2-C293-D2 |
| Study Area | 6.7 | subsurface sediment | LW2-C295-B |
| Study Area | 6.7 | subsurface sediment | LW2-C295-C |
| Study Area | 6.7 | subsurface sediment | LW2-C313-B |
| Study Area | 6.7 | subsurface sediment | LW2-C313-C |
| Study Area | 6.7 | subsurface sediment | LW2-C321-B1 |
| Study Area | 6.7 | subsurface sediment | LW2-C321-B2 |
| Study Area | 6.7 | subsurface sediment | LW2-C321-C1 |
| Study Area | 6.7 | subsurface sediment | LW2-C321-C2 |
| Study Area | 6.7 | subsurface sediment | LW2-C321-D2 |
| Study Area | 6.7 | subsurface sediment | LW2-C321-E1 |
| Study Area | 6.7 | subsurface sediment | LW2-C321-E2 |
| Study Area | 6.7 | subsurface sediment | LW2-C323-B |
| Study Area | 6.7 | subsurface sediment | LW2-C323-C |
| Study Area | 6.7 | subsurface sediment | LW2-C323-D |
| Study Area | 6.7 | subsurface sediment | LW2-C323-E |
| Study Area | 6.7 | surface sediment | LW2-C533-A |
| Study Area | 6.7 | subsurface sediment | LW2-C533-B |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 6.7 | subsurface sediment | LW2-C533-C |
| Study Area | 6.7 | subsurface sediment | LW2-C533-D |
| Study Area | 6.7 | surface sediment | LW2-G277 |
| Study Area | 6.7 | surface sediment | LW2-G280 |
| Study Area | 6.7 | surface sediment | LW2-G282 |
| Study Area | 6.7 | surface sediment | LW2-G291 |
| Study Area | 6.7 | surface sediment | LW2-G293 |
| Study Area | 6.7 | surface sediment | LW2-G295 |
| Study Area | 6.7 | surface sediment | LW2-G310 |
| Study Area | 6.7 | surface sediment | LW2-G313 |
| Study Area | 6.7 | surface sediment | LW2-G317 |
| Study Area | 6.7 | surface sediment | LW2-G320 |
| Study Area | 6.7 | surface sediment | LW2-G321 |
| Study Area | 6.7 | surface sediment | LW2-G323 |
| Study Area | 6.7 | surface sediment | LW2-G324-2 |
| Study Area | 6.7 | surface sediment | LW2-GBT016 |
| Study Area | 6.7 | surface sediment | LW3-G667 |
| Study Area | 6.7 | surface sediment | LW3-G670 |
| Study Area | 6.7 | surface sediment | LW3-G671 |
| Study Area | 6.7 | surface sediment | LW3-GWC1 |
| Study Area | 6.7 | surface sediment | LWG0106R002SDS015C10 |
| Study Area | 6.7 | surface sediment | LWG0106R002SDS015C20 |
| Study Area | 6.7 | surface sediment | LWG0106R002SDS015C31 |
| Study Area | 6.7 | surface sediment | NA-2A-0005 |
| Study Area | 6.7 | subsurface sediment | NA-2A-0508 |
| Study Area | 6.7 | subsurface sediment | NA-2A-0812 |
| Study Area | 6.7 | subsurface sediment | NA-2A-1216 |
| Study Area | 6.7 | subsurface sediment | NA-2A-1620 |
| Study Area | 6.7 | subsurface sediment | NA-2A-2024 |
| Study Area | 6.7 | subsurface sediment | NA-2A-2428 |
| Study Area | 6.7 | subsurface sediment | NA-2A-2832 |
| Study Area | 6.7 | subsurface sediment | NA-2A-3238 |
| Study Area | 6.7 | subsurface sediment | NA-2A-3844 |
| Study Area | 6.7 | subsurface sediment | NA-2A-4854 |
| Study Area | 6.7 | subsurface sediment | NA-2A-5864 |
| Study Area | 6.7 | subsurface sediment | NA-2A-6874 |
| Study Area | 6.7 | subsurface sediment | NA-2A-7884 |
| Study Area | 6.7 | subsurface sediment | NA-2A-8894 |
| Study Area | 6.7 | surface sediment | NA-2B-0031 |
| Study Area | 6.7 | subsurface sediment | NA-2B-3157 |
| Study Area | 6.7 | subsurface sediment | NA-2B-5794 |
| Study Area | 6.7 | surface sediment | WLCDRD05PG06060 |
| Study Area | 6.7 | subsurface sediment | WLCDRD05VC06060 |
| Study Area | 6.7 | surface sediment | WLCMBA01ED0104ED0104 |
| Study Area | 6.7 | surface sediment | WLCMBA01ED0105ED0105 |
| Study Area | 6.7 | surface sediment | WLCMBA01ED0108ED0108 |
| Study Area | 6.7 | surface sediment | WLCMBA01ED0109ED0109 |
| Study Area | 6.7 | subsurface sediment | WLCMBI02SED02SED02 |
| Study Area | 6.7 | surface sediment | WLCMBJ99D09901D09901 |
| Study Area | 6.7 | surface sediment | WLCMBJ99D09902D09902 |
| Study Area | 6.7 | subsurface sediment | WLR0797WRGC24RGC24A |
| Study Area | 6.7 | subsurface sediment | WLR0797WRGC24RGC24B |
| Study Area | 6.7 | subsurface sediment | WLR0797WRGC25RGC25A |
| Study Area | 6.7 | surface sediment | WR-WSI98SD0730 |
| Study Area | 6.8 | surface sediment | LW2-C282-A |
| Study Area | 6.8 | subsurface sediment | LW2-C282-B |
| Study Area | 6.8 | subsurface sediment | LW2-C282-C |
| Study Area | 6.8 | subsurface sediment | LW2-C282-D |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 6.8 | subsurface sediment | LW2-C296-B |
| Study Area | 6.8 | subsurface sediment | LW2-C296-C |
| Study Area | 6.8 | subsurface sediment | LW2-C296-D |
| Study Area | 6.8 | subsurface sediment | LW2-C303-B |
| Study Area | 6.8 | subsurface sediment | LW2-C303-C |
| Study Area | 6.8 | subsurface sediment | LW2-C303-D |
| Study Area | 6.8 | subsurface sediment | LW2-C324-B |
| Study Area | 6.8 | subsurface sediment | LW2-C324-D |
| Study Area | 6.8 | subsurface sediment | LW2-C324-E |
| Study Area | 6.8 | subsurface sediment | LW2-C326-B |
| Study Area | 6.8 | subsurface sediment | LW2-C326-C |
| Study Area | 6.8 | subsurface sediment | LW2-C326-D |
| Study Area | 6.8 | subsurface sediment | LW2-C327-B |
| Study Area | 6.8 | subsurface sediment | LW2-C327-C |
| Study Area | 6.8 | subsurface sediment | LW2-C327-D |
| Study Area | 6.8 | surface sediment | LW2-C329-A |
| Study Area | 6.8 | subsurface sediment | LW2-C329-B |
| Study Area | 6.8 | subsurface sediment | LW2-C329-C |
| Study Area | 6.8 | subsurface sediment | LW2-C329-D |
| Study Area | 6.8 | subsurface sediment | LW2-C331-B |
| Study Area | 6.8 | subsurface sediment | LW2-C331-C |
| Study Area | 6.8 | subsurface sediment | LW2-C331-D |
| Study Area | 6.8 | subsurface sediment | LW2-C331-E |
| Study Area | 6.8 | subsurface sediment | LW2-C331-G |
| Study Area | 6.8 | subsurface sediment | LW2-C333-B |
| Study Area | 6.8 | subsurface sediment | LW2-C333-C |
| Study Area | 6.8 | subsurface sediment | LW2-C333-E |
| Study Area | 6.8 | subsurface sediment | LW2-C333-G |
| Study Area | 6.8 | surface sediment | LW2-C524-A |
| Study Area | 6.8 | subsurface sediment | LW2-C524-B |
| Study Area | 6.8 | surface sediment | LW2-G296 |
| Study Area | 6.8 | surface sediment | LW2-G303 |
| Study Area | 6.8 | surface sediment | LW2-G319 |
| Study Area | 6.8 | surface sediment | LW2-G322 |
| Study Area | 6.8 | surface sediment | LW2-G324-1 |
| Study Area | 6.8 | surface sediment | LW2-G325 |
| Study Area | 6.8 | surface sediment | LW2-G326 |
| Study Area | 6.8 | surface sediment | LW2-G327 |
| Study Area | 6.8 | surface sediment | LW2-G329 |
| Study Area | 6.8 | surface sediment | LW2-G330 |
| Study Area | 6.8 | surface sediment | LW2-G331 |
| Study Area | 6.8 | surface sediment | LW2-G333 |
| Study Area | 6.8 | surface sediment | LW3-G666 |
| Study Area | 6.8 | surface sediment | LWG0106B022SDS015C00 |
| Study Area | 6.8 | surface sediment | LWG0106R004SDS015C00 |
| Study Area | 6.8 | surface sediment | LWG2-PG-R2RP3 |
| Study Area | 6.8 | surface sediment | LWG2-PG-RP3C |
| Study Area | 6.8 | surface sediment | WLCMBA01ED0103ED0103 |
| Study Area | 6.8 | surface sediment | WLCMBA01ED0103ED0140 |
| Study Area | 6.8 | surface sediment | WLCMBA01ED0110ED0110 |
| Study Area | 6.8 | surface sediment | WLCMBA01ED0111ED0111 |
| Study Area | 6.8 | surface sediment | WLCMBA01ED0112ED0112 |
| Study Area | 6.8 | surface sediment | WLCMBA01ED0114ED0114 |
| Study Area | 6.8 | surface sediment | WLCMBJ99D09905D09905 |
| Study Area | 6.8 | surface sediment | WLCMBJ99D09906D09906 |
| Study Area | 6.8 | surface sediment | WLCOFJ0222C0122C010 |
| Study Area | 6.8 | surface sediment | WLCOFJ0222C0222C020 |
| Study Area | 6.8 | surface sediment | WLCOFJ0222C0322C030 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 6.8 | surface sediment | WLCOFJ0222C0422C040 |
| Study Area | 6.8 | surface sediment | WR-WSI98SD0740 |
| Study Area | 6.8 | subsurface sediment | WR-WSI98SD0740000A |
| Study Area | 6.8 | surface sediment | WR-WSI98SD0770 |
| Study Area | 6.9 | surface sediment | LW2-B050 |
| Study Area | 6.9 | subsurface sediment | LW2-C332-B |
| Study Area | 6.9 | subsurface sediment | LW2-C332-C |
| Study Area | 6.9 | subsurface sediment | LW2-C332-D |
| Study Area | 6.9 | subsurface sediment | LW2-C334-B |
| Study Area | 6.9 | subsurface sediment | LW2-C334-C |
| Study Area | 6.9 | subsurface sediment | LW2-C334-D |
| Study Area | 6.9 | surface sediment | LW2-C335-A |
| Study Area | 6.9 | subsurface sediment | LW2-C335-B |
| Study Area | 6.9 | subsurface sediment | LW2-C335-C |
| Study Area | 6.9 | subsurface sediment | LW2-C335-E |
| Study Area | 6.9 | surface sediment | LW2-G328 |
| Study Area | 6.9 | surface sediment | LW2-G332 |
| Study Area | 6.9 | surface sediment | LW2-G334 |
| Study Area | 6.9 | surface sediment | LW2-G335 |
| Study Area | 6.9 | surface sediment | LW2-G336 |
| Study Area | 6.9 | surface sediment | LW2-GBT017 |
| Study Area | 6.9 | surface sediment | LW3-G668 |
| Study Area | 6.9 | surface sediment | LW3-G669 |
| Study Area | 6.9 | surface sediment | LW3-G672 |
| Study Area | 6.9 | surface sediment | LWG2-PG-RP7B |
| Study Area | 6.9 | subsurface sediment | LWM-METCS13 |
| Study Area | 6.9 | surface sediment | WLCDRD05PG06262 |
| Study Area | 6.9 | surface sediment | WLCDRD05PG06464 |
| Study Area | 6.9 | subsurface sediment | WLCDRD05VC06262 |
| Study Area | 6.9 | surface sediment | WLCMBA01ED0115ED0115 |
| Study Area | 6.9 | surface sediment | WLCMBA01ED0116ED0116 |
| Study Area | 6.9 | surface sediment | WLCMBA01ED0118ED0118 |
| Study Area | 6.9 | surface sediment | WLCMBA01ED0119ED0119 |
| Study Area | 6.9 | surface sediment | WLCOFJ0222B0122B010 |
| Study Area | 6.9 | surface sediment | WLCOFJ0222B0222B020 |
| Study Area | 6.9 | surface sediment | WLCOFJ0222B0322B030 |
| Study Area | 6.9 | surface sediment | WLCOFJ0222B0422B040 |
| Study Area | 6.9 | surface sediment | WRD&M98DMLDML |
| Study Area | 6.9 | surface sediment | WR-WSI98SD0780 |
| Study Area | 6.9 | surface sediment | WR-WSI98SD0800 |
| Study Area | 6.9 | surface sediment | WR-WSI98SD0810 |
| Study Area | 6.9 | subsurface sediment | WR-WSI98SD081C0000A |
| Study Area | 7 | subsurface sediment | ARK-WB-64-0-2 |
| Study Area | 7 | subsurface sediment | ARK-WB-64-10-12 |
| Study Area | 7 | subsurface sediment | ARK-WB-64-10-12_EPAsplit |
| Study Area | 7 | subsurface sediment | ARK-WB-64-12-14 |
| Study Area | 7 | subsurface sediment | ARK-WB-64-14-16 |
| Study Area | 7 | subsurface sediment | ARK-WB-64-16-18 |
| Study Area | 7 | subsurface sediment | ARK-WB-64-18-20 |
| Study Area | 7 | subsurface sediment | ARK-WB-64-20-22 |
| Study Area | 7 | subsurface sediment | ARK-WB-64-22-24 |
| Study Area | 7 | subsurface sediment | ARK-WB-64-2-4 |
| Study Area | 7 | subsurface sediment | ARK-WB-64-24-26 |
| Study Area | 7 | subsurface sediment | ARK-WB-64-26-26.5 |
| Study Area | 7 | subsurface sediment | ARK-WB-64-4-6 |
| Study Area | 7 | subsurface sediment | ARK-WB-64-6-8 |
| Study Area | 7 | subsurface sediment | ARK-WB-64-8-10 |
| Study Area | 7 | subsurface sediment | ARK-WB-65-0-1.5 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 7 | subsurface sediment | ARK-WB-65-10-15 |
| Study Area | 7 | subsurface sediment | ARK-WB-65-15-16 |
| Study Area | 7 | subsurface sediment | ARK-WB-65-16-18 |
| Study Area | 7 | subsurface sediment | ARK-WB-65-6.5-8 |
| Study Area | 7 | subsurface sediment | ARK-WB-65-8-10 |
| Study Area | 7 | subsurface sediment | ARK-WB-65-8-10_EPAsplit |
| Study Area | 7 | surface sediment | LW2-G338 |
| Study Area | 7 | surface sediment | LW2-G339 |
| Study Area | 7 | surface sediment | LW3-G673 |
| Study Area | 7 | surface sediment | LW3-G674 |
| Study Area | 7 | surface sediment | LW3-G675 |
| Study Area | 7 | surface sediment | LWG0107B024SDS015C00 |
| Study Area | 7 | surface sediment | WLCDRD05PG06666 |
| Study Area | 7 | subsurface sediment | WLCDRD05VC06464 |
| Study Area | 7 | subsurface sediment | WLCDRD05VC06666 |
| Study Area | 7 | surface sediment | WLCMBA01ED0121ED0121 |
| Study Area | 7 | surface sediment | WLCMBA01ED0122ED0122 |
| Study Area | 7 | surface sediment | WLCMBA01ED0123ED0123 |
| Study Area | 7 | surface sediment | WLCMBA01ED0123ED0145 |
| Study Area | 7 | surface sediment | WLCMBA01ED0124ED0124 |
| Study Area | 7 | surface sediment | WLCMBA01ED0125ED0125 |
| Study Area | 7 | surface sediment | WLR0797262728WRBC26 |
| Study Area | 7 | surface sediment | WLRELF99RB6SD1011 |
| Study Area | 7 | subsurface sediment | WLRELF99RB6SD1012 |
| Study Area | 7 | surface sediment | WLRELF99RB6SD1013 |
| Study Area | 7 | subsurface sediment | WLRELF99RB6SD1014 |
| Study Area | 7 | surface sediment | WRD&M98DMKDMK |
| Study Area | 7 | surface sediment | WR-WSI98SD0830 |
| Study Area | 7 | surface sediment | WR-WSI98SD0840 |
| Study Area | 7 | subsurface sediment | WR-WSI98SD084000ACC |
| Study Area | 7 | surface sediment | WR-WSI98SD0850 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-50-0-2 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-50-10-12 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-50-12-14 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-50-14-14.5 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-50-2-4 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-50-4-6 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-50-6-8 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-50-8-10 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-51-0-2 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-51-10-12 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-51-10-12_EPAsplit |
| Study Area | 7.1 | subsurface sediment | ARK-WB-51-12-14 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-51-14-16 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-51-16-18 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-51-18-20 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-51-20-21.5 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-51-2-4 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-51-4-6 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-51-6-8 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-51-8-10 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-52-0-2 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-52-10-12 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-52-12-14 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-52-14-16 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-52-16-18 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-52-2-4 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-52-4-6 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 7.1 | subsurface sediment | ARK-WB-52-6-8 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-52-8-10 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-53-0-2 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-53-10-12 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-53-12-14 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-53-14-15.3 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-53-2-4 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-53-4-6 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-53-6-8 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-53-8-10 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-54-0-2 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-54-10-12.3 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-54-12.3-14 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-54-14-16 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-54-16-18 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-54-2-4 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-54-4-6 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-54-6-8 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-54-8-10 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-55-0-2 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-55-10-12 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-55-12-14 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-55-14-16 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-55-16-18 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-55-18-20 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-55-20-21 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-55-2-4 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-55-4-6 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-55-6-8 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-55-8-10 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-63-0-2 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-63-10-12 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-63-10-12_EPAsplit |
| Study Area | 7.1 | subsurface sediment | ARK-WB-63-12-14 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-63-14-16 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-63-16-16.7 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-63-2-4 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-63-4-6 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-63-6-8 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-63-8-10 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-66-0-2 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-66-10-12 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-66-12-14 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-66-14-16 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-66-16-17.5 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-66-2-4 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-66-4-6 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-66-6-8 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-66-8-10 |
| Study Area | 7.1 | subsurface sediment | ARK-WB-66-8-10_EPAsplit |
| Study Area | 7.1 | subsurface sediment | LW2-C341-B |
| Study Area | 7.1 | surface sediment | LW2-C348-A |
| Study Area | 7.1 | subsurface sediment | LW2-C348-B |
| Study Area | 7.1 | subsurface sediment | LW2-C348-C |
| Study Area | 7.1 | subsurface sediment | LW2-C348-D |
| Study Area | 7.1 | surface sediment | LW2-G337 |
| Study Area | 7.1 | surface sediment | LW2-G341 |
| Study Area | 7.1 | surface sediment | LW2-G344 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 7.1 | surface sediment | LW2-G345-1 |
| Study Area | 7.1 | surface sediment | LW2-G345-2 |
| Study Area | 7.1 | surface sediment | LW2-G348 |
| Study Area | 7.1 | subsurface sediment | LW3-C676-B |
| Study Area | 7.1 | subsurface sediment | LW3-C676-C |
| Study Area | 7.1 | surface sediment | LW3-G676 |
| Study Area | 7.1 | surface sediment | LW3-G677 |
| Study Area | 7.1 | surface sediment | WLCDRD05PG06868 |
| Study Area | 7.1 | subsurface sediment | WLCDRD05VC06868 |
| Study Area | 7.1 | subsurface sediment | WLCMBI02SED08SED08 |
| Study Area | 7.1 | surface sediment | WLCMBJ99D09930D09930 |
| Study Area | 7.1 | surface sediment | WLCMBJ99D09931D09931 |
| Study Area | 7.1 | surface sediment | WLCMBJ99D09932D09932 |
| Study Area | 7.1 | surface sediment | WR-WSI98SD0870 |
| Study Area | 7.1 | surface sediment | WR-WSI98SD0880 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-40-0-2 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-40-0-2_EPAsplit |
| Study Area | 7.2 | subsurface sediment | ARK-WB-40-10-12 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-40-10-12_EPAsplit |
| Study Area | 7.2 | subsurface sediment | ARK-WB-40-12-14 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-40-14-16 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-40-2-4 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-40-4-6 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-40-6-8 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-40-6-8_EPAsplit |
| Study Area | 7.2 | subsurface sediment | ARK-WB-40-8-10 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-41-0-6 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-41-14-17 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-41-17-20 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-41-20-22.8 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-41-6-14 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-42-0-6 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-42-0-6_EPAsplit |
| Study Area | 7.2 | subsurface sediment | ARK-WB-42-14-17 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-42-17-20 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-42-20-23 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-42-20-23_EPAsplit |
| Study Area | 7.2 | subsurface sediment | ARK-WB-42-23-26 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-42-23-26_EPAsplit |
| Study Area | 7.2 | subsurface sediment | ARK-WB-42-6-14 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-42-6-14_EPAsplit |
| Study Area | 7.2 | subsurface sediment | ARK-WB-43-0-8 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-43-12-14 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-43-14-16 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-43-16-18 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-43-18-19 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-43-8-18 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-44-2-4_EPAsplit |
| Study Area | 7.2 | subsurface sediment | ARK-WB-45-0-2 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-45-10-12 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-45-12-14 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-45-2-4 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-45-4-6 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-45-6-8 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-45-8-10 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-46-0-2 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-46-10-12 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-46-12-14 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 7.2 | subsurface sediment | ARK-WB-46-14-16 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-46-16-18 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-46-18-20 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-46-20-22 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-46-22-24 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-46-2-4 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-46-24-25 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-46-4-6 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-46-8-10 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-47-0-2 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-47-10-12 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-47-12-14 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-47-14-16 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-47-16-18 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-47-18-20 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-47-20-22 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-47-22-23 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-47-2-4 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-47-6-8 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-47-8-10 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-48-10-12 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-48-12-14 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-48-14-16 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-48-16-18 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-48-18-20 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-48-20-21.9 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-48-2-4 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-48-4-6 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-48-6-8 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-48-8-10 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-49-0-2 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-49-10-12 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-49-12-14 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-49-14-16 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-49-14-16_EPAsplit |
| Study Area | 7.2 | subsurface sediment | ARK-WB-49-16-18 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-49-18-20 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-49-20-22 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-49-20-22_EPAsplit |
| Study Area | 7.2 | subsurface sediment | ARK-WB-49-22-23.5 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-49-22-23_5_EPAsplit |
| Study Area | 7.2 | subsurface sediment | ARK-WB-49-2-4 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-49-4-6 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-49-4-6_EPAsplit |
| Study Area | 7.2 | subsurface sediment | ARK-WB-49-6-8 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-49-6-8_EPAsplit |
| Study Area | 7.2 | subsurface sediment | ARK-WB-49-8-10 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-60-0-2 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-60-2-3.5 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-62-0-2 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-62-2-4 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-62-4-6 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-62-6-8 |
| Study Area | 7.2 | subsurface sediment | ARK-WB-62-8-8.8 |
| Study Area | 7.2 | surface sediment | LW2-B018 |
| Study Area | 7.2 | subsurface sediment | LW2-C351-B |
| Study Area | 7.2 | subsurface sediment | LW2-C351-C |
| Study Area | 7.2 | subsurface sediment | LW2-C351-D |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 7.2 | subsurface sediment | LW2-C351-E |
| Study Area | 7.2 | surface sediment | LW2-G350 |
| Study Area | 7.2 | surface sediment | LW2-G351 |
| Study Area | 7.2 | surface sediment | LW2-G351-2 |
| Study Area | 7.2 | surface sediment | LW2-G353-1 |
| Study Area | 7.2 | surface sediment | LW2-G353-2 |
| Study Area | 7.2 | surface sediment | LW2-GBT018 |
| Study Area | 7.2 | subsurface sediment | LW3-C678-B |
| Study Area | 7.2 | subsurface sediment | LW3-C678-C |
| Study Area | 7.2 | subsurface sediment | LW3-C678-D |
| Study Area | 7.2 | subsurface sediment | LW3-C678-E |
| Study Area | 7.2 | subsurface sediment | LW3-C679-B |
| Study Area | 7.2 | subsurface sediment | LW3-C679-C |
| Study Area | 7.2 | subsurface sediment | LW3-C679-D |
| Study Area | 7.2 | surface sediment | LWG0107R004SDS015C00 |
| Study Area | 7.2 | surface sediment | LWG2-PG-AP2A |
| Study Area | 7.2 | surface sediment | LWG2-PG-AP2D |
| Study Area | 7.2 | surface sediment | WLCDRD05PG07070 |
| Study Area | 7.2 | subsurface sediment | WLCDRD05VC07070 |
| Study Area | 7.2 | subsurface sediment | WLCEAF02WB02SO1725 |
| Study Area | 7.2 | subsurface sediment | WLCEAF02WB13SO1896 |
| Study Area | 7.2 | subsurface sediment | WLCEAF02WB13SO1901 |
| Study Area | 7.2 | subsurface sediment | WLCEAF02WB14SO1906 |
| Study Area | 7.2 | subsurface sediment | WLCEAF02WB14SO1912 |
| Study Area | 7.2 | subsurface sediment | WLCEAF02WB17SO1904 |
| Study Area | 7.2 | subsurface sediment | WLCEAF02WB18SO1888 |
| Study Area | 7.2 | subsurface sediment | WLCEAF02WB18SO1890 |
| Study Area | 7.2 | subsurface sediment | WLCEAF02WB18SO1894 |
| Study Area | 7.2 | subsurface sediment | WLCEAF02WB19SO1885 |
| Study Area | 7.2 | subsurface sediment | WLCEAF02WB20SO1882 |
| Study Area | 7.2 | surface sediment | WLCMBJ99D09934D09934 |
| Study Area | 7.2 | surface sediment | WLCMBJ99D09935D09935 |
| Study Area | 7.2 | surface sediment | WLCMBJ99D09936D09936 |
| Study Area | 7.2 | surface sediment | WLCMBJ99D09938D09938 |
| Study Area | 7.2 | surface sediment | WLCMBJ99D09939D09939 |
| Study Area | 7.2 | surface sediment | WLCOFJ02480348030 |
| Study Area | 7.2 | surface sediment | WLCOFJ02480548050 |
| Study Area | 7.2 | surface sediment | WLCOFJ02480648060 |
| Study Area | 7.2 | surface sediment | WLRELF99OSS001SD0001 |
| Study Area | 7.2 | subsurface sediment | WLRELF99OSS001SD0004 |
| Study Area | 7.2 | surface sediment | WLRELF99OSS002SD0006 |
| Study Area | 7.2 | subsurface sediment | WLRELF99OSS002SD0008 |
| Study Area | 7.2 | subsurface sediment | WLRELF99OSS002SDC001 |
| Study Area | 7.2 | surface sediment | WLRELF99OSS003SD0021 |
| Study Area | 7.2 | subsurface sediment | WLRELF99OSS003SD0022 |
| Study Area | 7.2 | surface sediment | WR-WSI98SD0860 |
| Study Area | 7.2 | surface sediment | WR-WSI98SD0900 |
| Study Area | 7.2 | subsurface sediment | WR-WSI98SD0900000A |
| Study Area | 7.3 | subsurface sediment | ARK-WB-32-10-12 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-32-12-14 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-32-14-16 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-32-16-18 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-32-18-20 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-32-20-22 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-32-22-24 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-32-24-26 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-32-26-28 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-32-28-30 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 7.3 | subsurface sediment | ARK-WB-32-30-32 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-32-32-34 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-32-34-36 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-33-12-14 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-34-0-2 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-34-2-4 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-34-4-6 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-34-4-6_EPAsplit |
| Study Area | 7.3 | subsurface sediment | ARK-WB-35-0-10 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-35-0-10_EPAsplit |
| Study Area | 7.3 | subsurface sediment | ARK-WB-35-10-20 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-35-10-20_EPAsplit |
| Study Area | 7.3 | subsurface sediment | ARK-WB-35-16-18 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-35-18-20 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-35-20-23 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-35-20-23_EPAsplit |
| Study Area | 7.3 | subsurface sediment | ARK-WB-35-23-26 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-35-23-26_EPAsplit |
| Study Area | 7.3 | subsurface sediment | ARK-WB-35-26-29 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-35-29-32 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-35-32-35 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-35-32-35_EPAsplit |
| Study Area | 7.3 | subsurface sediment | ARK-WB-35-35-35.6 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-36-0-10 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-36-10-22 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-36-22-25 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-36-25-28 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-36-28-31 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-36-31-34 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-36-34-37 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-36-37-40 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-37-0-6 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-37-10-12 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-37-12-14 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-37-14-17 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-37-17-20 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-37-20-23 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-37-6-14 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-38-2-4 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-39-0-8 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-39-14-16 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-39-16-18 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-39-18-21 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-39-21-24 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-39-24-25.7 |
| Study Area | 7.3 | subsurface sediment | ARK-WB-39-8-18 |
| Study Area | 7.3 | surface sediment | LW2-B017 |
| Study Area | 7.3 | subsurface sediment | LW2-C349-B |
| Study Area | 7.3 | subsurface sediment | LW2-C349-C |
| Study Area | 7.3 | subsurface sediment | LW2-C349-D |
| Study Area | 7.3 | surface sediment | LW2-C356-A |
| Study Area | 7.3 | subsurface sediment | LW2-C356-B |
| Study Area | 7.3 | subsurface sediment | LW2-C356-C |
| Study Area | 7.3 | subsurface sediment | LW2-C356-D |
| Study Area | 7.3 | subsurface sediment | LW2-C356-E |
| Study Area | 7.3 | surface sediment | LW2-G340 |
| Study Area | 7.3 | surface sediment | LW2-G343 |
| Study Area | 7.3 | surface sediment | LW2-G349 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 7.3 | surface sediment | LW2-G355 |
| Study Area | 7.3 | surface sediment | LW2-G356 |
| Study Area | 7.3 | surface sediment | LW3-G680 |
| Study Area | 7.3 | surface sediment | LW3-G681 |
| Study Area | 7.3 | surface sediment | LW3-G682 |
| Study Area | 7.3 | surface sediment | LW3-G683 |
| Study Area | 7.3 | surface sediment | LW3-G684-1 |
| Study Area | 7.3 | surface sediment | LW3-G684-2 |
| Study Area | 7.3 | surface sediment | LWG0107R006SDS015C00 |
| Study Area | 7.3 | surface sediment | LWG2-PG-AP4C |
| Study Area | 7.3 | surface sediment | LWG2-PG-AP4C-2 |
| Study Area | 7.3 | surface sediment | LWG2-PG-R2AP2 |
| Study Area | 7.3 | subsurface sediment | LWM-METCS14 |
| Study Area | 7.3 | subsurface sediment | LWM-TCLPC14A |
| Study Area | 7.3 | subsurface sediment | LWM-TCLPC14B |
| Study Area | 7.3 | subsurface sediment | LWM-TCLPC15 |
| Study Area | 7.3 | surface sediment | LWP-TZSAP03B-1 |
| Study Area | 7.3 | surface sediment | LWP-TZSAP03B-2 |
| Study Area | 7.3 | surface sediment | LWP-TZSAP04B |
| Study Area | 7.3 | surface sediment | LWP-TZSAP04D |
| Study Area | 7.3 | surface sediment | RIEDEL97SED14D140.5 |
| Study Area | 7.3 | subsurface sediment | RIEDEL97SED14D141.5 |
| Study Area | 7.3 | surface sediment | RIEDEL97SED15D150.5 |
| Study Area | 7.3 | subsurface sediment | RIEDEL97SED15D151.5 |
| Study Area | 7.3 | subsurface sediment | RIEDEL97SED15SED155 |
| Study Area | 7.3 | surface sediment | RIEDEL97SED16D160.5 |
| Study Area | 7.3 | subsurface sediment | RIEDEL97SED16D161.5 |
| Study Area | 7.3 | subsurface sediment | RIEDEL97SED16D162.5 |
| Study Area | 7.3 | subsurface sediment | RIEDEL97SED16ED1610 |
| Study Area | 7.3 | subsurface sediment | RIEDEL97SED16ED1615 |
| Study Area | 7.3 | subsurface sediment | RIEDEL97SED16SED165 |
| Study Area | 7.3 | surface sediment | WLCDRD05PG07272 |
| Study Area | 7.3 | subsurface sediment | WLCDRD05VC07272 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB04SO1743 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB05SO1775 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB08SO1915 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB08SO1917 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB08SO1919 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB08SO1929 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB09SO1931 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB09SO1934 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB09SO1938 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB09SO1945 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB10SO1947 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB10SO1952 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB10SO1956 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB10SO1961 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB11SO1963 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB11SO1967 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB11SO1971 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB12SO1870 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB15SO1850 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB16SO1867 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB21SO1873 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB22SO1877 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB22SO1879 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB24SO1972 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB24SO1975 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB25SO1978 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB25SO1983 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB25SO1985 |
| Study Area | 7.3 | subsurface sediment | WLCEAF02WB25SO1988 |
| Study Area | 7.3 | surface sediment | WLCT0I98GRAB07GRAB07 |
| Study Area | 7.3 | surface sediment | WLR0797WRBC29WRBC29 |
| Study Area | 7.3 | surface sediment | WLR0797WRBC29WRC |
| Study Area | 7.3 | surface sediment | WLRELF99OSS004SD0011 |
| Study Area | 7.3 | subsurface sediment | WLRELF99OSS004SD0013 |
| Study Area | 7.3 | surface sediment | WLRELF99OSS005SD0024 |
| Study Area | 7.3 | subsurface sediment | WLRELF99OSS005SD0026 |
| Study Area | 7.3 | subsurface sediment | WLRELF99OSS005SDC002 |
| Study Area | 7.3 | surface sediment | WLRELF99RB2SD1003 |
| Study Area | 7.3 | subsurface sediment | WLRELF99RB2SD1004 |
| Study Area | 7.3 | surface sediment | WR-WSI98SD0890 |
| Study Area | 7.3 | surface sediment | WR-WSI98SD0910 |
| Study Area | 7.3 | subsurface sediment | WR-WSI98SD0920000A |
| Study Area | 7.3 | surface sediment | WR-WSI98SD0920000CC |
| Study Area | 7.3 | surface sediment | WR-WSI98SD0930 |
| Study Area | 7.3 | surface sediment | WR-WSI98SD0940 |
| Study Area | 7.3 | surface sediment | WR-WSI98SD0950 |
| Study Area | 7.3 | surface sediment | WR-WSI98SD0960 |
| Study Area | 7.3 | subsurface sediment | WR-WSI98SD0960000A |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-0-2 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-10-12 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-10-12_EPAsplit |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-12-14 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-14-16 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-16-18 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-18-20 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-20-22 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-22-24 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-2-4 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-24-26 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-26-28 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-26-28_EPAsplit |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-28-30 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-30-32 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-32-34 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-34-36 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-36-38 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-38-40 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-40-42 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-40-42_EPAsplit |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-42-44 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-44-46 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-4-6 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-46-48 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-48-49.2 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-6-8 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-30-8-10 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31-0-2 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31-10-12 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31-12-14 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31-14-16 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31-16-18 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31-18-20 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31-20-22 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 7.4 | subsurface sediment | ARK-WB-31-22-24 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31-2-4 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31-24-26 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31-26-28 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31-28-30 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31-4-6 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31-6-8 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31-8-10 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31b-24.7-26.7 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31b-26.7-28.7 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31b-28.7-30.7 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31b-30.7-32.7 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31b-32.7-34.7 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31b-34.7-36.7 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31b-36.7-38.7 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-31b-38.7-40.5 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56-0-2 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56-10-11 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56-12-14 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56-14-16 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56-16-18 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56-18-20 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56-18-20_EPAsplit |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56-20-22 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56-22-24 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56-2-4 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56-4-6 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56-6-8 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56-8-10 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56b-20.7-22.7 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56b-22.7-24.7 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56b-24.7-26.7 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56b-26.7-28.7 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56b-28.7-30.7 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56b-30.7-32.7 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56b-32.7-34.7 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56b-34.7-36.7 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56b-36.7-38.7 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56b-38.7-40.7 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56b-40.7-42.7 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56b-42.7-44.7 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56b-44.7-46.7 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-56b-46.7-47.5 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-57-0-2 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-57-10-12 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-57-12-14 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-57-14-16 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-57-16-18 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-57-18-20 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-57-20-22 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-57-22-24 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-57-2-4 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-57-24-26 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-57-26-27.2 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-57-4-6 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-57-6-8 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-57-8-10 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-58-0-2 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 7.4 | subsurface sediment | ARK-WB-58-10-12 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-58-12-14 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-58-14-15.2 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-58-2-4 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-58-4-6 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-58-6-8 |
| Study Area | 7.4 | subsurface sediment | ARK-WB-58-8-10 |
| Study Area | 7.4 | surface sediment | LW2-C342-A |
| Study Area | 7.4 | subsurface sediment | LW2-C342-B |
| Study Area | 7.4 | subsurface sediment | LW2-C342-C |
| Study Area | 7.4 | subsurface sediment | LW2-C342-D |
| Study Area | 7.4 | subsurface sediment | LW2-C342-E |
| Study Area | 7.4 | subsurface sediment | LW2-C346-B |
| Study Area | 7.4 | subsurface sediment | LW2-C346-C |
| Study Area | 7.4 | subsurface sediment | LW2-C346-D |
| Study Area | 7.4 | subsurface sediment | LW2-C347-B |
| Study Area | 7.4 | subsurface sediment | LW2-C347-C |
| Study Area | 7.4 | subsurface sediment | LW2-C347-E |
| Study Area | 7.4 | subsurface sediment | LW2-C347-F |
| Study Area | 7.4 | surface sediment | LW2-C358-A |
| Study Area | 7.4 | subsurface sediment | LW2-C358-B |
| Study Area | 7.4 | subsurface sediment | LW2-C358-C |
| Study Area | 7.4 | subsurface sediment | LW2-C358-D |
| Study Area | 7.4 | surface sediment | LW2-C359-A |
| Study Area | 7.4 | subsurface sediment | LW2-C359-B |
| Study Area | 7.4 | subsurface sediment | LW2-C359-C |
| Study Area | 7.4 | subsurface sediment | LW2-C359-D |
| Study Area | 7.4 | subsurface sediment | LW2-C360-B1 |
| Study Area | 7.4 | subsurface sediment | LW2-C360-B2 |
| Study Area | 7.4 | subsurface sediment | LW2-C360-C1 |
| Study Area | 7.4 | subsurface sediment | LW2-C360-C2 |
| Study Area | 7.4 | subsurface sediment | LW2-C360-D2 |
| Study Area | 7.4 | subsurface sediment | LW2-C360-F1 |
| Study Area | 7.4 | subsurface sediment | LW2-C360-F2 |
| Study Area | 7.4 | subsurface sediment | LW2-C362-B |
| Study Area | 7.4 | subsurface sediment | LW2-C362-C |
| Study Area | 7.4 | subsurface sediment | LW2-C362-D |
| Study Area | 7.4 | subsurface sediment | LW2-C366-B1 |
| Study Area | 7.4 | subsurface sediment | LW2-C366-B2 |
| Study Area | 7.4 | subsurface sediment | LW2-C366-C1 |
| Study Area | 7.4 | subsurface sediment | LW2-C366-C2 |
| Study Area | 7.4 | subsurface sediment | LW2-C366-D1 |
| Study Area | 7.4 | subsurface sediment | LW2-C366-D2 |
| Study Area | 7.4 | subsurface sediment | LW2-C366-E1 |
| Study Area | 7.4 | subsurface sediment | LW2-C366-F1 |
| Study Area | 7.4 | subsurface sediment | LW2-C366-F2 |
| Study Area | 7.4 | subsurface sediment | LW2-C366-G1 |
| Study Area | 7.4 | subsurface sediment | LW2-C368-B |
| Study Area | 7.4 | subsurface sediment | LW2-C368-C |
| Study Area | 7.4 | subsurface sediment | LW2-C368-D |
| Study Area | 7.4 | subsurface sediment | LW2-C368-E |
| Study Area | 7.4 | surface sediment | LW2-G342 |
| Study Area | 7.4 | surface sediment | LW2-G346 |
| Study Area | 7.4 | surface sediment | LW2-G347 |
| Study Area | 7.4 | surface sediment | LW2-G358 |
| Study Area | 7.4 | surface sediment | LW2-G359 |
| Study Area | 7.4 | surface sediment | LW2-G360 |
| Study Area | 7.4 | surface sediment | LW2-G362-1 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 7.4 | surface sediment | LW2-G362-2 |
| Study Area | 7.4 | surface sediment | LW2-G366 |
| Study Area | 7.4 | surface sediment | LW2-G368 |
| Study Area | 7.4 | surface sediment | LW2-GBT019 |
| Study Area | 7.4 | subsurface sediment | LW3-C686-B |
| Study Area | 7.4 | subsurface sediment | LW3-C686-C |
| Study Area | 7.4 | subsurface sediment | LW3-C686-D |
| Study Area | 7.4 | surface sediment | LW3-G685 |
| Study Area | 7.4 | surface sediment | LW3-G686 |
| Study Area | 7.4 | surface sediment | LW3-GSP07E |
| Study Area | 7.4 | surface sediment | LWG2-PG-CP7A |
| Study Area | 7.4 | surface sediment | LWG2-PG-CP7D |
| Study Area | 7.4 | surface sediment | LWG2-PG-CP9A |
| Study Area | 7.4 | surface sediment | LWG2-PG-CP9D |
| Study Area | 7.4 | surface sediment | LWP-TZSCP06C |
| Study Area | 7.4 | surface sediment | LWP-TZSCP07B |
| Study Area | 7.4 | surface sediment | LWP-TZSCP08D-1 |
| Study Area | 7.4 | surface sediment | LWP-TZSCP08D-2 |
| Study Area | 7.4 | surface sediment | RIEDEL97SED10D100.5 |
| Study Area | 7.4 | subsurface sediment | RIEDEL97SED10D101.5 |
| Study Area | 7.4 | subsurface sediment | RIEDEL97SED10D102.5 |
| Study Area | 7.4 | subsurface sediment | RIEDEL97SED10ED1010 |
| Study Area | 7.4 | subsurface sediment | RIEDEL97SED10ED1015 |
| Study Area | 7.4 | subsurface sediment | RIEDEL97SED10SED105 |
| Study Area | 7.4 | surface sediment | RIEDEL97SED11D110.5 |
| Study Area | 7.4 | subsurface sediment | RIEDEL97SED11D111.5 |
| Study Area | 7.4 | subsurface sediment | RIEDEL97SED11SED115 |
| Study Area | 7.4 | surface sediment | RIEDEL97SED12D120.5 |
| Study Area | 7.4 | subsurface sediment | RIEDEL97SED12D121.5 |
| Study Area | 7.4 | subsurface sediment | RIEDEL97SED12ED1215 |
| Study Area | 7.4 | surface sediment | RIEDEL97SED13D130.5 |
| Study Area | 7.4 | subsurface sediment | RIEDEL97SED13D131.5 |
| Study Area | 7.4 | surface sediment | WLCASF97S014W4166 |
| Study Area | 7.4 | subsurface sediment | WLCEAF02WB23SO1855 |
| Study Area | 7.4 | subsurface sediment | WLCEAF02WB23SO1858 |
| Study Area | 7.4 | subsurface sediment | WLCEAF02WB23SO1864 |
| Study Area | 7.4 | surface sediment | WLRELF99OSS006SD0016 |
| Study Area | 7.4 | subsurface sediment | WLRELF99OSS006SD0017 |
| Study Area | 7.4 | surface sediment | WRD&M98DMJDMJ |
| Study Area | 7.4 | surface sediment | WR-WSI98SD0970 |
| Study Area | 7.4 | surface sediment | WR-WSI98SD0980 |
| Study Area | 7.4 | surface sediment | WR-WSI98SD0990 |
| Study Area | 7.5 | subsurface sediment | LW2-C352-B |
| Study Area | 7.5 | subsurface sediment | LW2-C352-C |
| Study Area | 7.5 | subsurface sediment | LW2-C352-D |
| Study Area | 7.5 | subsurface sediment | LW2-C357-B |
| Study Area | 7.5 | subsurface sediment | LW2-C357-C |
| Study Area | 7.5 | subsurface sediment | LW2-C357-D |
| Study Area | 7.5 | surface sediment | LW2-C361-A |
| Study Area | 7.5 | subsurface sediment | LW2-C361-B |
| Study Area | 7.5 | subsurface sediment | LW2-C371-B |
| Study Area | 7.5 | subsurface sediment | LW2-C371-C |
| Study Area | 7.5 | subsurface sediment | LW2-C371-E |
| Study Area | 7.5 | subsurface sediment | LW2-C377-B |
| Study Area | 7.5 | subsurface sediment | LW2-C377-C |
| Study Area | 7.5 | subsurface sediment | LW2-C377-D |
| Study Area | 7.5 | subsurface sediment | LW2-C377-E |
| Study Area | 7.5 | surface sediment | LW2-G352 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 7.5 | surface sediment | LW2-G354 |
| Study Area | 7.5 | surface sediment | LW2-G357 |
| Study Area | 7.5 | surface sediment | LW2-G361 |
| Study Area | 7.5 | surface sediment | LW2-G365 |
| Study Area | 7.5 | surface sediment | LW2-G369 |
| Study Area | 7.5 | surface sediment | LW2-G371 |
| Study Area | 7.5 | surface sediment | LW2-G377 |
| Study Area | 7.5 | surface sediment | LW2-GBT020 |
| Study Area | 7.5 | subsurface sediment | LW3-C688-B |
| Study Area | 7.5 | subsurface sediment | LW3-C688-C |
| Study Area | 7.5 | subsurface sediment | LW3-C688-D |
| Study Area | 7.5 | subsurface sediment | LW3-C688-F |
| Study Area | 7.5 | subsurface sediment | LW3-C690-B |
| Study Area | 7.5 | subsurface sediment | LW3-C690-C |
| Study Area | 7.5 | subsurface sediment | LW3-C690-D |
| Study Area | 7.5 | subsurface sediment | LW3-C690-E |
| Study Area | 7.5 | surface sediment | LW3-G687 |
| Study Area | 7.5 | surface sediment | LW3-G689 |
| Study Area | 7.5 | surface sediment | LWG0107B022SDS015C00 |
| Study Area | 7.5 | surface sediment | LWG0107R003SDS015C00 |
| Study Area | 7.5 | surface sediment | LWG0107R030SDS015C00 |
| Study Area | 7.5 | surface sediment | RIEDEL97SED09D090.5 |
| Study Area | 7.5 | subsurface sediment | RIEDEL97SED09D091.5 |
| Study Area | 7.5 | surface sediment | WLCASF97S013W4167 |
| Study Area | 7.5 | surface sediment | WLRWTF98ATXSD1ATXSD1 |
| Study Area | 7.5 | surface sediment | WLRWTF98ATXSD1TXSD1D |
| Study Area | 7.5 | surface sediment | WLRWTF98ATXSD2ATXSD2 |
| Study Area | 7.5 | surface sediment | WLRWTF98ATXSD2TXSD2D |
| Study Area | 7.5 | surface sediment | WLRWTF98ATXSD3ATXSD3 |
| Study Area | 7.5 | surface sediment | WR-WSI98SD1000 |
| Study Area | 7.5 | subsurface sediment | WR-WSI98SD1000000A |
| Study Area | 7.5 | surface sediment | WR-WSI98SD1010 |
| Study Area | 7.5 | surface sediment | WR-WSI98SD1020 |
| Study Area | 7.5 | subsurface sediment | WR-WSI98SD1020000A |
| Study Area | 7.5 | surface sediment | WR-WSI98SD1030 |
| Study Area | 7.5 | surface sediment | WR-WSI98SD1040 |
| Study Area | 7.6 | subsurface sediment | LW2-C381-B |
| Study Area | 7.6 | subsurface sediment | LW2-C381-C |
| Study Area | 7.6 | subsurface sediment | LW2-C381-E |
| Study Area | 7.6 | surface sediment | LW2-G374 |
| Study Area | 7.6 | surface sediment | LW2-G381 |
| Study Area | 7.6 | surface sediment | LW2-G389 |
| Study Area | 7.6 | surface sediment | LW3-G691 |
| Study Area | 7.6 | surface sediment | LW3-G692-1 |
| Study Area | 7.6 | surface sediment | LW3-G692-2 |
| Study Area | 7.6 | surface sediment | LW3-G693 |
| Study Area | 7.6 | surface sediment | PSYSEA98PSY38PSY38S |
| Study Area | 7.6 | subsurface sediment | PSYSEA98PSY39CPSY39A |
| Study Area | 7.6 | subsurface sediment | PSYSEA98PSY39CPSY39B |
| Study Area | 7.6 | surface sediment | PSYSEA98PSY39PSY39S |
| Study Area | 7.6 | surface sediment | WLCASF97S009W4172 |
| Study Area | 7.6 | surface sediment | WLCASF97S010W4171 |
| Study Area | 7.6 | surface sediment | WLCASF97S011W4170 |
| Study Area | 7.6 | surface sediment | WLCASF97S012W4168 |
| Study Area | 7.6 | surface sediment | WLCASF97S012W4169 |
| Study Area | 7.6 | surface sediment | WLCCWI08ANCTPD03 |
| Study Area | 7.6 | surface sediment | WLCCWI08ANCTPD04 |
| Study Area | 7.6 | surface sediment | WLCCWI08DMMU1A |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 7.6 | subsurface sediment | WLCCWI08DMMU1A4041 |
| Study Area | 7.6 | subsurface sediment | WLCCWI08DMMU1A4142 |
| Study Area | 7.6 | subsurface sediment | WLCCWI08DMMU1ABC |
| Study Area | 7.6 | surface sediment | WLCCWI08DMMU1B |
| Study Area | 7.6 | subsurface sediment | WLCCWI08DMMU1B4041 |
| Study Area | 7.6 | subsurface sediment | WLCCWI08DMMU1B4142 |
| Study Area | 7.6 | surface sediment | WLCCWI08DMMU1C |
| Study Area | 7.6 | subsurface sediment | WLCCWI08DMMU1C4041 |
| Study Area | 7.6 | subsurface sediment | WLCCWI08DMMU1C4142 |
| Study Area | 7.6 | surface sediment | WLCCWI08DMMU3A |
| Study Area | 7.6 | subsurface sediment | WLCCWI08DMMU3A13 |
| Study Area | 7.6 | surface sediment | WLCDRD05PG02929 |
| Study Area | 7.6 | surface sediment | WLCDRD05PG07474 |
| Study Area | 7.6 | subsurface sediment | WLCDRI03C07-08CSS03 |
| Study Area | 7.6 | surface sediment | WLCWTG02ANCTPD01A |
| Study Area | 7.6 | surface sediment | WLCWTG02ANCTPD01B |
| Study Area | 7.6 | surface sediment | WLCWTG02ANCTPD02A |
| Study Area | 7.6 | surface sediment | WLCWTG02ANCTPD02B |
| Study Area | 7.6 | surface sediment | WLCWTG02ANCTPD03A |
| Study Area | 7.6 | surface sediment | WLCWTG02ANCTPD03B |
| Study Area | 7.6 | surface sediment | WLCWTG02ANCTPD04A |
| Study Area | 7.6 | surface sediment | WLCWTG02ANCTPD04B |
| Study Area | 7.6 | surface sediment | WLRWTF98ATXSD4ATXSD4 |
| Study Area | 7.6 | surface sediment | WLRWTF98ATXSD5ATXSD5 |
| Study Area | 7.6 | surface sediment | WLRWTF98HEVSD3HEVSD3 |
| Study Area | 7.6 | surface sediment | WRD&M98DMIDMI |
| Study Area | 7.6 | surface sediment | WR-WSI98SD1050 |
| Study Area | 7.6 | surface sediment | WR-WSI98SD1060 |
| Study Area | 7.6 | subsurface sediment | WR-WSI98SD1060000A |
| Study Area | 7.6 | surface sediment | WR-WSI98SD1070 |
| Study Area | 7.6 | surface sediment | WR-WSI98SD1080 |
| Study Area | 7.6 | surface sediment | WR-WSI98SD1100 |
| Study Area | 7.7 | surface sediment | LW2-B019 |
| Study Area | 7.7 | subsurface sediment | LW2-C373-B |
| Study Area | 7.7 | subsurface sediment | LW2-C373-C |
| Study Area | 7.7 | subsurface sediment | LW2-C373-D |
| Study Area | 7.7 | subsurface sediment | LW2-C401-B |
| Study Area | 7.7 | subsurface sediment | LW2-C401-C |
| Study Area | 7.7 | subsurface sediment | LW2-C401-D |
| Study Area | 7.7 | subsurface sediment | LW2-C401-E |
| Study Area | 7.7 | subsurface sediment | LW2-C401-F |
| Study Area | 7.7 | surface sediment | LW2-C532-A |
| Study Area | 7.7 | subsurface sediment | LW2-C532-B |
| Study Area | 7.7 | subsurface sediment | LW2-C532-C |
| Study Area | 7.7 | subsurface sediment | LW2-C532-D |
| Study Area | 7.7 | subsurface sediment | LW2-C532-E |
| Study Area | 7.7 | subsurface sediment | LW2-C532-F |
| Study Area | 7.7 | surface sediment | LW2-G363 |
| Study Area | 7.7 | surface sediment | LW2-G373 |
| Study Area | 7.7 | surface sediment | LW2-G378 |
| Study Area | 7.7 | surface sediment | LW2-G394 |
| Study Area | 7.7 | surface sediment | LW2-G401 |
| Study Area | 7.7 | surface sediment | LW2-G404 |
| Study Area | 7.7 | surface sediment | LW3-G694 |
| Study Area | 7.7 | surface sediment | LW3-GSP07W |
| Study Area | 7.7 | surface sediment | LWG2-PG-W9A |
| Study Area | 7.7 | surface sediment | LWG2-PG-W9C |
| Study Area | 7.7 | subsurface sediment | TOSCO99DMMU1SDO1 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 7.7 | subsurface sediment | TOSCO99DMMU1SDO3 |
| Study Area | 7.7 | subsurface sediment | TOSCO99DMMU2SDO4 |
| Study Area | 7.7 | surface sediment | WLCASF97S004W4156 |
| Study Area | 7.7 | surface sediment | WLCASF97S005W4155 |
| Study Area | 7.7 | surface sediment | WLCASF97S006W4154 |
| Study Area | 7.7 | surface sediment | WLCASF97S008W4152 |
| Study Area | 7.7 | surface sediment | WLCCWI08ANCTPD05 |
| Study Area | 7.7 | surface sediment | WLCCWI08ANCTPD06 |
| Study Area | 7.7 | surface sediment | WLCCWI08DMMU2A |
| Study Area | 7.7 | subsurface sediment | WLCCWI08DMMU2A4041 |
| Study Area | 7.7 | subsurface sediment | WLCCWI08DMMU2A4142 |
| Study Area | 7.7 | subsurface sediment | WLCCWI08DMMU2ABC |
| Study Area | 7.7 | surface sediment | WLCCWI08DMMU2B |
| Study Area | 7.7 | subsurface sediment | WLCCWI08DMMU2B4041 |
| Study Area | 7.7 | subsurface sediment | WLCCWI08DMMU2B4142 |
| Study Area | 7.7 | surface sediment | WLCCWI08DMMU2C |
| Study Area | 7.7 | subsurface sediment | WLCCWI08DMMU2C4041 |
| Study Area | 7.7 | subsurface sediment | WLCCWI08DMMU2C4142 |
| Study Area | 7.7 | subsurface sediment | WLCCWI08DMMU3ABC |
| Study Area | 7.7 | surface sediment | WLCCWI08DMMU3B |
| Study Area | 7.7 | subsurface sediment | WLCCWI08DMMU3B13 |
| Study Area | 7.7 | surface sediment | WLCCWI08DMMU3D |
| Study Area | 7.7 | subsurface sediment | WLCCWI08DMMU3D13 |
| Study Area | 7.7 | surface sediment | WLCCWI08DMMU3E |
| Study Area | 7.7 | subsurface sediment | WLCCWI08DMMU3E13 |
| Study Area | 7.7 | subsurface sediment | WLCDRD05VC02929 |
| Study Area | 7.7 | surface sediment | WLCOFJ02220122010 |
| Study Area | 7.7 | surface sediment | WLCOFJ02220222020 |
| Study Area | 7.7 | surface sediment | WLCOFJ022203122031 |
| Study Area | 7.7 | surface sediment | WLCOFJ02220322030 |
| Study Area | 7.7 | surface sediment | WLCOFJ02220422040 |
| Study Area | 7.7 | surface sediment | WLCOFJ02220522050 |
| Study Area | 7.7 | surface sediment | WLCOFJ02220622060 |
| Study Area | 7.7 | subsurface sediment | WLCPWL09APS-1B |
| Study Area | 7.7 | subsurface sediment | WLCPWL09APS-1T |
| Study Area | 7.7 | subsurface sediment | WLCPWL09APS-2B |
| Study Area | 7.7 | subsurface sediment | WLCPWL09APS-2T |
| Study Area | 7.7 | subsurface sediment | WLCPWL09APS-3B |
| Study Area | 7.7 | subsurface sediment | WLCPWL09APS-3T |
| Study Area | 7.7 | subsurface sediment | WLCPWL09DRB-1Z |
| Study Area | 7.7 | subsurface sediment | WLCPWL09DRB-2Z |
| Study Area | 7.7 | subsurface sediment | WLCPWL09DRB-3Z |
| Study Area | 7.7 | subsurface sediment | WLCPWL09DRB-DP |
| Study Area | 7.7 | subsurface sediment | WLCPWL09URB-1Z |
| Study Area | 7.7 | subsurface sediment | WLCPWL09URB-2Z |
| Study Area | 7.7 | subsurface sediment | WLCPWL09URB-3Z |
| Study Area | 7.7 | subsurface sediment | WLCPWL09URB-DP |
| Study Area | 7.7 | surface sediment | WLCWTG02ANCTPD05A |
| Study Area | 7.7 | surface sediment | WLCWTG02ANCTPD05B |
| Study Area | 7.7 | surface sediment | WLCWTG02ANCTPD06A |
| Study Area | 7.7 | surface sediment | WLCWTG02ANCTPD06B |
| Study Area | 7.7 | surface sediment | WLCWTG02ANCTPD07A |
| Study Area | 7.7 | surface sediment | WLCWTG02ANCTPD07B |
| Study Area | 7.7 | surface sediment | WLCWTG02ANCTPD08A |
| Study Area | 7.7 | surface sediment | WLCWTG02ANCTPD08B |
| Study Area | 7.7 | surface sediment | WLCWTG02ANCTPD09R |
| Study Area | 7.7 | subsurface sediment | WLCWTI00N20N20 |
| Study Area | 7.7 | subsurface sediment | WLCWTI00N40N40 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 7.7 | subsurface sediment | WLCWTI00S20S20 |
| Study Area | 7.7 | subsurface sediment | WLCWTI00S40S40 |
| Study Area | 7.7 | subsurface sediment | WLCWTI00TP11TP11 |
| Study Area | 7.7 | surface sediment | WLRWTF98HEVSD1HEVSD1 |
| Study Area | 7.7 | surface sediment | WLRWTF98HEVSD2HEVSD2 |
| Study Area | 7.7 | surface sediment | WLRWTF98TOSSD1TOSSD1 |
| Study Area | 7.7 | surface sediment | WLRWTF98TOSSD2TOSSD2 |
| Study Area | 7.7 | surface sediment | WLRWTF98TOSSD3TOSSD3 |
| Study Area | 7.7 | surface sediment | WR-WSI98SD1110 |
| Study Area | 7.7 | surface sediment | WR-WSI98SD1130 |
| Study Area | 7.7 | surface sediment | WR-WSI98SD1140 |
| Study Area | 7.7 | surface sediment | WR-WSI98SD1150 |
| Study Area | 7.7 | surface sediment | WR-WSI98SD1160 |
| Study Area | 7.7 | subsurface sediment | WR-WSI98SD1160000A |
| Study Area | 7.8 | subsurface sediment | LW2-C403-B |
| Study Area | 7.8 | subsurface sediment | LW2-C403-C |
| Study Area | 7.8 | subsurface sediment | LW2-C403-D |
| Study Area | 7.8 | subsurface sediment | LW2-C403-F |
| Study Area | 7.8 | surface sediment | LW2-G391 |
| Study Area | 7.8 | surface sediment | LW2-G399 |
| Study Area | 7.8 | surface sediment | LW2-G403 |
| Study Area | 7.8 | surface sediment | LW2-GBT021 |
| Study Area | 7.8 | subsurface sediment | LW3-C695-B |
| Study Area | 7.8 | subsurface sediment | LW3-C695-D |
| Study Area | 7.8 | subsurface sediment | LW3-C695-E |
| Study Area | 7.8 | surface sediment | NA-3A-0005 |
| Study Area | 7.8 | subsurface sediment | NA-3A-0508 |
| Study Area | 7.8 | subsurface sediment | NA-3A-0812 |
| Study Area | 7.8 | subsurface sediment | NA-3A-1216 |
| Study Area | 7.8 | subsurface sediment | NA-3A-1620 |
| Study Area | 7.8 | subsurface sediment | NA-3A-2024 |
| Study Area | 7.8 | subsurface sediment | NA-3A-2428 |
| Study Area | 7.8 | subsurface sediment | NA-3A-2832 |
| Study Area | 7.8 | subsurface sediment | NA-3A-3238 |
| Study Area | 7.8 | subsurface sediment | NA-3A-3844 |
| Study Area | 7.8 | subsurface sediment | NA-3A-4854 |
| Study Area | 7.8 | subsurface sediment | NA-3A-5864 |
| Study Area | 7.8 | subsurface sediment | NA-3A-6874 |
| Study Area | 7.8 | subsurface sediment | NA-3A-7884 |
| Study Area | 7.8 | subsurface sediment | NA-3A-8894 |
| Study Area | 7.8 | surface sediment | NA-3B-0034 |
| Study Area | 7.8 | subsurface sediment | NA-3B-3464 |
| Study Area | 7.8 | subsurface sediment | NA-3B-6494 |
| Study Area | 7.8 | surface sediment | PSYSEA98PSY37PSY37S |
| Study Area | 7.8 | surface sediment | PSYSEA98PSY40PSY40S |
| Study Area | 7.8 | surface sediment | WLCASF97S003W4157 |
| Study Area | 7.8 | subsurface sediment | WLCDRD05VC03131 |
| Study Area | 7.8 | subsurface sediment | WLCDRI03C09-11CSS04 |
| Study Area | 7.8 | surface sediment | WLRWTF98TOSSD4TOSSD4 |
| Study Area | 7.8 | surface sediment | WLRWTF98TOSSD5TOSSD5 |
| Study Area | 7.8 | subsurface sediment | WR-WSI98SD1170000A |
| Study Area | 7.8 | surface sediment | WR-WSI98SD1170000CC |
| Study Area | 7.8 | surface sediment | WR-WSI98SD1180 |
| Study Area | 7.8 | surface sediment | WR-WSI98SD1190 |
| Study Area | 7.8 | surface sediment | WR-WSI98SD1210 |
| Study Area | 7.8 | surface sediment | WR-WSI98SD1220 |
| Study Area | 7.8 | subsurface sediment | WR-WSI98SD1220000A |
| Study Area | 7.9 | subsurface sediment | LW2-C386-B |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 7.9 | subsurface sediment | LW2-C386-C |
| Study Area | 7.9 | surface sediment | LW2-G370 |
| Study Area | 7.9 | surface sediment | LW2-G375 |
| Study Area | 7.9 | surface sediment | LW2-G386 |
| Study Area | 7.9 | surface sediment | LW2-G407 |
| Study Area | 7.9 | subsurface sediment | LW3-C698-B |
| Study Area | 7.9 | surface sediment | LW3-G696 |
| Study Area | 7.9 | surface sediment | LW3-G697 |
| Study Area | 7.9 | surface sediment | LWG0107R040SDS015C00 |
| Study Area | 7.9 | subsurface sediment | PSYSEA98PSY36CPSY36A |
| Study Area | 7.9 | subsurface sediment | PSYSEA98PSY36CPSY36B |
| Study Area | 7.9 | subsurface sediment | PSYSEA98PSY36CPSY36C |
| Study Area | 7.9 | subsurface sediment | PSYSEA98PSY36CPSY36D |
| Study Area | 7.9 | surface sediment | PSYSEA98PSY36PSY36S |
| Study Area | 7.9 | surface sediment | WLCASF97S002W4158 |
| Study Area | 7.9 | surface sediment | WLCT0I98GRAB08GRAB08 |
| Study Area | 7.9 | surface sediment | WR-WSI98SD1200 |
| Study Area | 7.9 | subsurface sediment | WR-WSI98SD1200000A |
| Study Area | 7.9 | surface sediment | WR-WSI98SD1240 |
| Study Area | 8 | subsurface sediment | LW2-C372-B |
| Study Area | 8 | subsurface sediment | LW2-C372-C |
| Study Area | 8 | subsurface sediment | LW2-C372-E |
| Study Area | 8 | surface sediment | LW2-C400-A |
| Study Area | 8 | subsurface sediment | LW2-C400-B |
| Study Area | 8 | subsurface sediment | LW2-C400-C |
| Study Area | 8 | subsurface sediment | LW2-C400-D |
| Study Area | 8 | subsurface sediment | LW2-C413-B1 |
| Study Area | 8 | subsurface sediment | LW2-C413-B2 |
| Study Area | 8 | subsurface sediment | LW2-C413-C1 |
| Study Area | 8 | subsurface sediment | LW2-C413-C2 |
| Study Area | 8 | subsurface sediment | LW2-C413-D2 |
| Study Area | 8 | surface sediment | LW2-G367 |
| Study Area | 8 | surface sediment | LW2-G372-1 |
| Study Area | 8 | surface sediment | LW2-G372-2 |
| Study Area | 8 | surface sediment | LW2-G387 |
| Study Area | 8 | surface sediment | LW2-G400 |
| Study Area | 8 | surface sediment | LW2-G410-1 |
| Study Area | 8 | surface sediment | LW2-G410-2 |
| Study Area | 8 | surface sediment | LW2-G413 |
| Study Area | 8 | surface sediment | LW2-GBT022 |
| Study Area | 8 | subsurface sediment | LW3-C701-B |
| Study Area | 8 | subsurface sediment | LW3-C701-D |
| Study Area | 8 | subsurface sediment | LW3-C701-E |
| Study Area | 8 | subsurface sediment | LW3-C702-B |
| Study Area | 8 | subsurface sediment | LW3-C702-C |
| Study Area | 8 | subsurface sediment | LW3-C702-D |
| Study Area | 8 | subsurface sediment | LW3-C702-F |
| Study Area | 8 | subsurface sediment | LW3-C703-B |
| Study Area | 8 | subsurface sediment | LW3-C703-C |
| Study Area | 8 | subsurface sediment | LW3-C703-D |
| Study Area | 8 | surface sediment | LW3-G699 |
| Study Area | 8 | surface sediment | LW3-G700 |
| Study Area | 8 | surface sediment | LWG0107B023SDS015C00 |
| Study Area | 8 | surface sediment | LWG0108R002SDS015C00 |
| Study Area | 8 | surface sediment | PSYD&M97DM22DM22 |
| Study Area | 8 | subsurface sediment | PSYSEA98PSY18CPSY18A |
| Study Area | 8 | subsurface sediment | PSYSEA98PSY18CPSY18B |
| Study Area | 8 | subsurface sediment | PSYSEA98PSY18CPSY18C |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 8 | surface sediment | PSYSEA98PSY18PSY18S |
| Study Area | 8 | surface sediment | PSYSEA98PSY21PSY21S |
| Study Area | 8 | subsurface sediment | PSYSEA98PSY24CPSY24A |
| Study Area | 8 | subsurface sediment | PSYSEA98PSY24CPSY24B |
| Study Area | 8 | surface sediment | PSYSEA98PSY24PSY24S |
| Study Area | 8 | surface sediment | PSYSEA98PSY25PSY25S |
| Study Area | 8 | surface sediment | PSYSEA98PSY26PSY26S |
| Study Area | 8 | subsurface sediment | PSYSEA98PSY34CPSY34A |
| Study Area | 8 | subsurface sediment | PSYSEA98PSY34CPSY34B |
| Study Area | 8 | subsurface sediment | PSYSEA98PSY34CPSY34C |
| Study Area | 8 | surface sediment | PSYSEA98PSY34PSY34S |
| Study Area | 8 | surface sediment | PSYSEA98PSY35PSY35S |
| Study Area | 8 | subsurface sediment | PSYSEA98PSY41CPSY41A |
| Study Area | 8 | subsurface sediment | PSYSEA98PSY41CPSY41B |
| Study Area | 8 | subsurface sediment | PSYSEA98PSY41CPSY41C |
| Study Area | 8 | surface sediment | PSYSEA98PSY41PSY41S |
| Study Area | 8 | surface sediment | PSYSEA98PSY42PSY42S |
| Study Area | 8 | surface sediment | WLCASF97S001W4159 |
| Study Area | 8 | subsurface sediment | WLCDRI03C04-06CSS02 |
| Study Area | 8 | subsurface sediment | WLCDRI03C12-14CSS05 |
| Study Area | 8 | subsurface sediment | WLCPSK092-A |
| Study Area | 8 | subsurface sediment | WLCPSK092-B |
| Study Area | 8 | subsurface sediment | WLCPSK092-Z |
| Study Area | 8 | subsurface sediment | WLCPSK093-A |
| Study Area | 8 | subsurface sediment | WLCPSK093-B |
| Study Area | 8 | subsurface sediment | WLCPSK093-Z |
| Study Area | 8 | surface sediment | WR-WSI98SD1230 |
| Study Area | 8 | surface sediment | WR-WSI98SD1250 |
| Study Area | 8 | subsurface sediment | WR-WSI98SD1250000A |
| Study Area | 8 | surface sediment | WR-WSI98SD1260 |
| Study Area | 8.1 | surface sediment | LW2-B021 |
| Study Area | 8.1 | subsurface sediment | LW2-C364-B |
| Study Area | 8.1 | subsurface sediment | LW2-C364-C |
| Study Area | 8.1 | subsurface sediment | LW2-C364-D |
| Study Area | 8.1 | subsurface sediment | LW2-C392-B |
| Study Area | 8.1 | subsurface sediment | LW2-C392-C |
| Study Area | 8.1 | subsurface sediment | LW2-C392-D |
| Study Area | 8.1 | surface sediment | LW2-G364 |
| Study Area | 8.1 | surface sediment | LW2-G376 |
| Study Area | 8.1 | surface sediment | LW2-G392 |
| Study Area | 8.1 | surface sediment | LW2-G395 |
| Study Area | 8.1 | surface sediment | LW2-G414 |
| Study Area | 8.1 | surface sediment | LW2-G418 |
| Study Area | 8.1 | surface sediment | LW2-G422 |
| Study Area | 8.1 | surface sediment | LW2-GBT023 |
| Study Area | 8.1 | surface sediment | LW2-GBT024 |
| Study Area | 8.1 | subsurface sediment | LW3-C704-B |
| Study Area | 8.1 | subsurface sediment | LW3-C704-C |
| Study Area | 8.1 | subsurface sediment | LW3-C704-D |
| Study Area | 8.1 | subsurface sediment | LW3-C706-B |
| Study Area | 8.1 | subsurface sediment | LW3-C706-C |
| Study Area | 8.1 | subsurface sediment | LW3-C706-D |
| Study Area | 8.1 | subsurface sediment | LW3-C706-E |
| Study Area | 8.1 | surface sediment | LW3-G705 |
| Study Area | 8.1 | surface sediment | LW3-G706 |
| Study Area | 8.1 | surface sediment | LW3-G707 |
| Study Area | 8.1 | subsurface sediment | LWM-METCS23 |
| Study Area | 8.1 | surface sediment | PSYD&M97DM04DM04 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 8.1 | surface sediment | PSYD&M97DM09DM09T |
| Study Area | 8.1 | subsurface sediment | PSYD&M97DM20DM20 |
| Study Area | 8.1 | subsurface sediment | PSYD&M97DM20DM20C |
| Study Area | 8.1 | surface sediment | PSYSEA98PSY15PSY15S |
| Study Area | 8.1 | surface sediment | PSYSEA98PSY19PSY19S |
| Study Area | 8.1 | subsurface sediment | PSYSEA98PSY20CPSY20A |
| Study Area | 8.1 | subsurface sediment | PSYSEA98PSY20CPSY20B |
| Study Area | 8.1 | subsurface sediment | PSYSEA98PSY20CPSY20C |
| Study Area | 8.1 | subsurface sediment | PSYSEA98PSY20CPSY20D |
| Study Area | 8.1 | surface sediment | PSYSEA98PSY20PSY20S |
| Study Area | 8.1 | surface sediment | PSYSEA98PSY22PSY22S |
| Study Area | 8.1 | subsurface sediment | PSYSEA98PSY23CPSY23A |
| Study Area | 8.1 | subsurface sediment | PSYSEA98PSY23CPSY23B |
| Study Area | 8.1 | subsurface sediment | PSYSEA98PSY23CPSY23C |
| Study Area | 8.1 | subsurface sediment | PSYSEA98PSY23CPSY23D |
| Study Area | 8.1 | surface sediment | PSYSEA98PSY23PSY23S |
| Study Area | 8.1 | surface sediment | PSYSEA98PSY29PSY29S |
| Study Area | 8.1 | surface sediment | PSYSEA98PSY31PSY31S |
| Study Area | 8.1 | surface sediment | PSYSEA98PSY32PSY32S |
| Study Area | 8.1 | subsurface sediment | PSYSEA98PSY33CPSY33A |
| Study Area | 8.1 | subsurface sediment | PSYSEA98PSY33CPSY33B |
| Study Area | 8.1 | subsurface sediment | PSYSEA98PSY33CPSY33C |
| Study Area | 8.1 | surface sediment | PSYSEA98PSY33PSY33S |
| Study Area | 8.1 | surface sediment | WLCDRD05PG07676 |
| Study Area | 8.1 | subsurface sediment | WLCPSK094-A |
| Study Area | 8.1 | subsurface sediment | WLCPSK094-B |
| Study Area | 8.1 | subsurface sediment | WLCPSK094-Z |
| Study Area | 8.1 | subsurface sediment | WLCPSK095-A |
| Study Area | 8.1 | subsurface sediment | WLCPSK095-B |
| Study Area | 8.1 | subsurface sediment | WLCPSK095-Z |
| Study Area | 8.1 | surface sediment | WR-WSI98SD1270 |
| Study Area | 8.1 | subsurface sediment | WR-WSI98SD1270000A |
| Study Area | 8.1 | surface sediment | WR-WSI98SD1280 |
| Study Area | 8.1 | surface sediment | WR-WSI98SD1290 |
| Study Area | 8.1 | surface sediment | WR-WSI98SD1300 |
| Study Area | 8.2 | subsurface sediment | LW2-C382-B |
| Study Area | 8.2 | subsurface sediment | LW2-C382-C |
| Study Area | 8.2 | subsurface sediment | LW2-C382-D |
| Study Area | 8.2 | subsurface sediment | LW2-C384-B |
| Study Area | 8.2 | subsurface sediment | LW2-C384-C |
| Study Area | 8.2 | subsurface sediment | LW2-C384-E |
| Study Area | 8.2 | subsurface sediment | LW2-C384-F |
| Study Area | 8.2 | surface sediment | LW2-C409-A |
| Study Area | 8.2 | subsurface sediment | LW2-C409-B |
| Study Area | 8.2 | subsurface sediment | LW2-C409-C |
| Study Area | 8.2 | subsurface sediment | LW2-C409-D |
| Study Area | 8.2 | surface sediment | LW2-G382 |
| Study Area | 8.2 | surface sediment | LW2-G384-1 |
| Study Area | 8.2 | surface sediment | LW2-G384-2 |
| Study Area | 8.2 | surface sediment | LW2-G390 |
| Study Area | 8.2 | surface sediment | LW2-G398 |
| Study Area | 8.2 | surface sediment | LW2-G406 |
| Study Area | 8.2 | surface sediment | LW2-G409 |
| Study Area | 8.2 | surface sediment | LW2-G423 |
| Study Area | 8.2 | subsurface sediment | LW3-C708-B |
| Study Area | 8.2 | subsurface sediment | LW3-C708-C |
| Study Area | 8.2 | subsurface sediment | LW3-C708-D |
| Study Area | 8.2 | subsurface sediment | LW3-C708-F |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 8.2 | subsurface sediment | LW3-C708-G |
| Study Area | 8.2 | subsurface sediment | LW3-C709-B |
| Study Area | 8.2 | surface sediment | LW3-G710 |
| Study Area | 8.2 | surface sediment | LW3-G711 |
| Study Area | 8.2 | surface sediment | LW3-GSP08E |
| Study Area | 8.2 | surface sediment | LWG0108R003SDS015C00 |
| Study Area | 8.2 | surface sediment | LWG0108R040SDS015C00 |
| Study Area | 8.2 | subsurface sediment | LWM-METCS21 |
| Study Area | 8.2 | surface sediment | PSYD&M97DM01DM01 |
| Study Area | 8.2 | surface sediment | PSYD&M97DM18DM18 |
| Study Area | 8.2 | subsurface sediment | PSYD&M97DM24DM24C1 |
| Study Area | 8.2 | subsurface sediment | PSYD&M97DM24DM24C2 |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY16CPSY16A |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY16CPSY16B |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY16CPSY16C |
| Study Area | 8.2 | surface sediment | PSYSEA98PSY16PSY16S |
| Study Area | 8.2 | surface sediment | PSYSEA98PSY17PSY17S |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY27CPSY27A |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY27CPSY27B |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY27CPSY27C |
| Study Area | 8.2 | surface sediment | PSYSEA98PSY27CY27A01 |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY27CY27A02 |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY27CY27A03 |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY27CY27A04 |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY27CY27B05 |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY27CY27B06 |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY27CY27B07 |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY27CY27B08 |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY27CY27C09 |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY27CY27C10 |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY27CY27C11 |
| Study Area | 8.2 | surface sediment | PSYSEA98PSY27PSY27S |
| Study Area | 8.2 | surface sediment | PSYSEA98PSY28PSY28S |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY30CPSY30A |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY30CPSY30B |
| Study Area | 8.2 | surface sediment | PSYSEA98PSY30CY30A01 |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY30CY30A02 |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY30CY30A03 |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY30CY30A04 |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY30CY30B05 |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY30CY30B06 |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY30CY30B07 |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY30CY30B08 |
| Study Area | 8.2 | surface sediment | PSYSEA98PSY30PSY30S |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY43CPSY43A |
| Study Area | 8.2 | subsurface sediment | PSYSEA98PSY43CPSY43B |
| Study Area | 8.2 | surface sediment | PSYSEA98PSY43PSY43S |
| Study Area | 8.2 | surface sediment | PSYSEA98PSY44PSY44S |
| Study Area | 8.2 | surface sediment | WLCDRD05PG07878 |
| Study Area | 8.2 | surface sediment | WLCDRD05PG08080 |
| Study Area | 8.2 | subsurface sediment | WLCPSK091-A |
| Study Area | 8.2 | subsurface sediment | WLCPSK091-Z |
| Study Area | 8.2 | surface sediment | WR-WSI98SD1310 |
| Study Area | 8.2 | surface sediment | WR-WSI98SD1320 |
| Study Area | 8.2 | surface sediment | WR-WSI98SD1330 |
| Study Area | 8.2 | subsurface sediment | WR-WSI98SD1330000A |
| Study Area | 8.2 | surface sediment | WR-WSI98SD1340 |
| Study Area | 8.3 | surface sediment | LW2-B022-1 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 8.3 | surface sediment | LW2-B022-2 |
| Study Area | 8.3 | surface sediment | LW2-C379-A |
| Study Area | 8.3 | subsurface sediment | LW2-C379-B |
| Study Area | 8.3 | subsurface sediment | LW2-C379-C |
| Study Area | 8.3 | subsurface sediment | LW2-C379-D |
| Study Area | 8.3 | subsurface sediment | LW2-C431-B |
| Study Area | 8.3 | subsurface sediment | LW2-C431-C |
| Study Area | 8.3 | subsurface sediment | LW2-C431-D |
| Study Area | 8.3 | subsurface sediment | LW2-C431-F |
| Study Area | 8.3 | surface sediment | LW2-C434-A |
| Study Area | 8.3 | subsurface sediment | LW2-C434-B |
| Study Area | 8.3 | subsurface sediment | LW2-C434-C |
| Study Area | 8.3 | subsurface sediment | LW2-C434-D |
| Study Area | 8.3 | surface sediment | LW2-G379 |
| Study Area | 8.3 | surface sediment | LW2-G412 |
| Study Area | 8.3 | surface sediment | LW2-G427 |
| Study Area | 8.3 | surface sediment | LW2-G431 |
| Study Area | 8.3 | surface sediment | LW2-G432 |
| Study Area | 8.3 | surface sediment | LW2-G434 |
| Study Area | 8.3 | subsurface sediment | LW3-C712-B |
| Study Area | 8.3 | subsurface sediment | LW3-C712-C |
| Study Area | 8.3 | surface sediment | LW3-G713 |
| Study Area | 8.3 | surface sediment | LWG2-PG-R2GN1 |
| Study Area | 8.3 | surface sediment | PSYSEA98PSY12PSY12S |
| Study Area | 8.3 | surface sediment | PSYSEA98PSY14PSY14S |
| Study Area | 8.3 | surface sediment | PSYSEA98PSY45PSY45S |
| Study Area | 8.3 | surface sediment | WLCDRD05PG08282 |
| Study Area | 8.3 | subsurface sediment | WLCDRI03C15-17CSS06 |
| Study Area | 8.3 | surface sediment | WLCOFJ02190119010 |
| Study Area | 8.3 | surface sediment | WLCOFJ02190219020 |
| Study Area | 8.3 | surface sediment | WLCOFJ02190319030 |
| Study Area | 8.3 | surface sediment | WLCOFJ0219A0119A010 |
| Study Area | 8.3 | surface sediment | WLCOFJ0219A0219A020 |
| Study Area | 8.3 | surface sediment | WLCOFJ0219A0319A030 |
| Study Area | 8.3 | surface sediment | WRD&M98DMHDMH |
| Study Area | 8.3 | surface sediment | WR-WSI98SD1350 |
| Study Area | 8.3 | subsurface sediment | WR-WSI98SD1350000A |
| Study Area | 8.4 | surface sediment | LW2-C380-A |
| Study Area | 8.4 | subsurface sediment | LW2-C380-B |
| Study Area | 8.4 | subsurface sediment | LW2-C380-C |
| Study Area | 8.4 | subsurface sediment | LW2-C380-E |
| Study Area | 8.4 | subsurface sediment | LW2-C383-B |
| Study Area | 8.4 | subsurface sediment | LW2-C383-C |
| Study Area | 8.4 | subsurface sediment | LW2-C383-D |
| Study Area | 8.4 | subsurface sediment | LW2-C393-B |
| Study Area | 8.4 | subsurface sediment | LW2-C393-C |
| Study Area | 8.4 | surface sediment | LW2-C420-A |
| Study Area | 8.4 | subsurface sediment | LW2-C420-B |
| Study Area | 8.4 | subsurface sediment | LW2-C420-C |
| Study Area | 8.4 | subsurface sediment | LW2-C420-D |
| Study Area | 8.4 | surface sediment | LW2-C436-A |
| Study Area | 8.4 | subsurface sediment | LW2-C436-B |
| Study Area | 8.4 | subsurface sediment | LW2-C436-C |
| Study Area | 8.4 | subsurface sediment | LW2-C436-D |
| Study Area | 8.4 | subsurface sediment | LW2-C436-E |
| Study Area | 8.4 | subsurface sediment | LW2-C437-B |
| Study Area | 8.4 | subsurface sediment | LW2-C437-C |
| Study Area | 8.4 | subsurface sediment | LW2-C437-D |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 8.4 | subsurface sediment | LW2-C437-F |
| Study Area | 8.4 | subsurface sediment | LW2-C439-B |
| Study Area | 8.4 | subsurface sediment | LW2-C439-C |
| Study Area | 8.4 | subsurface sediment | LW2-C439-D |
| Study Area | 8.4 | subsurface sediment | LW2-C439-E |
| Study Area | 8.4 | surface sediment | LW2-G380 |
| Study Area | 8.4 | surface sediment | LW2-G383 |
| Study Area | 8.4 | surface sediment | LW2-G385 |
| Study Area | 8.4 | surface sediment | LW2-G393 |
| Study Area | 8.4 | surface sediment | LW2-G419 |
| Study Area | 8.4 | surface sediment | LW2-G420 |
| Study Area | 8.4 | surface sediment | LW2-G428 |
| Study Area | 8.4 | surface sediment | LW2-G436 |
| Study Area | 8.4 | surface sediment | LW2-G437 |
| Study Area | 8.4 | surface sediment | LW2-G439 |
| Study Area | 8.4 | subsurface sediment | LW3-C714-B |
| Study Area | 8.4 | surface sediment | LW3-G715 |
| Study Area | 8.4 | surface sediment | LWG2-PG-GN1E |
| Study Area | 8.4 | surface sediment | LWG2-PG-GN2E |
| Study Area | 8.4 | subsurface sediment | LWM-TCLPC18 |
| Study Area | 8.4 | surface sediment | PSYSEA98PSY08PSY08S |
| Study Area | 8.4 | surface sediment | PSYSEA98PSY08PSY52S |
| Study Area | 8.4 | surface sediment | PSYSEA98PSY08PSY53S |
| Study Area | 8.4 | subsurface sediment | PSYSEA98PSY11CPSY11A |
| Study Area | 8.4 | subsurface sediment | PSYSEA98PSY11CPSY11B |
| Study Area | 8.4 | subsurface sediment | PSYSEA98PSY11CPSY11C |
| Study Area | 8.4 | subsurface sediment | PSYSEA98PSY11CPSY11D |
| Study Area | 8.4 | surface sediment | PSYSEA98PSY11PSY11S |
| Study Area | 8.4 | surface sediment | PSYSEA98PSY46PSY46S |
| Study Area | 8.4 | surface sediment | WLCDRD05PG08484 |
| Study Area | 8.4 | surface sediment | WLCOFH02M101M101 |
| Study Area | 8.4 | surface sediment | WLCOFH02M103M103 |
| Study Area | 8.4 | surface sediment | WLCOFH02M104M104 |
| Study Area | 8.4 | surface sediment | WLCOFH02M105M105 |
| Study Area | 8.4 | surface sediment | WLCOFH02M106M106 |
| Study Area | 8.4 | surface sediment | WLCOFH02M107M107 |
| Study Area | 8.4 | surface sediment | WLCOFH02M108M108 |
| Study Area | 8.4 | surface sediment | WLCOFH02M109M109 |
| Study Area | 8.4 | surface sediment | WLCOFH02M110M110 |
| Study Area | 8.4 | surface sediment | WLCOFJ02S0601S6010 |
| Study Area | 8.4 | surface sediment | WR-WSI98SD1360 |
| Study Area | 8.4 | subsurface sediment | WR-WSI98SD1360000A |
| Study Area | 8.4 | surface sediment | WR-WSI98SD1370000CC |
| Study Area | 8.5 | subsurface sediment | LW2-C388-B |
| Study Area | 8.5 | subsurface sediment | LW2-C388-C |
| Study Area | 8.5 | surface sediment | LW2-C397-A |
| Study Area | 8.5 | subsurface sediment | LW2-C397-B |
| Study Area | 8.5 | subsurface sediment | LW2-C397-C |
| Study Area | 8.5 | subsurface sediment | LW2-C397-D |
| Study Area | 8.5 | subsurface sediment | LW2-C402-B |
| Study Area | 8.5 | subsurface sediment | LW2-C402-C |
| Study Area | 8.5 | subsurface sediment | LW2-C402-D |
| Study Area | 8.5 | surface sediment | LW2-C440-A |
| Study Area | 8.5 | subsurface sediment | LW2-C440-B |
| Study Area | 8.5 | subsurface sediment | LW2-C440-C |
| Study Area | 8.5 | subsurface sediment | LW2-C440-D |
| Study Area | 8.5 | surface sediment | LW2-C441-A1 |
| Study Area | 8.5 | subsurface sediment | LW2-C441-B1 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 8.5 | subsurface sediment | LW2-C441-B2 |
| Study Area | 8.5 | subsurface sediment | LW2-C441-C1 |
| Study Area | 8.5 | subsurface sediment | LW2-C441-C2 |
| Study Area | 8.5 | subsurface sediment | LW2-C441-D1 |
| Study Area | 8.5 | subsurface sediment | LW2-C441-D2 |
| Study Area | 8.5 | subsurface sediment | LW2-C445-B |
| Study Area | 8.5 | subsurface sediment | LW2-C445-C |
| Study Area | 8.5 | subsurface sediment | LW2-C445-D |
| Study Area | 8.5 | subsurface sediment | LW2-C445-E |
| Study Area | 8.5 | surface sediment | LW2-G388 |
| Study Area | 8.5 | surface sediment | LW2-G397 |
| Study Area | 8.5 | surface sediment | LW2-G402 |
| Study Area | 8.5 | surface sediment | LW2-G424 |
| Study Area | 8.5 | surface sediment | LW2-G440 |
| Study Area | 8.5 | surface sediment | LW2-G441 |
| Study Area | 8.5 | surface sediment | LW2-G445 |
| Study Area | 8.5 | surface sediment | LW2-GBT025 |
| Study Area | 8.5 | surface sediment | LW2-GBT026 |
| Study Area | 8.5 | subsurface sediment | LW3-C717-B |
| Study Area | 8.5 | surface sediment | LW3-G716 |
| Study Area | 8.5 | surface sediment | LW3-G717 |
| Study Area | 8.5 | surface sediment | LW3-G718 |
| Study Area | 8.5 | surface sediment | LWG0108R001SDS015C00 |
| Study Area | 8.5 | surface sediment | LWG2-PG-GN5A |
| Study Area | 8.5 | surface sediment | LWG2-PG-GN5A-2 |
| Study Area | 8.5 | surface sediment | PSYD&M97DM21DM21 |
| Study Area | 8.5 | surface sediment | WLCDRD05PG08686 |
| Study Area | 8.5 | subsurface sediment | WLCDRI03C18-20CSS07 |
| Study Area | 8.6 | subsurface sediment | LW2-C396-B |
| Study Area | 8.6 | subsurface sediment | LW2-C396-C |
| Study Area | 8.6 | subsurface sediment | LW2-C444-B |
| Study Area | 8.6 | subsurface sediment | LW2-C444-C |
| Study Area | 8.6 | subsurface sediment | LW2-C444-D |
| Study Area | 8.6 | subsurface sediment | LW2-C444-E |
| Study Area | 8.6 | surface sediment | LW2-C447-A |
| Study Area | 8.6 | subsurface sediment | LW2-C447-B |
| Study Area | 8.6 | subsurface sediment | LW2-C447-C |
| Study Area | 8.6 | subsurface sediment | LW2-C447-D |
| Study Area | 8.6 | subsurface sediment | LW2-C447-F |
| Study Area | 8.6 | surface sediment | LW2-G396 |
| Study Area | 8.6 | surface sediment | LW2-G408 |
| Study Area | 8.6 | surface sediment | LW2-G429 |
| Study Area | 8.6 | surface sediment | LW2-G435 |
| Study Area | 8.6 | surface sediment | LW2-G444 |
| Study Area | 8.6 | surface sediment | LW2-G447 |
| Study Area | 8.6 | subsurface sediment | LW3-C720-B |
| Study Area | 8.6 | subsurface sediment | LW3-C721-B |
| Study Area | 8.6 | subsurface sediment | LW3-C721-C |
| Study Area | 8.6 | subsurface sediment | LW3-C721-D |
| Study Area | 8.6 | subsurface sediment | LW3-C721-E |
| Study Area | 8.6 | surface sediment | LW3-G719 |
| Study Area | 8.6 | surface sediment | LW3-G720 |
| Study Area | 8.6 | surface sediment | LW3-G722 |
| Study Area | 8.6 | surface sediment | LWG0108R041SDS015C00 |
| Study Area | 8.6 | surface sediment | PSYSEA98PSY10PSY10S |
| Study Area | 8.6 | surface sediment | PSYSEA98PSY47PSY47S |
| Study Area | 8.6 | surface sediment | PSYSEA98PSY48PSY48S |
| Study Area | 8.6 | surface sediment | WLCDRD05PG08888 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 8.6 | surface sediment | WLCGNG03A2GS09A2GS09 |
| Study Area | 8.6 | surface sediment | WLCGNG03A2GS10A2GS10 |
| Study Area | 8.6 | subsurface sediment | WLR0499WRVC08WRVC08 |
| Study Area | 8.6 | subsurface sediment | WLR0499WRVC08WRVC8C |
| Study Area | 8.6 | subsurface sediment | WLR1199WRVC03WRVC03 |
| Study Area | 8.6 | surface sediment | WR-WSI98SD1380 |
| Study Area | 8.6 | subsurface sediment | WR-WSI98SD1380000A |
| Study Area | 8.6 | surface sediment | WR-WSI98SD1390 |
| Study Area | 8.7 | surface sediment | LW2-B023 |
| Study Area | 8.7 | subsurface sediment | LW2-C415-B |
| Study Area | 8.7 | subsurface sediment | LW2-C415-C |
| Study Area | 8.7 | subsurface sediment | LW2-C415-D |
| Study Area | 8.7 | subsurface sediment | LW2-C415-E |
| Study Area | 8.7 | surface sediment | LW2-C448-A |
| Study Area | 8.7 | subsurface sediment | LW2-C448-B |
| Study Area | 8.7 | subsurface sediment | LW2-C448-C |
| Study Area | 8.7 | subsurface sediment | LW2-C448-D |
| Study Area | 8.7 | subsurface sediment | LW2-C450-B |
| Study Area | 8.7 | subsurface sediment | LW2-C450-C |
| Study Area | 8.7 | surface sediment | LW2-G415 |
| Study Area | 8.7 | surface sediment | LW2-G433-1 |
| Study Area | 8.7 | surface sediment | LW2-G433-2 |
| Study Area | 8.7 | surface sediment | LW2-G448 |
| Study Area | 8.7 | surface sediment | LW2-G450-1 |
| Study Area | 8.7 | surface sediment | LW2-G450-2 |
| Study Area | 8.7 | surface sediment | LW2-GBT027-1 |
| Study Area | 8.7 | surface sediment | LW2-GBT027-2 |
| Study Area | 8.7 | subsurface sediment | LW3-C724-B |
| Study Area | 8.7 | subsurface sediment | LW3-C724-C |
| Study Area | 8.7 | subsurface sediment | LW3-C724-E |
| Study Area | 8.7 | subsurface sediment | LW3-C724-G |
| Study Area | 8.7 | surface sediment | LW3-G725 |
| Study Area | 8.7 | surface sediment | LW3-GCRSP08W |
| Study Area | 8.7 | surface sediment | LWG0108B032SDS015C00 |
| Study Area | 8.7 | surface sediment | PSYSEA98PSY06PSY06S |
| Study Area | 8.7 | subsurface sediment | PSYSEA98PSY07CPSY07A |
| Study Area | 8.7 | subsurface sediment | PSYSEA98PSY07CPSY07B |
| Study Area | 8.7 | surface sediment | PSYSEA98PSY07PSY07S |
| Study Area | 8.7 | subsurface sediment | WLCDRI03C21-23CSS08 |
| Study Area | 8.7 | subsurface sediment | WLCDRI03C24-26CSS09 |
| Study Area | 8.7 | surface sediment | WLCGNG03A2GS11A2GS11 |
| Study Area | 8.7 | subsurface sediment | WLR0499WRVC05WRA |
| Study Area | 8.7 | subsurface sediment | WLR0499WRVC05WRVC05 |
| Study Area | 8.7 | subsurface sediment | WLR0499WRVC06WRVC06 |
| Study Area | 8.7 | subsurface sediment | WLR0499WRVC07WRVC07 |
| Study Area | 8.7 | subsurface sediment | WLR1199WRVC04WRVC04 |
| Study Area | 8.7 | surface sediment | WR-WSI98SD1400 |
| Study Area | 8.7 | surface sediment | WR-WSI98SD1420 |
| Study Area | 8.8 | surface sediment | LW2-B024 |
| Study Area | 8.8 | subsurface sediment | LW2-C405-B |
| Study Area | 8.8 | subsurface sediment | LW2-C405-C |
| Study Area | 8.8 | subsurface sediment | LW2-C405-E |
| Study Area | 8.8 | surface sediment | LW2-C449-A |
| Study Area | 8.8 | subsurface sediment | LW2-C449-B |
| Study Area | 8.8 | subsurface sediment | LW2-C449-C |
| Study Area | 8.8 | subsurface sediment | LW2-C449-E |
| Study Area | 8.8 | subsurface sediment | LW2-C453-B |
| Study Area | 8.8 | subsurface sediment | LW2-C453-C |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 8.8 | subsurface sediment | LW2-C453-D |
| Study Area | 8.8 | subsurface sediment | LW2-C455-B |
| Study Area | 8.8 | subsurface sediment | LW2-C455-C |
| Study Area | 8.8 | subsurface sediment | LW2-C455-D |
| Study Area | 8.8 | subsurface sediment | LW2-C455-F |
| Study Area | 8.8 | subsurface sediment | LW2-C456-B |
| Study Area | 8.8 | subsurface sediment | LW2-C456-C |
| Study Area | 8.8 | subsurface sediment | LW2-C456-D |
| Study Area | 8.8 | subsurface sediment | LW2-C456-F |
| Study Area | 8.8 | subsurface sediment | LW2-C456-G |
| Study Area | 8.8 | surface sediment | LW2-G405 |
| Study Area | 8.8 | surface sediment | LW2-G411 |
| Study Area | 8.8 | surface sediment | LW2-G443 |
| Study Area | 8.8 | surface sediment | LW2-G449 |
| Study Area | 8.8 | surface sediment | LW2-G452 |
| Study Area | 8.8 | surface sediment | LW2-G453 |
| Study Area | 8.8 | surface sediment | LW2-G455 |
| Study Area | 8.8 | surface sediment | LW2-G456 |
| Study Area | 8.8 | surface sediment | LW2-GBT028 |
| Study Area | 8.8 | subsurface sediment | LW3-C727-B |
| Study Area | 8.8 | surface sediment | LW3-G727 |
| Study Area | 8.8 | surface sediment | PSYD&M97DM12DM12 |
| Study Area | 8.8 | surface sediment | PSYSEA98PSY49PSY49S |
| Study Area | 8.8 | subsurface sediment | PSYSEA98PSY50CPSY50A |
| Study Area | 8.8 | subsurface sediment | PSYSEA98PSY50CPSY50B |
| Study Area | 8.8 | surface sediment | PSYSEA98PSY50PSY50S |
| Study Area | 8.8 | subsurface sediment | WLCDRI03C27-29CSS10 |
| Study Area | 8.8 | subsurface sediment | WLCDRI03C30-32CSS11 |
| Study Area | 8.8 | surface sediment | WLCGNG03A2BGS5S1 |
| Study Area | 8.8 | surface sediment | WLCGNG03A2GS12A2GS12 |
| Study Area | 8.8 | surface sediment | WLCOFH0218021802 |
| Study Area | 8.8 | surface sediment | WLCOFH0218031803 |
| Study Area | 8.8 | surface sediment | WLCOFH0218051805 |
| Study Area | 8.8 | surface sediment | WLCOFH0218061806 |
| Study Area | 8.8 | surface sediment | WLCOFH0218071807 |
| Study Area | 8.8 | surface sediment | WLCOFH0218081808 |
| Study Area | 8.8 | surface sediment | WLCOFH0218091809 |
| Study Area | 8.8 | surface sediment | WLCOFH0218101810 |
| Study Area | 8.8 | surface sediment | WLCOFJ02M0201M2010 |
| Study Area | 8.8 | surface sediment | WLCOFJ02M0202M2020 |
| Study Area | 8.8 | surface sediment | WLCOFJ02M02031M2031 |
| Study Area | 8.8 | surface sediment | WLCOFJ02M0203M2030 |
| Study Area | 8.8 | surface sediment | WLCOFJ02M0204M2040 |
| Study Area | 8.8 | surface sediment | WLCOFJ02M0205M2050 |
| Study Area | 8.8 | subsurface sediment | WLR0499WRVC09WRVC09 |
| Study Area | 8.8 | subsurface sediment | WR-WSI98SD1410000A |
| Study Area | 8.8 | surface sediment | WR-WSI98SD1410000CC |
| Study Area | 8.8 | surface sediment | WR-WSI98SD1430 |
| Study Area | 8.8 | subsurface sediment | WR-WSI98SD1430000A |
| Study Area | 8.8 | surface sediment | WR-WSI98SD1440 |
| Study Area | 8.8 | surface sediment | WR-WSI98SD1460 |
| Study Area | 8.9 | surface sediment | LW2-C421-A |
| Study Area | 8.9 | subsurface sediment | LW2-C421-B |
| Study Area | 8.9 | subsurface sediment | LW2-C421-C |
| Study Area | 8.9 | subsurface sediment | LW2-C421-D |
| Study Area | 8.9 | subsurface sediment | LW2-C421-E |
| Study Area | 8.9 | subsurface sediment | LW2-C421-F |
| Study Area | 8.9 | subsurface sediment | LW2-C457-B |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 8.9 | subsurface sediment | LW2-C457-C |
| Study Area | 8.9 | subsurface sediment | LW2-C457-D |
| Study Area | 8.9 | subsurface sediment | LW2-C457-E |
| Study Area | 8.9 | subsurface sediment | LW2-C458-B |
| Study Area | 8.9 | subsurface sediment | LW2-C458-B2 |
| Study Area | 8.9 | subsurface sediment | LW2-C458-C |
| Study Area | 8.9 | subsurface sediment | LW2-C458-C2 |
| Study Area | 8.9 | subsurface sediment | LW2-C458-D |
| Study Area | 8.9 | subsurface sediment | LW2-C458-D2 |
| Study Area | 8.9 | surface sediment | LW2-G416 |
| Study Area | 8.9 | surface sediment | LW2-G421 |
| Study Area | 8.9 | surface sediment | LW2-G438 |
| Study Area | 8.9 | surface sediment | LW2-G457 |
| Study Area | 8.9 | surface sediment | LW2-G458 |
| Study Area | 8.9 | surface sediment | LW2-G460 |
| Study Area | 8.9 | surface sediment | LW3-G729 |
| Study Area | 8.9 | surface sediment | NA-4A-0005 |
| Study Area | 8.9 | subsurface sediment | NA-4A-0508 |
| Study Area | 8.9 | subsurface sediment | NA-4A-0812 |
| Study Area | 8.9 | subsurface sediment | NA-4A-1216 |
| Study Area | 8.9 | subsurface sediment | NA-4A-1620 |
| Study Area | 8.9 | subsurface sediment | NA-4A-2024 |
| Study Area | 8.9 | subsurface sediment | NA-4A-2428 |
| Study Area | 8.9 | subsurface sediment | NA-4A-2832 |
| Study Area | 8.9 | subsurface sediment | NA-4A-3238 |
| Study Area | 8.9 | subsurface sediment | NA-4A-3844 |
| Study Area | 8.9 | subsurface sediment | NA-4A-4448 |
| Study Area | 8.9 | subsurface sediment | NA-4A-5864 |
| Study Area | 8.9 | subsurface sediment | NA-4A-6874 |
| Study Area | 8.9 | subsurface sediment | NA-4A-7884 |
| Study Area | 8.9 | subsurface sediment | NA-4A-8894 |
| Study Area | 8.9 | surface sediment | NA-4B-0024 |
| Study Area | 8.9 | subsurface sediment | NA-4B-2450 |
| Study Area | 8.9 | subsurface sediment | NA-4B-5094 |
| Study Area | 8.9 | surface sediment | PSYD&M97DM16DM16 |
| Study Area | 8.9 | surface sediment | PSYSEA98PSY05PSY05S |
| Study Area | 8.9 | surface sediment | WLCDRD05PG09090 |
| Study Area | 8.9 | surface sediment | WLCGNG03A2BGS6S1 |
| Study Area | 8.9 | surface sediment | WLCGNG03A2BGS7S1 |
| Study Area | 8.9 | surface sediment | WLCGNG03HA37A |
| Study Area | 8.9 | subsurface sediment | WLCGNG03HA37B |
| Study Area | 8.9 | surface sediment | WRD&M98DMGDMG |
| Study Area | 8.9 | surface sediment | WR-WSI98SD1450 |
| Study Area | 8.9 | surface sediment | WR-WSI98SD1470 |
| Study Area | 9 | subsurface sediment | LW2-C417-B |
| Study Area | 9 | subsurface sediment | LW2-C417-C |
| Study Area | 9 | subsurface sediment | LW2-C417-D |
| Study Area | 9 | surface sediment | LW2-C426-A |
| Study Area | 9 | subsurface sediment | LW2-C426-B |
| Study Area | 9 | subsurface sediment | LW2-C426-C |
| Study Area | 9 | subsurface sediment | LW2-C426-D |
| Study Area | 9 | surface sediment | LW2-C461-A |
| Study Area | 9 | subsurface sediment | LW2-C461-B |
| Study Area | 9 | subsurface sediment | LW2-C461-C |
| Study Area | 9 | subsurface sediment | LW2-C461-D |
| Study Area | 9 | subsurface sediment | LW2-C462-B |
| Study Area | 9 | subsurface sediment | LW2-C462-C |
| Study Area | 9 | subsurface sediment | LW2-C462-D |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 9 | surface sediment | LW2-G417 |
| Study Area | 9 | surface sediment | LW2-G426 |
| Study Area | 9 | surface sediment | LW2-G442 |
| Study Area | 9 | surface sediment | LW2-G461 |
| Study Area | 9 | surface sediment | LW2-G462 |
| Study Area | 9 | surface sediment | LW2-G467 |
| Study Area | 9 | surface sediment | LW2-GBT029 |
| Study Area | 9 | surface sediment | LWG0109B028SDS015C00 |
| Study Area | 9 | subsurface sediment | LWM-METCS19-1 |
| Study Area | 9 | subsurface sediment | LWM-METCS19-2 |
| Study Area | 9 | subsurface sediment | LWM-TCLPC19 |
| Study Area | 9 | subsurface sediment | LWM-TCLPC19-2 |
| Study Area | 9 | surface sediment | PSYSEA98PSY04PSY04S |
| Study Area | 9 | surface sediment | WLCDRD05PG09292 |
| Study Area | 9 | subsurface sediment | WLCDRI03C33-35CSS12 |
| Study Area | 9 | surface sediment | WLCGNG03HA38A |
| Study Area | 9 | subsurface sediment | WLCGNG03HA38B |
| Study Area | 9 | surface sediment | WLCGNG03HA39A |
| Study Area | 9 | subsurface sediment | WLCGNG03HA39B |
| Study Area | 9 | surface sediment | WR-WSI98SD1490 |
| Study Area | 9.1 | surface sediment | LW2-B020 |
| Study Area | 9.1 | subsurface sediment | LW2-C425-B1 |
| Study Area | 9.1 | subsurface sediment | LW2-C425-B2 |
| Study Area | 9.1 | subsurface sediment | LW2-C425-C1 |
| Study Area | 9.1 | subsurface sediment | LW2-C425-C2 |
| Study Area | 9.1 | subsurface sediment | LW2-C425-D2 |
| Study Area | 9.1 | subsurface sediment | LW2-C425-E1 |
| Study Area | 9.1 | subsurface sediment | LW2-C425-F1 |
| Study Area | 9.1 | surface sediment | LW2-C430-A |
| Study Area | 9.1 | subsurface sediment | LW2-C430-B |
| Study Area | 9.1 | subsurface sediment | LW2-C430-C |
| Study Area | 9.1 | subsurface sediment | LW2-C430-E |
| Study Area | 9.1 | subsurface sediment | LW2-C468-B |
| Study Area | 9.1 | subsurface sediment | LW2-C468-C |
| Study Area | 9.1 | subsurface sediment | LW2-C468-D |
| Study Area | 9.1 | surface sediment | LW2-G425 |
| Study Area | 9.1 | surface sediment | LW2-G430 |
| Study Area | 9.1 | surface sediment | LW2-G446 |
| Study Area | 9.1 | surface sediment | LW2-G464 |
| Study Area | 9.1 | surface sediment | LW2-G468 |
| Study Area | 9.1 | surface sediment | LW2-G469 |
| Study Area | 9.1 | surface sediment | LW2-G473 |
| Study Area | 9.1 | surface sediment | LW3-G730 |
| Study Area | 9.1 | surface sediment | LW3-G731 |
| Study Area | 9.1 | surface sediment | LW3-G732-1 |
| Study Area | 9.1 | surface sediment | LW3-G732-2 |
| Study Area | 9.1 | surface sediment | LWG0109R001SDS015C10 |
| Study Area | 9.1 | surface sediment | LWG0109R001SDS015C20 |
| Study Area | 9.1 | surface sediment | LWG0109R001SDS015C31 |
| Study Area | 9.1 | subsurface sediment | LWM-TCLPC23 |
| Study Area | 9.1 | subsurface sediment | PSYSEA98PSY01CPSY01A |
| Study Area | 9.1 | subsurface sediment | PSYSEA98PSY01CPSY01B |
| Study Area | 9.1 | surface sediment | PSYSEA98PSY01PSY01S |
| Study Area | 9.1 | surface sediment | WLCDRD05PG09494 |
| Study Area | 9.1 | surface sediment | WLCGNG03HA41A |
| Study Area | 9.1 | subsurface sediment | WLCGNG03HA41B |
| Study Area | 9.1 | subsurface sediment | WLCGNG03HA42 |
| Study Area | 9.1 | surface sediment | WLCOFJ02M0302M3020 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 9.1 | surface sediment | WLCOFJ02M0303M3030 |
| Study Area | 9.1 | surface sediment | WLCOFJ02M0304M3040 |
| Study Area | 9.1 | surface sediment | WLCOFJ02M0305M3050 |
| Study Area | 9.1 | surface sediment | WLCOFJ02S0203S2030 |
| Study Area | 9.1 | surface sediment | WLCOFJ02S0204S2040 |
| Study Area | 9.1 | surface sediment | WR-WSI98SD1480 |
| Study Area | 9.1 | surface sediment | WR-WSI98SD1500 |
| Study Area | 9.1 | subsurface sediment | WR-WSI98SD1500000A |
| Study Area | 9.1 | subsurface sediment | WR-WSI98SD1510000A |
| Study Area | 9.1 | surface sediment | WR-WSI98SD1510000CC |
| Study Area | 9.2 | surface sediment | LW2-C471-A |
| Study Area | 9.2 | subsurface sediment | LW2-C471-B |
| Study Area | 9.2 | subsurface sediment | LW2-C471-C |
| Study Area | 9.2 | subsurface sediment | LW2-C471-D |
| Study Area | 9.2 | subsurface sediment | LW2-C474-B |
| Study Area | 9.2 | subsurface sediment | LW2-C474-C |
| Study Area | 9.2 | subsurface sediment | LW2-C474-D |
| Study Area | 9.2 | subsurface sediment | LW2-C477-B |
| Study Area | 9.2 | subsurface sediment | LW2-C477-C |
| Study Area | 9.2 | surface sediment | LW2-G451 |
| Study Area | 9.2 | surface sediment | LW2-G466 |
| Study Area | 9.2 | surface sediment | LW2-G471 |
| Study Area | 9.2 | surface sediment | LW2-G474 |
| Study Area | 9.2 | surface sediment | LW2-G477 |
| Study Area | 9.2 | surface sediment | LW2-G479 |
| Study Area | 9.2 | surface sediment | LW2-G480 |
| Study Area | 9.2 | subsurface sediment | LW3-C733-B |
| Study Area | 9.2 | surface sediment | LW3-GSP09W |
| Study Area | 9.2 | surface sediment | PSYSEA98PSY03PSY03S |
| Study Area | 9.2 | surface sediment | WLCDRD05PG09696 |
| Study Area | 9.2 | subsurface sediment | WLCDRI03C36-38CSS13 |
| Study Area | 9.2 | surface sediment | WLCGNG03HA43A |
| Study Area | 9.2 | subsurface sediment | WLCGNG03HA43B |
| Study Area | 9.2 | surface sediment | WLCOFJ02S0201S2010 |
| Study Area | 9.2 | surface sediment | WLCOFJ02S0202S2020 |
| Study Area | 9.2 | surface sediment | WLCOFJ02S0205S2050 |
| Study Area | 9.3 | surface sediment | LW2-B025-1 |
| Study Area | 9.3 | surface sediment | LW2-B025-2 |
| Study Area | 9.3 | subsurface sediment | LW2-C454-B |
| Study Area | 9.3 | subsurface sediment | LW2-C454-C |
| Study Area | 9.3 | subsurface sediment | LW2-C454-D |
| Study Area | 9.3 | subsurface sediment | LW2-C454-E |
| Study Area | 9.3 | subsurface sediment | LW2-C454-H |
| Study Area | 9.3 | surface sediment | LW2-G454 |
| Study Area | 9.3 | surface sediment | LW2-G459 |
| Study Area | 9.3 | surface sediment | LW2-G475-1 |
| Study Area | 9.3 | surface sediment | LW2-G475-2 |
| Study Area | 9.3 | surface sediment | LW2-G482 |
| Study Area | 9.3 | surface sediment | LW2-GBT030 |
| Study Area | 9.3 | surface sediment | WLCDRD05PG09898 |
| Study Area | 9.3 | subsurface sediment | WLCDRI03C39-41CSS14 |
| Study Area | 9.3 | surface sediment | WLCOFJ02S0502S5020 |
| Study Area | 9.3 | surface sediment | WLCOFJ02S0503S5030 |
| Study Area | 9.3 | surface sediment | WLCOFJ02S0504S5040 |
| Study Area | 9.3 | surface sediment | WLCOFJ02S0505S5050 |
| Study Area | 9.3 | surface sediment | WLCOFJ02S0506S5060 |
| Study Area | 9.3 | surface sediment | WLCOFJ02S0507S5070 |
| Study Area | 9.3 | subsurface sediment | WLR0499WRVC04WRVC04 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 9.4 | surface sediment | LW2-G463 |
| Study Area | 9.4 | surface sediment | LW2-G465 |
| Study Area | 9.4 | surface sediment | LW2-G478 |
| Study Area | 9.4 | surface sediment | LW2-G485 |
| Study Area | 9.4 | subsurface sediment | LW3-C735-B |
| Study Area | 9.4 | subsurface sediment | LW3-C735-C |
| Study Area | 9.4 | surface sediment | LW3-G734 |
| Study Area | 9.4 | surface sediment | LW3-G735 |
| Study Area | 9.4 | surface sediment | LW3-G736 |
| Study Area | 9.4 | surface sediment | LWG0109B026SDS015C00 |
| Study Area | 9.4 | surface sediment | WLCDRD05PG03333 |
| Study Area | 9.4 | surface sediment | WLCDRD05PG03535 |
| Study Area | 9.4 | surface sediment | WLCDRD05PG100100 |
| Study Area | 9.4 | subsurface sediment | WLCDRD05VC03333 |
| Study Area | 9.4 | subsurface sediment | WLCDRI03C42-44CSS15 |
| Study Area | 9.5 | surface sediment | LW2-G470 |
| Study Area | 9.5 | surface sediment | LW2-G472 |
| Study Area | 9.5 | surface sediment | LW2-G483 |
| Study Area | 9.5 | surface sediment | LW2-G488 |
| Study Area | 9.5 | surface sediment | LW2-GBT031 |
| Study Area | 9.5 | surface sediment | LW3-G737 |
| Study Area | 9.5 | surface sediment | LW3-RC483-001 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-005 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-009 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-013 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-017 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-021 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-025 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-029 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-033 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-037 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-041 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-045 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-049 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-053 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-057 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-061 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-065 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-069 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-073 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-077 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-081 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-085 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-089 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-093 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-097 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-101 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-105 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-109 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-113 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-117 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-121 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-125 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-129 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-133 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-137 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-141 |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-145 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 9.5 | subsurface sediment | LW3-RC483-149 |
| Study Area | 9.5 | surface sediment | LW3-RC483-A |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-B |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-C |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-D |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-E |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-F |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-G |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-H |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-I |
| Study Area | 9.5 | subsurface sediment | LW3-RC483-J |
| Study Area | 9.5 | surface sediment | WLCDRD05PG03737 |
| Study Area | 9.5 | surface sediment | WLCDRD05PG102102 |
| Study Area | 9.5 | subsurface sediment | WLCDRD05VC03535 |
| Study Area | 9.5 | subsurface sediment | WLCDRD05VC03737 |
| Study Area | 9.5 | surface sediment | WLCT0I98GRAB09GRAB09 |
| Study Area | 9.6 | surface sediment | LW2-B026 |
| Study Area | 9.6 | surface sediment | LW2-G476 |
| Study Area | 9.6 | surface sediment | LW2-G486 |
| Study Area | 9.6 | surface sediment | LW2-G494 |
| Study Area | 9.6 | subsurface sediment | LW3-C738-B |
| Study Area | 9.6 | subsurface sediment | LW3-C738-C |
| Study Area | 9.6 | subsurface sediment | LW3-C738-D |
| Study Area | 9.6 | subsurface sediment | LW3-C738-F |
| Study Area | 9.6 | surface sediment | LW3-G738 |
| Study Area | 9.6 | surface sediment | WLCDRD05PG03939 |
| Study Area | 9.6 | surface sediment | WLCDRD05PG104104 |
| Study Area | 9.6 | surface sediment | WLCDRD05PG136136Dup |
| Study Area | 9.6 | subsurface sediment | WLCDRD05VC03939 |
| Study Area | 9.6 | subsurface sediment | WLCDRI03C45-47CSS16 |
| Study Area | 9.6 | subsurface sediment | WLR0499WRVC03WRVC03 |
| Study Area | 9.6 | subsurface sediment | WLR1199WRVC05WRVC05 |
| Study Area | 9.7 | subsurface sediment | LW2-C492-B |
| Study Area | 9.7 | subsurface sediment | LW2-C492-C |
| Study Area | 9.7 | surface sediment | LW2-G481 |
| Study Area | 9.7 | surface sediment | LW2-G489 |
| Study Area | 9.7 | surface sediment | LW2-G492-1 |
| Study Area | 9.7 | surface sediment | LW2-G492-2 |
| Study Area | 9.7 | surface sediment | LW2-G497 |
| Study Area | 9.7 | surface sediment | LW2-GBT032 |
| Study Area | 9.7 | subsurface sediment | LW3-C739-B |
| Study Area | 9.7 | subsurface sediment | LW3-C739-C |
| Study Area | 9.7 | subsurface sediment | LW3-C739-D |
| Study Area | 9.7 | subsurface sediment | LW3-C739-E |
| Study Area | 9.7 | surface sediment | LW3-G739 |
| Study Area | 9.7 | surface sediment | LW3-G740 |
| Study Area | 9.7 | surface sediment | LWG0109R002SDS015C00 |
| Study Area | 9.7 | surface sediment | LWG0109R040SDS015C00 |
| Study Area | 9.7 | surface sediment | LWG0109R041SDS015C00 |
| Study Area | 9.7 | subsurface sediment | LWM-METCS24 |
| Study Area | 9.7 | surface sediment | PSYSEA98PSY70PSY70S |
| Study Area | 9.7 | surface sediment | WLCDRD05PG04141 |
| Study Area | 9.7 | subsurface sediment | WLCDRD05VC04141 |
| Study Area | 9.7 | subsurface sediment | WLCDRI03C48-50CSS17 |
| Study Area | 9.7 | subsurface sediment | WLCDRI03HCVC53CSS19 |
| Study Area | 9.7 | surface sediment | WRD&M98DMEDME |
| Study Area | 9.8 | surface sediment | LW2-G484 |
| Study Area | 9.8 | surface sediment | LW2-G493 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 9.8 | surface sediment | LW3-G741 |
| Study Area | 9.8 | surface sediment | LWG0109B027SDS015C10 |
| Study Area | 9.8 | surface sediment | LWG0109B027SDS015C20 |
| Study Area | 9.8 | surface sediment | LWG0109B027SDS015C31 |
| Study Area | 9.8 | surface sediment | PSYSEA98PSY71PSY71S |
| Study Area | 9.8 | surface sediment | PSYSEA98PSY77PSY77S |
| Study Area | 9.8 | surface sediment | WLCDRD05PG04343 |
| Study Area | 9.8 | subsurface sediment | WLCDRD05VC04343 |
| Study Area | 9.8 | surface sediment | WLCT0I98GRAB10GRAB10 |
| Study Area | 9.9 | surface sediment | LW2-G487 |
| Study Area | 9.9 | subsurface sediment | LW3-C742-B |
| Study Area | 9.9 | subsurface sediment | LW3-C742-C |
| Study Area | 9.9 | subsurface sediment | LW3-C743-B |
| Study Area | 9.9 | subsurface sediment | LW3-C743-D |
| Study Area | 9.9 | surface sediment | LW3-G742 |
| Study Area | 9.9 | surface sediment | LW3-G743 |
| Study Area | 9.9 | surface sediment | LW3-G744 |
| Study Area | 9.9 | surface sediment | LW3-G745 |
| Study Area | 9.9 | surface sediment | LW3-GSP10E |
| Study Area | 9.9 | surface sediment | WLCDRD05PG04545 |
| Study Area | 9.9 | surface sediment | WLCDRD05PG135135Dup |
| Study Area | 9.9 | subsurface sediment | WLCDRD05VC04545 |
| Study Area | 9.9 | subsurface sediment | WLCDRI03C51-52CSS18 |
| Study Area | 9.9 | surface sediment | WRD&M98DMDDMD |
| Study Area | 9.9 | surface sediment | WRD&M98DMFDMF |
| Study Area | 10 | surface sediment | LW2-G490 |
| Study Area | 10 | surface sediment | LW2-G491 |
| Study Area | 10 | surface sediment | LW2-G496 |
| Study Area | 10 | surface sediment | LW2-G499 |
| Study Area | 10 | surface sediment | LW2-G501 |
| Study Area | 10 | surface sediment | LW2-GBT033 |
| Study Area | 10 | subsurface sediment | LW3-C746-B |
| Study Area | 10 | subsurface sediment | LW3-C746-D |
| Study Area | 10 | surface sediment | LW3-G746 |
| Study Area | 10 | subsurface sediment | WLCAYH00SD04SD04D |
| Study Area | 10 | surface sediment | WLCAYH00SD04SD04S |
| Study Area | 10 | surface sediment | WLCGAL00GAUPOFGAUPOF |
| Study Area | 10 | subsurface sediment | WLR0797WRGC32RGC32A |
| Study Area | 10 | subsurface sediment | WLR0797WRGC34RGC34A |
| Study Area | 10.1 | surface sediment | LW2-G495 |
| Study Area | 10.1 | surface sediment | LW2-G498 |
| Study Area | 10.1 | subsurface sediment | LW3-C747-B |
| Study Area | 10.1 | subsurface sediment | LW3-C747-C |
| Study Area | 10.1 | subsurface sediment | LW3-C747-E |
| Study Area | 10.1 | subsurface sediment | LW3-C748-B1 |
| Study Area | 10.1 | subsurface sediment | LW3-C748-B2 |
| Study Area | 10.1 | subsurface sediment | LW3-C748-C1 |
| Study Area | 10.1 | subsurface sediment | LW3-C748-C2 |
| Study Area | 10.1 | subsurface sediment | LW3-C748-D1 |
| Study Area | 10.1 | subsurface sediment | LW3-C748-D2 |
| Study Area | 10.1 | subsurface sediment | LW3-C749-B |
| Study Area | 10.1 | subsurface sediment | LW3-C749-C |
| Study Area | 10.1 | surface sediment | LW3-G747 |
| Study Area | 10.1 | surface sediment | LW3-G748 |
| Study Area | 10.1 | surface sediment | LW3-G750 |
| Study Area | 10.1 | surface sediment | LW3-G751 |
| Study Area | 10.1 | surface sediment | WLCDRD05PG04747 |
| Study Area | 10.1 | subsurface sediment | WLCDRD05VC04747 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 10.1 | surface sediment | WLCGAL00GAPD01GAPD01 |
| Study Area | 10.1 | surface sediment | WLCGAL00GAPD02APD02D |
| Study Area | 10.1 | surface sediment | WLCGAL00GAPD02GAPD02 |
| Study Area | 10.1 | subsurface sediment | WLR0797WRGC33RGC33A |
| Study Area | 10.1 | subsurface sediment | WLR0797WRGC35RGC35A |
| Study Area | 10.2 | surface sediment | LW2-G500 |
| Study Area | 10.2 | surface sediment | LW2-G503 |
| Study Area | 10.2 | subsurface sediment | LW3-C752-B |
| Study Area | 10.2 | subsurface sediment | LW3-C752-C |
| Study Area | 10.2 | subsurface sediment | LW3-C752-D |
| Study Area | 10.2 | surface sediment | LW3-G752 |
| Study Area | 10.2 | surface sediment | LW3-GCA10W-C00 |
| Study Area | 10.2 | surface sediment | LW3-GCR10W |
| Study Area | 10.2 | surface sediment | PSYSEA98PSY76PSY76S |
| Study Area | 10.2 | surface sediment | WLCDRD05PG106106 |
| Study Area | 10.2 | subsurface sediment | WLCDRD05VC04949 |
| Study Area | 10.2 | subsurface sediment | WLCDRD05VC106106 |
| Study Area | 10.2 | surface sediment | WLCSPL03SED10SED10 |
| Study Area | 10.2 | surface sediment | WLCSPL03SED11SED11 |
| Study Area | 10.2 | surface sediment | WLCT1F00T1S01T1S01 |
| Study Area | 10.3 | surface sediment | LW2-G502 |
| Study Area | 10.3 | surface sediment | LW2-G504 |
| Study Area | 10.3 | surface sediment | LW2-G506 |
| Study Area | 10.3 | subsurface sediment | LW3-C753-B |
| Study Area | 10.3 | subsurface sediment | LW3-C753-C |
| Study Area | 10.3 | surface sediment | LW3-G753 |
| Study Area | 10.3 | surface sediment | LW3-GSP10W |
| Study Area | 10.3 | surface sediment | WLCDRD05PG108108 |
| Study Area | 10.3 | subsurface sediment | WLCDRD05VC05151 |
| Study Area | 10.3 | subsurface sediment | WLCDRD05VC108108 |
| Study Area | 10.3 | subsurface sediment | WLCDRD05VC110110 |
| Study Area | 10.3 | surface sediment | WLCSPL03SED01SED01 |
| Study Area | 10.3 | surface sediment | WLCSPL03SED02SED02 |
| Study Area | 10.3 | surface sediment | WLCSPL03SED03SED03 |
| Study Area | 10.3 | surface sediment | WLCSPL03SED04SED04 |
| Study Area | 10.3 | surface sediment | WLCSPL03SED05SED05 |
| Study Area | 10.3 | surface sediment | WLCSPL03SED06SED06 |
| Study Area | 10.3 | surface sediment | WLCSPL03SED07SED07 |
| Study Area | 10.3 | surface sediment | WLCSPL03SED08SED08 |
| Study Area | 10.3 | surface sediment | WLCSPL03SED09SED09 |
| Study Area | 10.3 | surface sediment | WLCSPL03SED12SED12 |
| Study Area | 10.3 | surface sediment | WLCSPL03SED13SED13 |
| Study Area | 10.3 | surface sediment | WLCSPL03SED14SED14 |
| Study Area | 10.3 | surface sediment | WLCSPL03SED15SED15 |
| Study Area | 10.3 | surface sediment | WLCSPL03SED16SED16 |
| Study Area | 10.3 | surface sediment | WLR0797WRBC36WRBC36 |
| Study Area | 10.4 | surface sediment | LW2-G505 |
| Study Area | 10.4 | surface sediment | LW2-G508 |
| Study Area | 10.4 | subsurface sediment | LW3-C757-B |
| Study Area | 10.4 | subsurface sediment | LW3-C757-C |
| Study Area | 10.4 | subsurface sediment | LW3-C757-E |
| Study Area | 10.4 | surface sediment | LW3-G754 |
| Study Area | 10.4 | surface sediment | LW3-G755 |
| Study Area | 10.4 | surface sediment | LW3-G756 |
| Study Area | 10.4 | surface sediment | LW3-RC01-001 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-005 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-009 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-013 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 10.4 | subsurface sediment | LW3-RC01-017 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-021 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-025 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-029 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-033 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-037 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-041 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-045 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-049 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-053 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-057 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-061 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-065 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-069 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-073 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-077 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-081 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-085 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-089 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-093 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-097 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-101 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-105 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-109 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-113 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-117 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-121 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-125 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-129 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-133 |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-137 |
| Study Area | 10.4 | surface sediment | LW3-RC01-A |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-B |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-C |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-D |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-E |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-F |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-G |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-H |
| Study Area | 10.4 | subsurface sediment | LW3-RC01-I |
| Study Area | 10.4 | surface sediment | WLCAYH00SD03SD03S |
| Study Area | 10.4 | subsurface sediment | WLCDRD05VC05353 |
| Study Area | 10.5 | surface sediment | LW2-G507 |
| Study Area | 10.5 | surface sediment | LW2-G510 |
| Study Area | 10.5 | subsurface sediment | LW3-C760-B |
| Study Area | 10.5 | subsurface sediment | LW3-C760-C |
| Study Area | 10.5 | subsurface sediment | LW3-C760-D |
| Study Area | 10.5 | subsurface sediment | LW3-C762-B |
| Study Area | 10.5 | subsurface sediment | LW3-C762-C |
| Study Area | 10.5 | subsurface sediment | LW3-C762-D |
| Study Area | 10.5 | subsurface sediment | LW3-C762-E |
| Study Area | 10.5 | surface sediment | LW3-G758 |
| Study Area | 10.5 | surface sediment | LW3-G759-1 |
| Study Area | 10.5 | surface sediment | LW3-G759-2 |
| Study Area | 10.5 | surface sediment | LW3-G760 |
| Study Area | 10.5 | surface sediment | LW3-G761 |
| Study Area | 10.5 | surface sediment | LW3-G763 |
| Study Area | 10.5 | surface sediment | WLCDRD05PG112112 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 10.5 | surface sediment | WLCDRD05PG114114 |
| Study Area | 10.5 | subsurface sediment | WLCDRD05VC05555 |
| Study Area | 10.5 | subsurface sediment | WLCDRD05VC114114 |
| Study Area | 10.5 | surface sediment | WLCT0I98GRAB11GRAB11 |
| Study Area | 10.5 | surface sediment | WRD&M98DMCDMC |
| Study Area | 10.6 | surface sediment | LW2-G509 |
| Study Area | 10.6 | surface sediment | LW2-G512 |
| Study Area | 10.6 | surface sediment | LW2-G514 |
| Study Area | 10.6 | subsurface sediment | LW3-C764-B1 |
| Study Area | 10.6 | subsurface sediment | LW3-C764-B2 |
| Study Area | 10.6 | subsurface sediment | LW3-C764-C1 |
| Study Area | 10.6 | subsurface sediment | LW3-C764-C2 |
| Study Area | 10.6 | subsurface sediment | LW3-C764-D1 |
| Study Area | 10.6 | subsurface sediment | LW3-C764-D2 |
| Study Area | 10.6 | surface sediment | LW3-G764 |
| Study Area | 10.6 | surface sediment | LW3-G765 |
| Study Area | 10.6 | surface sediment | LW3-G766 |
| Study Area | 10.6 | surface sediment | LW3-G767 |
| Study Area | 10.6 | surface sediment | WLCDRD05PG116116 |
| Study Area | 10.6 | subsurface sediment | WLCDRD05VC05757 |
| Study Area | 10.6 | subsurface sediment | WLCDRD05VC116116 |
| Study Area | 10.6 | surface sediment | WRD&M98DMBDMB |
| Study Area | 10.7 | surface sediment | LW2-G511 |
| Study Area | 10.7 | surface sediment | LW2-G515 |
| Study Area | 10.7 | surface sediment | LW3-G768 |
| Study Area | 10.7 | surface sediment | LW3-G769 |
| Study Area | 10.7 | surface sediment | PSYSEA98PSY72PSY72S |
| Study Area | 10.7 | surface sediment | PSYSEA98PSY72PSY74S |
| Study Area | 10.7 | surface sediment | PSYSEA98PSY72PSY75S |
| Study Area | 10.7 | surface sediment | WLCDRD05PG118118 |
| Study Area | 10.7 | subsurface sediment | WLCDRD05VC05959 |
| Study Area | 10.7 | subsurface sediment | WLCDRD05VC118118 |
| Study Area | 10.7 | surface sediment | WLCT1F00T1S02T1S02 |
| Study Area | 10.7 | surface sediment | WRD&M98DMADMA |
| Study Area | 10.8 | surface sediment | LW2-G513 |
| Study Area | 10.8 | surface sediment | LW2-G517 |
| Study Area | 10.8 | surface sediment | LW3-G770 |
| Study Area | 10.8 | subsurface sediment | WLCAYH00SD02SD02D |
| Study Area | 10.8 | surface sediment | WLCAYH00SD02SD02S |
| Study Area | 10.8 | surface sediment | WLCDRD05PG06161 |
| Study Area | 10.8 | surface sediment | WLCDRD05PG120120 |
| Study Area | 10.8 | subsurface sediment | WLCDRD05VC06161 |
| Study Area | 10.8 | subsurface sediment | WLCDRD05VC120120 |
| Study Area | 10.8 | surface sediment | WLCT1F00T1S03T1S03 |
| Study Area | 10.8 | surface sediment | WLCT1F00T1S04T1S04 |
| Study Area | 10.9 | surface sediment | LW2-G518 |
| Study Area | 10.9 | surface sediment | LW3-G771 |
| Study Area | 10.9 | surface sediment | LW3-RC02-001 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-005 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-009 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-013 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-017 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-021 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-025 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-029 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-033 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-037 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-041 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 10.9 | subsurface sediment | LW3-RC02-045 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-049 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-053 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-057 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-061 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-065 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-069 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-073 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-077 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-081 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-085 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-089 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-093 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-097 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-101 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-105 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-109 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-113 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-117 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-121 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-125 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-129 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-133 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-137 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-141 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-145 |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-149 |
| Study Area | 10.9 | surface sediment | LW3-RC02-A |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-B |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-C |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-D |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-E |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-F |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-G |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-H |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-I |
| Study Area | 10.9 | subsurface sediment | LW3-RC02-J |
| Study Area | 10.9 | surface sediment | WLCDRD05PG06363 |
| Study Area | 10.9 | surface sediment | WLCT0I98GRAB12GRAB12 |
| Study Area | 10.9 | surface sediment | WLCT1F00T1S05T1S05 |
| Study Area | 10.9 | surface sediment | WLCT1F00T1S06T1S06 |
| Study Area | 11 | surface sediment | LW2-G516 |
| Study Area | 11 | surface sediment | LW3-G772 |
| Study Area | 11 | surface sediment | RM11E-G001 |
| Study Area | 11 | surface sediment | RM11E-G002 |
| Study Area | 11 | subsurface sediment | WLCAYH00SD01SD01D |
| Study Area | 11 | surface sediment | WLCAYH00SD01SD01S |
| Study Area | 11 | surface sediment | WLCDRD05PG122122 |
| Study Area | 11 | subsurface sediment | WLCDRD05VC122122 |
| Study Area | 11 | subsurface sediment | WLCDRD05VC124124 |
| Study Area | 11 | surface sediment | WLCT1F00T1S07T1S07 |
| Study Area | 11 | surface sediment | WLCT1F00T1S08T1S08 |
| Study Area | 11.1 | subsurface sediment | LW3-C773-B1 |
| Study Area | 11.1 | subsurface sediment | LW3-C773-B2 |
| Study Area | 11.1 | subsurface sediment | LW3-C773-C1 |
| Study Area | 11.1 | subsurface sediment | LW3-C773-C2 |
| Study Area | 11.1 | subsurface sediment | LW3-C773-D1 |
| Study Area | 11.1 | subsurface sediment | LW3-C773-D2 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 11.1 | surface sediment | LW3-G774 |
| Study Area | 11.1 | surface sediment | LW3-G775 |
| Study Area | 11.1 | surface sediment | LW3-G776 |
| Study Area | 11.1 | subsurface sediment | LW3-UC01-B |
| Study Area | 11.1 | surface sediment | LW3-UG01 |
| Study Area | 11.1 | surface sediment | RM11E_BDSL001 |
| Study Area | 11.1 | surface sediment | RM11E_BDSL002 |
| Study Area | 11.1 | surface sediment | RM11E_BDSL003 |
| Study Area | 11.1 | subsurface sediment | RM11E-C001-B |
| Study Area | 11.1 | subsurface sediment | RM11E-C001-C |
| Study Area | 11.1 | subsurface sediment | RM11E-C002-B |
| Study Area | 11.1 | subsurface sediment | RM11E-C002-C |
| Study Area | 11.1 | subsurface sediment | RM11E-C002-D |
| Study Area | 11.1 | subsurface sediment | RM11E-C003-B |
| Study Area | 11.1 | subsurface sediment | RM11E-C003-C |
| Study Area | 11.1 | subsurface sediment | RM11E-C003-D |
| Study Area | 11.1 | subsurface sediment | RM11E-C004-B |
| Study Area | 11.1 | subsurface sediment | RM11E-C004-C |
| Study Area | 11.1 | subsurface sediment | RM11E-C005-B |
| Study Area | 11.1 | subsurface sediment | RM11E-C005-C |
| Study Area | 11.1 | subsurface sediment | RM11E-C005-D |
| Study Area | 11.1 | subsurface sediment | RM11E-C006-B |
| Study Area | 11.1 | subsurface sediment | RM11E-C007-B |
| Study Area | 11.1 | subsurface sediment | RM11E-C007-C |
| Study Area | 11.1 | subsurface sediment | RM11E-C007-D |
| Study Area | 11.1 | subsurface sediment | RM11E-C008-B |
| Study Area | 11.1 | subsurface sediment | RM11E-C008-C |
| Study Area | 11.1 | subsurface sediment | RM11E-C008-D |
| Study Area | 11.1 | subsurface sediment | RM11E-C009-B |
| Study Area | 11.1 | subsurface sediment | RM11E-C009-C |
| Study Area | 11.1 | surface sediment | RM11E-C010-A (R2) |
| Study Area | 11.1 | subsurface sediment | RM11E-C010-B |
| Study Area | 11.1 | subsurface sediment | RM11E-C010-C |
| Study Area | 11.1 | subsurface sediment | RM11E-C010-D |
| Study Area | 11.1 | subsurface sediment | RM11E-C011-B |
| Study Area | 11.1 | subsurface sediment | RM11E-C011-C |
| Study Area | 11.1 | subsurface sediment | RM11E-C011-D |
| Study Area | 11.1 | surface sediment | RM11E-G003 |
| Study Area | 11.1 | surface sediment | RM11E-G004 |
| Study Area | 11.1 | surface sediment | RM11E-G005 |
| Study Area | 11.1 | surface sediment | RM11E-G006 |
| Study Area | 11.1 | surface sediment | RM11E-G007 |
| Study Area | 11.1 | surface sediment | RM11E-G008 |
| Study Area | 11.1 | surface sediment | RM11E-G009 |
| Study Area | 11.1 | surface sediment | RM11E-G010 |
| Study Area | 11.1 | surface sediment | RM11E-G011 |
| Study Area | 11.1 | surface sediment | RM11E-G012 |
| Study Area | 11.1 | surface sediment | RM11E-G013 |
| Study Area | 11.1 | surface sediment | RM11E-G014 |
| Study Area | 11.1 | surface sediment | WLCDRD05PG124124 |
| Study Area | 11.1 | surface sediment | WLCDRD05PG126126 |
| Study Area | 11.1 | subsurface sediment | WLCDRD05VC126126 |
| Study Area | 11.1 | surface sediment | WLCGWI04GNVV04 |
| Study Area | 11.1 | subsurface sediment | WLR0797WRGC37RGC37A |
| Study Area | 11.1 | subsurface sediment | WLR1199WRVC06C06ABC |
| Study Area | 11.1 | subsurface sediment | WLR1199WRVC06RVC06D |
| Study Area | 11.2 | subsurface sediment | LW3-C777-B |
| Study Area | 11.2 | subsurface sediment | LW3-C777-C |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 11.2 | subsurface sediment | LW3-C777-D |
| Study Area | 11.2 | surface sediment | LW3-G777 |
| Study Area | 11.2 | subsurface sediment | LW3-UC02-B |
| Study Area | 11.2 | subsurface sediment | LW3-UC02-C |
| Study Area | 11.2 | surface sediment | LW3-UG02 |
| Study Area | 11.2 | surface sediment | RM11E_BDSL004 |
| Study Area | 11.2 | surface sediment | RM11E_BDSL005 |
| Study Area | 11.2 | surface sediment | RM11E_BDSL006 |
| Study Area | 11.2 | surface sediment | RM11E-C012-A |
| Study Area | 11.2 | subsurface sediment | RM11E-C012-B |
| Study Area | 11.2 | subsurface sediment | RM11E-C012-C |
| Study Area | 11.2 | subsurface sediment | RM11E-C012-D |
| Study Area | 11.2 | subsurface sediment | RM11E-C012-E |
| Study Area | 11.2 | subsurface sediment | RM11E-C013-B |
| Study Area | 11.2 | subsurface sediment | RM11E-C013-C |
| Study Area | 11.2 | subsurface sediment | RM11E-C013-D |
| Study Area | 11.2 | subsurface sediment | RM11E-C014-B |
| Study Area | 11.2 | subsurface sediment | RM11E-C014-C |
| Study Area | 11.2 | subsurface sediment | RM11E-C014-D |
| Study Area | 11.2 | subsurface sediment | RM11E-C015-B |
| Study Area | 11.2 | subsurface sediment | RM11E-C015-C |
| Study Area | 11.2 | subsurface sediment | RM11E-C015-D |
| Study Area | 11.2 | subsurface sediment | RM11E-C016-B |
| Study Area | 11.2 | subsurface sediment | RM11E-C016-C |
| Study Area | 11.2 | subsurface sediment | RM11E-C016-D |
| Study Area | 11.2 | subsurface sediment | RM11E-C017-B |
| Study Area | 11.2 | subsurface sediment | RM11E-C017-C |
| Study Area | 11.2 | subsurface sediment | RM11E-C017-D |
| Study Area | 11.2 | subsurface sediment | RM11E-C018-B |
| Study Area | 11.2 | subsurface sediment | RM11E-C018-C |
| Study Area | 11.2 | subsurface sediment | RM11E-C048-B (R1) |
| Study Area | 11.2 | subsurface sediment | RM11E-C048-B (R2) |
| Study Area | 11.2 | subsurface sediment | RM11E-C048-C (R1) |
| Study Area | 11.2 | surface sediment | RM11E-G015 |
| Study Area | 11.2 | surface sediment | RM11E-G016 |
| Study Area | 11.2 | surface sediment | RM11E-G017 |
| Study Area | 11.2 | surface sediment | RM11E-G018 |
| Study Area | 11.2 | surface sediment | RM11E-G019 |
| Study Area | 11.2 | surface sediment | RM11E-G020 |
| Study Area | 11.2 | surface sediment | RM11E-G021 |
| Study Area | 11.2 | surface sediment | RM11E-G063 |
| Study Area | 11.2 | surface sediment | RM11E-G065 |
| Study Area | 11.2 | surface sediment | WLCDRD05PG128128 |
| Study Area | 11.2 | subsurface sediment | WLCDRD05VC128128 |
| Study Area | 11.2 | subsurface sediment | WLCGWF03GNVC03Z1 |
| Study Area | 11.2 | subsurface sediment | WLCGWF03GNZCOMP2003 |
| Study Area | 11.2 | surface sediment | WLCGWI04GNVV02 |
| Study Area | 11.2 | surface sediment | WLCGWI04GNVV03 |
| Study Area | 11.2 | subsurface sediment | WLR0797WRGC38RGC38A |
| Study Area | 11.2 | subsurface sediment | WLR1199WRVC07C07ABC |
| Study Area | 11.2 | subsurface sediment | WLR1199WRVC07RVC07D |
| Study Area | 11.3 | subsurface sediment | LW3-C778-B |
| Study Area | 11.3 | subsurface sediment | LW3-C778-C |
| Study Area | 11.3 | subsurface sediment | LW3-C779-B |
| Study Area | 11.3 | subsurface sediment | LW3-C779-C |
| Study Area | 11.3 | subsurface sediment | LW3-C779-E |
| Study Area | 11.3 | surface sediment | LW3-G778 |
| Study Area | 11.3 | surface sediment | LW3-G779 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 11.3 | surface sediment | LW3-GCA11E-C00 |
| Study Area | 11.3 | surface sediment | LW3-GCRSP11E |
| Study Area | 11.3 | subsurface sediment | LW3-UC03-B |
| Study Area | 11.3 | subsurface sediment | LW3-UC03-C |
| Study Area | 11.3 | subsurface sediment | LW3-UC03-D |
| Study Area | 11.3 | surface sediment | LW3-UG03 |
| Study Area | 11.3 | surface sediment | RM11E_BDSL007 |
| Study Area | 11.3 | surface sediment | RM11E_BDSL008 |
| Study Area | 11.3 | surface sediment | RM11E_BDSL009 |
| Study Area | 11.3 | surface sediment | RM11E_BDSL012 |
| Study Area | 11.3 | surface sediment | RM11E_BDSL015 |
| Study Area | 11.3 | surface sediment | RM11E_BDSL016 |
| Study Area | 11.3 | surface sediment | RM11E_BDSL017 |
| Study Area | 11.3 | surface sediment | RM11E_BDSL018 |
| Study Area | 11.3 | surface sediment | RM11E_BDSL021 |
| Study Area | 11.3 | surface sediment | RM11E_BDSL022 |
| Study Area | 11.3 | surface sediment | RM11E_BDSL023 |
| Study Area | 11.3 | subsurface sediment | RM11E-C019-B |
| Study Area | 11.3 | subsurface sediment | RM11E-C019-C |
| Study Area | 11.3 | subsurface sediment | RM11E-C019-D |
| Study Area | 11.3 | subsurface sediment | RM11E-C019-E |
| Study Area | 11.3 | subsurface sediment | RM11E-C020-B |
| Study Area | 11.3 | subsurface sediment | RM11E-C020-C |
| Study Area | 11.3 | subsurface sediment | RM11E-C021-B |
| Study Area | 11.3 | subsurface sediment | RM11E-C021-C |
| Study Area | 11.3 | subsurface sediment | RM11E-C021-D |
| Study Area | 11.3 | subsurface sediment | RM11E-C022-B |
| Study Area | 11.3 | subsurface sediment | RM11E-C022-C |
| Study Area | 11.3 | subsurface sediment | RM11E-C023-B |
| Study Area | 11.3 | subsurface sediment | RM11E-C023-C |
| Study Area | 11.3 | subsurface sediment | RM11E-C023-D |
| Study Area | 11.3 | subsurface sediment | RM11E-C023-E |
| Study Area | 11.3 | subsurface sediment | RM11E-C024-B |
| Study Area | 11.3 | subsurface sediment | RM11E-C024-C |
| Study Area | 11.3 | subsurface sediment | RM11E-C024-D |
| Study Area | 11.3 | subsurface sediment | RM11E-C025-B |
| Study Area | 11.3 | subsurface sediment | RM11E-C025-C |
| Study Area | 11.3 | subsurface sediment | RM11E-C025-D |
| Study Area | 11.3 | subsurface sediment | RM11E-C026-B |
| Study Area | 11.3 | subsurface sediment | RM11E-C026-C |
| Study Area | 11.3 | subsurface sediment | RM11E-C026-D |
| Study Area | 11.3 | subsurface sediment | RM11E-C026-E |
| Study Area | 11.3 | subsurface sediment | RM11E-C026-F |
| Study Area | 11.3 | subsurface sediment | RM11E-C027-B |
| Study Area | 11.3 | subsurface sediment | RM11E-C027-C |
| Study Area | 11.3 | subsurface sediment | RM11E-C027-D |
| Study Area | 11.3 | subsurface sediment | RM11E-C028-B |
| Study Area | 11.3 | subsurface sediment | RM11E-C028-C |
| Study Area | 11.3 | subsurface sediment | RM11E-C028-D |
| Study Area | 11.3 | subsurface sediment | RM11E-C031-B |
| Study Area | 11.3 | subsurface sediment | RM11E-C031-C |
| Study Area | 11.3 | subsurface sediment | RM11E-C031-D |
| Study Area | 11.3 | subsurface sediment | RM11E-C047-B |
| Study Area | 11.3 | subsurface sediment | RM11E-C047-C |
| Study Area | 11.3 | subsurface sediment | RM11E-C047-D |
| Study Area | 11.3 | subsurface sediment | RM11E-C047-E |
| Study Area | 11.3 | subsurface sediment | RM11E-C047-F |
| Study Area | 11.3 | surface sediment | RM11E-G022 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 11.3 | surface sediment | RM11E-G023 |
| Study Area | 11.3 | surface sediment | RM11E-G024 |
| Study Area | 11.3 | surface sediment | RM11E-G025 |
| Study Area | 11.3 | surface sediment | RM11E-G026 |
| Study Area | 11.3 | surface sediment | RM11E-G027 |
| Study Area | 11.3 | surface sediment | RM11E-G028 |
| Study Area | 11.3 | surface sediment | RM11E-G029 |
| Study Area | 11.3 | surface sediment | RM11E-G030 |
| Study Area | 11.3 | surface sediment | RM11E-G031 |
| Study Area | 11.3 | surface sediment | RM11E-G032 |
| Study Area | 11.3 | surface sediment | RM11E-G035 |
| Study Area | 11.3 | surface sediment | RM11E-G066 |
| Study Area | 11.3 | surface sediment | RM11E-G067 |
| Study Area | 11.3 | surface sediment | WLCDRD05PG130130 |
| Study Area | 11.3 | subsurface sediment | WLCDRD05VC130130 |
| Study Area | 11.3 | subsurface sediment | WLCGWF03GNVC01Z1 |
| Study Area | 11.3 | surface sediment | WLCGWI04GNVV01 |
| Study Area | 11.3 | surface sediment | WLCT1F00T1S09T1S09 |
| Study Area | 11.3 | subsurface sediment | WLR0797WRCD40RCD40A |
| Study Area | 11.3 | subsurface sediment | WLR0797WRCD41RCD41A |
| Study Area | 11.3 | subsurface sediment | WLR0797WRCD41RCD41B |
| Study Area | 11.4 | surface sediment | RM11E_BDSL011 |
| Study Area | 11.4 | surface sediment | RM11E_BDSL013 |
| Study Area | 11.4 | surface sediment | RM11E_BDSL014 |
| Study Area | 11.4 | surface sediment | RM11E_BDSL019 |
| Study Area | 11.4 | surface sediment | RM11E_BDSL020 |
| Study Area | 11.4 | subsurface sediment | RM11E-C029-B |
| Study Area | 11.4 | subsurface sediment | RM11E-C029-C |
| Study Area | 11.4 | subsurface sediment | RM11E-C029-D |
| Study Area | 11.4 | subsurface sediment | RM11E-C029-E |
| Study Area | 11.4 | subsurface sediment | RM11E-C029-F |
| Study Area | 11.4 | subsurface sediment | RM11E-C029-G |
| Study Area | 11.4 | subsurface sediment | RM11E-C032-B |
| Study Area | 11.4 | subsurface sediment | RM11E-C032-C |
| Study Area | 11.4 | subsurface sediment | RM11E-C032-D |
| Study Area | 11.4 | subsurface sediment | RM11E-C032-E |
| Study Area | 11.4 | subsurface sediment | RM11E-C032-F |
| Study Area | 11.4 | subsurface sediment | RM11E-C034-B |
| Study Area | 11.4 | subsurface sediment | RM11E-C034-C |
| Study Area | 11.4 | subsurface sediment | RM11E-C035-B |
| Study Area | 11.4 | subsurface sediment | RM11E-C035-C |
| Study Area | 11.4 | subsurface sediment | RM11E-C035-D |
| Study Area | 11.4 | subsurface sediment | RM11E-C036-B |
| Study Area | 11.4 | subsurface sediment | RM11E-C036-C |
| Study Area | 11.4 | subsurface sediment | RM11E-C036-D |
| Study Area | 11.4 | subsurface sediment | RM11E-C037-B |
| Study Area | 11.4 | subsurface sediment | RM11E-C037-C |
| Study Area | 11.4 | subsurface sediment | RM11E-C038-B |
| Study Area | 11.4 | subsurface sediment | RM11E-C038-C |
| Study Area | 11.4 | subsurface sediment | RM11E-C038-D |
| Study Area | 11.4 | subsurface sediment | RM11E-C040-B |
| Study Area | 11.4 | subsurface sediment | RM11E-C040-C |
| Study Area | 11.4 | subsurface sediment | RM11E-C040-D |
| Study Area | 11.4 | surface sediment | RM11E-G033 |
| Study Area | 11.4 | surface sediment | RM11E-G036 |
| Study Area | 11.4 | surface sediment | RM11E-G037 |
| Study Area | 11.4 | surface sediment | RM11E-G038 |
| Study Area | 11.4 | surface sediment | RM11E-G039 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Study Area | 11.4 | surface sediment | RM11E-G040 |
| Study Area | 11.4 | surface sediment | RM11E-G041 |
| Study Area | 11.4 | surface sediment | RM11E-G042 |
| Study Area | 11.4 | surface sediment | RM11E-G045 |
| Study Area | 11.4 | surface sediment | RM11E-G064 |
| Study Area | 11.4 | surface sediment | WLCDRD05PG132132 |
| Study Area | 11.4 | subsurface sediment | WLCDRD05VC132132 |
| Study Area | 11.4 | subsurface sediment | WLR0797WRCD42RCD42A |
| Study Area | 11.4 | subsurface sediment | WLR0797WRCD42RCD42B |
| Study Area | 11.4 | subsurface sediment | WLR0797WRCD42RCD42C |
| Study Area | 11.4 | subsurface sediment | WLR0797WRCD42RCD42D |
| Study Area | 11.5 | surface sediment | RM11E_BDSL010 |
| Study Area | 11.5 | subsurface sediment | RM11E-C039-B |
| Study Area | 11.5 | subsurface sediment | RM11E-C039-C |
| Study Area | 11.5 | subsurface sediment | RM11E-C039-D |
| Study Area | 11.5 | subsurface sediment | RM11E-C039-E |
| Study Area | 11.5 | surface sediment | RM11E-G044 |
| Study Area | 11.5 | surface sediment | RM11E-G046 |
| Study Area | 11.5 | surface sediment | RM11E-G047 |
| Study Area | 11.5 | surface sediment | RM11E-G049 |
| Study Area | 11.5 | surface sediment | WLCDRD05PG134134 |
| Study Area | 11.5 | subsurface sediment | WLCDRD05VC134134 |
| Study Area | 11.5 | surface sediment | WLCPGH02CLDP |
| Study Area | 11.5 | subsurface sediment | WLR0797WRCD43RCD43A |
| Study Area | 11.5 | subsurface sediment | WLR0797WRCD43RCD43B |
| Study Area | 11.5 | subsurface sediment | WLR0797WRCD43WRD |
| Study Area | 11.5 | surface sediment | WLR1199WRVC08WRVC08 |
| Study Area | 11.6 | subsurface sediment | RM11E-C042-B (R2) |
| Study Area | 11.6 | subsurface sediment | RM11E-C042-C (R2) |
| Study Area | 11.6 | subsurface sediment | RM11E-C042-D (R2) |
| Study Area | 11.6 | surface sediment | RM11E-G050 |
| Study Area | 11.6 | surface sediment | RM11E-G051 |
| Study Area | 11.6 | subsurface sediment | WLR0797WRGC39RGC39A |
| Study Area | 11.7 | surface sediment | RM11E-C043-A |
| Study Area | 11.7 | subsurface sediment | RM11E-C043-B |
| Downtown (RM 11.8 - 12.2) | 11.9 | surface sediment | LW3-GCA12W-C00 |
| Downtown (RM 11.8 - 12.2) | 11.9 | surface sediment | LW3-GSP12W-ALT |
| Downtown (RM 11.8 - 12.2) | 11.9 | subsurface sediment | LW3-UC04-B |
| Downtown (RM 11.8 - 12.2) | 11.9 | subsurface sediment | LW3-UC04-C |
| Downtown (RM 11.8 - 12.2) | 11.9 | subsurface sediment | LW3-UC04-D |
| Downtown (RM 11.8 - 12.2) | 11.9 | surface sediment | LW3-UG04-1 |
| Downtown (RM 11.8 - 12.2) | 11.9 | surface sediment | LW3-UG04-2 |
| Downtown (RM 11.8 - 12.2) | 11.9 | subsurface sediment | RM11E-C044-B |
| Downtown (RM 11.8 - 12.2) | 11.9 | subsurface sediment | RM11E-C045-B |
| Downtown (RM 11.8 - 12.2) | 11.9 | subsurface sediment | RM11E-C045-C |
| Downtown (RM 11.8 - 12.2) | 11.9 | surface sediment | RM11E-G059 |
| Downtown (RM 11.8 - 12.2) | 12 | surface sediment | LW3-GCR12W |
| Downtown (RM 11.8 - 12.2) | 12 | subsurface sediment | LW3-UC05-B1 |
| Downtown (RM 11.8 - 12.2) | 12 | subsurface sediment | LW3-UC05-B2 |
| Downtown (RM 11.8 - 12.2) | 12 | subsurface sediment | LW3-UC05-C1 |
| Downtown (RM 11.8 - 12.2) | 12 | subsurface sediment | LW3-UC05-C2 |
| Downtown (RM 11.8 - 12.2) | 12 | subsurface sediment | LW3-UC05-D1 |
| Downtown (RM 11.8 - 12.2) | 12 | subsurface sediment | LW3-UC05-D2 |
| Downtown (RM 11.8 - 12.2) | 12 | subsurface sediment | LW3-UC06-B |
| Downtown (RM 11.8 - 12.2) | 12 | subsurface sediment | LW3-UC06-C |
| Downtown (RM 11.8 - 12.2) | 12 | subsurface sediment | LW3-UC06-D |
| Downtown (RM 11.8 - 12.2) | 12 | subsurface sediment | LW3-UC06-E |
| Downtown (RM 11.8 - 12.2) | 12 | surface sediment | LW3-UG05 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Downtown (RM 11.8 - 12.2) | 12 | surface sediment | LW3-UG06 |
| Downtown (RM 11.8 - 12.2) | 12 | subsurface sediment | RM11E-C046-B |
| Downtown (RM 11.8 - 12.2) | 12 | subsurface sediment | RM11E-C046-C |
| Downtown (RM 11.8 - 12.2) | 12 | subsurface sediment | RM11E-C046-D |
| Downtown (RM 11.8 - 12.2) | 12 | surface sediment | RM11E-G061 |
| Downtown (RM 11.8 - 12.2) | 12 | surface sediment | RM11E-G062 |
| Downtown (RM 11.8 - 12.2) | 12 | surface sediment | WLLASE08DPSCG066 |
| Downtown (RM 11.8 - 12.2) | 12 | surface sediment | WLLPGH09PG-010-SC030-N |
| Downtown (RM 11.8 - 12.2) | 12 | subsurface sediment | WLLPGH09PG-010-SC3090-N |
| Downtown (RM 11.8 - 12.2) | 12 | subsurface sediment | WLLPGH09PG-010-SC90150-N |
| Downtown (RM 11.8 - 12.2) | 12 | surface sediment | WLLPGH09PG-011-SC030-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | surface sediment | LW3-C782-A |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | LW3-C782-B |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | LW3-C782-C |
| Downtown (RM 11.8 - 12.2) | 12.1 | surface sediment | LW3-G780 |
| Downtown (RM 11.8 - 12.2) | 12.1 | surface sediment | LW3-G781 |
| Downtown (RM 11.8 - 12.2) | 12.1 | surface sediment | LW3-GCA12E-C00-R |
| Downtown (RM 11.8 - 12.2) | 12.1 | surface sediment | LW3-GCRSP12E |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | LW3-UC07-B |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | LW3-UC07-C |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | LW3-UC07-D |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | LW3-UC07-E |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | LW3-UC08-B |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | LW3-UC08-C |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | LW3-UC08-D |
| Downtown (RM 11.8 - 12.2) | 12.1 | surface sediment | LW3-UG07 |
| Downtown (RM 11.8 - 12.2) | 12.1 | surface sediment | LW3-UG08 |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLASB10DPSCC086B |
| Downtown (RM 11.8 - 12.2) | 12.1 | surface sediment | WLLASB10DPSCC087A |
| Downtown (RM 11.8 - 12.2) | 12.1 | surface sediment | WLLASB10DPSCG086 |
| Downtown (RM 11.8 - 12.2) | 12.1 | surface sediment | WLLASE08DPSCC031A |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLASE08DPSCC031B |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLASE08DPSCC031C |
| Downtown (RM 11.8 - 12.2) | 12.1 | surface sediment | WLLASE08DPSCG063 |
| Downtown (RM 11.8 - 12.2) | 12.1 | surface sediment | WLLASE08DPSCG064 |
| Downtown (RM 11.8 - 12.2) | 12.1 | surface sediment | WLLASE08DPSCG065 |
| Downtown (RM 11.8 - 12.2) | 12.1 | surface sediment | WLLASE08DPSCG067 |
| Downtown (RM 11.8 - 12.2) | 12.1 | surface sediment | WLLPGH09PG005-SC030-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG005-SC150210-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG005-SC210270-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG005-SC270330-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG005-SC3090-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG005-SC330390-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG005-SC90150-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | surface sediment | WLLPGH09PG-006-SC030-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG-006-SC150210-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG-006-SC210270-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG-006-SC270330-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG-006-SC3090-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG-006-SC330390-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG-006-SC390450-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG-006-SC90150-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | surface sediment | WLLPGH09PG-007-SC030-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG-007-SC3090-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG-007-SC90150-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | surface sediment | WLLPGH09PG-008-SC030-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG-008-SC150210-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG-008-SC210270-N |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG-008-SC3090-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG-008-SC90150-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | surface sediment | WLLPGH09PG-009-SC030-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG-009-SC150210-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG-009-SC210270-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG-009-SC270330-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG-009-SC3090-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG-009-SC330390-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG-009-SC390450-N |
| Downtown (RM 11.8 - 12.2) | 12.1 | subsurface sediment | WLLPGH09PG-009-SC90150-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | LW3-C783-B |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | LW3-C783-C |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | LW3-C783-D |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | LW3-C783-E |
| Downtown (RM 11.8 - 12.2) | 12.2 | surface sediment | LW3-G783 |
| Downtown (RM 11.8 - 12.2) | 12.2 | surface sediment | WLLPGH09PG-001-SC030-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG-001-SC150210-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG-001-SC210270-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG-001-SC270330-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG-001-SC3090-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG-001-SC90150-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | surface sediment | WLLPGH09PG-002-SC030-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG-002-SC150210-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG-002-SC210270-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG-002-SC270330-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG-002-SC3090-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG-002-SC90150-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | surface sediment | WLLPGH09PG-003-SC030-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG-003-SC150210-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG-003-SC210270-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG-003-SC270330-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG-003-SC3090-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG-003-SC330390-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG-003-SC90150-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | surface sediment | WLLPGH09PG004-SC030-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG004-SC150210-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG004-SC210270-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG004-SC270330-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG004-SC3090-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG004-SC330390-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG004-SC390450-N |
| Downtown (RM 11.8 - 12.2) | 12.2 | subsurface sediment | WLLPGH09PG004-SC90150-N |
| Downtown (RM 12.3 - 15.3) | 12.3 | subsurface sediment | WLLASE08DPSCC001B |
| Downtown (RM 12.3 - 15.3) | 12.3 | subsurface sediment | WLLASE08DPSCC001C |
| Downtown (RM 12.3 - 15.3) | 12.3 | subsurface sediment | WLLASE08DPSCC001D |
| Downtown (RM 12.3 - 15.3) | 12.3 | surface sediment | WLLASE08DPSCG001 |
| Downtown (RM 12.3 - 15.3) | 12.3 | surface sediment | WLLASE08DPSCG002 |
| Downtown (RM 12.3 - 15.3) | 12.3 | surface sediment | WLLASE08DPSCG060 |
| Downtown (RM 12.3 - 15.3) | 12.3 | surface sediment | WLLASE08DPSCG061 |
| Downtown (RM 12.3 - 15.3) | 12.3 | surface sediment | WLLASE08DPSCG062 |
| Downtown (RM 12.3 - 15.3) | 12.3 | surface sediment | WLLPGH09PG-012-SC030-N |
| Downtown (RM 12.3 - 15.3) | 12.3 | subsurface sediment | WLLPGH09PG-012-SC150210-N |
| Downtown (RM 12.3 - 15.3) | 12.3 | subsurface sediment | WLLPGH09PG-012-SC210270-N |
| Downtown (RM 12.3 - 15.3) | 12.3 | subsurface sediment | WLLPGH09PG-012-SC270330-N |
| Downtown (RM 12.3 - 15.3) | 12.3 | subsurface sediment | WLLPGH09PG-012-SC3090-N |
| Downtown (RM 12.3 - 15.3) | 12.3 | subsurface sediment | WLLPGH09PG-012-SC330390-N |
| Downtown (RM 12.3 - 15.3) | 12.3 | subsurface sediment | WLLPGH09PG-012-SC390450-N |
| Downtown (RM 12.3 - 15.3) | 12.3 | subsurface sediment | WLLPGH09PG-012-SC90150-N |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Downtown (RM 12.3 - 15.3) | 12.4 | surface sediment | WLLASB10DPSCC041A |
| Downtown (RM 12.3 - 15.3) | 12.4 | subsurface sediment | WLLASB10DPSCC041B |
| Downtown (RM 12.3 - 15.3) | 12.4 | subsurface sediment | WLLASB10DPSCC089B |
| Downtown (RM 12.3 - 15.3) | 12.4 | surface sediment | WLLASB10DPSCG089 |
| Downtown (RM 12.3 - 15.3) | 12.4 | surface sediment | WLLASE08DPSCG059 |
| Downtown (RM 12.3 - 15.3) | 12.4 | surface sediment | WLLASE08DPSCG068 |
| Downtown (RM 12.3 - 15.3) | 12.5 | surface sediment | WLLASB10DPSCG088 |
| Downtown (RM 12.3 - 15.3) | 12.5 | subsurface sediment | WLLASE08DPSCC030B |
| Downtown (RM 12.3 - 15.3) | 12.5 | surface sediment | WLLASE08DPSCG003 |
| Downtown (RM 12.3 - 15.3) | 12.5 | surface sediment | WLLASE08DPSCG057 |
| Downtown (RM 12.3 - 15.3) | 12.5 | surface sediment | WLLASE08DPSCG058 |
| Downtown (RM 12.3 - 15.3) | 12.6 | surface sediment | WLLASE08DPSCC029A |
| Downtown (RM 12.3 - 15.3) | 12.6 | subsurface sediment | WLLASE08DPSCC029B |
| Downtown (RM 12.3 - 15.3) | 12.6 | subsurface sediment | WLLASE08DPSCC029C |
| Downtown (RM 12.3 - 15.3) | 12.6 | surface sediment | WLLASE08DPSCG055 |
| Downtown (RM 12.3 - 15.3) | 12.6 | surface sediment | WLLASE08DPSCG056 |
| Downtown (RM 12.3 - 15.3) | 12.7 | surface sediment | WLLASB10DPSCC090A |
| Downtown (RM 12.3 - 15.3) | 12.7 | subsurface sediment | WLLASB10DPSCC090B |
| Downtown (RM 12.3 - 15.3) | 12.7 | subsurface sediment | WLLASE08DPSCC028B |
| Downtown (RM 12.3 - 15.3) | 12.7 | surface sediment | WLLASE08DPSCG053 |
| Downtown (RM 12.3 - 15.3) | 12.7 | surface sediment | WLLASE08DPSCG054 |
| Downtown (RM 12.3 - 15.3) | 12.8 | surface sediment | WLLASB10DPSCG091 |
| Downtown (RM 12.3 - 15.3) | 12.8 | surface sediment | WLLASB10DPSCG092 |
| Downtown (RM 12.3 - 15.3) | 12.8 | subsurface sediment | WLLASE08DPSCC027B |
| Downtown (RM 12.3 - 15.3) | 12.8 | surface sediment | WLLASE08DPSCG005 |
| Downtown (RM 12.3 - 15.3) | 12.8 | surface sediment | WLLASE08DPSCG051 |
| Downtown (RM 12.3 - 15.3) | 12.8 | surface sediment | WLLASE08DPSCG052 |
| Downtown (RM 12.3 - 15.3) | 12.9 | subsurface sediment | WLLASB10DPSCC095B |
| Downtown (RM 12.3 - 15.3) | 12.9 | surface sediment | WLLASB10DPSCG093 |
| Downtown (RM 12.3 - 15.3) | 12.9 | surface sediment | WLLASB10DPSCG095 |
| Downtown (RM 12.3 - 15.3) | 12.9 | surface sediment | WLLASE08DPSCG006 |
| Downtown (RM 12.3 - 15.3) | 13 | surface sediment | WLLASB10DPSCG094 |
| Downtown (RM 12.3 - 15.3) | 13 | subsurface sediment | WLLASE08DPSCC002B |
| Downtown (RM 12.3 - 15.3) | 13 | subsurface sediment | WLLASE08DPSCC026B |
| Downtown (RM 12.3 - 15.3) | 13 | surface sediment | WLLASE08DPSCG007 |
| Downtown (RM 12.3 - 15.3) | 13 | surface sediment | WLLASE08DPSCG008 |
| Downtown (RM 12.3 - 15.3) | 13 | surface sediment | WLLASE08DPSCG049 |
| Downtown (RM 12.3 - 15.3) | 13 | surface sediment | WLLASE08DPSCG050 |
| Downtown (RM 12.3 - 15.3) | 13 | surface sediment | WLLASE08DPSCG069 |
| Downtown (RM 12.3 - 15.3) | 13 | surface sediment | WLLGEC10O33-S001 |
| Downtown (RM 12.3 - 15.3) | 13 | surface sediment | WLLGEC10O33-S008 |
| Downtown (RM 12.3 - 15.3) | 13.1 | surface sediment | WLLASE08DPSCC025A |
| Downtown (RM 12.3 - 15.3) | 13.1 | subsurface sediment | WLLASE08DPSCC025B |
| Downtown (RM 12.3 - 15.3) | 13.1 | subsurface sediment | WLLASE08DPSCC025D |
| Downtown (RM 12.3 - 15.3) | 13.1 | surface sediment | WLLASE08DPSCG047 |
| Downtown (RM 12.3 - 15.3) | 13.1 | surface sediment | WLLASE08DPSCG048 |
| Downtown (RM 12.3 - 15.3) | 13.1 | surface sediment | WLLGEC10O33-C002-A |
| Downtown (RM 12.3 - 15.3) | 13.1 | surface sediment | WLLGEC10O33-C003-A |
| Downtown (RM 12.3 - 15.3) | 13.1 | subsurface sediment | WLLGEC10O33-C004-B |
| Downtown (RM 12.3 - 15.3) | 13.1 | subsurface sediment | WLLGEC10O33-C005-B |
| Downtown (RM 12.3 - 15.3) | 13.1 | subsurface sediment | WLLGEC10O33-C007-B |
| Downtown (RM 12.3 - 15.3) | 13.1 | subsurface sediment | WLLGEC10O33-C008-B |
| Downtown (RM 12.3 - 15.3) | 13.1 | surface sediment | WLLGEC10O33-C009-A |
| Downtown (RM 12.3 - 15.3) | 13.1 | surface sediment | WLLGEC10O33-S002 |
| Downtown (RM 12.3 - 15.3) | 13.1 | surface sediment | WLLGEC10O33-S003 |
| Downtown (RM 12.3 - 15.3) | 13.1 | surface sediment | WLLGEC10O33-S004 |
| Downtown (RM 12.3 - 15.3) | 13.1 | surface sediment | WLLGEC10O33-S005 |
| Downtown (RM 12.3 - 15.3) | 13.1 | surface sediment | WLLGEC10O33-S006 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Downtown (RM 12.3 - 15.3) | 13.1 | surface sediment | WLLGEC10O33-S007 |
| Downtown (RM 12.3 - 15.3) | 13.1 | surface sediment | WLLGEC10O33-S009 |
| Downtown (RM 12.3 - 15.3) | 13.1 | surface sediment | WLLGEC10O33-S010 |
| Downtown (RM 12.3 - 15.3) | 13.1 | surface sediment | WLLGEC10O33-S011 |
| Downtown (RM 12.3 - 15.3) | 13.2 | subsurface sediment | WLLASE08DPSCC003E |
| Downtown (RM 12.3 - 15.3) | 13.2 | surface sediment | WLLASE08DPSCG009 |
| Downtown (RM 12.3 - 15.3) | 13.2 | surface sediment | WLLASE08DPSCG046 |
| Downtown (RM 12.3 - 15.3) | 13.3 | surface sediment | WLLASB10DPSCG096 |
| Downtown (RM 12.3 - 15.3) | 13.3 | subsurface sediment | WLLASE08DPSCC004B |
| Downtown (RM 12.3 - 15.3) | 13.3 | subsurface sediment | WLLASE08DPSCC023B |
| Downtown (RM 12.3 - 15.3) | 13.3 | subsurface sediment | WLLASE08DPSCC024B |
| Downtown (RM 12.3 - 15.3) | 13.3 | subsurface sediment | WLLASE08DPSCC024C |
| Downtown (RM 12.3 - 15.3) | 13.3 | surface sediment | WLLASE08DPSCG010 |
| Downtown (RM 12.3 - 15.3) | 13.3 | surface sediment | WLLASE08DPSCG011 |
| Downtown (RM 12.3 - 15.3) | 13.3 | surface sediment | WLLASE08DPSCG043 |
| Downtown (RM 12.3 - 15.3) | 13.3 | surface sediment | WLLASE08DPSCG044 |
| Downtown (RM 12.3 - 15.3) | 13.3 | surface sediment | WLLASE08DPSCG045 |
| Downtown (RM 12.3 - 15.3) | 13.4 | surface sediment | WLCZDI00WRS45WRS45-1 |
| Downtown (RM 12.3 - 15.3) | 13.4 | surface sediment | WLCZDI00WRS47WRS47 |
| Downtown (RM 12.3 - 15.3) | 13.4 | surface sediment | WLCZDI00WRS53WRS53 |
| Downtown (RM 12.3 - 15.3) | 13.4 | subsurface sediment | WLLASE08DPSCC005D |
| Downtown (RM 12.3 - 15.3) | 13.4 | subsurface sediment | WLLASE08DPSCC006D |
| Downtown (RM 12.3 - 15.3) | 13.4 | subsurface sediment | WLLASE08DPSCC033B |
| Downtown (RM 12.3 - 15.3) | 13.4 | surface sediment | WLLASE08DPSCG012 |
| Downtown (RM 12.3 - 15.3) | 13.4 | surface sediment | WLLASE08DPSCG013 |
| Downtown (RM 12.3 - 15.3) | 13.4 | surface sediment | WLLASE08DPSCG014 |
| Downtown (RM 12.3 - 15.3) | 13.4 | surface sediment | WLLASE08DPSCG015 |
| Downtown (RM 12.3 - 15.3) | 13.4 | surface sediment | WLLASE08DPSCG042 |
| Downtown (RM 12.3 - 15.3) | 13.4 | surface sediment | WLLASE08DPSCG085 |
| Downtown (RM 12.3 - 15.3) | 13.4 | subsurface sediment | WLLGEC10IPC-C012-B |
| Downtown (RM 12.3 - 15.3) | 13.4 | subsurface sediment | WLLGEC10IPC-C012-C |
| Downtown (RM 12.3 - 15.3) | 13.4 | surface sediment | WLLGEC10IPC-S012 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDH04T202R05 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI00WRS11WRS11-1 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI00WRS38WRS38-1 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI00WRS39WRS39-1 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI00WRS40WRS40-1 |
| Downtown (RM 12.3 - 15.3) | 13.5 | subsurface sediment | WLCZDI00WRS40WRS40-2 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI00WRS41WRS44-1 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI00WRS48WRS48 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI00WRS54WRS54 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI07WRS80 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI07WRS80 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI07WRS81 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI07WRS81 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI07WRS82 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI07WRS82 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI07WRS83 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI07WRS83 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI07WRS84 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI07WRS84 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI07WRS85 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI07WRS85 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI07WRS86 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI07WRS86 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI07WRS92 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI07WRS93 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI07WRS94 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLCZDI07WRS95 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLLASB10DPSCC099A |
| Downtown (RM 12.3 - 15.3) | 13.5 | subsurface sediment | WLLASB10DPSCC099D |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLLASB10DPSCG098 |
| Downtown (RM 12.3 - 15.3) | 13.5 | subsurface sediment | WLLASE08DPSCC022B |
| Downtown (RM 12.3 - 15.3) | 13.5 | subsurface sediment | WLLASE08DPSCC022C |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLLASE08DPSCG039 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLLASE08DPSCG041 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLLASE08DPSCG070 |
| Downtown (RM 12.3 - 15.3) | 13.5 | subsurface sediment | WLLGEC10IPC-C013-B |
| Downtown (RM 12.3 - 15.3) | 13.5 | subsurface sediment | WLLGEC10IPC-C014-B1 |
| Downtown (RM 12.3 - 15.3) | 13.5 | subsurface sediment | WLLGEC10IPC-C014-C |
| Downtown (RM 12.3 - 15.3) | 13.5 | subsurface sediment | WLLGEC10IPC-C015-B |
| Downtown (RM 12.3 - 15.3) | 13.5 | subsurface sediment | WLLGEC10IPC-C017-B |
| Downtown (RM 12.3 - 15.3) | 13.5 | subsurface sediment | WLLGEC10IPC-C017-C |
| Downtown (RM 12.3 - 15.3) | 13.5 | subsurface sediment | WLLGEC10IPC-C018-B |
| Downtown (RM 12.3 - 15.3) | 13.5 | subsurface sediment | WLLGEC10IPC-C018-C |
| Downtown (RM 12.3 - 15.3) | 13.5 | subsurface sediment | WLLGEC10IPC-C019-B |
| Downtown (RM 12.3 - 15.3) | 13.5 | subsurface sediment | WLLGEC10IPC-C019-C1 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLLGEC10IPC-S013 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLLGEC10IPC-S014 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLLGEC10IPC-S015 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLLGEC10IPC-S016 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLLGEC10IPC-S017 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLLGEC10IPC-S018 |
| Downtown (RM 12.3 - 15.3) | 13.5 | surface sediment | WLLGEC10IPC-S019 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDH04T204R09 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDH04T206R12 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDH04T207R14 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDH04T208R16 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI00WRS05WRS05-1 |
| Downtown (RM 12.3 - 15.3) | 13.6 | subsurface sediment | WLCZDI00WRS05WRS05-2 |
| Downtown (RM 12.3 - 15.3) | 13.6 | subsurface sediment | WLCZDI00WRS05WRS05-3 |
| Downtown (RM 12.3 - 15.3) | 13.6 | subsurface sediment | WLCZDI00WRS05WRS05-4 |
| Downtown (RM 12.3 - 15.3) | 13.6 | subsurface sediment | WLCZDI00WRS05WRS05-5 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI00WRS12WRS12-1 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI00WRS13WRS13-1 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI00WRS34WRS34-1 |
| Downtown (RM 12.3 - 15.3) | 13.6 | subsurface sediment | WLCZDI00WRS34WRS34-2 |
| Downtown (RM 12.3 - 15.3) | 13.6 | subsurface sediment | WLCZDI00WRS34WRS34-3 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI00WRS35WRS35-1 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI00WRS36WRS36-1 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI00WRS37WRS37-1 |
| Downtown (RM 12.3 - 15.3) | 13.6 | subsurface sediment | WLCZDI00WRS37WRS37-2 |
| Downtown (RM 12.3 - 15.3) | 13.6 | subsurface sediment | WLCZDI00WRS37WRS37-3 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI00WRS49WRS49 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI00WRS50WRS50 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI07WRS72 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI07WRS72 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI07WRS73 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI07WRS73 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI07WRS74 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI07WRS74 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI07WRS75 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI07WRS75 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI07WRS76 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI07WRS76 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI07WRS77 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI07WRS77 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI07WRS78 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI07WRS78 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI07WRS79 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI07WRS79 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLCZDI07WRS96 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLLASB10DPSCC100A |
| Downtown (RM 12.3 - 15.3) | 13.6 | subsurface sediment | WLLASB10DPSCC100F |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLLASB10DPSCG100 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLLASB10DPSCG101 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLLASB10DPSCG102 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLLASB10DPSCG1022 |
| Downtown (RM 12.3 - 15.3) | 13.6 | subsurface sediment | WLLASE08DPSCC021C |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLLASE08DPSCG036 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLLASE08DPSCG037 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLLASE08DPSCG038 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLLASE08DPSCG040 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLLASE08DPSCG071 |
| Downtown (RM 12.3 - 15.3) | 13.6 | surface sediment | WLLASE08DPSCG072 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDH04T210R50 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDH04T211R20 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDH04T212R22 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDH04T213R24 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDH04T214R26 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDH04T214R27 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDI00WRS06WRS06-1 |
| Downtown (RM 12.3 - 15.3) | 13.7 | subsurface sediment | WLCZDI00WRS06WRS06-2 |
| Downtown (RM 12.3 - 15.3) | 13.7 | subsurface sediment | WLCZDI00WRS06WRS06-3 |
| Downtown (RM 12.3 - 15.3) | 13.7 | subsurface sediment | WLCZDI00WRS06WRS06-4 |
| Downtown (RM 12.3 - 15.3) | 13.7 | subsurface sediment | WLCZDI00WRS06WRS06-5 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDI00WRS15WRS15-1 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDI00WRS16WRS16-1 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDI00WRS31WRS31-1 |
| Downtown (RM 12.3 - 15.3) | 13.7 | subsurface sediment | WLCZDI00WRS31WRS31-2 |
| Downtown (RM 12.3 - 15.3) | 13.7 | subsurface sediment | WLCZDI00WRS31WRS31-3 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDI00WRS32WRS32-1 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDI00WRS33WRS33-1 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDI00WRS51WRS51 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDI07WRS68 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDI07WRS68 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDI07WRS69 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDI07WRS69 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDI07WRS70 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDI07WRS70 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDI07WRS71 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDI07WRS71 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDI07WRS90 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDI07WRS91 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLCZDI07WRS97 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLLASE08DPSCG073 |
| Downtown (RM 12.3 - 15.3) | 13.7 | surface sediment | WLLASE08DPSCG074 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLCZDH04T215R28 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLCZDH04T216R30 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLCZDH04T217R31 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLCZDH04T218R32 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLCZDH04T218R48 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLCZDH04T219R47 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLCZDI00WRS07WRS07-1 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Downtown (RM 12.3 - 15.3) | 13.8 | subsurface sediment | WLCZDI00WRS07WRS07-2 |
| Downtown (RM 12.3 - 15.3) | 13.8 | subsurface sediment | WLCZDI00WRS07WRS07-3 |
| Downtown (RM 12.3 - 15.3) | 13.8 | subsurface sediment | WLCZDI00WRS07WRS07-4 |
| Downtown (RM 12.3 - 15.3) | 13.8 | subsurface sediment | WLCZDI00WRS07WRS07-5 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLCZDI00WRS08WRS08-1 |
| Downtown (RM 12.3 - 15.3) | 13.8 | subsurface sediment | WLCZDI00WRS08WRS08-2 |
| Downtown (RM 12.3 - 15.3) | 13.8 | subsurface sediment | WLCZDI00WRS08WRS08-3 |
| Downtown (RM 12.3 - 15.3) | 13.8 | subsurface sediment | WLCZDI00WRS08WRS08-4 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLCZDI00WRS17WRS17-1 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLCZDI00WRS28WRS28-1 |
| Downtown (RM 12.3 - 15.3) | 13.8 | subsurface sediment | WLCZDI00WRS28WRS28-2 |
| Downtown (RM 12.3 - 15.3) | 13.8 | subsurface sediment | WLCZDI00WRS28WRS28-3 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLCZDI00WRS29WRS29-1 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLCZDI00WRS30WRS30-1 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLCZDI00WRS52WRS52 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLCZDI07WRS65 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLCZDI07WRS65 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLCZDI07WRS66 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLCZDI07WRS66 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLCZDI07WRS67 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLCZDI07WRS67 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLCZDI07WRS89 |
| Downtown (RM 12.3 - 15.3) | 13.8 | subsurface sediment | WLLASE08DPSCC019C |
| Downtown (RM 12.3 - 15.3) | 13.8 | subsurface sediment | WLLASE08DPSCC020C |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLLASE08DPSCG033 |
| Downtown (RM 12.3 - 15.3) | 13.8 | surface sediment | WLLASE08DPSCG035 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDH04T220R45 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDH04T220R46 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDH04T221R44 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDH04T222R42 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDH04T222R43 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDH04T223R40 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDH04T223R41 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDI00WRS18WRS18-1 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDI00WRS19WRS19-1 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDI00WRS25WRS25-1 |
| Downtown (RM 12.3 - 15.3) | 13.9 | subsurface sediment | WLCZDI00WRS25WRS25-2 |
| Downtown (RM 12.3 - 15.3) | 13.9 | subsurface sediment | WLCZDI00WRS25WRS25-3 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDI00WRS26WRS26-1 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDI00WRS27WRS27-1 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDI07WRS61 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDI07WRS61 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDI07WRS62 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDI07WRS62 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDI07WRS63 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDI07WRS63 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDI07WRS64 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDI07WRS64 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLCZDI07WRS88 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLLASE08DPSCG032 |
| Downtown (RM 12.3 - 15.3) | 13.9 | surface sediment | WLLASE08DPSCG075 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDH04T224R39 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDH04T224R49 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDH04T225R37 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDH04T225R38 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDH04T226R35 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDH04T226R36 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDH04T227R33 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDH04T227R34 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDI00WRS20WRS20-1 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDI00WRS21WRS21-1 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDI00WRS22WRS22-1 |
| Downtown (RM 12.3 - 15.3) | 14 | subsurface sediment | WLCZDI00WRS22WRS22-2 |
| Downtown (RM 12.3 - 15.3) | 14 | subsurface sediment | WLCZDI00WRS22WRS22-3 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDI00WRS23WRS23-1 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDI00WRS24WRS24-1 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDI07WRS55 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDI07WRS55 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDI07WRS56 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDI07WRS56 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDI07WRS57 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDI07WRS57 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDI07WRS58 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDI07WRS58 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDI07WRS59 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDI07WRS59 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDI07WRS60 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDI07WRS60 |
| Downtown (RM 12.3 - 15.3) | 14 | surface sediment | WLCZDI07WRS87 |
| Downtown (RM 12.3 - 15.3) | 14 | subsurface sediment | WLLASE08DPSCC034A |
| Downtown (RM 12.3 - 15.3) | 14 | subsurface sediment | WLLASE08DPSCC034B |
| Downtown (RM 12.3 - 15.3) | 14.1 | surface sediment | WLCZDI00WRS46WRS46-1 |
| Downtown (RM 12.3 - 15.3) | 14.1 | subsurface sediment | WLCZDI00WRS46WRS46-2 |
| Downtown (RM 12.3 - 15.3) | 14.1 | subsurface sediment | WLCZDI00WRS46WRS46-3 |
| Downtown (RM 12.3 - 15.3) | 14.1 | surface sediment | WLLASB10DPSCG104 |
| Downtown (RM 12.3 - 15.3) | 14.1 | surface sediment | WLLASB10DPSCG106 |
| Downtown (RM 12.3 - 15.3) | 14.1 | surface sediment | WLLASB10DPSCG108 |
| Downtown (RM 12.3 - 15.3) | 14.1 | surface sediment | WLLASB10DPSCG109 |
| Downtown (RM 12.3 - 15.3) | 14.1 | surface sediment | WLLASE08DPSCC007A |
| Downtown (RM 12.3 - 15.3) | 14.1 | subsurface sediment | WLLASE08DPSCC007C |
| Downtown (RM 12.3 - 15.3) | 14.1 | subsurface sediment | WLLASE08DPSCC008B |
| Downtown (RM 12.3 - 15.3) | 14.1 | subsurface sediment | WLLASE08DPSCC008C |
| Downtown (RM 12.3 - 15.3) | 14.1 | subsurface sediment | WLLASE08DPSCC035A |
| Downtown (RM 12.3 - 15.3) | 14.1 | subsurface sediment | WLLASE08DPSCC035B |
| Downtown (RM 12.3 - 15.3) | 14.1 | subsurface sediment | WLLASE08DPSCC036A |
| Downtown (RM 12.3 - 15.3) | 14.1 | subsurface sediment | WLLASE08DPSCC036B |
| Downtown (RM 12.3 - 15.3) | 14.1 | surface sediment | WLLASE08DPSCG016 |
| Downtown (RM 12.3 - 15.3) | 14.1 | surface sediment | WLLASE08DPSCG017 |
| Downtown (RM 12.3 - 15.3) | 14.1 | surface sediment | WLLASE08DPSCG076 |
| Downtown (RM 12.3 - 15.3) | 14.2 | subsurface sediment | WLLASB10DPSCC112B |
| Downtown (RM 12.3 - 15.3) | 14.2 | surface sediment | WLLASB10DPSCG112 |
| Downtown (RM 12.3 - 15.3) | 14.2 | subsurface sediment | WLLASE08DPSCC009B |
| Downtown (RM 12.3 - 15.3) | 14.2 | subsurface sediment | WLLASE08DPSCC037A |
| Downtown (RM 12.3 - 15.3) | 14.2 | subsurface sediment | WLLASE08DPSCC037B |
| Downtown (RM 12.3 - 15.3) | 14.2 | subsurface sediment | WLLASE08DPSCC038A |
| Downtown (RM 12.3 - 15.3) | 14.2 | subsurface sediment | WLLASE08DPSCC038B |
| Downtown (RM 12.3 - 15.3) | 14.2 | subsurface sediment | WLLASE08DPSCC039A |
| Downtown (RM 12.3 - 15.3) | 14.2 | subsurface sediment | WLLASE08DPSCC039B |
| Downtown (RM 12.3 - 15.3) | 14.2 | surface sediment | WLLASE08DPSCG018 |
| Downtown (RM 12.3 - 15.3) | 14.3 | surface sediment | WLLASE08DPSCG019 |
| Downtown (RM 12.3 - 15.3) | 14.4 | subsurface sediment | WLLASE08DPSCC010B |
| Downtown (RM 12.3 - 15.3) | 14.4 | surface sediment | WLLASE08DPSCG020 |
| Downtown (RM 12.3 - 15.3) | 14.5 | surface sediment | WLCRIL99HCSS02HCSS02 |
| Downtown (RM 12.3 - 15.3) | 14.5 | subsurface sediment | WLLASE08DPSCC011B |
| Downtown (RM 12.3 - 15.3) | 14.5 | surface sediment | WLLASE08DPSCG021 |
| Downtown (RM 12.3 - 15.3) | 14.5 | surface sediment | WLLASE08DPSCG022 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Downtown (RM 12.3 - 15.3) | 14.5 | surface sediment | WLLASE08DPSCG031 |
| Downtown (RM 12.3 - 15.3) | 14.5 | surface sediment | WLLASE08DPSCG077 |
| Downtown (RM 12.3 - 15.3) | 14.6 | surface sediment | WLCRIL99HCSS04HCSS04 |
| Downtown (RM 12.3 - 15.3) | 14.6 | surface sediment | WLCRIV99PA03PA03 |
| Downtown (RM 12.3 - 15.3) | 14.6 | surface sediment | WLCRIV99PA04PA04 |
| Downtown (RM 12.3 - 15.3) | 14.7 | surface sediment | WLCRIL99HCSS03HCSS03 |
| Downtown (RM 12.3 - 15.3) | 14.7 | surface sediment | WLLASE08DPSCG023 |
| Downtown (RM 12.3 - 15.3) | 14.8 | surface sediment | WLLASE08DPSCG024 |
| Downtown (RM 12.3 - 15.3) | 15 | surface sediment | WLLASE08DPSCC014B |
| Downtown (RM 12.3 - 15.3) | 15 | surface sediment | WLLASE08DPSCG025 |
| Downtown (RM 12.3 - 15.3) | 15 | surface sediment | WLLASE08DPSCG078 |
| Downtown (RM 12.3 - 15.3) | 15.1 | surface sediment | WLLASB10DPSCG113 |
| Downtown (RM 12.3 - 15.3) | 15.1 | surface sediment | WLLASB10DPSCG114 |
| Downtown (RM 12.3 - 15.3) | 15.1 | surface sediment | WLLASB10DPSCG115 |
| Downtown (RM 12.3 - 15.3) | 15.1 | surface sediment | WLLASB10DPSCG116 |
| Downtown (RM 12.3 - 15.3) | 15.1 | subsurface sediment | WLLASE08DPSCC018B |
| Downtown (RM 12.3 - 15.3) | 15.1 | surface sediment | WLLASE08DPSCG026 |
| Downtown (RM 12.3 - 15.3) | 15.1 | surface sediment | WLLASE08DPSCG030 |
| Downtown (RM 12.3 - 15.3) | 15.3 | surface sediment | WLCRIL99HCSS30HCSS30 |
| Multnomah Channel | 0 | subsurface sediment | LW3-MC001-B1 |
| Multnomah Channel | 0 | subsurface sediment | LW3-MC001-B2 |
| Multnomah Channel | 0 | subsurface sediment | LW3-MC001-C1 |
| Multnomah Channel | 0 | subsurface sediment | LW3-MC001-C2 |
| Multnomah Channel | 0 | subsurface sediment | LW3-MC002-B |
| Multnomah Channel | 0 | subsurface sediment | LW3-MC002-C |
| Multnomah Channel | 0 | subsurface sediment | LW3-MC002-D |
| Multnomah Channel | 2.9 | surface sediment | LW2-G045 |
| Multnomah Channel | 2.9 | surface sediment | LW2-G047 |
| Multnomah Channel | 2.9 | surface sediment | LW2-G048 |
| Multnomah Channel | 2.9 | surface sediment | LW2-GBT003 |
| Multnomah Channel | 2.9 | subsurface sediment | LW3-MC006-B |
| Multnomah Channel | 2.9 | subsurface sediment | LW3-MC006-C |
| Multnomah Channel | 2.9 | subsurface sediment | LW3-MC006-D |
| Multnomah Channel | 2.9 | subsurface sediment | LW3-MC008-B |
| Multnomah Channel | 2.9 | subsurface sediment | LW3-MC008-C |
| Multnomah Channel | 2.9 | subsurface sediment | LW3-MC008-D |
| Multnomah Channel | 2.9 | subsurface sediment | LW3-MC009-B |
| Multnomah Channel | 2.9 | surface sediment | LW3-MG001 |
| Multnomah Channel | 2.9 | surface sediment | LW3-MG002-1 |
| Multnomah Channel | 2.9 | surface sediment | LW3-MG002-2 |
| Multnomah Channel | 2.9 | surface sediment | LW3-MG003 |
| Multnomah Channel | 2.9 | surface sediment | LW3-MG004 |
| Multnomah Channel | 2.9 | surface sediment | LW3-MG006 |
| Multnomah Channel | 2.9 | surface sediment | LW3-MG007 |
| Multnomah Channel | 2.9 | surface sediment | LW3-MG008 |
| Multnomah Channel | 2.9 | surface sediment | LW3-MG009 |
| Multnomah Channel | 2.9 | surface sediment | LW3-MG010 |
| Multnomah Channel | 3 | surface sediment | LW2-B007 |
| Multnomah Channel | 3 | surface sediment | LW2-G049 |
| Multnomah Channel | 3.1 | surface sediment | LW2-G054 |
| Upriver | 15.4 | surface sediment | LW2-U1C-1 |
| Upriver | 15.4 | surface sediment | LW2-U1C-2 |
| Upriver | 15.4 | surface sediment | LW2-U1C-3 |
| Upriver | 15.4 | surface sediment | WLCDRD05PGR01Ref01 |
| Upriver | 15.4 | surface sediment | WLCDRI03CREF01CREF01 |
| Upriver | 15.4 | surface sediment | WLLASE08DPSCG079 |
| Upriver | 15.4 | surface sediment | WLLRSH01HC02HC02 |
| Upriver | 15.4 | surface sediment | WLLRSI01HC02HC02 |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Upriver | 15.5 | surface sediment | WLCRIL99HCSS29HCSS29 |
| Upriver | 15.5 | subsurface sediment | WLLASE08DPSCC016B |
| Upriver | 15.5 | surface sediment | WLLASE08DPSCG027 |
| Upriver | 15.5 | surface sediment | WLLASE08DPSCG029 |
| Upriver | 15.6 | surface sediment | WLCRIL99HCSS31HCSS31 |
| Upriver | 15.6 | subsurface sediment | WLLASE08DPSCC017D |
| Upriver | 15.6 | surface sediment | WLLASE08DPSCG028 |
| Upriver | 15.6 | surface sediment | WLLRSH01HC01HC01 |
| Upriver | 15.8 | subsurface sediment | WLLASE08DPSCC032B |
| Upriver | 15.8 | surface sediment | WLLASE08DPSCG080 |
| Upriver | 16 | surface sediment | LW2-U2C-1 |
| Upriver | 16 | surface sediment | LW2-U2C-2 |
| Upriver | 16 | surface sediment | LW2-U2C-3 |
| Upriver | 16.6 | surface sediment | LW3-UG02A |
| Upriver | 16.6 | surface sediment | WLCRIL99HCSS32CSS103 |
| Upriver | 16.6 | surface sediment | WLCRIL99HCSS32HCSS32 |
| Upriver | 16.6 | surface sediment | WLLRSH01HC03HC03 |
| Upriver | 16.7 | surface sediment | LW3-UG02C |
| Upriver | 16.7 | surface sediment | LW3-UG02C-R |
| Upriver | 16.8 | surface sediment | LW3-UG02B |
| Upriver | 16.9 | surface sediment | LW3-UG02D |
| Upriver | 17 | surface sediment | LW3-UG02E-1 |
| Upriver | 17 | surface sediment | LW3-UG02E-2 |
| Upriver | 17 | surface sediment | LW3-UG02F |
| Upriver | 17 | surface sediment | WLLRSH01HC04HC04 |
| Upriver | 17.1 | surface sediment | LW2-U3C-1 |
| Upriver | 17.1 | surface sediment | LW2-U3C-2 |
| Upriver | 17.1 | surface sediment | LW2-U3C-3 |
| Upriver | 17.1 | surface sediment | LW3-G785 |
| Upriver | 17.1 | surface sediment | LW3-UG03A-1 |
| Upriver | 17.1 | surface sediment | LW3-UG03A-2 |
| Upriver | 17.1 | surface sediment | LW3-UG03B |
| Upriver | 17.1 | surface sediment | LW3-UG03B-R |
| Upriver | 17.1 | surface sediment | LW3-UG03C |
| Upriver | 17.7 | surface sediment | WLLRSH01HC05HC05 |
| Upriver | 17.9 | surface sediment | WLCMBJ99D09940D09940 |
| Upriver | 17.9 | surface sediment | WLCMBJ99D09940D09954 |
| Upriver | 18.3 | surface sediment | LW3-UG04A |
| Upriver | 18.4 | surface sediment | LW3-UG04B |
| Upriver | 18.5 | surface sediment | LW3-UG04C |
| Upriver | 18.8 | surface sediment | LW2-U4Q-1 |
| Upriver | 18.8 | surface sediment | LW2-U4Q-2 |
| Upriver | 18.8 | surface sediment | LW2-U4Q-3 |
| Upriver | 18.8 | surface sediment | LW3-G786 |
| Upriver | 18.8 | surface sediment | LW3-UG06A |
| Upriver | 18.8 | surface sediment | LW3-UG06B |
| Upriver | 18.8 | surface sediment | LW3-UG06B-R |
| Upriver | 18.8 | surface sediment | WLCDRD05PGR03Ref03 |
| Upriver | 18.8 | surface sediment | WLLRSH01HC07HC07 |
| Upriver | 18.8 | surface sediment | WLLRSH01HC08HC08 |
| Upriver | 18.8 | surface sediment | WLLRSI01HC08HC08 |
| Upriver | 18.9 | surface sediment | LW3-UG06C |
| Upriver | 21.5 | surface sediment | WLCMBJ99D09941D09941 |
| Upriver | 21.5 | surface sediment | WLFLH07WR01SD |
| Upriver | 22.6 | surface sediment | WLFLH07WR02SD |
| Upriver | 22.7 | surface sediment | LW3-UG11A |
| Upriver | 22.7 | surface sediment | LW3-UG11B |
| Upriver | 22.7 | surface sediment | LW3-UG11C |

Table D1.3-1. RI Data Set Sediment Sample Inventory by River Reach.

| Reach | River Mile | Sediment | Sample ID |
|---|---|---|---|
| Upriver | 22.7 | surface sediment | WLCMBJ99D09942D09942 |
| Upriver | 22.9 | surface sediment | WLLRSI01CD05CD05 |
| Upriver | 23 | surface sediment | WLLRSH01HC09HC09 |
| Upriver | 23 | surface sediment | WLLRSI01CD04CD04 |
| Upriver | 23.1 | surface sediment | LW3-UG12A |
| Upriver | 23.1 | surface sediment | WLLRSI01CD03CD03 |
| Upriver | 23.2 | surface sediment | LW2-U6TOC-1 |
| Upriver | 23.2 | surface sediment | LW2-U6TOC-2 |
| Upriver | 23.2 | surface sediment | LW2-U6TOC-3 |
| Upriver | 23.2 | surface sediment | LW3-G787 |
| Upriver | 23.2 | surface sediment | LW3-UG12B |
| Upriver | 23.2 | surface sediment | LW3-UG12B-R |
| Upriver | 23.2 | surface sediment | LW3-UG12C |
| Upriver | 23.2 | surface sediment | WLCDRD05PGR02Ref02 |
| Upriver | 23.2 | surface sediment | WLCDRI03CREF02CREF02 |
| Upriver | 23.2 | surface sediment | WLLRSH01HC10HC10 |
| Upriver | 23.2 | surface sediment | WLLRSI01CD02CD02 |
| Upriver | 23.2 | surface sediment | WLLRSI01HC10HC10 |
| Upriver | 23.3 | surface sediment | WLLRSI01CD01CD01 |
| Upriver | 23.8 | surface sediment | WLFLH07WR05SD |
| Upriver | 23.9 | surface sediment | WLCMBA01ED0130ED0130 |
| Upriver | 23.9 | surface sediment | WLCMBJ99D09943D09943 |
| Upriver | 24.1 | surface sediment | WLFLH07WR03SD |
| Upriver | 24.4 | surface sediment | WLFLH07WR04SD |
| Upriver | 25.2 | surface sediment | WLFLH07WR06SD |
| Upriver | 25.4 | surface sediment | WLFLH07WR07SD |
| Upriver | 25.5 | surface sediment | LW2-U5Q-1 |
| Upriver | 25.5 | surface sediment | LW2-U5Q-2 |
| Upriver | 25.5 | surface sediment | LW2-U5Q-3 |
| Upriver | 25.5 | surface sediment | LW3-G788 |
| Upriver | 25.5 | surface sediment | LW3-G788-R |
| Upriver | 26 | surface sediment | WLFLH07BH01SD |
| Upriver | 26.1 | surface sediment | WLFLH07BH03SD |
| Upriver | 26.1 | surface sediment | WLFLH07BH04SD |

**Notes:**

RI - remedial investigation

RM - river mile

Table D1.3-2. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Grain Size** | | | | | | | | | | | | | | | | |
| < 0.075 mm | percent | 50 | 50 | 100 | 2.13 | 95.7 | T4-VC09 | 45 | 32.8 | 91.5 | 2.13 | 95.7 | T4-VC09 | 45 | 32.8 | 91.5 |
| > 0.075 mm | percent | 8 | 8 | 100 | 6 | 46.4 | T4-WB-02 | 20.6 | 16.1 | 43 | 6 | 46.4 | T4-WB-02 | 20.6 | 16.1 | 43 |
| >10 Phi clay | percent | 136 | 136 | 100 | 0 | 11.4 | LPSG-S-014-R-1 | 2.36 | 1.46 | 7.23 | 0 | 11.4 | LPSG-S-014-R-1 | 2.36 | 1.46 | 7.23 |
| >9 Phi clay | percent | 868 | 868 | 100 | 0 | 20.9 | CP07DPG | 4.65 | 4.41 | 9.92 | 0 | 20.9 | CP07DPG | 4.65 | 4.41 | 9.92 |
| 8-9 Phi clay | percent | 1005 | 1004 | 99.9 | 0 | 16.3 | C397 | 2.953 | 2.8 | 6.496 | 0 | 16.3 | C397 | 2.95 | 2.79 T | 6.494 |
| 9-10 Phi clay | percent | 136 | 134 | 98.5 | 0.02 | 12 | S1 | 1.75 | 1.34 | 4.3 | 0.01 U | 12 | S1 | 1.73 | 1.33 | 4.3 |
| Clay | percent | 377 | 377 | 100 | 0 | 24.4 | PSY04 | 8.935 | 8.96 | 18.8 | 0 | 24.4 | PSY04 | 8.935 | 8.96 | 18.8 |
| Coarse sand | percent | 1135 | 1135 | 100 | 0.01 | 51.9 | G660 | 5.89 | 1.77 | 23.6 | 0.01 | 51.9 | G660 | 5.89 | 1.77 | 23.6 |
| Coarse silt | percent | 1005 | 1002 | 99.7 | 0 | 63.3 | G613 | 18.9 | 18.1 | 42 | 0 | 63.3 | G613 | 18.8 | 18 | 42 |
| Fine gravel | percent | 968 | 960 | 99.2 | 0 T | 29.5 | G508 | 1.439 | 0.5 | 7.081 | 0 T | 29.5 | G508 | 1.427 | 0.495 | 7.038 |
| Fine sand | percent | 1135 | 1135 | 100 | 0.29 | 57.1 | WR-PG-126 | 10.20378941 | 7.9 | 25.93 | 0.29 | 57.1 | WR-PG-126 | 10.20378941 | 7.9 | 25.93 |
| Fine silt | percent | 1005 | 1004 | 99.9 | 0 | 30.1 | G693 | 7.45 | 7.17 J | 16.3 | 0 | 30.1 | G693 | 7.44 | 7.16 J | 16.3 |
| Fines | percent | 1420 | 1420 | 100 | 0 | 105 T | DG01 | 53.75 | 61 | 92.1 | 0 | 105 T | DG01 | 53.75 | 61 | 92.1 |
| Gravel | percent | 383 | 381 | 99.5 | 0 | 84.6 | RB05 | 3.651 | 0.37 | 14.4 | 0 | 84.6 | RB05 | 3.632 | 0.355 T | 14.38 |
| Mean grain size | mm | 1 | 1 | 100 | 1.41 | 1.41 | WR-VC-08 | 1.41 | 1.41 | 1.41 | 1.41 | 1.41 | WR-VC-08 | 1.41 | 1.41 | 1.41 |
| Median grain size | mm | 1 | 1 | 100 | 0.9 | 0.9 | WR-VC-08 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | WR-VC-08 | 0.9 | 0.9 | 0.9 |
| Medium gravel | percent | 968 | 947 | 97.8 | 0 T | 60 | G025 | 1.9555 | 0.03 | 10.94 | 0 T | 60 | G025 | 1.9131 | 0.02335 | 10.73 |
| Medium sand | percent | 1135 | 1135 | 100 | 0.08 | 78.4 | 05B019 | 14.8 | 5.38 J | 54.9 | 0.08 | 78.4 | 05B019 | 14.8 | 5.38 J | 54.9 |
| Medium silt | percent | 1005 | 1004 | 99.9 | 0 | 48.2 | G092 | 12.26 | 12.3 | 25.3 J | 0 | 48.2 | G092 | 12.25 | 12.3 | 25.3 J |
| Sand | percent | 284 | 284 | 100 | 1.67 J | 99 | RB6 | 36.96 | 28.35 | 91.78 J | 1.67 J | 99 | RB6 | 36.96 | 28.35 | 91.78 J |
| Sieve 10 | percent | 46 | 46 | 100 | 0 | 7.5 | S1 | 0.55 | 0 | 2.1 | 0 | 7.5 | S1 | 0.55 | 0 | 2.1 |
| Sieve 140 | percent | 46 | 46 | 100 | 2 | 38.2 J | T4-UP08 | 9.46 | 8.3 J | 16.39 J | 2 | 38.2 J | T4-UP08 | 9.46 | 8.3 J | 16.39 J |
| Sieve 20 | percent | 46 | 46 | 100 | 0 | 5.3 | S1 | 1.2 | 0.5 | 4.5 J | 0 | 5.3 | S1 | 1.2 | 0.5 | 4.5 J |
| Sieve 200 | percent | 46 | 46 | 100 | 0.14 | 9.3 J | T4-VC18 | 3.1 | 2.6 | 6.7 | 0.14 | 9.3 J | T4-VC18 | 3.1 | 2.6 | 6.7 |
| Sieve 230 | percent | 4 | 4 | 100 | 2.6 | 6.7 | S4 | 5.1 | 5.6 | 6.6 | 2.6 | 6.7 | S4 | 5.1 | 5.6 | 6.6 |
| Sieve 4 | percent | 46 | 46 | 100 | 0 | 12.3 | T4-UP13 | 0.987 | 0 | 5.58 | 0 | 12.3 | T4-UP13 | 0.987 | 0 | 5.58 |
| Sieve 40 | percent | 46 | 46 | 100 | 0.1 | 38.4 | T4-VC22 | 12.4 | 7.2 | 35.4 | 0.1 | 38.4 | T4-VC22 | 12.4 | 7.2 | 35.4 |
| Sieve 60 | percent | 46 | 46 | 100 | 0.3 | 56 | T4-VC28 | 20.08 | 14.6 J | 52.15 | 0.3 | 56 | T4-VC28 | 20.08 | 14.6 J | 52.15 |
| Silt | percent | 383 | 383 | 100 | 0.02 | 95.7 | DM-H | 55.1 | 62.53 | 83.39 | 0.02 | 95.7 | DM-H | 55.1 | 62.53 | 83.39 |
| Very coarse sand | percent | 1133 | 1133 | 100 | 0 T | 26.2 | G508 | 1.8763 | 0.91 | 6.518 | 0 T | 26.2 | G508 | 1.8763 | 0.91 | 6.518 |
| Very fine sand | percent | 1133 | 1133 | 100 | 0.04 | 66.8 | G218 | 12.14145633 | 10.4 | 29.24 | 0.04 | 66.8 | G218 | 12.14145633 | 10.4 | 29.24 |
| Very fine silt | percent | 1005 | 1005 | 100 | 0 | 24.7 | C397 | 4.67 | 4.33 | 10.3 J | 0 | 24.7 | C397 | 4.67 | 4.33 | 10.3 J |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Acid Volatile Sulfides | mg/kg | 76 | 56 | 73.7 | 0.161 J | 434 J | PSY23 | 22.8 | 6.13 | 64.8 | 0.161 J | 434 J | PSY23 | 17 | 3.25 | 49.8 |
| Ammonia | mg/kg | 493 | 487 | 98.8 | 0.26 J | 481 | GN01EPG | 99.1 | 88.1 | 218 | 0.07 U | 481 | GN01EPG | 98.3 | 87.4 | 217 |
| Bulk density | g/cm3 | 6 | 6 | 100 | 1.32 | 1.8 | G021; G033 | 1.6 | 1.62 | 1.8 | 1.32 | 1.8 | G021; G033 | 1.6 | 1.62 | 1.8 |
| Cyanide | mg/kg | 39 | 34 | 87.2 | 0.1 J | 39.4 J | SDDC25SS | 4.55 | 0.52 J | 24.2 J | 0.08 UJ | 39.4 J | SDDC25SS | 3.99 | 0.4 J | 18.5 J |
| Gravimetric water content | percent | 6 | 6 | 100 | 11.1 | 103 | G012 | 51.5 | 50.8 | 96.5 | 11.1 | 103 | G012 | 51.5 | 50.8 | 96.5 |
| Oxidation-Reduction Potential | mv | 2 | 2 | 100 | -55.9 | 227 | BT007 | 85.55 | 85.55 | 212.9 | -55.9 | 227 | BT007 | 85.55 | 85.55 | 212.9 |
| Perchlorate | µg/kg | 13 | 3 | 23.1 | 96200 | 274000 | CP07B | 213000 | 269000 | 274000 | 22 U | 274000 | CP07B | 49200 | 11 U | 271000 |
| pH | pH units | 2 | 2 | 100 | 6.79 | 7.03 | BT030 | 6.91 | 6.91 | 7.02 | 6.79 | 7.03 | BT030 | 6.91 | 6.91 | 7.02 |
| Specific Gravity | NA | 792 | 792 | 100 | 0.88 | 2.4 | G621; G670 | 1.52 | 1.47 | 1.87 | 0.88 | 2.4 | G621; G670 | 1.52 | 1.47 | 1.87 |
| Sulfide | mg/kg | 496 | 431 | 86.9 | 0.2 J | 1830 J | HC-S-25 | 29.4 | 6.1 J | 88.8 J | 0.07 UJ | 1830 J | HC-S-25 | 25.6 | 4.7 J | 64.4 J |
| Total organic carbon | percent | 1698 | 1694 | 99.8 | 0.00715 J | 27 | G006 | 1.7892 | 1.74 | 3.1535 | 0.00433 U | 27 | G006 | 1.7851 | 1.735 | 3.1515 |
| Total solids | percent | 1489 | 1489 | 100 | 10.9 | 98.8 | T4-IM-01 | 55.98 | 52.5 | 82.98 | 10.9 | 98.8 | T4-IM-01 | 55.98 | 52.5 | 82.98 |
| Total volatile solids | percent | 173 | 173 | 100 | 0.91 | 12.1 | PSY10 | 7.101 | 7.29 | 9.794 | 0.91 | 12.1 | PSY10 | 7.101 | 7.29 | 9.794 |
| **Metals** | | | | | | | | | | | | | | | | |
| Aluminum | mg/kg | 1256 | 1256 | 100 | 1630 | 47400 | RC483-2 | 23300 | 24000 | 39800 | 1630 | 47400 | RC483-2 | 23300 | 24000 | 39800 |
| Antimony | mg/kg | 1372 | 1023 | 74.6 | 0.02 J | 47.7 | A2GS10 | 1.107 | 0.22 J | 6 J | 0.02 J | 47.7 | A2GS10 | 1.062 | 0.2 J | 5.445 U |
| Arsenic | mg/kg | 1551 | 1426 | 91.9 | 0.7 | 132 | RB08 | 4.86 | 3.71 J | 8.995 | 0.7 | 132 | RB08 | 4.685 | 3.6 | 8.69 J |
| Arsenic pentavalent | mg/kg | 7 | 7 | 100 | 3.69 JT | 5.35 | SS-01 | 4.249 | 3.992 | 5.117 J | 3.69 JT | 5.35 | SS-01 | 4.249 | 3.992 | 5.117 J |
| Arsenic trivalent | mg/kg | 7 | 7 | 100 | 0.105 J | 0.509 JT | SS-41 | 0.202 | 0.163 | 0.413 J | 0.105 J | 0.509 JT | SS-41 | 0.202 | 0.163 | 0.413 J |
| Barium | mg/kg | 239 | 239 | 100 | 58.9 J | 5950 | CP09APG | 198 | 177 | 243 | 58.9 J | 5950 | CP09APG | 198 | 177 | 243 |
| Beryllium | mg/kg | 240 | 205 | 85.4 | 0.217 J | 1.19 | A2GS12 | 0.595 | 0.6 | 0.7 | 0.217 J | 1.31 U | SS-48 | 0.585 | 0.6 | 0.7 |
| Cadmium | mg/kg | 1551 | 1403 | 90.5 | 0.0156 J | 10.1 | T4-UP13 | 0.41256 | 0.25 J | 1.26 | 0.00159 U | 10.1 | T4-UP13 | 0.3929 | 0.249 | 1.155 |
| Calcium | mg/kg | 145 | 145 | 100 | 4430 J | 53800 | SED01 | 8750 | 8280 | 9840 | 4430 J | 53800 | SED01 | 8750 | 8280 | 9840 |
| Chromium | mg/kg | 1536 | 1530 | 99.6 | 4.07 J | 819 J | RB06 | 35.37 | 29.3 | 57.48 | 4.07 J | 819 J | RB06 | 35.3 | 29.3 | 57.33 |
| Chromium hexavalent | mg/kg | 65 | 28 | 43.1 | 0.2 J | 2.1 J | BT012 | 0.72 | 0.5 J | 1.5 J | 0.1 UJ | 2.1 J | BT012 | 0.42 | 0.3 UJT | 1.4 J |

Table D1.3-2. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Cobalt | mg/kg | 145 | 145 | 100 | 11.1 T | 55.5 | SED02 | 18.3 | 18.3 | 20.3 | 11.1 T | 55.5 | SED02 | 18.3 | 18.3 | 20.3 |
| Copper | mg/kg | 1552 | 1548 | 99.7 | 6.19 J | 2830 | UG01 | 60.8 | 38.8 J | 171.3 | 6.19 J | 2830 | UG01 | 60.67 | 38.7 | 170.9 |
| Iron | mg/kg | 164 | 164 | 100 | 19100 | 84900 | SED01 | 42000 | 42300 | 53100 | 19100 | 84900 | SED01 | 42000 | 42300 | 53100 |
| Lead | mg/kg | 1575 | 1560 | 99 | 1.1 J | 13400 T | GWC1 | 49.22 | 16 J | 122.1 J | 1.1 J | 13400 T | GWC1 | 48.84 | 15.8 | 122 J |
| Magnesium | mg/kg | 145 | 145 | 100 | 3710 | 14500 | SED02 | 6710 | 6930 | 7720 | 3710 | 14500 | SED02 | 6710 | 6930 | 7720 |
| Manganese | mg/kg | 286 | 286 | 100 | 236 T | 2220 | HA-43 | 667.7 | 652 | 1008 | 236 T | 2220 | HA-43 | 667.7 | 652 | 1008 |
| Mercury | mg/kg | 1527 | 1398 | 91.6 | 0.005 | 65.2 T | GWC1 | 0.14548 | 0.068 | 0.2683 | 0.00189 U | 65.2 T | GWC1 | 0.13564 | 0.063 J | 0.2507 J |
| Methylmercury | mg/kg | 3 | 3 | 100 | 0.000016 J | 0.000472 | SS-19 | 0.000318333 | 0.000467 T | 0.0004715 | 0.000016 J | 0.000472 | SS-19 | 0.000318333 | 0.000467 T | 0.0004715 |
| Nickel | mg/kg | 1511 | 1494 | 98.9 | 6.22 J | 594 | PSY27 | 25.7 | 23.3 J | 37 J | 6.22 J | 594 | PSY27 | 25.5 | 23.2 | 37 J |
| Potassium | mg/kg | 145 | 145 | 100 | 540 | 50000 | SED02 | 1670 | 1280 | 1550 | 540 | 50000 | SED02 | 1670 | 1280 | 1550 |
| Selenium | mg/kg | 1209 | 540 | 44.7 | 0.03 JT | 20 | SD139 | 2.827 | 0.17 | 14 | 0.03 JT | 20 | SD139 | 1.378 | 0.12 U | 12 |
| Silver | mg/kg | 1513 | 1404 | 92.8 | 0.014 J | 14.8 | S0202 | 0.3443 | 0.2035 | 1 | 0.014 J | 14.8 | S0202 | 0.3457 | 0.206 J | 1.062 U |
| Sodium | mg/kg | 145 | 145 | 100 | 352 | 49000 | SED02 | 1800 | 1100 | 2410 | 352 | 49000 | SED02 | 1800 | 1100 | 2410 |
| Thallium | mg/kg | 258 | 187 | 72.5 | 0.026 J | 27 | SD043 | 7.468 | 7 | 22 | 0.026 J | 27 | SD043 | 5.783 | 2.5 U | 21.15 |
| Tin | mg/kg | 16 | 16 | 100 | 0.891 J | 14.2 J | DM-B | 3.7 | 2.5 J | 8.83 J | 0.891 J | 14.2 J | DM-B | 3.7 | 2.5 J | 8.83 J |
| Titanium | mg/kg | 75 | 75 | 100 | 940 | 3680 | DM-B | 1980 | 1930 | 3140 | 940 | 3680 | DM-B | 1980 | 1930 | 3140 |
| Vanadium | mg/kg | 145 | 145 | 100 | 63 | 152 | SD075 | 102 | 104 | 122 | 63 | 152 | SD075 | 102 | 104 | 122 |
| Zinc | mg/kg | 1581 | 1581 | 100 | 3.68 J | 4220 | HA-43 | 154 | 106 J | 375 | 3.68 J | 4220 | HA-43 | 154 | 106 J | 375 |
| **Butyltins** | | | | | | | | | | | | | | | | |
| Butyltin ion | µg/kg | 323 | 219 | 67.8 | 0.093 J | 740 J | SD012 | 13.5 | 1.6 J | 47.4 | 0.042 U | 740 J | SD012 | 9.7 | 1.8 J | 30.4 |
| Dibutyltin dichloride | µg/kg | 4 | 4 | 100 | 17 J | 34 JT | 03R004 | 29 | 33 J | 34 J | 17 J | 34 JT | 03R004 | 29 | 33 J | 34 J |
| Dibutyltin ion | µg/kg | 323 | 251 | 77.7 | 0.14 J | 2700 | G421 | 45.1 | 4.6 | 133 | 0.04 U | 2700 | G421 | 35.7 | 2.95 UJ | 109 |
| Monobutyltin trichloride | µg/kg | 3 | 3 | 100 | 8.2 J | 28 J | 03R004 | 15 | 9.6 J | 26 J | 8.2 J | 28 J | 03R004 | 15 | 9.6 J | 26 J |
| Tetrabutyltin | µg/kg | 327 | 86 | 26.3 | 0.27 J | 1000 | G421 | 18.4 | 1.7 J | 31.3 | 0.081 U | 1000 | G421 | 5.63 | 0.79 J | 5.49 |
| Tributyltin | µg/kg | 8 | 4 | 50 | 3.3 | 146 | A2BGS-7 | 49.3 | 24 | 130 | 2.79 U | 146 | A2BGS-7 | 25.4 | 2.44 | 109 |
| Tributyltin chloride | µg/kg | 4 | 4 | 100 | 25 | 64 | 03R005 | 40.9 | 37.3 | 60.9 | 25 | 64 | 03R005 | 40.9 | 37.3 | 60.9 |
| Tributyltin ion | µg/kg | 358 | 333 | 93 | 0.45 J | 47000 | SD012 | 466.2 | 22 | 753.6 | 0.079 U | 47000 | SD012 | 433.7 | 17.5 | 650.5 |
| **PCB Aroclors** | | | | | | | | | | | | | | | | |
| Aroclor 1016 | µg/kg | 1314 | 1 | 0.1 | 46 | 46 | PP01M105 | 46 | 46 | 46 | 0.89 U | 2000 U | SD090 | 8.68 | 1.6 U | 18 U |
| Aroclor 1221 | µg/kg | 1313 | 13 | 1 | 10.7 | 109 | G472 | 46.5 | 40.1 | 103 | 0.89 U | 4000 U | SD090 | 15.5 | 2.05 U | 33.5 U |
| Aroclor 1232 | µg/kg | 1313 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.89 U | 2190 UJ | G453 | 10.1 | 1.95 U | 24.2 U |
| Aroclor 1242 | µg/kg | 1314 | 54 | 4.1 | 2.1 J | 1200 | G111 | 92.7 | 28.4 | 265 | 0.89 U | 2000 U | SD090 | 12.3 | 1.7 U | 33.5 U |
| Aroclor 1248 | µg/kg | 1314 | 294 | 22.4 | 2.59 J | 22300 J | G453 | 219 | 16 J | 695 | 0.89 U | 22300 J | G453 | 55.5 | 1.95 U | 98 |
| Aroclor 1254 | µg/kg | 1314 | 577 | 43.9 | 0.851 J | 3000 | SED01 | 80.4 | 18 NJ | 332 | 0.64 U | 3000 | SED01 | 43.4 | 7.5 | 166 |
| Aroclor 1260 | µg/kg | 1314 | 932 | 70.9 | 1.3 J | 5070 J | G453 | 82.1 | 14 | 250 | 0.82 U | 5070 J | G453 | 64.4 | 10 | 203 |
| Aroclor 1262 | µg/kg | 1012 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.98 U | 1220 UJ | G453 | 2.98 | 1.03 UJ | 7 U |
| Aroclor 1268 | µg/kg | 1012 | 21 | 2.1 | 1.89 J | 55 | G112 | 14.9 | 11.9 | 44.7 | 0.84 U | 1050 UJ | G453 | 3.03 | 0.953 U | 8.7 U |
| Aroclors | µg/kg | 1315 | 1020 | 77.6 | 0.851 JT | 27400 JT | G453 | 189.4 | 27 J | 795.7 | 0.851 JT | 27400 JT | G453 | 156.1 | 19.5 UT | 601.8 J |
| **PCB Congeners** | | | | | | | | | | | | | | | | |
| PCB001 | pg/g | 252 | 214 | 84.9 | 1.95 T | 217000 | G453 | 1210 | 16.9 J | 1140 J | 1.68 U | 217000 | G453 | 1030 | 13.5 J | 912 |
| PCB002 | pg/g | 252 | 225 | 89.3 | 1.25 T | 21200 | G453 | 131 | 16.9 | 105 | 1.25 T | 21200 | G453 | 118 | 14.5 | 101 |
| PCB003 | pg/g | 252 | 222 | 88.1 | 2.22 T | 124000 | G453 | 665 | 17.8 | 438 | 1.68 U | 124000 | G453 | 586 | 14.5 J | 407 |
| PCB004 | pg/g | 11 | 11 | 100 | 5.86 T | 9070 | 03R004 | 1090 | 308 | 4930 | 5.86 T | 9070 | 03R004 | 1090 | 308 | 4930 |
| PCB004 & 010 | pg/g | 241 | 201 | 83.4 | 5.43 | 267000 | G453 | 2450 | 67.2 | 4750 | 3.33 U | 267000 | G453 | 2040 | 49.9 | 3860 |
| PCB005 | pg/g | 11 | 11 | 100 | 0.209 T | 520 | 03R004 | 52.9 | 1.29 | 277 | 0.209 T | 520 | 03R004 | 52.9 | 1.29 | 277 |
| PCB005 & 008 | pg/g | 241 | 226 | 93.8 | 9.4 | 780000 | G453 | 5080 | 102 | 5300 | 9.4 | 780000 | G453 | 4760 | 90.2 T | 5000 |
| PCB006 | pg/g | 252 | 190 | 75.4 | 3.07 T | 138000 | G453 | 1200 | 35.8 | 2040 | 3.07 T | 138000 | G453 | 909 | 22 | 1620 |
| PCB007 | pg/g | 11 | 10 | 90.9 | 0.963 | 1040 | 03R004 | 122 | 7.29 | 606 | 0.696 UT | 1040 | 03R004 | 111 | 2.58 | 558 |
| PCB007 & 009 | pg/g | 241 | 118 | 49 | 5.05 | 67000 | G453 | 842 | 39.9 J | 1090 | 2.48 U | 67000 | G453 | 416 | 9.97 | 369 |
| PCB008 | pg/g | 89 | 29 | 32.6 | 12.8 | 22500 | 03R004 | 1850 | 658 T | 7540 J | 12.8 | 22500 | 03R004 | 727 | 185 UJ | 1610 J |
| PCB009 | pg/g | 11 | 11 | 100 | 0.885 T | 1830 | 03R004 | 186 | 4 | 977 | 0.885 T | 1830 | 03R004 | 186 | 4 | 977 |
| PCB010 | pg/g | 11 | 11 | 100 | 0.351 T | 474 | 03R004 | 57.6 | 14.2 | 257 | 0.351 T | 474 | 03R004 | 57.6 | 14.2 | 257 |
| PCB011 | pg/g | 252 | 235 | 93.3 | 11.9 | 3360 | G453 | 168 | 131 JT | 372 | 9.87 UJ | 3360 | G453 | 158 | 121 | 362 |
| PCB012 & 013 | pg/g | 252 | 153 | 60.7 | 1.86 JT | 29800 | G453 | 395 | 29.7 | 752 | 1.86 JT | 29800 | G453 | 243 | 12.6 | 391 |
| PCB014 | pg/g | 252 | 5 | 2 | 0.198 | 5.44 | 07R006 | 1.31 | 0.284 T | 4.43 | 0.161 U | 242 U | G453 | 6.27 | 4.88 U | 13 U |
| PCB015 | pg/g | 252 | 240 | 95.2 | 8.64 | 352000 | G453 | 2440 | 107 J | 3970 | 8.64 | 352000 | G453 | 2320 | 101 | 3720 |
| PCB016 | pg/g | 11 | 11 | 100 | 11.3 T | 17100 | 03R004 | 1950 | 54.7 | 9430 | 11.3 T | 17100 | 03R004 | 1950 | 54.7 | 9430 |
| PCB016 & 032 | pg/g | 241 | 238 | 98.8 | 7.35 J | 1100000 | G453 | 6540 | 139 | 6970 J | 2.53 UT | 1100000 | G453 | 6460 | 138 | 6960 |
| PCB017 | pg/g | 252 | 245 | 97.2 | 5.88 | 744000 | G453 | 4460 | 102 T | 5200 | 2.53 UT | 744000 | G453 | 4340 | 99.4 | 4950 |

Table D1.3-2. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Units | # Analyzed | # Detected | % Detected | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th[b] | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th (half DL)[b] |
| PCB018 | pg/g | 319 | 250 | 78.4 | 8.06 J | 1920000 | G453 | 10900 | 181 J | 6860 | 8.06 J | 1920000 | G453 | 8550 | 170 U | 5400 |
| PCB018 & 030 | pg/g | 11 | 11 | 100 | 25.5 JT | 35500 J | 03R004 | 4190 | 139 J | 19800 J | 25.5 JT | 35500 J | 03R004 | 4190 | 139 J | 19800 J |
| PCB019 | pg/g | 252 | 248 | 98.4 | 5.22 | 179000 | G453 | 1830 | 62.9 | 3050 | 5.22 | 179000 | G453 | 1800 | 60.4 | 2970 |
| PCB020 & 021 & 033 | pg/g | 241 | 239 | 99.2 | 7.06 J | 933000 | G453 | 5800 | 147 J | 3720 | 3.85 U | 933000 | G453 | 5750 | 146 | 3710 |
| PCB020 & 028 | pg/g | 11 | 11 | 100 | 63.2 JT | 38200 J | 03R004 | 6670 | 559 J | 26000 J | 63.2 JT | 38200 J | 03R004 | 6670 | 559 J | 26000 J |
| PCB021 & 033 | pg/g | 11 | 11 | 100 | 25.5 JT | 24900 J | 03R004 | 2940 | 105 J | 14400 J | 25.5 JT | 24900 J | 03R004 | 2940 | 105 J | 14400 J |
| PCB022 | pg/g | 252 | 248 | 98.4 | 4.95 J | 540000 | G453 | 3470 | 104 | 4000 | 4.95 J | 540000 | G453 | 3420 | 103 | 3800 |
| PCB023 | pg/g | 252 | 44 | 17.5 | 0.161 | 1460 | G453 | 50.7 | 5.86 | 105 | 0.144 UT | 1460 | G453 | 11.3 | 2.47 U | 17.8 |
| PCB024 | pg/g | 11 | 9 | 81.8 | 0.458 T | 599 | 03R004 | 83.7 | 15 T | 392 | 0.144 UT | 599 | 03R004 | 68.5 | 1.66 | 340 |
| PCB024 & 027 | pg/g | 241 | 218 | 90.5 | 2.32 | 123000 | G453 | 898 | 29.2 | 1260 | 2.32 | 123000 | G453 | 813 | 24.3 J | 1070 |
| PCB025 | pg/g | 252 | 237 | 94 | 4.71 | 119000 | G453 | 861 | 38.5 T | 1510 | 4.71 | 119000 | G453 | 810 | 33.8 | 1360 |
| PCB026 | pg/g | 241 | 230 | 95.4 | 5.45 | 257000 | G453 | 1720 | 60.1 | 2160 | 4.92 UJ | 257000 | G453 | 1640 | 53 J | 2160 |
| PCB026 & 029 | pg/g | 11 | 11 | 100 | 9.55 JT | 8320 J | 03R004 | 1130 | 50.8 J | 5040 J | 9.55 JT | 8320 J | 03R004 | 1130 | 50.8 J | 5040 J |
| PCB027 | pg/g | 11 | 11 | 100 | 3.41 T | 2880 | 03R004 | 423 | 121 T | 1730 | 3.41 T | 2880 | 03R004 | 423 | 121 T | 1730 |
| PCB028 | pg/g | 319 | 282 | 88.4 | 15.7 J | 1750000 | G453 | 9760 | 378 | 12500 | 11.6 UT | 1750000 | G453 | 8640 | 310 | 8900 |
| PCB029 | pg/g | 241 | 77 | 32 | 1.93 | 8800 | G453 | 165 | 10.2 | 371 | 1.24 U | 8800 | G453 | 54.9 | 2.5 UJ | 29.1 |
| PCB030 | pg/g | 241 | 13 | 5.4 | 1.04 J | 215 JT | BT016 | 39.3 | 9.11 J | 161 J | 1.04 J | 215 JT | BT016 | 5.28 | 2.46 UJ | 12.4 U |
| PCB031 | pg/g | 252 | 251 | 99.6 | 11.5 J | 1550000 | G453 | 9800 | 261 T | 11100 | 11.5 J | 1550000 | G453 | 9760 | 252 J | 11100 |
| PCB032 | pg/g | 11 | 11 | 100 | 11.6 T | 10500 | 03R004 | 1630 | 117 | 6590 | 11.6 T | 10500 | 03R004 | 1630 | 117 | 6590 |
| PCB034 | pg/g | 252 | 119 | 47.2 | 0.283 T | 8310 | G453 | 117 | 12.3 | 250 | 0.283 T | 8310 | G453 | 56.7 | 3.37 | 95.1 J |
| PCB035 | pg/g | 252 | 189 | 75 | 1.08 T | 14300 | G453 | 131 | 11 | 235 | 1.08 T | 14300 | G453 | 99.3 | 7.16 J | 199 |
| PCB036 | pg/g | 252 | 25 | 9.9 | 0.412 T | 286 | G453 | 18.4 | 5.33 | 25.3 | 0.196 UT | 286 | G453 | 4.51 | 2.46 UJ | 10.5 |
| PCB037 | pg/g | 252 | 248 | 98.4 | 6.13 J | 435000 | G453 | 2700 | 113 | 4040 | 6.13 J | 435000 | G453 | 2660 | 111 | 3990 |
| PCB038 | pg/g | 252 | 169 | 67.1 | 0.531 | 8790 | G453 | 163 | 12 | 365 | 0.201 U | 8790 | G453 | 110 | 6.3 U | 242 |
| PCB039 | pg/g | 252 | 85 | 33.7 | 0.404 JT | 1500 | G453 | 39.2 | 8.84 | 100 | 0.404 JT | 1500 | G453 | 15.1 | 2.52 UJ | 34.8 J |
| PCB040 | pg/g | 241 | 228 | 94.6 | 4.69 | 311000 | G453 | 2450 | 79 | 3120 | 4.69 | 311000 | G453 | 2320 | 69.7 T | 2640 |
| PCB040 & 041 & 071 | pg/g | 11 | 11 | 100 | 47.4 JT | 19100 J | 03R004 | 5870 | 284 J | 18500 J | 47.4 JT | 19100 J | 03R004 | 5870 | 284 J | 18500 J |
| PCB041 & 064 & 071 & 072 | pg/g | 241 | 240 | 99.6 | 17.5 | 1410000 | G453 | 12300 | 426 | 16600 J | 11.6 UT | 1410000 | G453 | 12200 | 422 T | 16600 J |
| PCB042 | pg/g | 11 | 11 | 100 | 22.6 T | 8970 | 03R004 | 2870 | 149 | 8730 | 22.6 T | 8970 | 03R004 | 2870 | 149 | 8730 |
| PCB042 & 059 | pg/g | 241 | 238 | 98.8 | 5.57 | 548000 | G453 | 4330 | 157 J | 6400 | 5.57 | 548000 | G453 | 4270 | 156 | 6300 |
| PCB043 | pg/g | 11 | 11 | 100 | 3.51 T | 1720 | 03R004 | 458 | 23.9 | 1520 | 3.51 T | 1720 | 03R004 | 458 | 23.9 | 1520 |
| PCB043 & 049 | pg/g | 241 | 241 | 100 | 19.7 | 1160000 | G453 | 11200 | 510 | 31800 | 19.7 | 1160000 | G453 | 11200 | 510 | 31800 |
| PCB044 | pg/g | 319 | 268 | 84 | 17.3 | 1620000 | G453 | 12800 | 589 J | 16000 | 11.6 UT | 1620000 | G453 | 10800 | 367 J | 13400 |
| PCB044 & 047 & 065 | pg/g | 11 | 11 | 100 | 95.1 JT | 45900 J | 03R005 | 13400 | 2320 J | 40400 J | 95.1 JT | 45900 J | 03R005 | 13400 | 2320 J | 40400 J |
| PCB045 | pg/g | 241 | 228 | 94.6 | 6.7 | 324000 | G453 | 2490 | 61.6 | 2620 | 4.92 UJ | 324000 | G453 | 2350 | 55.7 | 2570 |
| PCB045 & 051 | pg/g | 11 | 11 | 100 | 18 JT | 7970 J | 03R004 | 2160 | 884 JT | 6710 J | 18 JT | 7970 J | 03R004 | 2160 | 884 JT | 6710 J |
| PCB046 | pg/g | 252 | 238 | 94.4 | 4.13 | 138000 | G453 | 1080 | 37.3 J | 1640 | 4.13 | 138000 | G453 | 1020 | 30.9 | 1580 J |
| PCB047 | pg/g | 241 | 239 | 99.2 | 16.5 | 411000 | G453 | 5560 | 294 J | 13200 | 13.6 UJ | 411000 | G453 | 5510 | 293 | 13100 |
| PCB048 | pg/g | 11 | 11 | 100 | 14.7 T | 8570 | 03R004 | 1850 | 96.7 | 6610 | 14.7 T | 8570 | 03R004 | 1850 | 96.7 | 6610 |
| PCB048 & 075 | pg/g | 241 | 232 | 96.3 | 6.82 | 390000 | G453 | 3090 | 91.3 | 3750 | 4.92 UJ | 390000 | G453 | 2980 | 87.6 | 3570 |
| PCB049 & 069 | pg/g | 11 | 11 | 100 | 60.3 JT | 28700 J | 03R005 | 7970 | 710 J | 24500 J | 60.3 JT | 28700 J | 03R005 | 7970 | 710 J | 24500 J |
| PCB050 | pg/g | 241 | 134 | 55.6 | 1.46 T | 11300 | GCA11E | 231 | 10.6 | 350 | 1.46 T | 11300 | GCA11E | 130 | 4.88 U | 157 |
| PCB050 & 053 | pg/g | 11 | 11 | 100 | 16.5 JT | 5430 J | 03R004 | 1840 | 583 J | 5130 J | 16.5 JT | 5430 J | 03R004 | 1840 | 583 J | 5130 J |
| PCB051 | pg/g | 241 | 238 | 98.8 | 5.35 | 90900 | G453 | 1640 | 64.6 | 3620 | 5 U | 90900 | G453 | 1620 | 63.9 | 3590 |
| PCB052 | pg/g | 89 | 45 | 50.6 | 134 T | 112000 J | 03R005 | 7000 | 2070 | 30600 | 134 T | 112000 J | 03R005 | 3620 | 280 J | 16200 J |
| PCB052 & 069 | pg/g | 241 | 241 | 100 | 22.2 | 1490000 | G453 | 15400 | 803 JT | 39100 | 22.2 | 1490000 | G453 | 15400 | 803 JT | 39100 |
| PCB053 | pg/g | 241 | 238 | 98.8 | 5.54 | 283000 | G453 | 3000 | 135 | 6530 | 5.54 | 283000 | G453 | 2960 | 132 | 6360 |
| PCB054 | pg/g | 252 | 210 | 83.3 | 1.24 T | 23600 JT | BT016 | 343 | 12.8 J | 572 | 1.24 T | 23600 JT | BT016 | 286 | 9.98 | 540 J |
| PCB055 | pg/g | 252 | 185 | 73.4 | 1.38 T | 19600 | G453 | 236 | 18 | 717 J | 0.496 U | 19600 | G453 | 174 | 9.67 | 450 |
| PCB056 | pg/g | 11 | 11 | 100 | 30.8 T | 16700 | 02R001 | 4130 | 337 | 14500 | 30.8 T | 16700 | 02R001 | 4130 | 337 | 14500 |
| PCB056 & 060 | pg/g | 241 | 240 | 99.6 | 9.38 J | 902000 | G453 | 7260 | 238 | 7710 | 9.38 J | 902000 | G453 | 7230 | 236 | 7650 |
| PCB057 | pg/g | 252 | 136 | 54 | 1.28 | 7080 | G453 | 124 | 13.2 | 321 J | 0.717 UT | 7080 | G453 | 68 | 3.99 | 137 |
| PCB058 | pg/g | 252 | 125 | 49.6 | 0.99 | 2860 | G453 | 72.3 | 10.5 | 270 J | 0.765 U | 2860 | G453 | 37.3 | 3.21 | 114 |
| PCB059 & 062 & 075 | pg/g | 11 | 11 | 100 | 8.84 JT | 3260 J | 03R004 | 909 | 115 J | 2970 J | 8.84 JT | 3260 J | 03R004 | 909 | 115 J | 2970 J |
| PCB060 | pg/g | 11 | 11 | 100 | 13.3 T | 8380 | 02R001 | 2060 | 172 | 7400 | 13.3 T | 8380 | 02R001 | 2060 | 172 | 7400 |
| PCB061 & 070 | pg/g | 241 | 240 | 99.6 | 21.2 J | 1530000 | G453 | 12800 | 575 | 16700 J | 11.6 UT | 1530000 | G453 | 12800 | 549 | 16700 J |
| PCB061 & 070 & 074 & 076 | pg/g | 11 | 11 | 100 | 152 JT | 76900 J | 03R005 | 18700 | 2200 J | 66200 J | 152 JT | 76900 J | 03R005 | 18700 | 2200 J | 66200 J |
| PCB062 | pg/g | 241 | 14 | 5.8 | 3.13 | 677 | G453 | 87.4 | 11.1 | 368 | 1.25 UT | 677 | G453 | 7.97 | 2.46 U | 12.5 U |
| PCB063 | pg/g | 252 | 222 | 88.1 | 1.72 | 50900 | G453 | 462 | 23.9 | 932 | 1.72 | 50900 | G453 | 407 | 17.8 | 886 |

Table D1.3-2. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| PCB064 | pg/g | 11 | 11 | 100 | 40.7 T | 16500 | 02R001 | 5160 | 343 | 15100 | 40.7 T | 16500 | 02R001 | 5160 | 343 | 15100 |
| PCB065 | pg/g | 241 | 19 | 7.9 | 2.85 | 1810 | G453 | 140 | 13.6 | 502 | 1.25 UT | 1810 | G453 | 13.9 | 2.46 U | 13.6 |
| PCB066 | pg/g | 89 | 61 | 68.5 | 78.8 T | 39000 J | 02R001 | 3540 | 930 J | 22900 | 78.8 T | 39000 J | 02R001 | 2460 | 600 T | 13600 |
| PCB066 & 076 | pg/g | 241 | 240 | 99.6 | 19 | 1220000 | G453 | 10100 | 434 | 12300 | 11.6 UT | 1220000 | G453 | 10100 | 430 | 12100 |
| PCB067 | pg/g | 252 | 211 | 83.7 | 1.7 | 51100 | G453 | 402 | 17.6 | 705 | 1.7 | 51100 | G453 | 337 | 13.4 J | 602 |
| PCB068 | pg/g | 252 | 185 | 73.4 | 0.778 T | 5120 | G453 | 122 | 15.2 | 477 | 0.778 T | 5120 | G453 | 90.5 | 8.16 | 424 |
| PCB072 | pg/g | 11 | 11 | 100 | 1.12 T | 430 | 03R005 | 82.6 | 23.3 T | 296 | 1.12 T | 430 | 03R005 | 82.6 | 23.3 T | 296 |
| PCB073 | pg/g | 252 | 92 | 36.5 | 2.29 | 33300 | G453 | 667 | 25.6 | 2220 J | 0.598 U | 33300 | G453 | 245 | 2.62 U | 348 |
| PCB074 | pg/g | 241 | 239 | 99.2 | 8.2 J | 672000 | G453 | 5370 | 200 T | 6240 | 8.2 J | 672000 | G453 | 5320 | 198 | 6200 |
| PCB077 | pg/g | 264 | 252 | 95.5 | 1.85 | 99900 | G453 | 843 | 48.1 | 1290 | 1.85 | 99900 | G453 | 805 | 45.2 | 1260 |
| PCB078 | pg/g | 252 | 24 | 9.5 | 2.91 | 252 | G009 | 29.6 | 12 | 94.7 | 0.177 UT | 252 | G009 | 5.91 | 2.47 U | 19.8 |
| PCB079 | pg/g | 252 | 209 | 82.9 | 2.33 T | 7490 | G453 | 162 | 18.6 | 636 | 1.68 U | 7490 | G453 | 135 | 12.9 | 399 J |
| PCB080 | pg/g | 252 | 2 | 0.8 | 5.38 | 12.8 | G218 | 9.09 | 9.09 | 12.4 | 0.521 UT | 121 U | G453 | 3.38 | 2.46 U | 6.89 U |
| PCB081 | pg/g | 264 | 221 | 83.7 | 0.245 J | 3830 | G453 | 49 | 3.65 J | 137 | 0.245 J | 3830 | G453 | 41.2 | 2.41 J | 103 J |
| PCB082 | pg/g | 252 | 245 | 97.2 | 5.35 | 125000 | G453 | 1640 | 119 | 5950 J | 4.93 U | 125000 | G453 | 1590 | 114 | 5800 J |
| PCB083 | pg/g | 241 | 22 | 9.1 | 3.34 | 1010 | G453 | 121 | 28.4 | 459 J | 1.25 UT | 1010 | G453 | 13.8 | 2.46 U | 24.1 U |
| PCB083 & 099 | pg/g | 11 | 11 | 100 | 142 JT | 130000 J | 03R005 | 15900 | 2560 JT | 72100 J | 142 JT | 130000 J | 03R005 | 15900 | 2560 JT | 72100 J |
| PCB084 | pg/g | 11 | 11 | 100 | 71.7 T | 68600 | 03R005 | 8090 | 927 T | 37700 | 71.7 T | 68600 | 03R005 | 8090 | 927 T | 37700 |
| PCB084 & 092 | pg/g | 241 | 241 | 100 | 21.1 | 335000 | G453 | 5420 | 485 | 21200 | 21.1 | 335000 | G453 | 5420 | 485 | 21200 |
| PCB085 & 116 | pg/g | 241 | 238 | 98.8 | 5.39 J | 158000 | G453 | 1970 | 158 J | 7600 J | 5.39 J | 158000 | G453 | 1940 | 157 T | 7590 J |
| PCB085 & 116 & 117 | pg/g | 11 | 11 | 100 | 41.1 JT | 29200 J | 03R005 | 4140 | 605 J | 17700 J | 41.1 JT | 29200 J | 03R005 | 4140 | 605 J | 17700 J |
| PCB086 | pg/g | 241 | 121 | 50.2 | 2.31 | 10600 | G453 | 217 | 14.3 | 650 | 1.65 U | 10600 | G453 | 111 | 5.74 | 187 |
| PCB086 & 087 & 097 & 108 & 119 & 125 | pg/g | 11 | 11 | 100 | 167 JT | 159000 J | 03R005 | 19100 | 2750 JT | 88200 J | 167 JT | 159000 J | 03R005 | 19100 | 2750 JT | 88200 J |
| PCB087 & 117 & 125 | pg/g | 241 | 240 | 99.6 | 12.1 | 279000 | G453 | 4430 | 368 | 16000 J | 11.6 UT | 279000 | G453 | 4410 | 366 | 16000 JT |
| PCB088 & 091 | pg/g | 252 | 250 | 99.2 | 9.67 | 130000 | G453 | 2490 | 220 | 8770 J | 9.67 | 130000 | G453 | 2470 | 216 J | 8540 J |
| PCB089 | pg/g | 252 | 199 | 79 | 2.36 T | 23000 | G453 | 275 | 17.8 | 1020 | 1.68 U | 23000 | G453 | 218 | 11.4 J | 688 J |
| PCB090 & 101 | pg/g | 241 | 241 | 100 | 56.3 | 713000 | G453 | 14000 | 1270 | 48800 | 56.3 | 713000 | G453 | 14000 | 1270 | 48800 |
| PCB090 & 101 & 113 | pg/g | 11 | 11 | 100 | 312 JT | 258000 J | 03R005 | 29400 | 5540 J | 138000 J | 312 JT | 258000 J | 03R005 | 29400 | 5540 J | 138000 J |
| PCB092 | pg/g | 11 | 11 | 100 | 58.9 T | 43900 | 03R005 | 5100 | 1020 T | 23700 | 58.9 T | 43900 | 03R005 | 5100 | 1020 T | 23700 |
| PCB093 | pg/g | 241 | 1 | 0.4 | 13.1 | 13.1 | G494 | 13.1 | 13.1 | 13.1 | 1.25 UT | 121 U | G453 | 3.46 | 2.46 U | 6.55 U |
| PCB093 & 095 & 098 & 100 & 102 | pg/g | 11 | 11 | 100 | 305 JT | 235000 J | 03R005 | 26600 | 3770 J | 126000 J | 305 JT | 235000 J | 03R005 | 26600 | 3770 J | 126000 J |
| PCB094 | pg/g | 252 | 210 | 83.3 | 1.52 T | 29100 | GCA11E | 377 | 17.5 | 690 | 1.52 T | 29100 | GCA11E | 315 | 12.4 | 620 |
| PCB095 & 098 & 102 | pg/g | 241 | 241 | 100 | 40.7 | 629000 | G453 | 11300 | 1030 | 38900 | 40.7 | 629000 | G453 | 11300 | 1030 | 38900 |
| PCB096 | pg/g | 252 | 206 | 81.7 | 1.96 T | 14100 | G453 | 314 | 20.5 J | 1090 | 1.96 T | 14100 | G453 | 257 | 13 J | 815 |
| PCB097 | pg/g | 241 | 239 | 99.2 | 13.1 | 240000 | G453 | 3470 | 278 J | 12500 | 9.31 UJ | 240000 | G453 | 3440 | 275 | 12500 |
| PCB099 | pg/g | 241 | 241 | 100 | 25.1 | 324000 | G453 | 5410 | 494 | 20200 | 25.1 | 324000 | G453 | 5410 | 494 | 20200 |
| PCB100 | pg/g | 241 | 227 | 94.2 | 2.94 | 33200 | GCA11E | 514 | 26 J | 1020 | 2.94 | 33200 | GCA11E | 484 | 23.6 T | 987 |
| PCB101 | pg/g | 78 | 34 | 43.6 | 260 JT | 8480 | 19A01 | 1660 | 1080 | 4730 J | 180 UT | 8480 | 19A01 | 802 | 175 U | 3660 |
| PCB103 | pg/g | 252 | 234 | 92.9 | 3.27 T | 36100 | GCA11E | 439 | 32.3 | 1270 | 2.48 U | 36100 | GCA11E | 408 | 27.8 | 1170 |
| PCB104 | pg/g | 252 | 73 | 29 | 0.178 T | 4530 | GCA11E | 150 | 10.3 T | 378 J | 0.178 T | 4530 | GCA11E | 45.8 | 2.5 UJ | 60.6 |
| PCB105 | pg/g | 342 | 267 | 78.1 | 7.84 | 220000 | G453 | 3450 | 297 | 13300 | 7.84 | 220000 | G453 | 2710 | 200 | 8510 |
| PCB106 | pg/g | 11 | 2 | 18.2 | 1.3 T | 62.2 | 07R006 | 31.8 | 31.8 | 59.2 | 0.351 U | 62.2 | 07R006 | 6.85 | 0.329 UT | 35 |
| PCB106 & 118 | pg/g | 253 | 253 | 100 | 16.9 | 529000 | G453 | 8710 | 855 | 35600 J | 16.9 | 529000 | G453 | 8710 | 855 | 35600 J |
| PCB107 & 109 | pg/g | 241 | 234 | 97.1 | 5.04 J | 40800 | G453 | 735 | 77.4 | 2600 | 4.92 UJ | 40800 | G453 | 714 | 73.8 | 2520 |
| PCB107 & 124 | pg/g | 11 | 11 | 100 | 8.93 JT | 7110 J | 03R005 | 884 | 153 JT | 4010 J | 8.93 JT | 7110 J | 03R005 | 884 | 153 JT | 4010 J |
| PCB108 & 112 | pg/g | 241 | 231 | 95.9 | 4.74 | 39400 | G453 | 660 | 55.4 | 2350 | 4.74 | 39400 | G453 | 632 | 48.7 | 2310 |
| PCB109 | pg/g | 11 | 11 | 100 | 14 T | 8920 | 03R005 | 1230 | 283 T | 5260 | 14 T | 8920 | 03R005 | 1230 | 283 T | 5260 |
| PCB110 | pg/g | 241 | 241 | 100 | 33.6 T | 718000 | G453 | 12900 | 1220 | 47800 | 33.6 T | 718000 | G453 | 12900 | 1220 | 47800 |
| PCB110 & 115 | pg/g | 11 | 11 | 100 | 378 JT | 302000 J | 03R005 | 34400 | 5170 JT | 163000 J | 378 JT | 302000 J | 03R005 | 34400 | 5170 JT | 163000 J |
| PCB111 | pg/g | 11 | 6 | 54.5 | 1.67 T | 15.6 | 03R005 | 7.18 | 6.34 | 14.4 J | 0.329 UT | 15.6 | 03R005 | 4.14 | 1.67 T | 13.2 J |
| PCB111 & 115 | pg/g | 241 | 212 | 88 | 3.59 | 14700 | G453 | 261 | 21.3 J | 1140 J | 1.68 U | 14700 | G453 | 230 | 17.5 | 992 |
| PCB112 | pg/g | 11 | 1 | 9.1 | 34.7 T | 34.7 T | 06R002 | 34.7 | 34.7 T | 34.7 T | 0.218 UT | 34.7 T | 06R002 | 4.3 | 0.284 U | 20.1 |
| PCB113 | pg/g | 241 | 130 | 53.9 | 1.65 J | 5180 | G453 | 122 | 14.1 | 358 J | 1.65 J | 5180 | G453 | 67.4 | 6.18 | 198 |
| PCB114 | pg/g | 264 | 252 | 95.5 | 0.444 | 16900 | G453 | 235 | 17.5 | 890 | 0.444 | 16900 | G453 | 225 | 16.4 | 862 |
| PCB118 | pg/g | 89 | 37 | 41.6 | 208 T | 170000 J | 03R005 | 7060 | 960 J | 16100 J | 130 UT | 170000 J | 03R005 | 2990 | 115 U | 5730 |
| PCB119 | pg/g | 241 | 231 | 95.9 | 4.94 T | 18100 | GCA11E | 468 | 42.4 | 1640 | 4.92 UJ | 18100 | GCA11E | 448 | 39.7 | 1630 |
| PCB120 | pg/g | 252 | 136 | 54 | 0.973 T | 2110 | GCA11E | 75.5 | 12.9 J | 210 | 0.973 T | 2110 | GCA11E | 42.2 | 5.67 | 153 |
| PCB121 | pg/g | 252 | 29 | 11.5 | 0.759 | 4470 | GCA11E | 217 | 12 | 508 J | 0.415 UT | 4470 | GCA11E | 27.9 | 2.47 UJ | 28 J |
| PCB122 | pg/g | 252 | 197 | 78.2 | 2.48 | 8270 | G453 | 160 | 16.7 | 587 | 1.68 U | 8270 | G453 | 126 | 10.5 J | 425 J |

Table D1.3-2. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| PCB123 | pg/g | 264 | 250 | 94.7 | 0.381 | 12500 | G453 | 182 | 15.8 | 667 | 0.381 | 12500 | G453 | 173 | 14.7 | 606 J |
| PCB124 | pg/g | 241 | 228 | 94.6 | 3.04 | 20600 | G453 | 368 | 38.1 J | 1190 | 3.04 | 20600 | G453 | 349 | 36.2 | 1170 |
| PCB126 | pg/g | 264 | 249 | 94.3 | 0.237 | 2020 | G453 | 49.5 | 7.09 | 219 | 0.237 | 2020 | G453 | 46.7 | 6.35 J | 203 |
| PCB127 | pg/g | 252 | 10 | 4 | 0.581 JT | 632 | 03R005 | 91.8 | 8.9 | 446 | 0.581 JT | 632 | 03R005 | 6.94 | 2.46 U | 12.4 U |
| PCB128 | pg/g | 78 | 43 | 55.1 | 200 J | 6680 J | 1902 | 676 | 410 J | 1190 J | 110 UT | 6680 J | 1902 | 410 | 230 J | 995 J |
| PCB128 & 162 | pg/g | 241 | 238 | 98.8 | 9.2 | 69300 J | G393 | 1850 | 207 | 6660 | 9.2 | 69300 J | G393 | 1820 | 198 | 6570 |
| PCB128 & 166 | pg/g | 11 | 11 | 100 | 83.1 JT | 42000 J | 03R005 | 4800 | 1020 J | 22300 J | 83.1 JT | 42000 J | 03R005 | 4800 | 1020 J | 22300 J |
| PCB129 | pg/g | 241 | 231 | 95.9 | 4.38 | 18900 | G453 | 585 | 59.2 | 2380 J | 4.38 | 18900 | G453 | 561 | 57 | 2190 |
| PCB129 & 138 & 160 & 163 | pg/g | 11 | 11 | 100 | 688 JT | 342000 J | 03R005 | 37800 | 7910 J | 179000 J | 688 JT | 342000 J | 03R005 | 37800 | 7910 J | 179000 J |
| PCB130 | pg/g | 252 | 245 | 97.2 | 5 J | 35500 J | G393 | 943 | 105 | 3390 | 5 J | 35500 J | G393 | 917 | 102 | 3260 |
| PCB131 | pg/g | 252 | 36 | 14.3 | 2.67 | 4280 | 03R005 | 242 | 24.5 | 872 | 1.25 UT | 4280 | 03R005 | 37.4 | 2.47 UJ | 55.8 |
| PCB132 | pg/g | 11 | 11 | 100 | 230 T | 85600 | 03R005 | 9810 | 2450 | 45300 | 230 T | 85600 | 03R005 | 9810 | 2450 | 45300 |
| PCB132 & 161 | pg/g | 241 | 240 | 99.6 | 20.3 | 254000 J | G393 | 4680 | 443 | 12700 | 15.1 UJ | 254000 J | G393 | 4660 | 437 | 12600 |
| PCB133 | pg/g | 11 | 11 | 100 | 10.6 T | 2570 | 03R005 | 336 | 138 | 1410 | 10.6 T | 2570 | 03R005 | 336 | 138 | 1410 |
| PCB133 & 142 | pg/g | 241 | 233 | 96.7 | 5.01 J | 38400 | GCA11E | 631 | 58.4 | 1590 | 4.93 U | 38400 | GCA11E | 610 | 55.4 | 1500 |
| PCB134 & 143 | pg/g | 252 | 248 | 98.4 | 5.27 | 41900 J | G393 | 941 | 90.4 | 2850 | 4.98 U | 41900 J | G393 | 926 | 88.1 | 2770 |
| PCB135 | pg/g | 241 | 239 | 99.2 | 13.2 | 163000 J | G393 | 3100 | 260 J | 7130 | 11.3 U | 163000 J | G393 | 3080 | 259 | 7030 |
| PCB135 & 151 & 154 | pg/g | 11 | 10 | 90.9 | 310 JT | 60100 J | 03R005 | 8300 | 2490 J | 35800 J | 10.1 U | 60100 J | 03R005 | 7550 | 2320 J | 33100 J |
| PCB136 | pg/g | 252 | 250 | 99.2 | 12.5 | 188000 J | G393 | 3120 | 265 | 7340 | 5 U | 188000 J | G393 | 3090 | 257 | 7340 |
| PCB137 | pg/g | 252 | 241 | 95.6 | 4.48 | 19600 | G092 | 574 | 62.5 | 2350 | 4.48 | 19600 | G092 | 549 | 57.7 | 2130 |
| PCB138 | pg/g | 78 | 51 | 65.4 | 170 J | 31900 J | 1902 | 3340 | 1330 J | 12000 J | 120 UT | 31900 J | 1902 | 2210 | 585 J | 8210 J |
| PCB138 & 163 & 164 | pg/g | 241 | 241 | 100 | 62.2 | 1040000 J | G393 | 18700 | 1650 | 43500 | 62.2 | 1040000 J | G393 | 18700 | 1650 | 43500 |
| PCB139 & 140 | pg/g | 11 | 11 | 100 | 8.38 JT | 5040 J | 03R005 | 633 | 146 J | 2980 J | 8.38 JT | 5040 J | 03R005 | 633 | 146 J | 2980 J |
| PCB139 & 149 | pg/g | 241 | 241 | 100 | 64.5 | 1230000 J | G393 | 18300 | 1490 | 39700 | 64.5 | 1230000 J | G393 | 18300 | 1490 | 39700 |
| PCB140 | pg/g | 241 | 198 | 82.2 | 3.55 | 3380 | G453 | 136 | 18.7 | 624 J | 1.68 U | 3380 | G453 | 112 | 13.4 | 604 |
| PCB141 | pg/g | 252 | 252 | 100 | 15.3 | 269000 J | G393 | 4280 | 318 | 9140 | 15.3 | 269000 J | G393 | 4280 | 318 | 9140 |
| PCB142 | pg/g | 11 | 2 | 18.2 | 0.554 | 928 | 07R006 | 464 | 464 | 882 | 0.368 UT | 928 | 07R006 | 85.4 | 0.424 UT | 466 |
| PCB144 | pg/g | 252 | 247 | 98 | 6.28 | 83900 J | G393 | 1130 | 84.1 | 2210 | 4.93 U | 83900 J | G393 | 1110 | 82.2 | 2200 |
| PCB145 | pg/g | 252 | 45 | 17.9 | 1.13 | 186 | G453 | 32.9 | 8.71 J | 140 | 0.354 UT | 186 | G453 | 8.1 | 2.47 U | 38 |
| PCB146 | pg/g | 11 | 11 | 100 | 132 T | 25100 | 03R005 | 3270 | 1260 | 13800 | 132 T | 25100 | 03R005 | 3270 | 1260 | 13800 |
| PCB146 & 165 | pg/g | 241 | 238 | 98.8 | 12.9 | 159000 | GCA11E | 3250 | 311 | 8530 | 12.9 | 159000 | GCA11E | 3210 | 307 | 8370 |
| PCB147 | pg/g | 241 | 231 | 95.9 | 5.57 T | 89900 | GCA11E | 925 | 50 | 2450 | 4.93 U | 89900 | GCA11E | 887 | 46.6 | 2290 |
| PCB147 & 149 | pg/g | 11 | 11 | 100 | 646 JT | 212000 J | 03R005 | 24600 | 5550 J | 112000 J | 646 JT | 212000 J | 03R005 | 24600 | 5550 J | 112000 J |
| PCB148 | pg/g | 252 | 168 | 66.7 | 1.16 T | 23400 | GCA11E | 211 | 11.3 | 271 | 1.16 T | 23400 | GCA11E | 142 | 6.35 U | 201 |
| PCB150 | pg/g | 252 | 163 | 64.7 | 0.872 T | 12000 | GCA11E | 164 | 12.1 T | 406 | 0.872 T | 12000 | GCA11E | 107 | 6.35 U | 291 |
| PCB151 | pg/g | 241 | 240 | 99.6 | 19.8 | 403000 J | G393 | 6510 | 404 | 11800 | 19.8 | 403000 J | G393 | 6480 | 393 | 11700 |
| PCB152 | pg/g | 252 | 118 | 46.8 | 0.545 T | 8920 | GCA11E | 158 | 9.84 | 314 | 0.545 T | 8920 | GCA11E | 75.7 | 3.34 | 135 |
| PCB153 | pg/g | 319 | 291 | 91.2 | 76.7 | 1220000 J | G393 | 16900 | 1690 T | 37200 | 76.7 | 1220000 J | G393 | 15400 | 1380 J | 34500 |
| PCB153 & 168 | pg/g | 11 | 11 | 100 | 644 JT | 208000 J | 03R005 | 24800 | 6880 J | 111000 J | 644 JT | 208000 J | 03R005 | 24800 | 6880 J | 111000 J |
| PCB154 | pg/g | 241 | 229 | 95 | 5.14 | 12400 | GCA11E | 380 | 43.2 | 1710 | 4.87 UT | 12400 | GCA11E | 362 | 38.7 T | 1610 |
| PCB155 | pg/g | 251 | 32 | 12.7 | 0.263 J | 1490 | GCA11E | 77.1 | 12.5 J | 252 J | 0.122 UT | 1490 | GCA11E | 12.7 | 2.46 U | 19.6 J |
| PCB156 | pg/g | 264 | 263 | 99.6 | 2.21 | 77700 J | G393 | 1430 | 136 J | 4020 | 2.21 | 77700 J | G393 | 1430 | 136 J | 4010 |
| PCB157 | pg/g | 264 | 257 | 97.3 | 0.708 | 7770 | G092 | 238 | 28.2 | 888 | 0.708 | 7770 | G092 | 232 | 27.2 J | 839 |
| PCB158 | pg/g | 11 | 11 | 100 | 66 T | 25600 | 03R005 | 3030 | 752 | 13600 | 66 T | 25600 | 03R005 | 3030 | 752 | 13600 |
| PCB158 & 160 | pg/g | 241 | 238 | 98.8 | 8.69 | 109000 J | G393 | 1870 | 156 | 5050 | 8.69 | 109000 J | G393 | 1850 | 151 | 4890 |
| PCB159 | pg/g | 252 | 159 | 63.1 | 2.31 | 10000 | G453 | 233 | 34.9 | 764 | 0.591 U | 10000 | G453 | 149 | 14.9 | 374 |
| PCB161 | pg/g | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.394 UT | 18 U | 07R006 | 1.73 | 0.307 U | 7.05 U |
| PCB162 | pg/g | 11 | 10 | 90.9 | 1.37 JT | 789 | 03R005 | 102 | 25.8 | 468 | 1.37 JT | 789 | 03R005 | 92.8 | 24.1 | 432 |
| PCB164 | pg/g | 11 | 11 | 100 | 53.8 T | 14700 | 03R005 | 1800 | 579 | 7920 | 53.8 T | 14700 | 03R005 | 1800 | 579 | 7920 |
| PCB165 | pg/g | 11 | 7 | 63.6 | 1.65 | 27.2 | 03R005 | 7.24 | 2.51 T | 22.4 | 0.524 UT | 27.2 | 03R005 | 5.82 | 2.51 T | 19.3 |
| PCB166 | pg/g | 241 | 126 | 52.3 | 1.94 | 3370 | G355 | 92.1 | 12.5 | 402 J | 1.65 U | 3370 | G355 | 49.7 | 5.09 | 114 |
| PCB167 | pg/g | 264 | 262 | 99.2 | 1.15 | 29800 J | G393 | 579 | 59.8 | 1640 | 1.15 | 29800 J | G393 | 574 | 58.9 | 1640 |
| PCB168 | pg/g | 241 | 119 | 49.4 | 1.7 | 1110 | G453 | 66 | 10.7 | 295 J | 1.65 U | 1110 | G453 | 34.1 | 3.65 | 116 |
| PCB169 | pg/g | 264 | 48 | 18.2 | 0.151 | 95.1 | G355 | 6.762 | 1.155 J | 14.68 | 0.0981 U | 95.1 | G355 | 2.083 | 0.6525 U | 8.153 J |
| PCB170 | pg/g | 330 | 290 | 87.9 | 1.43 | 477000 J | G393 | 6160 | 504 J | 11900 | 1.43 | 477000 J | G393 | 5430 | 393 | 9460 |
| PCB171 | pg/g | 241 | 239 | 99.2 | 7.08 | 132000 J | G393 | 1890 | 137 | 3830 | 7.08 | 132000 J | G393 | 1870 | 134 | 3800 |
| PCB171 & 173 | pg/g | 11 | 11 | 100 | 79.5 JT | 9230 J | 03R005 | 1620 | 674 J | 5610 J | 79.5 JT | 9230 J | 03R005 | 1620 | 674 J | 5610 J |
| PCB172 | pg/g | 252 | 248 | 98.4 | 5.88 | 69900 J | G393 | 1120 | 98.1 | 2720 | 4.98 U | 69900 J | G393 | 1100 | 95.8 | 2690 |
| PCB173 | pg/g | 241 | 191 | 79.3 | 2.69 | 12300 J | G393 | 222 | 19.9 J | 488 | 1.68 U | 12300 J | G393 | 177 | 11.1 | 346 |

Table D1.3-2. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| PCB174 | pg/g | 252 | 252 | 100 | 28.4 | 499000 J | G393 | 7670 | 595 | 17100 | 28.4 | 499000 J | G393 | 7670 | 595 | 17100 |
| PCB175 | pg/g | 252 | 232 | 92.1 | 2.43 | 25700 J | G393 | 385 | 31.5 | 838 | 2.43 | 25700 J | G393 | 355 | 27.5 | 828 |
| PCB176 | pg/g | 252 | 250 | 99.2 | 5.2 | 75100 J | G393 | 1060 | 81.4 | 2310 | 5.2 | 75100 J | G393 | 1050 | 80.8 | 2280 |
| PCB177 | pg/g | 252 | 252 | 100 | 17.6 | 276000 J | G393 | 4410 | 349 | 10300 | 17.6 | 276000 J | G393 | 4410 | 349 | 10300 |
| PCB178 | pg/g | 252 | 250 | 99.2 | 8.8 | 129000 | GCA11E | 1900 | 141 | 3640 | 8.8 | 129000 | GCA11E | 1880 | 141 | 3610 |
| PCB179 | pg/g | 252 | 251 | 99.6 | 14.2 | 226000 J | G393 | 3890 | 303 | 8470 | 14.2 | 226000 J | G393 | 3880 | 299 | 8440 |
| PCB180 | pg/g | 319 | 292 | 91.5 | 59 | 1130000 J | G393 | 15000 | 1190 | 27000 | 59 | 1130000 J | G393 | 13800 | 996 | 22800 |
| PCB180 & 193 | pg/g | 11 | 11 | 100 | 539 JT | 50300 J | 03R005 | 9460 | 4770 JT | 32000 J | 539 JT | 50300 J | 03R005 | 9460 | 4770 JT | 32000 J |
| PCB181 | pg/g | 252 | 126 | 50 | 1.53 T | 17300 | G355 | 302 | 19.8 | 642 | 1.25 UT | 17300 | G355 | 153 | 6.2 U | 339 |
| PCB182 | pg/g | 11 | 11 | 100 | 1.27 T | 187 | 03R005 | 35.1 | 13.5 | 138 | 1.27 T | 187 | 03R005 | 35.1 | 13.5 | 138 |
| PCB182 & 187 | pg/g | 241 | 241 | 100 | 38.2 | 617000 J | G393 | 11200 | 813 | 21400 | 38.2 | 617000 J | G393 | 11200 | 813 | 21400 |
| PCB183 | pg/g | 241 | 240 | 99.6 | 19.5 | 338000 J | G393 | 4840 | 345 | 11400 | 16.6 UJ | 338000 J | G393 | 4820 | 344 | 11400 |
| PCB183 & 185 | pg/g | 11 | 11 | 100 | 188 JT | 16200 J | 03R005 | 3280 | 1310 JT | 10200 J | 188 JT | 16200 J | 03R005 | 3280 | 1310 JT | 10200 J |
| PCB184 | pg/g | 252 | 49 | 19.4 | 0.747 T | 234 | G355 | 27.3 | 7.26 | 139 J | 0.32 UT | 234 | G355 | 7.85 | 2.48 U | 23.3 |
| PCB185 | pg/g | 241 | 233 | 96.7 | 5.91 | 54500 J | G393 | 899 | 70.4 T | 2000 | 4.93 U | 54500 J | G393 | 869 | 64.5 | 1920 |
| PCB186 | pg/g | 252 | 17 | 6.7 | 0.326 T | 597 | G355 | 66 | 12.8 | 351 | 0.304 U | 597 | G355 | 7.48 | 2.46 U | 12.8 |
| PCB187 | pg/g | 89 | 54 | 60.7 | 200 J | 22900 | 03R005 | 2180 | 1340 J | 5150 | 130 UT | 22900 | 03R005 | 1360 | 490 J | 4460 J |
| PCB188 | pg/g | 252 | 79 | 31.3 | 0.474 | 4680 | GCA11E | 99.5 | 10.8 | 257 J | 0.322 UT | 4680 | GCA11E | 33.4 | 2.51 U | 62.9 |
| PCB189 | pg/g | 264 | 255 | 96.6 | 0.371 | 18200 J | G393 | 263 | 21.9 | 595 | 0.371 | 18200 J | G393 | 255 | 20.6 | 535 |
| PCB190 | pg/g | 252 | 249 | 98.8 | 6.53 | 107000 J | G393 | 1500 | 109 | 3520 | 6.53 | 107000 J | G393 | 1490 | 106 | 3420 |
| PCB191 | pg/g | 252 | 227 | 90.1 | 1.81 | 21000 J | G393 | 316 | 26.7 | 758 | 1.81 | 21000 J | G393 | 285 | 20.2 | 636 |
| PCB192 | pg/g | 252 | 6 | 2.4 | 12.1 | 127 | G355 | 55.8 | 52.5 J | 110 | 0.245 UT | 127 | G355 | 4.5 | 2.45 U | 12.4 UJ |
| PCB193 | pg/g | 241 | 234 | 97.1 | 5.86 | 50500 J | G393 | 865 | 63.7 | 1830 | 4.98 U | 50500 J | G393 | 840 | 58 | 1830 |
| PCB194 | pg/g | 252 | 252 | 100 | 14.9 | 195000 J | G393 | 3810 | 328 | 7000 | 14.9 | 195000 J | G393 | 3810 | 328 | 7000 |
| PCB195 | pg/g | 252 | 248 | 98.4 | 6.31 | 93900 J | G393 | 1740 | 133 | 4210 | 6.23 UJ | 93900 J | G393 | 1710 | 131 | 4210 |
| PCB196 | pg/g | 11 | 11 | 100 | 64.5 T | 3370 | 03R005 | 1090 | 738 | 2790 | 64.5 T | 3370 | 03R005 | 1090 | 738 | 2790 |
| PCB196 & 203 | pg/g | 241 | 241 | 100 | 16.7 | 277000 J | G393 | 5160 | 393 | 10800 | 16.7 | 277000 J | G393 | 5160 | 393 | 10800 |
| PCB197 | pg/g | 241 | 188 | 78 | 2.77 | 8670 J | G393 | 206 | 19.6 | 510 | 1.68 U | 8670 J | G393 | 162 | 11.9 | 388 |
| PCB197 & 200 | pg/g | 11 | 11 | 100 | 24.3 JT | 2430 J | 07R006 | 504 | 219 J | 1770 J | 24.3 JT | 2430 J | 07R006 | 504 | 219 J | 1770 J |
| PCB198 | pg/g | 241 | 212 | 88 | 2.72 | 11600 J | G393 | 278 | 27.5 | 770 | 1.68 U | 11600 J | G393 | 245 | 19.5 | 531 |
| PCB198 & 199 | pg/g | 11 | 11 | 100 | 129 JT | 7190 J | 03R005 | 2140 | 1320 J | 5290 J | 129 JT | 7190 J | 03R005 | 2140 | 1320 J | 5290 J |
| PCB199 | pg/g | 241 | 240 | 99.6 | 15.4 | 211000 J | G393 | 4500 | 359 | 8420 | 15.4 | 211000 J | G393 | 4480 | 357 | 8420 |
| PCB200 | pg/g | 241 | 229 | 95 | 3.82 | 31100 J | G393 | 610 | 47.2 JT | 1310 | 3.82 | 31100 J | G393 | 580 | 44.2 | 1310 |
| PCB201 | pg/g | 252 | 242 | 96 | 3.74 | 25100 J | G393 | 541 | 53.9 | 1250 | 3.74 | 25100 J | G393 | 520 | 47.5 J | 1130 |
| PCB202 | pg/g | 252 | 246 | 97.6 | 5.84 | 33900 | GCA11E | 779 | 79.9 | 1790 | 4.98 U | 33900 | GCA11E | 760 | 75.3 | 1740 |
| PCB203 | pg/g | 11 | 11 | 100 | 81.3 T | 5450 | 07R006 | 1650 | 870 | 5010 | 81.3 T | 5450 | 07R006 | 1650 | 870 | 5010 |
| PCB204 | pg/g | 252 | 21 | 8.3 | 0.318 T | 961 | G355 | 84.3 | 7.3 | 364 | 0.276 U | 961 | G355 | 10.1 | 2.46 U | 17.7 UJ |
| PCB205 | pg/g | 252 | 214 | 84.9 | 2.76 | 9500 J | G393 | 213 | 20.5 J | 574 | 1.68 U | 9500 J | G393 | 182 | 13.8 | 415 |
| PCB206 | pg/g | 252 | 249 | 98.8 | 8.01 | 165000 | G453 | 1920 | 195 | 5270 J | 8.01 | 165000 | G453 | 1900 | 191 | 4980 J |
| PCB207 | pg/g | 252 | 223 | 88.5 | 3.45 | 13200 | G453 | 273 | 26.2 | 731 J | 1.68 U | 13200 | G453 | 242 | 21.3 | 492 |
| PCB208 | pg/g | 252 | 244 | 96.8 | 4.03 | 59400 | G453 | 545 | 55.7 | 1310 J | 4.03 | 59400 | G453 | 528 | 53.3 | 1220 J |
| PCB209 | pg/g | 252 | 249 | 98.8 | 8.34 | 327000 | G453 | 1960 | 124 | 1850 | 8.34 | 327000 | G453 | 1940 | 124 | 1840 |
| Total PCB Congeners | pg/g | 252 | 252 | 100 | 1050 JT | 35400000 T | G453 | 453000 | 36200 J | 1570000 J | 1050 JT | 35400000 T | G453 | 453000 | 36200 J | 1570000 J |
| **PCBs[c]** | | | | | | | | | | | | | | | | |
| Total PCBs | µg/kg | 1318 | 1052 | 79.8 | 0.851 JT | 35400 T | -- | 220.2 | 26.85 J | 736.2 | 0.851 JT | 35400 T | -- | 183.4 | 19.65 J | 600.9 |
| **PCB Homologs** | | | | | | | | | | | | | | | | |
| Dichlorobiphenyl homologs | pg/g | 252 | 247 | 98 | 15.4 JT | 1640000 T | G453 | 10900 | 466 JT | 17000 | 10.6 UT | 1640000 T | G453 | 10700 | 454 | 16800 |
| Heptachlorobiphenyl homologs | pg/g | 252 | 252 | 100 | 183 T | 4220000 JT | G393 | 66300 | 5080 | 155000 | 183 T | 4220000 JT | G393 | 66300 | 5080 | 155000 |
| Hexachlorobiphenyl homologs | pg/g | 252 | 252 | 100 | 276 JT | 5440000 JT | G393 | 95900 | 8750 J | 222000 | 276 JT | 5440000 JT | G393 | 95900 | 8750 J | 222000 |
| Monochlorobiphenyl homologs | pg/g | 252 | 233 | 92.5 | 5.03 T | 362000 T | G453 | 1870 | 49.2 T | 1420 | 1.68 UT | 362000 T | G453 | 1730 | 42.6 | 1290 |
| Nonachlorobiphenyl homologs | pg/g | 252 | 249 | 98.8 | 8.01 T | 238000 T | G453 | 2700 | 267 T | 7050 J | 8.01 T | 238000 T | G453 | 2670 | 264 | 6640 J |
| Octachlorobiphenyl homologs | pg/g | 252 | 252 | 100 | 36.4 T | 891000 JT | G393 | 17400 | 1510 | 35500 | 36.4 T | 891000 JT | G393 | 17400 | 1510 | 35500 |
| Pentachlorobiphenyl homologs | pg/g | 252 | 252 | 100 | 267 T | 4640000 T | G453 | 84300 | 7390 | 296000 | 267 T | 4640000 T | G453 | 84300 | 7390 | 296000 |
| Tetrachlorobiphenyl homologs | pg/g | 252 | 252 | 100 | 172 T | 12800000 T | G453 | 113000 | 5150 J | 298000 J | 172 T | 12800000 T | G453 | 113000 | 5150 J | 298000 J |
| Trichlorobiphenyl homologs | pg/g | 252 | 252 | 100 | 51.4 T | 9690000 T | G453 | 59300 | 1730 | 80100 | 51.4 T | 9690000 T | G453 | 59300 | 1730 | 80100 |
| **PCDD/Fs Homologs** | | | | | | | | | | | | | | | | |
| Heptachlorodibenzofuran homologs | pg/g | 237 | 235 | 99.2 | 0.337 | 39100 | 07R006 | 228.128 | 17.069 | 317.6 J | 0.119 U | 39100 | 07R006 | 226.203 | 17 | 314.4 J |
| Heptachlorodibenzo-p-dioxin homologs | pg/g | 237 | 237 | 100 | 1.324 | 7095.84 | G426 | 209.2969 | 65.2 | 944.524 J | 1.324 | 7095.84 | G426 | 209.2969 | 65.2 | 944.524 J |
| Hexachlorodibenzofuran homologs | pg/g | 237 | 235 | 99.2 | 0.168 J | 100000 | 07R006 | 499.4072 | 10.175 | 330.6265 | 0.095 UT | 100000 | 07R006 | 495.1932 | 10.161 | 329.751 |

Table D1.3-2. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Hexachlorodibenzo-p-dioxin homologs | pg/g | 237 | 233 | 98.3 | 0.222 | 596.039 | G426 | 29.7432 | 8.632 T | 123.4 J | 0.02 U | 596.039 | G426 | 29.242 | 8.487 | 123.2 J |
| Octachlorodibenzofuran | pg/g | 238 | 227 | 95.4 | 0.579 J | 20800 | 07R006 | 142.977 | 16.4 | 235.5 J | 0.137 U | 20800 | 07R006 | 137.354 | 15.082 | 232.75 J |
| Octachlorodibenzo-p-dioxin | pg/g | 238 | 234 | 98.3 | 6.462 JT | 19201.141 J | G426 | 798.75639 | 262.5125 | 2881.5939 J | 5.93 U | 19201.141 J | G426 | 785.61063 | 255.824 | 2811.3151 J |
| Pentachlorodibenzofuran homologs | pg/g | 237 | 233 | 98.3 | 0.083 | 64700 | 07R006 | 350.30698 | 6.26 | 324.144 | 0.01 U | 64700 | 07R006 | 344.39524 | 6.16 | 323.072 |
| Pentachlorodibenzo-p-dioxin homologs | pg/g | 237 | 188 | 79.3 | 0.0281 J | 141 NJ | 06R002 | 6.11654 | 0.9105 J | 21.2107 J | 0.011 U | 141 NJ | 06R002 | 4.86364 | 0.513 | 17.719 |
| Tetrachlorodibenzofuran homologs | pg/g | 237 | 220 | 92.8 | 0.05 | 35800 | 07R006 | 207.3885 | 2.4305 | 183.1685 | 0.01 U | 35800 | 07R006 | 192.515 | 2.05 | 146.793 |
| Tetrachlorodibenzo-p-dioxin homologs | pg/g | 236 | 199 | 84.3 | 0.017 | 416.466 | G332 | 8.30712 | 0.62 | 33.3707 J | 0.006 U | 416.466 | G332 | 7.01072 | 0.497 J | 23.5195 |
| Total PCDD/F | pg/g | 237 | 237 | 100 | 2.48 T | 264000 T | 07R006 | 2407 | 412 T | 5580 J | 2.48 T | 264000 T | 07R006 | 2407 | 412 T | 5580 J |
| **PCDD/Fs** | | | | | | | | | | | | | | | | |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran | pg/g | 238 | 227 | 95.4 | 0.163 J | 24800 | 07R006 | 130.693 | 5.515 | 111.5 J | 0.061 U | 24800 | 07R006 | 124.664 | 5.0305 J | 103.25 J |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin | pg/g | 238 | 234 | 98.3 | 0.863 JT | 2410.3 | G426 | 90.2574 | 27.15 | 384.55 J | 0.734 U | 2410.3 | G426 | 88.7759 | 26.65 | 381.95 J |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran | pg/g | 238 | 184 | 77.3 | 0.034 J | 8240 | 07R006 | 49.5624 | 0.7265 J | 21.253 | 0.01 U | 8240 | 07R006 | 38.3417 | 0.402 J | 14.6753 J |
| 1,2,3,4,7,8-Hexachlorodibenzofuran | pg/g | 238 | 215 | 90.3 | 0.043 J | 66000 | 07R006 | 327.9714 | 1.27 NJ | 54.2106 | 0.0164 U | 66000 | 07R006 | 298.0575 | 1.038 J | 53.0613 |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 238 | 149 | 62.6 | 0.026 J | 13 | SD086 | 0.8243 | 0.237 JT | 4.158 J | 0.007 U | 13 | SD086 | 0.574 | 0.1395 J | 2.553 |
| 1,2,3,6,7,8-Hexachlorodibenzofuran | pg/g | 238 | 207 | 87 | 0.021 J | 17800 | 07R006 | 92.6732 | 0.609 J | 26.3903 J | 0.016 U | 17800 | 07R006 | 81.1046 | 0.45525 J | 16.6558 J |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 238 | 217 | 91.2 | 0.074 J | 83 | SD086 | 4.4207 | 1.25 J | 18.251 J | 0.007 U | 83 | SD086 | 4.0546 | 1.07 J | 17.01 J |
| 1,2,3,7,8,9-Hexachlorodibenzofuran | pg/g | 238 | 60 | 25.2 | 0.019 J | 906 | 07R006 | 16.774 | 0.304 J | 7.8611 | 0.006 U | 906 | 07R006 | 4.2701 | 0.036 J | 2.7717 J |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | pg/g | 238 | 207 | 87 | 0.058 J | 28.4 | G033 | 2.2556 | 0.682 J | 12.677 J | 0.006 U | 28.4 | G033 | 1.9722 | 0.5575 J | 10.644 J |
| 1,2,3,7,8-Pentachlorodibenzofuran | pg/g | 238 | 180 | 75.6 | 0.022 J | 29400 | 07R006 | 176.647 | 0.5455 J | 85.7589 | 0.006 U | 29400 | 07R006 | 134.628 | 0.299 J | 29.0024 |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | pg/g | 238 | 142 | 59.7 | 0.02 JT | 20.536 | G332 | 1.0135 | 0.2185 J | 5.1535 J | 0.008 U | 20.536 | G332 | 0.63314 | 0.1035 J | 2.5085 J |
| 2,3,4,6,7,8-Hexachlorodibenzofuran | pg/g | 238 | 192 | 80.7 | 0.043 J | 2020 | 07R006 | 13.454 | 0.5225 J | 17.766 | 0.007 U | 2020 | 07R006 | 10.875 | 0.3715 J | 12.218 |
| 2,3,4,7,8-Pentachlorodibenzofuran | pg/g | 238 | 186 | 78.2 | 0.026 J | 9360 | 07R006 | 57.2702 | 0.564 J | 39.5318 J | 0.006 U | 9360 | 07R006 | 44.7973 | 0.3125 J | 23.5452 J |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/g | 238 | 150 | 63 | 0.058 J | 14000 | 07R006 | 105.417 | 0.8975 | 60.4138 | 0.011 U | 14000 | 07R006 | 66.4806 | 0.3065 J | 22.7758 |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | pg/g | 238 | 51 | 21.4 | 0.04 J | 111.091 | G332 | 3.14862 | 0.372 J | 6.3335 J | 0.00405 U | 111.091 | G332 | 0.697629 | 0.02335 U | 1.127 J |
| TCDD TEQ (ND = 0) | pg/g | 238 | 238 | 100 | 0.00803 JT | 14100 JT | 07R006 | 67.938 | 1.395 J | 40.49 J | 0.00803 JT | 14100 JT | 07R006 | 67.938 | 1.395 J | 40.49 J |
| Total TCDD TEQ (ND = 0) | pg/g | 383 | 383 | 100 | 0.00197 JA | 14100 JT | 07R006 | 45.826 | 1.4 JA | 46.31 J | 0.00197 JA | 14100 JT | 07R006 | 45.826 | 1.4 JA | 46.31 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | pg/g | 264 | 264 | 100 | 0.00104 JT | 239 T | G453 | 5.2641 | 0.6795 J | 22.46 J | 0.00104 JT | 239 T | G453 | 5.2641 | 0.6795 J | 22.46 J |
| **PBDE Congeners** | | | | | | | | | | | | | | | | |
| PBDE028 | µg/kg | 86 | 7 | 8.1 | 0.06 J | 0.49 J | G106 | 0.2 | 0.15 J | 0.42 J | 0.06 J | 1.4 U | G046 | 0.49 | 0.5 U | 0.6 U |
| PBDE047 | µg/kg | 86 | 83 | 96.5 | 0.11 J | 5.2 | G106 | 1.4 | 1.4 | 3.6 | 0.11 J | 5.2 | G106 | 1.4 | 1.4 | 3.5 |
| PBDE099 | µg/kg | 86 | 82 | 95.3 | 0.12 J | 8.2 | G085 | 1.6 | 1.4 | 4.4 | 0.12 J | 8.2 | G085 | 1.6 | 1.4 | 4.2 |
| PBDE100 | µg/kg | 86 | 75 | 87.2 | 0.02 J | 4.6 | G380 | 0.49 | 0.41 J | 1.4 | 0.02 J | 4.6 | G380 | 0.49 | 0.44 J | 1.4 |
| PBDE153 | µg/kg | 86 | 55 | 64 | 0.18 JT | 1.5 | G085 | 0.42 | 0.32 J | 1.1 | 0.18 JT | 1.5 | G085 | 0.45 | 0.42 U | 0.96 J |
| PBDE154 | µg/kg | 86 | 59 | 68.6 | 0.13 J | 1.1 J | G106 | 0.34 | 0.29 J | 0.89 J | 0.13 J | 1.2 U | G273 | 0.39 | 0.37 J | 0.79 J |
| PBDE183 | µg/kg | 86 | 13 | 15.1 | 0.09 J | 1.8 | G617 | 0.73 | 0.53 J | 1.6 | 0.09 J | 1.8 | G617 | 0.55 | 0.5 U | 0.87 J |
| PBDE209 | µg/kg | 86 | 67 | 77.9 | 2 J | 440 JT | G431 | 23 | 6.3 J | 58 J | 2 J | 440 JT | G431 | 19 | 5.7 J | 57 J |
| **Pesticides** | | | | | | | | | | | | | | | | |
| 2,4'-DDD | µg/kg | 1108 | 716 | 64.6 | 0.0322 J | 710 | 07R006 | 11.8 | 1.2 J | 55.28 J | 0.0272 U | 710 | 07R006 | 8.007 | 0.926 J | 25.71 |
| 2,4'-DDE | µg/kg | 1107 | 266 | 24 | 0.00495 J | 1000 | 07R006 | 9.8069 | 0.835 J | 24.325 J | 0.00495 J | 1000 | 07R006 | 2.9659 | 0.2 U | 6.322 J |
| 2,4'-DDT | µg/kg | 1108 | 571 | 51.5 | 0.0157 J | 2000 | AP02APG | 18.21 | 0.73 J | 33.25 | 0.0157 J | 2000 | AP02APG | 9.846 | 0.4425 | 12 J |
| 4,4'-DDD | µg/kg | 1249 | 1034 | 82.8 | 0.051 NJ | 11000 | OSS004 | 43.71 | 2.215 | 110 | 0.041 U | 11000 | OSS004 | 36.42 | 1.9 | 82.22 J |
| 4,4'-DDE | µg/kg | 1246 | 1021 | 81.9 | 0.052 J | 2240 J | G453 | 15.93 | 2.2 J | 33.2 NJ | 0.027 U | 2240 J | G453 | 13.74 | 2 | 31.98 J |
| 4,4'-DDT | µg/kg | 1234 | 846 | 68.6 | 0.0613 J | 81000 | OSS002 | 259.8 | 2.21 J | 295 J | 0.0478 U | 81000 | OSS002 | 178.6 | 1.365 J | 141.1 J |
| Aldrin | µg/kg | 1146 | 268 | 23.4 | 0.00333 J | 691 J | G355 | 4.8871 | 0.503 J | 10.156 J | 0.00333 J | 691 J | G355 | 1.9569 | 0.17 U | 5 U |
| alpha-Endosulfan | µg/kg | 1184 | 154 | 13 | 0.0183 JT | 21.1 NJ | G269 | 0.6649 | 0.19 J | 1.705 J | 0.0125 U | 99 U | SD090; SD097 | 0.8262 | 0.095 U | 1.893 J |
| alpha-Hexachlorocyclohexane | µg/kg | 1164 | 205 | 17.6 | 0.00238 J | 10 J | G453 | 0.57274 | 0.253 NJ | 2.214 J | 0.00139 U | 99 U | SD090; SD097 | 0.73457 | 0.10475 J | 1.675 U |
| beta-Endosulfan | µg/kg | 1184 | 177 | 14.9 | 0.0303 J | 235 NJ | G334 | 2.298 | 0.373 NJ | 2.192 J | 0.015 U | 235 NJ | G334 | 1.448 | 0.115 U | 2.848 U |
| beta-Hexachlorocyclohexane | µg/kg | 1184 | 442 | 37.3 | 0.00138 J | 20.3 J | G274 | 2.5702 | 1.795 J | 7.1575 J | 0.00112 U | 99 U | SD090; SD097 | 1.7732 | 0.55 U | 6.6285 J |
| Chlordane (cis & trans) | µg/kg | 189 | 1 | 0.5 | 26 | 26 | WR-PG-16 | 26 | 26 | 26 | 1.6 U | 150 U | GATX-SD4; GATX-SD5 | 6.5 | 2.65 UJ | 23 |
| Chlordane (technical) | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 8.8 U | 919 U | S3 | 109 | 40.5 U | 388 U |
| cis-Chlordane | µg/kg | 1170 | 395 | 33.8 | 0.00955 J | 203 J | G453 | 1.953 | 0.269 J | 6.982 J | 0.00955 J | 203 J | G453 | 1.3908 | 0.165 J | 4.7122 U |
| cis-Nonachlor | µg/kg | 1056 | 257 | 24.3 | 0.00457 J | 378 NJ | G355 | 3.1549 | 0.387 J | 8.016 J | 0.00457 J | 700 U | G778 | 2.111 | 0.205 U | 3.715 J |
| delta-Hexachlorocyclohexane (Lindane) | µg/kg | 1181 | 150 | 12.7 | 0.0018 JT | 5.33 | 22B04 | 0.54638 | 0.3355 J | 2.1775 J | 0.00116 U | 99 U | SD090; SD097 | 0.84161 | 0.115 U | 1.95 U |
| Dieldrin | µg/kg | 1190 | 252 | 21.2 | 0.00834 J | 356 J | G453 | 2.5619 | 0.28 J | 6.0135 J | 0.00834 J | 356 J | G453 | 1.9188 | 0.19 U | 4.092 J |
| Endosulfan sulfate | µg/kg | 1180 | 65 | 5.5 | 0.00837 J | 240 T | SD092 | 5.9397 | 0.183 J | 10.982 J | 0.00837 J | 240 T | SD092 | 1.4699 | 0.115 U | 2.905 UJ |
| Endrin | µg/kg | 937 | 83 | 8.9 | 0.00984 J | 32 J | AP04CPG | 4.1196 | 0.82 NJ | 20.79 J | 0.00984 J | 200 U | SD090; SD097 | 1.7946 | 0.155 U | 7.338 J |
| Endrin aldehyde | µg/kg | 1184 | 53 | 4.5 | 0.1 NJ | 215 | OSS004 | 5.866 | 0.47 J | 9.554 J | 0.0368 U | 215 | OSS004 | 1.43 | 0.105 U | 3.243 UJ |

Table D1.3-2. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Endrin ketone | µg/kg | 1170 | 199 | 17 | 0.00547 J | 90.1 NJ | G453 | 1.908 | 0.6 NJ | 6.41 J | 0.00208 UT | 200 U | SD090; SD097 | 1.5771 | 0.19 U | 4.744 J |
| gamma-Hexachlorocyclohexane | µg/kg | 1195 | 206 | 17.2 | 0.0031 J | 430 | 07R006 | 4.4154 | 1.195 J | 7.9075 J | 0.0031 J | 430 | 07R006 | 1.5344 | 0.21 U | 5.416 J |
| Heptachlor | µg/kg | 1195 | 72 | 6 | 0.00264 J | 6 | PSY01 | 0.67449 | 0.285 J | 3.55 J | 0.00141 U | 99 U | SD090; SD097 | 0.7825 | 0.095 U | 2.004 |
| Heptachlor epoxide | µg/kg | 1183 | 92 | 7.8 | 0.00161 JT | 17 J | AP04CPG | 1.4002 | 0.33 J | 6.975 J | 0.00161 JT | 360 U | OSS004 | 1.0286 | 0.11 U | 2.675 J |
| Hexachlorocyclohexanes | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 40 U | OSS001; OSS002; OSS004; OSS006 | 10 | 5 U | 20 U |
| Methoxychlor | µg/kg | 1184 | 118 | 10 | 0.048 J | 33.6 NJ | G333 | 3.993 | 1.735 J | 19.29 J | 0.0226 U | 990 U | SD090; SD097 | 4.662 | 0.225 U | 9.102 J |
| Mirex | µg/kg | 963 | 36 | 3.7 | 0.095 J | 50 NJ | C525 | 4.132 | 0.45 J | 20.25 J | 0.0303 U | 130 U | 07R003 | 0.4608 | 0.065 U | 0.6963 J |
| Oxychlordane | µg/kg | 1056 | 93 | 8.8 | 0.00484 JT | 24.4 NJ | G390 | 2.6759 | 1.03 J | 10.82 J | 0.00195 UT | 130 U | 07R003 | 0.67444 | 0.08 U | 2.5638 U |
| Total chlordanes | µg/kg | 1193 | 761 | 63.8 | 0.031 JT | 669 NJT | G355 | 5.035 | 0.84 NJT | 12.4 NJT | 0.031 JT | 700 UT | G778 | 4.771 | 0.85 UA | 13.64 J |
| Total endosulfan | µg/kg | 1184 | 340 | 28.7 | 0.00837 JT | 240 T | SD092 | 2.633 | 0.3085 J | 5.8825 | 0.00837 JT | 240 T | SD092 | 1.9258 | 0.2435 J | 5 U |
| Total DDD | µg/kg | 1249 | 1060 | 84.9 | 0.051 NJT | 11000 A | OSS004 | 50.6 | 3.29 J | 122.3 J | 0.041 UT | 11000 A | OSS004 | 43.25 | 2.6 A | 109.2 J |
| DDx | µg/kg | 1249 | 1130 | 90.5 | 0.051 NJT | 84909 A | OSS002 | 267.96 | 7.495 J | 459.55 J | 0.051 NJT | 84909 A | OSS002 | 242.76 | 6.69 NJT | 371.08 J |
| Total DDE | µg/kg | 1246 | 1025 | 82.3 | 0.052 JT | 2530 NJT | G453 | 18.42 | 2.3 T | 38.74 J | 0.0384 UT | 2530 NJT | G453 | 16.03 | 2.15 J | 37.93 J |
| Total DDT | µg/kg | 1248 | 936 | 75 | 0.077 JT | 81000 A | OSS002 | 245.9 | 2.55 J | 277 J | 0.0441 UJT | 81000 A | OSS002 | 185 | 1.745 J | 153.3 J |
| Total 4,4'-DDx | µg/kg | 995 | 874 | 87.8 | 0.051 JT | 84909 T | OSS002 | 317.42 | 6.6 J | 512.3 J | 0.051 JT | 84909 T | OSS002 | 279.19 | 5.31 JT | 405.74 J |
| Toxaphene | µg/kg | 1174 | 2 | 0.2 | 48 NJ | 470 | C299 | 259 | 259 J | 449 J | 3.4 U | 9900 U | SD090; SD097 | 75.4 | 10 U | 150 UJ |
| trans-Chlordane | µg/kg | 1172 | 568 | 48.5 | 0.0105 J | 445 NJ | G453 | 2.273 | 0.3805 J | 5 J | 0.0105 J | 445 NJ | G453 | 1.956 | 0.35 J | 5.5 J |
| trans-Nonachlor | µg/kg | 1055 | 382 | 36.2 | 0.0103 J | 226 NJ | G355 | 1.855 | 0.25 J | 4.169 J | 0.0103 J | 226 NJ | G355 | 1.059 | 0.18 J | 2.38 J |
| **PAHs** | | | | | | | | | | | | | | | | |
| 1,6,7-Trimethylnaphthalene | µg/kg | 64 | 46 | 71.9 | 0.24 J | 220 | T4-UP14 | 24.2 | 12 | 91.8 | 0.24 J | 276 UJ | T4-IM-09 | 28.4 | 12.4 | 117 UJ |
| 1-Methylnaphthalene | µg/kg | 289 | 272 | 94.1 | 0.24 J | 13000 J | SL004 | 91.4 | 3.6 J | 122 J | 0.24 J | 13000 J | SL004 | 87.3 | 3.7 | 120 J |
| 1-Methylphenanthrene | µg/kg | 51 | 48 | 94.1 | 0.38 J | 1800 | T4-UP13 | 99 | 24 | 210 | 0.38 J | 1800 | T4-UP13 | 94 | 22 | 210 |
| 2,6-Dimethylnaphthalene | µg/kg | 64 | 53 | 82.8 | 0.2 J | 250 | T4-UP13 | 31.7 | 12 | 129 J | 0.2 J | 250 | T4-UP13 | 30.1 | 12.4 | 109 J |
| 2-Methylnaphthalene | µg/kg | 1508 | 1202 | 79.7 | 0.37 J | 53000 | GS04APG2 | 301 | 8.3 | 280 | 0.37 J | 53000 | GS04APG2 | 254 | 9.5 U | 254 J |
| Acenaphthene | µg/kg | 1661 | 1381 | 83.1 | 0.21 J | 430000 | G225 | 1365 | 19 | 1800 | 0.18 U | 430000 | G225 | 1138.3 | 12 | 1358 |
| Acenaphthylene | µg/kg | 1661 | 1263 | 76 | 0.27 J | 54000 | G225 | 182 | 10 | 300 | 0.27 J | 54000 | G225 | 146 | 9.5 UT | 226 T |
| Anthracene | µg/kg | 1661 | 1446 | 87.1 | 0.35 J | 390000 | G225 | 1191 | 28 J | 1675 J | 0.24 U | 390000 | G225 | 1040 | 21.2 JT | 1400 J |
| Benzo(a)anthracene | µg/kg | 1661 | 1585 | 95.4 | 0.5 J | 320000 | G225 | 1584.2 | 82 | 4080 | 0.5 J | 320000 | G225 | 1513.9 | 73 | 4000 |
| Benzo(a)pyrene | µg/kg | 1661 | 1581 | 95.2 | 0.86 J | 340000 | G225 | 1931.1 | 93 | 5000 | 0.24 U | 340000 | G225 | 1840.4 | 85 | 4900 |
| Benzo(b)fluoranthene | µg/kg | 1553 | 1500 | 96.6 | 0.87 J | 300000 | G225 | 1595 | 99.5 | 4105 | 0.72 U | 300000 | G225 | 1543 | 94 | 4100 J |
| Benzo(b+k)fluoranthene | µg/kg | 607 | 547 | 90.1 | 3.7 J | 108000 T | AN-1-3 | 2430 | 195 T | 11200 | 3.26 U | 108000 T | AN-1-3 | 2190 | 175 T | 9930 |
| Benzo(e)pyrene | µg/kg | 320 | 318 | 99.4 | 1.6 J | 32000 | T4-UP13 | 962.8 | 68.5 | 4130 | 0.9 U | 32000 | T4-UP13 | 956.8 | 64 | 4110 |
| Benzo(g,h,i)perylene | µg/kg | 1661 | 1554 | 93.6 | 0.5 J | 180000 | G225 | 1383.4 | 73.7 | 3935 J | 0.5 J | 180000 | G225 | 1296.3 | 64 | 3600 |
| Benzo(j+k)fluoranthene | µg/kg | 32 | 32 | 100 | 25 | 8273 | LPSG-S-021-R-1 | 476.9 | 123 | 982.8 | 25 | 8273 | LPSG-S-021-R-1 | 476.9 | 123 | 982.8 |
| Benzo(k)fluoranthene | µg/kg | 1519 | 1449 | 95.4 | 0.77 J | 100000 | G225 | 885 | 48 | 3060 | 0.36 U | 100000 | G225 | 847 | 43 | 2810 |
| Benzofluoranthenes | µg/kg | 32 | 32 | 100 | 53 | 15730 | LPSG-S-021-R-1 | 929.1 | 248.5 | 1896 | 53 | 15730 | LPSG-S-021-R-1 | 929.1 | 248.5 | 1896 |
| C1-Chrysene | µg/kg | 274 | 270 | 98.5 | 2.1 | 23000 J | SL004 | 481.2 | 64.5 | 1188 | 2.1 | 23000 J | SL004 | 474.2 | 61 | 1156 |
| C1-Dibenzothiophene | µg/kg | 274 | 242 | 88.3 | 0.54 J | 25000 J | SL004 | 169.5 | 7.25 | 331.4 | 0.21 U | 25000 J | SL004 | 150.3 | 6.7 | 307 |
| C1-Fluoranthene/pyrene | µg/kg | 274 | 272 | 99.3 | 3.6 | 27000 J | G639; SL004 | 806.02 | 85.5 | 2239.5 | 3.6 | 27000 J | G639; SL004 | 800.17 | 83 | 2228.5 |
| C1-Fluorene | µg/kg | 274 | 258 | 94.2 | 0.6 J | 15000 J | SL004 | 196.5 | 8.9 | 372.4 | 0.5 U | 15000 J | SL004 | 185.3 | 8.2 | 350.8 |
| C1-Naphthalene | µg/kg | 50 | 33 | 66 | 4 | 3478 | LPSG-S-021-R-1 | 136.5 | 18 | 160.6 | 4 | 3478 | LPSG-S-021-R-1 | 93.86 | 13 | 112.1 |
| C1-Phenanthrene/anthracene | µg/kg | 274 | 271 | 98.9 | 1.3 J | 70000 J | G609 | 915.51 | 45 | 1785.5 | 1.3 J | 70000 J | G609 | 905.52 | 43.5 | 1768.9 |
| C2-Chrysene | µg/kg | 274 | 265 | 96.7 | 1.4 J | 30000 J | SL004 | 323.1 | 39 | 608 | 0.25 U | 30000 J | SL004 | 312.7 | 37 | 603.5 |
| C2-Dibenzothiophene | µg/kg | 274 | 259 | 94.5 | 0.78 J | 22000 J | SL004 | 257.7 | 16 | 534.6 | 0.21 U | 22000 J | SL004 | 243.8 | 14 | 512.5 |
| C2-Fluoranthene/pyrene | µg/kg | 256 | 252 | 98.4 | 2.1 J | 37000 J | SL004 | 436.6 | 46 | 863.5 | 0.61 U | 37000 J | SL004 | 429.8 | 45.5 | 817.5 |
| C2-Fluorene | µg/kg | 274 | 261 | 95.3 | 0.69 J | 36000 J | SL004 | 287.5 | 14 | 590 | 0.69 J | 36000 J | SL004 | 274.2 | 12.5 | 560.1 |
| C2-Naphthalene | µg/kg | 274 | 258 | 94.2 | 0.54 J | 72000 J | SL004 | 569.9 | 15 | 606.8 | 0.54 J | 72000 J | SL004 | 536.9 | 12.5 | 587.3 |
| C2-Phenanthrene/anthracene | µg/kg | 274 | 270 | 98.5 | 1.7 J | 67000 J | SL004 | 762.2 | 53.85 | 1455 | 1.7 J | 67000 J | SL004 | 753.2 | 53.35 | 1435 |
| C3-Chrysene | µg/kg | 274 | 247 | 90.1 | 2.6 | 25000 J | SL004 | 223 | 28 | 505 | 0.25 U | 25000 J | SL004 | 208 | 29 | 424 |
| C3-Dibenzothiophene | µg/kg | 274 | 249 | 90.9 | 0.78 J | 21000 J | SL004 | 211.7 | 18 | 476 | 0.21 U | 21000 J | SL004 | 196.1 | 15 | 461 |
| C3-Fluoranthene/pyrene | µg/kg | 256 | 250 | 97.7 | 1.5 J | 39000 J | SL004 | 327.7 | 30 | 558 | 0.61 U | 39000 J | SL004 | 320 | 29 | 510 |
| C3-Fluorene | µg/kg | 274 | 254 | 92.7 | 2 J | 51000 J | SL004 | 373.6 | 21 | 735.2 | 0.5 U | 51000 J | SL004 | 346.7 | 19 | 615.7 |
| C3-Naphthalene | µg/kg | 274 | 259 | 94.5 | 0.47 J | 91000 J | SL004 | 633.8 | 11 | 1100 | 0.47 J | 91000 J | SL004 | 599.4 | 10 | 911.5 |
| C3-Phenanthrene/anthracene | µg/kg | 274 | 269 | 98.2 | 1.7 J | 66000 J | SL004 | 551.3 | 44 | 1100 | 0.75 U | 66000 J | SL004 | 544.5 | 43.5 | 1100 |
| C4-Chrysene | µg/kg | 274 | 161 | 58.8 | 2.5 | 20000 J | SL004 | 180 | 18 | 219 | 0.25 U | 20000 J | SL004 | 114 | 10 | 174 |
| C4-Dibenzothiophene | µg/kg | 32 | 32 | 100 | 12 | 604 | LPSG-S-021-R-1 | 65.6 | 33.5 | 194 | 12 | 604 | LPSG-S-021-R-1 | 65.6 | 33.5 | 194 |
| C4-Naphthalene | µg/kg | 274 | 256 | 93.4 | 0.75 J | 63000 J | SL004 | 411.6 | 14 | 758.5 | 0.37 U | 63000 J | SL004 | 384.8 | 12 | 720.3 |
| C4-Phenanthrene/anthracene | µg/kg | 274 | 261 | 95.3 | 1.9 J | 48000 J | SL004 | 322 | 22 | 570 | 0.75 U | 48000 J | SL004 | 307 | 20 | 564 |

Table D1.3-2. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Chrysene | µg/kg | 1661 | 1604 | 96.6 | 1.4 J | 370000 | G225 | 1856.2 | 110 | 4900 | 0.45 U | 370000 | G225 | 1794.6 | 102 | 4500 |
| Dibenzo(a,h)anthracene | µg/kg | 1661 | 1357 | 81.7 | 0.22 J | 25000 | G225 | 242.3 | 19 | 862 J | 0.22 J | 25000 | G225 | 204.7 | 12 | 660 |
| Dibenzothiophene | µg/kg | 274 | 260 | 94.9 | 0.28 J | 11000 | G609 | 202.4 | 7.35 | 648.2 | 0.21 U | 11000 | G609 | 192.2 | 6 | 622.9 |
| Fluoranthene | µg/kg | 1669 | 1632 | 97.8 | 0.8 J | 1200000 | G225 | 4228.7 | 180 | 10670 | 0.8 J | 1200000 | G225 | 4136.4 | 171 | 10000 |
| Fluorene | µg/kg | 1661 | 1382 | 83.2 | 0.28 J | 220000 | G225 | 757.4 | 17 | 1097 | 0.21 U | 220000 | G225 | 633.6 | 11 | 850 |
| Total HPAHs | µg/kg | 1661 | 1640 | 98.7 | 2.16 JT | 4350000 T | G225 | 19383 | 984.5 | 49635 J | 2.16 JT | 4350000 T | G225 | 19139 | 948 JT | 48400 T |
| Indeno(1,2,3-cd)pyrene | µg/kg | 1661 | 1547 | 93.1 | 0.9 J | 210000 | G225 | 1446 | 73 | 4340 | 0.26 U | 210000 | G225 | 1349 | 62 | 3800 |
| Total LPAHs | µg/kg | 1661 | 1582 | 95.2 | 0.65 JT | 2910000 T | G225 | 8062 | 190 J | 11095 | 0.65 JT | 2910000 T | G225 | 7682.6 | 175 T | 10300 JA |
| Naphthalene | µg/kg | 1666 | 1125 | 67.5 | 0.27 J | 73000 J | AN-1-3; G225; G294-1 | 484 | 27 | 587 | 0.27 J | 73000 J | AN-1-3; G225; G294-1 | 334 | 14 | 368 |
| Perylene | µg/kg | 320 | 318 | 99.4 | 0.95 J | 13000 | T4-UP13 | 422 | 58.5 | 1700 | 0.32 U | 13000 | T4-UP13 | 419.4 | 58 | 1700 |
| Phenanthrene | µg/kg | 1661 | 1576 | 94.9 | 0.53 J | 1700000 | G225 | 4417.1 | 96 | 6250 | 0.53 J | 1700000 | G225 | 4192.7 | 84 | 5600 |
| Pyrene | µg/kg | 1661 | 1629 | 98.1 | 0.57 J | 1300000 | G225 | 4756.3 | 183 | 10480 J | 0.54 U | 1300000 | G225 | 4665.1 | 178 J | 10000 |
| Total BaPEq | µg/kg | 1661 | 1613 | 97.1 | 0.00314 JT | 449000 T | G225 | 2565.552 | 130 T | 7070 | 0.00314 JT | 449000 T | G225 | 2493.463 | 122 T | 6740 T |
| Total cPAHs | µg/kg | 1661 | 1613 | 97.1 | 0.5 JT | 1700000 T | G225 | 9356 | 530 T | 25000 | 0.5 JT | 1700000 T | G225 | 9087.7 | 490 T | 25000 T |
| Total PAHs | µg/kg | 1661 | 1640 | 98.7 | 3.3 JT | 7260000 T | G225 | 27166.6 | 1180 | 66630 J | 3.3 JT | 7260000 T | G225 | 26824.3 | 1150 JT | 66100 T |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl) phthalate | µg/kg | 1513 | 932 | 61.6 | 7 J | 440000 J | G367 | 1050 | 140 | 2200 | 2 U | 440000 J | G367 | 751 | 94 J | 1720 |
| Butylbenzyl phthalate | µg/kg | 1504 | 470 | 31.3 | 2.2 J | 2800 | G111 | 60.1 | 18 J | 200 J | 1.6 U | 10000 U | GRAB-05 | 46.2 | 9.5 U | 160 |
| Dibutyl phthalate | µg/kg | 1503 | 493 | 32.8 | 3.5 J | 1800 | G093 | 41 | 14 | 118 | 2.9 U | 20000 U | A2GS12; HA-43 | 69.2 | 10 U | 139 UJ |
| Diethyl phthalate | µg/kg | 1500 | 167 | 11.1 | 1.6 J | 370 | G093 | 9.47 | 3.8 J | 18 J | 1.3 U | 10000 U | GRAB-05 | 31 | 5 U | 103 U |
| Dimethyl phthalate | µg/kg | 1505 | 77 | 5.1 | 0.6 J | 171 | PSY03 | 23.8 | 13 | 75.6 J | 0.6 J | 10000 U | GRAB-05 | 29.8 | 4.5 J | 95.8 U |
| Di-n-octyl phthalate | µg/kg | 1500 | 129 | 8.6 | 3.4 J | 15400 JT | PP01M101 | 511 | 46 T | 2170 J | 1.3 U | 15400 JT | PP01M101 | 73.4 | 4.68 U | 138 UJ |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | µg/kg | 1336 | 18 | 1.3 | 3.1 J | 310 J | G355 | 45.2 | 8.8 J | 208 J | 0.44 U | 2640 U | SED03 | 16.8 | 2.7 U | 89.3 UJ |
| 1,2-Dichlorobenzene | µg/kg | 1386 | 18 | 1.3 | 0.16 J | 610 J | BT017 | 49.7 | 4.7 J | 227 J | 0.092 U | 8000 U | SED03 | 20 | 2.5 U | 89.8 U |
| 1,3-Dichlorobenzene | µg/kg | 1383 | 4 | 0.3 | 3.6 J | 98 | RP03CPG | 36.2 | 21.7 J | 89 J | 0.14 U | 8000 U | SED03 | 20.3 | 2.95 U | 89.9 U |
| 1,4-Dichlorobenzene | µg/kg | 1392 | 36 | 2.6 | 0.38 J | 730 J | G505 | 59.6 | 7.45 J | 360 J | 0.14 U | 8000 U | SED03 | 19.7 | 2.5 U | 83.2 UJ |
| 2,4-Dinitrotoluene | µg/kg | 1306 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 20400 U | S3 | 49.5 | 3.85 U | 112 UJ |
| 2,6-Dinitrotoluene | µg/kg | 1307 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 U | 10000 U | A2GS12 | 38.4 | 4.75 U | 114 U |
| 2-Chloronaphthalene | µg/kg | 1307 | 1 | 0.1 | 83 | 83 | G7321 | 83 | 83 | 83 | 1.24 UT | 6600 U | A2GS12 | 23.7 | 4.35 U | 60 UJ |
| 2-Nitroaniline | µg/kg | 1307 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.9 U | 6600 U | A2GS12 | 34.9 | 4.55 UJ | 115 U |
| 3,3'-Dichlorobenzidine | µg/kg | 1278 | 1 | 0.1 | 77 J | 77 J | G067 | 77 | 77 J | 77 J | 3.7 UJ | 20000 U | A2GS12 | 67.4 | 7 UJ | 145 U |
| 3-Nitroaniline | µg/kg | 1303 | 1 | 0.1 | 475 J | 475 J | PP01M103 | 475 | 475 J | 475 J | 2.5 U | 20000 U | A2GS12 | 62.6 | 4.4 U | 134 UJ |
| 4-Bromophenyl phenyl ether | µg/kg | 1308 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 6600 U | A2GS12 | 21.8 | 2.4 U | 82.3 UJ |
| 4-Chloroaniline | µg/kg | 1301 | 4 | 0.3 | 10 J | 14 J | G629 | 12.3 | 12.5 J | 13.9 J | 1.9 U | 40000 U | A2GS12 | 77.6 | 3.6 U | 95 U |
| 4-Chlorophenyl phenyl ether | µg/kg | 1308 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 6600 U | A2GS12 | 23.4 | 3.4 UJ | 89.6 U |
| 4-Nitroaniline | µg/kg | 1304 | 2 | 0.2 | 39 J | 96 | G099 | 67.5 | 67.5 J | 93.2 J | 1.8 U | 6600 U | A2GS12 | 38.9 | 4.63 U | 128 UJ |
| Aniline | µg/kg | 1071 | 18 | 1.7 | 6.6 J | 670 | G401 | 54.2 | 15 J | 181 J | 1.5 UJ | 1600 UJT | 52C05 | 15.8 | 1.9 UJ | 78.5 U |
| Azobenzene | µg/kg | 994 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.1 UJ | 1400 U | G264 | 9.5 | 2.8 U | 29 U |
| Benzoic acid | µg/kg | 1290 | 93 | 7.2 | 40 J | 4110 J | PP01M106 | 332 | 164 J | 544 J | 40 J | 53000 U | G264 | 387 | 110 UJ | 1050 UJ |
| Benzyl alcohol | µg/kg | 1359 | 176 | 13 | 2.2 J | 244 J | 52A05 | 12.7 | 9.05 J | 22.5 | 2.1 U | 6600 U | A2GS12 | 34 | 7.5 U | 112 UJ |
| Bis(2-chloro-1-methylethyl) ether | µg/kg | 221 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 UJ | 1200 UJ | TOS-SD3 | 24 | 9.5 UT | 100 U |
| Bis(2-chloroethoxy) methane | µg/kg | 1307 | 2 | 0.2 | 29 | 30 | SD04 | 29.5 | 29.5 | 30 | 1.4 U | 6600 U | A2GS12 | 21.8 | 2.2 U | 82.4 UJ |
| Bis(2-chloroethyl) ether | µg/kg | 1307 | 4 | 0.3 | 4.4 J | 14 J | G232; G375 | 9.93 | 10.7 J | 14 J | 1.9 U | 6600 U | A2GS12 | 26.7 | 4.1 U | 95.7 U |
| Bis(2-chloroisopropyl) ether | µg/kg | 1086 | 1 | 0.1 | 3.2 J | 3.2 J | G483 | 3.2 | 3.2 J | 3.2 J | 1.3 U | 6600 U | A2GS12 | 21.7 | 1.53 UJ | 83.6 UJ |
| Carbazole | µg/kg | 1289 | 761 | 59 | 1.4 J | 32000 J | G225 | 260 | 13 | 590 J | 1.3 U | 32000 J | G225 | 160 | 8.2 J | 290 |
| Dibenzofuran | µg/kg | 1494 | 1151 | 77 | 0.25 J | 31000 | G225 | 120 | 6.1 | 253 | 0.19 U | 31000 | G225 | 110 | 7.55 | 250 UJ |
| Diphenyl | µg/kg | 96 | 76 | 79.2 | 0.44 J | 446 | LPSG-S-021-R-1 | 27.9 | 8 | 128 | 0.44 J | 446 | LPSG-S-021-R-1 | 24.6 | 7.8 | 107 J |
| Hexachlorobenzene | µg/kg | 1387 | 432 | 31.1 | 0.0122 J | 340 | OSS004 | 4.14 | 0.66 J | 6.504 J | 0.0122 J | 10000 U | GRAB-05 | 18.98 | 1.17 | 12.35 J |
| Hexachlorobutadiene | µg/kg | 1414 | 83 | 5.9 | 0.065 J | 230 T | SD092 | 8.8909 | 0.545 J | 34.2 J | 0.00175 UJ | 10200 U | S3 | 27.159 | 0.175 U | 15.35 U |
| Hexachlorocyclopentadiene | µg/kg | 1301 | 0 | 0 | -- | -- | -- | -- | -- | -- | 12.4 UT | 20000 U | A2GS12 | 104 | 20 U | 295 U |
| Hexachloroethane | µg/kg | 1350 | 119 | 8.8 | 0.11 J | 1600 | OSS004 | 37.27 | 1.45 J | 75.1 | 0.037 U | 20000 U | A2GS12 | 35.87 | 0.25 UJ | 20 U |
| Isophorone | µg/kg | 1307 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 6600 U | A2GS12 | 22.1 | 2.5 U | 85 U |
| Nitrobenzene | µg/kg | 1307 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.2 U | 6600 U | A2GS12 | 23.5 | 3.4 U | 89.7 U |
| N-Nitrosodimethylamine | µg/kg | 1123 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.1 UJ | 8020 UJT | 52C05 | 52.7 | 7.5 UJ | 243 U |
| N-Nitrosodiphenylamine | µg/kg | 1362 | 19 | 1.4 | 2 J | 360 J | SDUD1SS | 56.4 | 9.9 J | 315 J | 1.6 U | 60000 U | GRAB-05 | 45.9 | 4 U | 91 UJ |
| N-Nitrosodipropylamine | µg/kg | 1307 | 1 | 0.1 | 3 J | 3 J | SD02 | 3 | 3 J | 3 J | 2.4 U | 6600 U | A2GS12 | 28.5 | 4.95 U | 99.4 UJ |
| Pyridine | µg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 382 UJ | 382 UJ | PP01M101 | 191 | 191 UJ | 191 UJ |

Table D1.3-2. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Phenols** | | | | | | | | | | | | | | | | |
| 2,3,4,5-Tetrachlorophenol | µg/kg | 1018 | 25 | 2.5 | 0.62 J | 180 J | G355 | 15 | 2.9 J | 50 J | 0.25 U | 1600 U | CP09DPG | 7.9 | 2.4 U | 48 U |
| 2,3,4,6;2,3,5,6-Tetrachlorophenol coelution | µg/kg | 548 | 12 | 2.2 | 1 J | 120 J | B010 | 18 | 2.2 J | 81 J | 0.39 U | 370 U | G339 | 2.4 | 1.8 U | 2.5 U |
| 2,3,4,6-Tetrachlorophenol | µg/kg | 146 | 0 | 0 | -- | -- | -- | -- | -- | -- | 9.63 U | 1600 UJT | 52C05 | 67.2 | 48.5 U | 185 U |
| 2,3,5,6-Tetrachlorophenol | µg/kg | 548 | 22 | 4 | 0.38 NJ | 28 | 4806 | 4.93 | 1.7 J | 14.9 J | 0.2 U | 1600 UJT | 52C05 | 18.7 | 0.468 U | 94.7 U |
| 2,4,5-Trichlorophenol | µg/kg | 1364 | 12 | 0.9 | 0.78 J | 48 J | G302 | 11.6 | 5.7 J | 42.5 J | 0.31 U | 6600 U | A2GS12 | 27.6 | 1.6 U | 60 U |
| 2,4,6-Trichlorophenol | µg/kg | 1364 | 39 | 2.9 | 0.21 NJ | 220 | CP07DPG | 16 | 1.6 NJ | 71.1 J | 0.13 U | 6600 U | A2GS12 | 27.1 | 1.8 U | 71.8 J |
| 2,4-Dichlorophenol | µg/kg | 1377 | 7 | 0.5 | 4.7 J | 120 | G332 | 41.8 | 36 J | 102 | 1 U | 6600 U | A2GS12 | 30.6 | 2.95 U | 91.3 UJ |
| 2,4-Dimethylphenol | µg/kg | 1357 | 6 | 0.4 | 7 | 300 | 09R002 | 122 | 59.2 J | 298 | 5.5 UJ | 20000 U | A2GS12 | 59.9 | 9.4 U | 120 U |
| 2,4-Dinitrophenol | µg/kg | 1337 | 0 | 0 | -- | -- | -- | -- | -- | -- | 17 U | 40000 U | A2GS12 | 211 | 46 U | 600 UJ |
| 2-Chlorophenol | µg/kg | 1360 | 2 | 0.1 | 9.8 J | 54 | G334 | 31.9 | 31.9 J | 51.8 J | 1.9 U | 6600 U | A2GS12 | 24.3 | 3.53 U | 85 UJ |
| 2-Methylphenol | µg/kg | 1415 | 6 | 0.4 | 2.6 J | 290 | G415 | 93.5 | 43 | 262 J | 1.5 U | 12000 U | SD05 | 34.6 | 4.65 U | 103 U |
| 2-Nitrophenol | µg/kg | 1351 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 6600 U | A2GS12 | 33.8 | 3.95 U | 110 U |
| 3- and 4-Methylphenol Coelution | µg/kg | 40 | 0 | 0 | -- | -- | -- | -- | -- | -- | 90 U | 12000 U | SD05 | 473 | 100 U | 1770 U |
| 3,4-Dichlorophenol | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.8 U | 1.3 U | GCA03W | 0.56 | 0.55 UJT | 0.64 U |
| 3,5-Dichlorophenol | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.4 U | 3.8 U | GCA03W | 1.6 | 1.6 U | 1.8 U |
| 4,6-Dinitro-2-methylphenol | µg/kg | 1358 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 20000 U | A2GS12 | 88.7 | 3.45 U | 383 UJ |
| 4-Chloro-3-methylphenol | µg/kg | 1360 | 18 | 1.3 | 2.4 J | 306 | PP011805 | 28.6 | 5.7 J | 104 J | 1.4 U | 6600 U | A2GS12 | 27.2 | 3.65 UJ | 92.6 UJ |
| 4-Methylphenol | µg/kg | 1381 | 674 | 48.8 | 2 J | 2500 | G418 | 122 | 20 J | 630 | 1.5 U | 10000 U | GRAB-05 | 82.6 | 14 | 440 |
| 4-Nitrophenol | µg/kg | 1356 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.0895 U | 20000 U | A2GS12 | 136.4 | 38.83 UJ | 500 UJ |
| Cresol | µg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2640 U | 2640 U | SED03 | 1320 | 1320 U | 1320 U |
| Pentachlorophenol | µg/kg | 1454 | 266 | 18.3 | 0.27 J | 8410 J | 52C01 | 59.2 | 5.91 J | 140 J | 0.167 U | 30500 U | GRAB-05 | 72.1 | 2.5 U | 145 U |
| Phenol | µg/kg | 1415 | 413 | 29.2 | 2.2 J | 680 | G092 | 18 | 10.4 JT | 37.8 J | 2 U | 10000 U | GRAB-05 | 35.5 | 10 U | 100 U |
| Tetrachlorophenol | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 28.9 U | 391 UJ | PP01M103 | 54.1 | 16.7 U | 184 UJ |
| **Petroleum** | | | | | | | | | | | | | | | | |
| C10-C12 Aliphatics | mg/kg | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3 U | 3.5 UJ | C096; C106; C312 | 1.7 | 1.8 UJ | 1.8 U |
| C10-C12 Aromatics | mg/kg | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3 U | 3.5 UJ | C096; C106; C312 | 1.7 | 1.8 UJ | 1.8 U |
| C12-C16 Aliphatics | mg/kg | 5 | 3 | 60 | 7 | 19 J | C312 | 13 | 14 | 19 J | 3.3 U | 19 J | C312 | 8.7 | 7 | 18 J |
| C12-C16 Aromatics | mg/kg | 5 | 2 | 40 | 3.4 | 16 J | C312 | 9.7 | 9.7 J | 15 J | 3.3 U | 16 J | C312 | 4.9 | 1.8 U | 13 J |
| C16-C21 Aliphatics | mg/kg | 5 | 5 | 100 | 17 | 49 J | C312 | 28 | 18 | 46 J | 17 | 49 J | C312 | 28 | 18 | 46 J |
| C16-C21 Aromatics | mg/kg | 5 | 3 | 60 | 27 | 100 J | C312 | 55 | 37 | 94 J | 3.3 U | 100 J | C312 | 33 | 27 | 87 J |
| C21-C34 Aliphatics | mg/kg | 5 | 5 | 100 | 100 | 180 J | C312 | 120 | 110 | 170 J | 100 | 180 J | C312 | 120 | 110 | 170 J |
| C21-C34 Aromatics | mg/kg | 5 | 5 | 100 | 8.2 | 92 J | C312 | 50 | 54 | 91 J | 8.2 | 92 J | C312 | 50 | 54 | 91 J |
| C8-C10 Aliphatics | mg/kg | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3 U | 3.5 UJ | C096; C106; C312 | 1.7 | 1.8 UJ | 1.8 U |
| C8-C10 Aromatics | mg/kg | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3 U | 3.5 UJ | C096; C106; C312 | 1.7 | 1.8 UJ | 1.8 U |
| Diesel fuels | mg/kg | 22 | 22 | 100 | 30 | 450 | SDDC25SS | 130 | 54 | 430 | 30 | 450 | SDDC25SS | 130 | 54 | 430 |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 803 | 745 | 92.8 | 0.046 J | 20000 J | G294-1 | 275 | 84 J | 678 J | 0.046 J | 20000 J | G294-1 | 257 | 80 | 639 J |
| Total Petroleum Hydrocarbons (Diesel)(silica gel treated) | mg/kg | 221 | 186 | 84.2 | 6.2 JT | 8100 J | SL004 | 144 | 46 J | 292 J | 3.3 U | 8100 J | SL004 | 123 | 43 J | 260 J |
| Fuel oil no. 2 | mg/kg | 1 | 1 | 100 | 401 | 401 | SED03 | 401 | 401 | 401 | 401 | 401 | SED03 | 401 | 401 | 401 |
| Total Petroleum Hydrocarbons (Gasoline) | mg/kg | 454 | 64 | 14.1 | 1.2 J | 260 J | GS04APG2 | 21.9 | 7.23 J | 102 J | 0.02 U | 260 J | GS04APG2 | 4.92 | 1.2 U | 20 U |
| Total Petroleum Hydrocarbons (Heavy Oil) | mg/kg | 26 | 20 | 76.9 | 26.7 | 1450 | A2GS12 | 336 | 207 | 1230 | 25 U | 1450 | A2GS12 | 263 | 143 | 1090 |
| Jet fuel A | mg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | RB13 | 5 | 5 U | 5 U |
| JP-4 jet fuel | mg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | RB13 | 5 | 5 U | 5 U |
| Kerosene | mg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | RB13 | 5 | 5 U | 5 U |
| Lube Oil | mg/kg | 127 | 99 | 78 | 7.96 | 3310 T | PP01M101 | 303 | 160 J | 1060 J | 1.03 U | 3310 T | PP01M101 | 246 | 95.8 | 907 |
| Mineral spirits | mg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | RB13 | 5 | 5 U | 5 U |
| Motor oil | mg/kg | 11 | 11 | 100 | 75 T | 300 | T4-S3-06 | 152 | 130 | 260 | 75 T | 300 | T4-S3-06 | 152 | 130 | 260 |
| Naphtha distillate | mg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | RB13 | 5 | 5 U | 5 U |
| Pencil pitch | mg/kg | 31 | 26 | 83.9 | 310 | 3700 | HC-S-20 | 1400 | 1300 J | 2400 | 100 U | 3700 | HC-S-20 | 1200 | 1100 | 2300 |
| Phytane | mg/kg | 31 | 9 | 29 | 0.5 | 6.1 | HC-S-25 | 1.5 | 0.9 | 4.6 | 0.5 | 6.1 | HC-S-25 | 0.62 | 0.25 U | 1.7 |
| Pristane | mg/kg | 31 | 11 | 35.5 | 0.5 | 7 | HC-S-25 | 1.6 | 0.8 | 4.8 | 0.5 | 7 | HC-S-25 | 0.72 | 0.25 U | 2.1 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 661 | 638 | 96.5 | 0.29 | 18000 J | G453 | 672 | 410 J | 1560 J | 0.29 | 18000 J | G453 | 651 | 400 J | 1500 J |
| Total Petroleum Hydrocarbons (Residual) (silica gel | mg/kg | 221 | 205 | 92.8 | 7.1 J | 9400 J | SL015 | 291 | 160 J | 514 J | 7.1 J | 9400 J | SL015 | 272 | 160 J | 490 J |
| Total Petroleum Hydrocarbons | mg/kg | 825 | 789 | 95.6 | 0.34 JT | 33100 JT | G294-1 | 818.9 | 455 JA | 1886 J | 0.34 JT | 33100 JT | G294-1 | 785.3 | 441 JT | 1848 J |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 221 | 211 | 95.5 | 7.1 JA | 17400 JA | SL004 | 410 | 205 JA | 785 J | 7.1 JA | 17400 JA | SL004 | 392 | 199 JA | 740 JT |

Table D1.3-2. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Herbicides** | | | | | | | | | | | | | | | | |
| 2,4,5-T | µg/kg | 217 | 1 | 0.5 | 15.8 | 15.8 | M0201 | 15.8 | 15.8 | 15.8 | 0.11 U | 190 U | 05R041 | 2.22 | 0.75 UT | 4.7 UJ |
| 2,4-D | µg/kg | 218 | 11 | 5 | 9 | 3250 J | G334 | 326 | 28.5 | 1672 J | 0.0753 U | 3250 J | G334 | 18.21 | 0.5975 U | 11.04 |
| 2,4-DB | µg/kg | 218 | 7 | 3.2 | 13 | 344 J | G334 | 89.1 | 23 | 280 J | 0.111 U | 344 J | G334 | 11.4 | 0.835 U | 44 U |
| Dalapon | µg/kg | 217 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.0662 U | 450 U | 03R005 | 8.202 | 0.489 U | 35.8 U |
| Dicamba | µg/kg | 218 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.135 UT | 61 U | GWC1 | 1.41 | 1.49 U | 2.15 U |
| Dichloroprop | µg/kg | 218 | 1 | 0.5 | 9.4 NJ | 9.4 NJ | RP07BPG | 9.4 | 9.4 NJ | 9.4 NJ | 0.12 U | 130 UJ | 07R006 | 2.29 | 0.888 U | 5.37 U |
| Dinoseb | µg/kg | 218 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.152 U | 230 U | GWC1 | 1.68 | 1.04 U | 2.51 UJ |
| MCPA | µg/kg | 218 | 2 | 0.9 | 4.14 | 356 J | G334 | 180 | 180 J | 338 J | 0.16 U | 67000 U | 03R003 | 1070 | 1.2 U | 1650 U |
| MCPP | µg/kg | 218 | 2 | 0.9 | 193 J | 4200 NJ | WR-PG-58 | 2200 | 2200 J | 4000 J | 0.115 UT | 91000 U | 03R040 | 929 | 0.953 U | 2070 U |
| Silvex | µg/kg | 218 | 1 | 0.5 | 5.4 J | 5.4 J | RP03CPG | 5.4 | 5.4 J | 5.4 J | 0.11 U | 44 U | GWC1 | 1.12 | 0.773 U | 2.19 U |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | µg/kg | 306 | 1 | 0.3 | 0.29 J | 0.29 J | BT018 | 0.29 | 0.29 J | 0.29 J | 0.038 U | 322 U | SS-48 | 9.98 | 0.0315 U | 109 U |
| 1,1,1-Trichloroethane | µg/kg | 306 | 1 | 0.3 | 0.91 J | 0.91 J | SDBH6SS | 0.91 | 0.91 J | 0.91 J | 0.072 U | 322 U | SS-48 | 9.99 | 0.06 U | 109 U |
| 1,1,2,2-Tetrachloroethane | µg/kg | 306 | 1 | 0.3 | 3.4 | 3.4 | G326 | 3.4 | 3.4 | 3.4 | 0.12 U | 322 U | SS-48 | 10.1 | 0.1 U | 109 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | µg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UJ | 2 UJ | 08R001 | 1 | 1 UJ | 1 UJ |
| 1,1,2-Trichloroethane | µg/kg | 306 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.072 U | 322 U | SS-48 | 10 | 0.06 U | 109 U |
| 1,1-Dichloroethane | µg/kg | 306 | 3 | 1 | 0.25 J | 0.31 J | CP07APG; CP07DPG | 0.29 | 0.31 J | 0.31 J | 0.07 U | 322 U | SS-48 | 10 | 0.06 U | 109 U |
| 1,1-Dichloroethene | µg/kg | 306 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.08 U | 322 U | SS-48 | 10 | 0.085 U | 109 U |
| 1,1-Dichloropropene | µg/kg | 45 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UJ | 322 U | SS-48 | 66.1 | 50 U | 147 U |
| 1,2,3-Trichlorobenzene | µg/kg | 45 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 UJ | 322 U | SS-48 | 70.7 | 50 U | 147 U |
| 1,2,3-Trichloropropane | µg/kg | 306 | 2 | 0.7 | 0.5 J | 0.86 J | WR-PG-42 | 0.68 | 0.68 J | 0.842 J | 0.14 U | 322 U | SS-48 | 11 | 0.115 U | 125 U |
| 1,2,4-Trimethylbenzene | µg/kg | 48 | 1 | 2.1 | 142 | 142 | A2BGS-5 | 142 | 142 | 142 | 2 UJ | 322 U | SS-48 | 71.3 | 50 U | 147 U |
| 1,2-Dibromo-3-chloropropane | µg/kg | 45 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 UJ | 1610 U | SS-48 | 306 | 250 U | 734 U |
| 1,2-Dichloroethane | µg/kg | 306 | 4 | 1.3 | 0.11 J | 0.36 J | G299 | 0.265 | 0.295 J | 0.359 J | 0.038 U | 322 U | SS-48 | 9.99 | 0.0318 U | 109 U |
| 1,2-Dichloroethene | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 5 U | 50 U | DM-1; DM-16; DM-9 | 14 | 13 U | 25 U |
| 1,2-Dichloropropane | µg/kg | 306 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.043 U | 322 U | SS-48 | 9.99 | 0.0355 U | 109 U |
| 1,3,5-Trimethylbenzene | µg/kg | 48 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UJ | 322 U | SS-48 | 69.3 | 50 U | 147 U |
| 1,3-Dichloropropane | µg/kg | 45 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UJ | 322 U | SS-48 | 66.1 | 50 U | 147 U |
| 1,3-Dichloropropene | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 5 U | 50 U | DM-1; DM-16; DM-9 | 14 | 13 U | 25 U |
| 1,4-Dichloro-trans-2-butene | µg/kg | 262 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.42 U | 120 U | SDUD27SS | 1.6 | 0.49 U | 1.9 U |
| 1-Methyl-4-isopropylbenzene | µg/kg | 28 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UJ | 643 U | SS-48 | 193 | 247 U | 297 U |
| 2,2-Dichloropropane | µg/kg | 45 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UJ | 322 U | SS-48 | 66.1 | 50 U | 147 U |
| 2-Chloroethyl vinyl ether | µg/kg | 261 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.19 U | 56 U | SDUD27SS | 0.72 | 0.15 U | 0.55 U |
| 2-Chlorotoluene | µg/kg | 45 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UJ | 322 U | SS-48 | 70.6 | 50 U | 147 U |
| 4-Chlorotoluene | µg/kg | 45 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UJ | 322 U | SS-48 | 70.6 | 50 U | 147 U |
| Acetone | µg/kg | 300 | 31 | 10.3 | 3.4 J | 2600 | SDBH5SS | 106 | 23 | 70 J | 2 U | 8040 U | SS-48 | 265 | 6 U | 2800 U |
| Acrolein | µg/kg | 41 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.7 U | 560 U | SDUD27SS | 37 | 0.6 U | 130 U |
| Acrylonitrile | µg/kg | 262 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.28 U | 120 U | SDUD27SS | 1.4 | 0.23 U | 0.85 U |
| Benzene | µg/kg | 364 | 46 | 12.6 | 0.074 J | 720 J | AP04D | 20.5 | 0.205 J | 52 | 0.01 U | 720 J | AP04D | 13 | 0.0468 U | 85.2 |
| Bromobenzene | µg/kg | 45 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UJ | 322 U | SS-48 | 66 | 50 U | 147 U |
| Bromochloromethane | µg/kg | 306 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.073 U | 322 U | SS-48 | 10.3 | 0.065 U | 109 U |
| Bromodichloromethane | µg/kg | 306 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.051 U | 322 U | SS-48 | 10 | 0.07 U | 109 U |
| Bromoethane | µg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4 UJ | 4 UJ | 08R001 | 2 | 2 UJ | 2 UJ |
| Bromoform | µg/kg | 306 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.056 U | 322 U | SS-48 | 10.2 | 0.0468 U | 109 U |
| Bromomethane | µg/kg | 306 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.36 U | 2040 U | S3 | 53.5 | 0.37 U | 598 U |
| BTEX | µg/kg | 381 | 86 | 22.6 | 0.074 JT | 3800 T | RC483-2 | 115.9 | 0.7 J | 665.5 J | 0.02 UT | 3800 T | RC483-2 | 43.88 | 0.205 UT | 249 UT |
| Butylbenzene | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 20 U | 100 U | PSY17; PSY29 | 30 | 30 U | 50 U |
| Carbon disulfide | µg/kg | 303 | 27 | 8.9 | 0.11 J | 4.5 | G092 | 0.645 | 0.3 J | 2.24 J | 0.085 U | 3220 U | SS-48 | 93.8 | 0.135 U | 1110 U |
| Carbon tetrachloride | µg/kg | 306 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.063 U | 408 U | S3 | 10.9 | 0.1 U | 119 U |
| Chlorobenzene | µg/kg | 315 | 51 | 16.2 | 0.14 JT | 35000 | AP04D | 1690 | 0.99 | 8360 | 0.072 U | 35000 | AP04D | 283 | 0.075 U | 134 U |
| Chlorodibromomethane | µg/kg | 306 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.083 U | 322 U | SS-48 | 10 | 0.07 U | 109 U |
| Chloroethane | µg/kg | 309 | 2 | 0.6 | 7.7 | 32 | GN05APG | 19.9 | 19.9 | 30.8 | 0.26 U | 500 U | DM-1; DM-16; DM-9 | 13.7 | 0.28 U | 133 U |
| Chloroform | µg/kg | 306 | 13 | 4.2 | 0.087 J | 98 | CP07DPG | 12.3 | 0.13 J | 75.2 | 0.068 U | 322 U | SS-48 | 10.5 | 0.06 U | 109 U |
| Chloromethane | µg/kg | 306 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.095 U | 1610 U | SS-48 | 49.3 | 0.19 U | 548 U |
| cis-1,2-Dichloroethene | µg/kg | 128 | 2 | 1.6 | 0.21 J | 0.27 J | RP03CPG | 0.24 | 0.24 J | 0.267 J | 0.076 U | 322 U | SS-48 | 23 | 0.0825 U | 141 U |
| cis-1,3-Dichloropropene | µg/kg | 298 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.038 U | 322 U | SS-48 | 9.88 | 0.031 U | 113 U |
| Dichlorodifluoromethane | µg/kg | 306 | 37 | 12.1 | 0.2 J | 29 | BT004 | 5.11 | 2.5 | 17.6 | 0.075 U | 1610 U | SS-48 | 49.8 | 0.12 U | 548 U |
| Ethylbenzene | µg/kg | 381 | 34 | 8.9 | 0.11 J | 710 | GS04APG2 | 28.5 | 0.295 J | 83.4 | 0.009 U | 710 | GS04APG2 | 12.6 | 0.085 U | 62 UJ |

Table D1.3-2. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Ethylene dibromide | µg/kg | 306 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.062 U | 322 U | SS-48 | 10.7 | 0.055 U | 109 U |
| Isopropylbenzene | µg/kg | 309 | 45 | 14.6 | 0.073 J | 520 | GS04APG2 | 21.4 | 0.61 J | 29.8 | 0.054 U | 643 U | SS-48 | 23.2 | 0.055 U | 247 U |
| m,p-Xylene | µg/kg | 354 | 28 | 7.9 | 0.08 J | 170 | GS04APG2 | 10.6 | 0.995 J | 60 | 0.02 U | 643 U | SS-48 | 17.7 | 0.145 U | 140 J |
| Methyl iodide | µg/kg | 262 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.42 U | 120 UJ | SDUD27SS | 1.8 | 0.65 U | 2.3 U |
| Methyl isobutyl ketone | µg/kg | 297 | 1 | 0.3 | 0.33 J | 0.33 J | EM03APG | 0.33 | 0.33 J | 0.33 J | 0.3 U | 1610 U | SS-48 | 50.5 | 0.24 U | 570 U |
| Methyl n-butyl ketone | µg/kg | 300 | 1 | 0.3 | 1.8 J | 1.8 J | GN02EPG | 1.8 | 1.8 J | 1.8 J | 0.78 U | 3220 U | SS-48 | 98 | 0.7 U | 1120 U |
| Methyl tert-butyl ether | µg/kg | 285 | 11 | 3.9 | 0.07 J | 0.84 J | G061 | 0.309 | 0.26 J | 0.765 J | 0.048 U | 322 U | SS-48 | 9.31 | 0.0395 U | 120 U |
| Methylene bromide | µg/kg | 306 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.089 U | 322 U | SS-48 | 10 | 0.085 U | 109 U |
| Methylene chloride | µg/kg | 306 | 2 | 0.7 | 0.88 J | 1.3 J | BT004 | 1.09 | 1.09 J | 1.28 J | 0.37 U | 1610 U | SS-48 | 48.9 | 0.865 J | 548 U |
| Methylethyl ketone | µg/kg | 100 | 53 | 53 | 2.1 J | 16 J | SDUD27SS | 4.47 | 4 J | 7.6 J | 2.1 J | 5100 U | S3 | 345 | 6.95 J | 1450 U |
| Methylisopropylbenzene | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 20 U | 100 U | PSY17; PSY29 | 21 | 19 U | 50 U |
| n-Butylbenzene | µg/kg | 37 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4 UJ | 1610 UJ | SS-48 | 354 | 250 U | 737 UJ |
| n-Propylbenzene | µg/kg | 48 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UJ | 534 U | SGP-23 | 73.8 | 50 U | 148 U |
| o-Xylene | µg/kg | 354 | 44 | 12.4 | 0.13 J | 500 | GS04APG2 | 16.5 | 0.515 J | 15.5 | 0.008 U | 500 | GS04APG2 | 10.9 | 0.09 UJ | 105 U |
| Sec-butylbenzene | µg/kg | 45 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UJ | 322 U | SS-48 | 75.6 | 53.5 U | 147 U |
| Styrene | µg/kg | 306 | 1 | 0.3 | 1.1 | 1.1 | G283 | 1.1 | 1.1 | 1.1 | 0.09 U | 322 U | SS-48 | 10 | 0.08 U | 109 U |
| tert-Butylbenzene | µg/kg | 42 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UJ | 322 U | SS-48 | 73.9 | 50 U | 147 U |
| Tetrachloroethene | µg/kg | 354 | 4 | 1.1 | 0.22 J | 2.4 J | SDBH6SS | 0.95 | 0.59 J | 2.18 J | 0.11 U | 322 U | SS-48 | 9.13 | 0.105 U | 58.4 UJ |
| Toluene | µg/kg | 355 | 19 | 5.4 | 0.08 J | 3800 | RC483-2 | 367 | 4.1 | 2360 | 0.02 U | 3800 | RC483-2 | 30.1 | 0.165 U | 115 U |
| trans-1,2-Dichloroethene | µg/kg | 303 | 1 | 0.3 | 0.48 J | 0.48 J | RP03CPG | 0.48 | 0.48 J | 0.48 J | 0.075 U | 322 U | SS-48 | 9.96 | 0.19 U | 111 U |
| trans-1,3-Dichloropropene | µg/kg | 303 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.054 U | 322 U | SS-48 | 9.85 | 0.044 U | 111 U |
| Trichloroethene | µg/kg | 354 | 6 | 1.7 | 0.11 J | 2.3 J | SDBH6SS | 0.677 | 0.295 J | 1.95 J | 0.076 U | 322 U | SS-48 | 9.12 | 0.07 U | 58.4 UJ |
| Trichlorofluoromethane | µg/kg | 306 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.099 U | 500 U | DM-1; DM-16; DM-9 | 12.2 | 0.085 U | 131 U |
| Vinyl acetate | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.49 UJ | 120 U | SDUD27SS | 15 | 19 U | 28 U |
| Vinyl chloride | µg/kg | 306 | 2 | 0.7 | 0.34 J | 0.57 J | C312 | 0.455 | 0.455 J | 0.559 J | 0.11 U | 500 U | DM-1; DM-16; DM-9 | 12.2 | 0.09 UJ | 131 U |
| Xylene | µg/kg | 381 | 45 | 11.8 | 0.14 JT | 670 T | GS04APG2 | 23.9 | 1.01 JT | 45.4 J | 0.02 UT | 670 T | GS04APG2 | 20.6 | 0.16 UT | 124 UJT |
| **Atterberg Limits** | | | | | | | | | | | | | | | | |
| Liquid Limit | percent | 29 | 29 | 100 | 24.2 | 59.1 | G349 | 38 | 37.6 | 43.1 | 24.2 | 59.1 | G349 | 38 | 37.6 | 43.1 |
| Plastic Limit | percent | 29 | 29 | 100 | 17.8 | 37.6 | G012 | 29.8 | 29.7 | 34.8 | 17.8 | 37.6 | G012 | 29.8 | 29.7 | 34.8 |
| Plasticity Index | percent | 29 | 29 | 100 | 4 | 30.7 | G349 | 8.2 | 7.5 | 10 | 4 | 30.7 | G349 | 8.2 | 7.5 | 10 |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

-- data not available.

BaPEq - benzo(a)pyrene equivalent

BTEX - benzene, toluene, ethylbenzene, and total xylene

cPAH - carcinogenic polycyclic aromatic hydrocarbon

DL - detection limit

HPAH - high molecular weight polycyclic aromatic hydrocarbon

LPAH - low molecular weight polycyclic aromatic hydrocarbon

ND - non-detect

PAH - polycyclic aromatic hydrocarbon

PBDE - polybrominated diphenyl ether

PCB - polychlorinated biphenyl

PCDD/F - dioxin/furan

RM - river mile

TEQ - toxic equivalent concentration

Reason codes for qualifiers:

J - The associated numerical value is an estimated quantity.

N - Presumptive evidence of presence of material; identification of the compound is not definitive.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:

A - Total value based on limited number of analytes.

T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-3. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Grainsize** | | | | | | | | | | | | | | | | |
| < 0.001 mm | percent | 8 | 8 | 100 | 0 | 8.1 | GP29 | 4 | 4.1 | 7.5 | 0 | 8.1 | GP29 | 4 | 4.1 | 7.5 |
| < 0.075 mm | percent | 207 | 207 | 100 | 1.1 | 97.4 | T4-VC16 | 38.9 | 21.3 | 92.4 | 1.1 | 97.4 | T4-VC16 | 38.9 | 21.3 | 92.4 |
| > 0.075 mm | percent | 58 | 58 | 100 | 0.8 | 60.2 T | T4-S3-02 | 26.9 | 20.9 | 57.8 | 0.8 | 60.2 T | T4-S3-02 | 26.9 | 20.9 | 57.8 |
| >= 0.001 to <0.005 mm | percent | 8 | 8 | 100 | 0 | 12.2 | GP31 | 6.3 | 6.65 | 12 | 0 | 12.2 | GP31 | 6.3 | 6.65 | 12 |
| >10 Phi clay | percent | 52 | 52 | 100 | 0 | 11.2 | SDDB20SB | 4.3 | 3.93 | 9.46 | 0 | 11.2 | SDDB20SB | 4.3 | 3.93 | 9.46 |
| >9 Phi clay | percent | 948 | 948 | 100 | 0 | 21.8 T | C366-1 | 6.71 | 6.65 | 14.6 | 0 | 21.8 T | C366-1 | 6.71 | 6.65 | 14.6 |
| 8-9 Phi clay | percent | 1000 | 1000 | 100 | 0 T | 16.4 | C022 | 3.747 | 3.8 | 8.071 J | 0 T | 16.4 | C022 | 3.747 | 3.8 | 8.071 J |
| 9-10 Phi clay | percent | 52 | 52 | 100 | 0 | 8.1 | S3 | 1.79 | 1.57 | 4.05 | 0 | 8.1 | S3 | 1.79 | 1.57 | 4.05 |
| Clay | percent | 565 | 565 | 100 | 0.04 | 68.2 T | DMMU1 | 11.98 | 10.6 | 28 | 0.04 | 68.2 T | DMMU1 | 11.98 | 10.6 | 28 |
| Coarse sand | percent | 1209 | 1209 | 100 | 0.03 | 58.2 | GS-D2 | 4.978 | 1.63 | 22.8 | 0.03 | 58.2 | GS-D2 | 4.978 | 1.63 | 22.8 |
| Coarse silt | percent | 1000 | 1000 | 100 | 0 | 54.4 | C717 | 12.65 | 12.55 J | 28.11 | 0 | 54.4 | C717 | 12.65 | 12.55 J | 28.11 |
| Fine gravel | percent | 1062 | 1012 | 95.3 | 0 T | 34 | C015 | 1.253 | 0.38 | 5.383 | 0 T | 34 | C015 | 1.194 | 0.33 J | 5.22 |
| Fine sand | percent | 1209 | 1209 | 100 | 0.09 | 63.4 | C351 | 12.8 | 8.7 | 37.18 | 0.09 | 63.4 | C351 | 12.8 | 8.7 | 37.18 |
| Fine silt | percent | 1000 | 1000 | 100 | 0 T | 30.5 J | C425-1 | 9.247 | 9.66 | 19.01 | 0 T | 30.5 J | C425-1 | 9.247 | 9.66 | 19.01 |
| Fines | percent | 1588 | 1588 | 100 | 0.12 T | 101 T | C380 | 52.2 | 59.61 | 91 | 0.12 T | 101 T | C380 | 52.2 | 59.61 | 91 |
| Granule | percent | 24 | 24 | 100 | 0 | 4.1 | GS-C7 | 0.705 | 0.25 | 3.08 | 0 | 4.1 | GS-C7 | 0.705 | 0.25 | 3.08 |
| Gravel | percent | 206 | 206 | 100 | 0 T | 45.2 | GS-05 | 1.78 | 0.24 | 8.98 | 0 T | 45.2 | GS-05 | 1.78 | 0.24 | 8.98 |
| Mean grain size | mm | 17 | 17 | 100 | 0.0351 | 0.269 | WR-VC-05 | 0.1259 | 0.0978 | 0.2306 | 0.0351 | 0.269 | WR-VC-05 | 0.1259 | 0.0978 | 0.2306 |
| Median grain size | mm | 17 | 17 | 100 | 0.02 | 0.25 | WR-VC-07 | 0.0524 | 0.042 | 0.098 | 0.02 | 0.25 | WR-VC-07 | 0.0524 | 0.042 | 0.098 |
| Medium gravel | percent | 1083 | 998 | 92.2 | 0 T | 65.8 | C006 | 1.432 | 0 | 6.703 | 0 T | 65.8 | C006 | 1.319 | 0 | 6.08 J |
| Medium sand | percent | 1209 | 1209 | 100 | 0.13 | 87.2 | C648 | 17.04 | 5.99 | 63.46 | 0.13 | 87.2 | C648 | 17.04 | 5.99 | 63.46 |
| Medium silt | percent | 1000 | 1000 | 100 | 0 | 41.9 | C690 | 12.98 | 14 | 25.51 | 0 | 41.9 | C690 | 12.98 | 14 | 25.51 |
| Medium-fine gravel | percent | 24 | 24 | 100 | 0 | 21.9 | GS-B7 | 1.53 | 0.1 | 5.2 | 0 | 21.9 | GS-B7 | 1.53 | 0.1 | 5.2 |
| Sand | percent | 146 | 146 | 100 | 3.4 | 100.16 | PSY39C | 38.415 | 31.695 | 94.478 | 3.4 | 100.16 | PSY39C | 38.415 | 31.695 | 94.478 |
| Sieve 1 inch | percent | 233 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0 U | 0 U | WB-30; WB-31; WB-31b; WB-32; WB-34; WB-35; WB-36; WB-37; WB-39; WB-40; WB-41; WB-42; WB-43; WB-45; WB-46; WB-47; WB-48; WB-49; WB-50; WB-53; WB-56; WB-56b; WB-57; WB-58; WB-60; WB-63; WB-65; WB-66 | 0 | 0 U | 0 U |
| Sieve 1.5 inch | percent | 233 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0 U | 0 U | WB-30; WB-31; WB-31b; WB-32; WB-34; WB-35; WB-36; WB-37; WB-39; WB-40; WB-41; WB-42; WB-43; WB-45; WB-46; WB-47; WB-48; WB-49; WB-50; WB-53; WB-56; WB-56b; WB-57; WB-58; WB-60; WB-63; WB-65; WB-66 | 0 | 0 U | 0 U |
| Sieve 10 | percent | 395 | 263 | 66.6 | 0 | 27.3 | GP26 | 0.657 | 0.1 | 2.1 | 0 | 27.3 | GP26 | 0.437 | 0 | 1.53 |
| Sieve 100 | percent | 11 | 11 | 100 | 0.3 | 44.9 | GP25; GP28 | 14.5 | 9.6 | 44.9 | 0.3 | 44.9 | GP25; GP28 | 14.5 | 9.6 | 44.9 |
| Sieve 140 | percent | 384 | 384 | 100 | 0.2 | 66 | WB-65 | 12.54 | 9.23 | 37 | 0.2 | 66 | WB-65 | 12.54 | 9.23 | 37 |

Table D1.3-3. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Sieve 2 inch | percent | 233 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0 U | 0 U | WB-30; WB-31; WB-31b; WB-32; WB-34; WB-35; WB-36; WB-37; WB-39; WB-40; WB-41; WB-42; WB-43; WB-45; WB-46; WB-47; WB-48; WB-49; WB-50; WB-53; WB-56; WB-56b; WB-57; WB-58; WB-60; WB-63; WB-65; WB-66 | 0 | 0 U | 0 U |
| Sieve 20 | percent | 387 | 337 | 87.1 | 0 | 7.8 | T4-VC28 | 0.75 | 0.4 | 2.6 | 0 | 7.8 | T4-VC28 | 0.66 | 0.3 | 2.5 |
| Sieve 200 | percent | 395 | 395 | 100 | -2.36 | 32 | WB-30 | 5.844 | 4 | 18.93 | -2.36 | 32 | WB-30 | 5.844 | 4 | 18.93 |
| Sieve 200 silt | percent | 8 | 8 | 100 | 3.2 | 74.5 | GP31 | 46.5 | 57.1 | 72.4 | 3.2 | 74.5 | GP31 | 46.5 | 57.1 | 72.4 |
| Sieve 230 | percent | 238 | 238 | 100 | 0.07 | 21.9 | S4 | 4.58 | 3.4 | 12.2 | 0.07 | 21.9 | S4 | 4.58 | 3.4 | 12.2 |
| Sieve 3 inch | percent | 233 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0 U | 0 U | WB-30; WB-31; WB-31b; WB-32; WB-34; WB-35; WB-36; WB-37; WB-39; WB-40; WB-41; WB-42; WB-43; WB-45; WB-46; WB-47; WB-48; WB-49; WB-50; WB-53; WB-56; WB-56b; WB-57; WB-58; WB-60; WB-63; WB-65; WB-66 | 0 | 0 U | 0 U |
| Sieve 3/4 inch | percent | 233 | 2 | 0.9 | 8.7 | 17 | WB-47 | 13 | 13 | 17 | 0 U | 17 | WB-47 | 0.11 | 0 U | 0 U |
| Sieve 3/8 inch | percent | 233 | 26 | 11.2 | 0.3 | 13 | WB-57 | 3.6 | 1.8 | 12 | 0 U | 13 | WB-57 | 0.4 | 0 U | 2 |
| Sieve 30 | percent | 8 | 8 | 100 | 0 | 11.1 | GP28 | 2.65 | 0 | 10.1 | 0 | 11.1 | GP28 | 2.65 | 0 | 10.1 |
| Sieve 4 | percent | 387 | 220 | 56.8 | 0 | 16 | WB-57 | 0.641 | 0 | 3.01 | 0 | 16 | WB-57 | 0.364 | 0 | 1.9 |
| Sieve 40 | percent | 387 | 383 | 99 | 0 | 52.2 | T4-VC28 | 9.8 | 2.6 | 38 | 0 | 52.2 | T4-VC28 | 9.7 | 2.5 | 37.9 |
| Sieve 60 | percent | 387 | 386 | 99.7 | 0.1 | 66 | T4-VC01 | 19.5 | 8.45 J | 54.98 | 0 U | 66 | T4-VC01 | 19.45 | 8.4 J | 54.97 |
| Silt | percent | 565 | 560 | 99.1 | 0 | 88.9 T | URB-D | 43.08 | 46.74 | 76.31 | -1.9 U | 88.9 T | URB-D | 42.69 | 46.12 | 76.2 |
| Very coarse sand | percent | 1206 | 1202 | 99.7 | 0 T | 26.4 | C266 | 1.484 | 0.6585 | 5.86 | 0 T | 26.4 | C266 | 1.48 | 0.65 | 5.858 |
| Very fine sand | percent | 1206 | 1206 | 100 | 0.07 | 46.1 | C144 | 10 | 9.13 | 23.2 | 0.07 | 46.1 | C144 | 10 | 9.13 | 23.2 |
| Very fine silt | percent | 1000 | 1000 | 100 | 0 | 17.5 | C528 | 5.994 | 6.435 | 12.6 | 0 | 17.5 | C528 | 5.994 | 6.435 | 12.6 |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Acid Volatile Sulfides | mg/kg | 23 | 19 | 82.6 | 0.6 | 46 J | WR-GC-33 | 19.3 | 17.9 | 42.4 J | 0.6 | 46 J | WR-GC-33 | 16 | 13 J | 42 |
| Ammonia | mg/kg | 221 | 221 | 100 | 1.4 | 775 | WR-VC-106 | 206 | 201 | 455 | 1.4 | 775 | WR-VC-106 | 206 | 201 | 455 |
| Bulk density | g/cm3 | 10 | 10 | 100 | 1.21 | 1.74 | C026 | 1.54 | 1.58 | 1.72 | 1.21 | 1.74 | C026 | 1.54 | 1.58 | 1.72 |
| Chloride | mg/kg | 10 | 4 | 40 | 17.9 J | 355 J | DMMU-1-C | 106 | 24.6 J | 306 J | 11.7 UJ | 355 J | DMMU-1-C | 47 | 9.1 UJ | 207 J |
| Cyanide | mg/kg | 126 | 92 | 73 | 0.03 J | 1410 | SDDC24SB | 26.8 | 0.5 | 37.4 | 0.03 J | 1410 | SDDC24SB | 20.6 | 0.25 UJ | 23.6 |
| Gravimetric water content | percent | 10 | 10 | 100 | 14 | 73.1 | C019 | 34.9 | 31.1 | 64 | 14 | 73.1 | C019 | 34.9 | 31.1 | 64 |
| Moisture | percent | 148 | 148 | 100 | 11.3 | 105 | C45-47 | 38.73 | 31.15 | 90.95 | 11.3 | 105 | C45-47 | 38.73 | 31.15 | 90.95 |
| Nitrate | mg/kg | 12 | 2 | 16.7 | 0.37 J | 0.5 | GS-09 | 0.435 | 0.435 J | 0.494 J | 0.37 J | 3.82 UJ | DMMU-3-A | 1.48 | 1.75 UJ | 1.9 UJ |
| Nitrite | mg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.35 UJ | 3.82 UJ | DMMU-3-A | 1.69 | 1.76 UJ | 1.9 UJ |
| pH | pH units | 24 | 24 | 100 | 6.55 | 7.19 | GS-05 | 6.88 | 6.91 | 7.17 | 6.55 | 7.19 | GS-05 | 6.88 | 6.91 | 7.17 |
| Specific Gravity | NA | 995 | 995 | 100 | 1.03 | 3.39 | C724 | 1.74 | 1.67 | 2.18 | 1.03 | 3.39 | C724 | 1.74 | 1.67 | 2.18 |
| Sulfate | mg/kg | 36 | 26 | 72.2 | 2.34 T | 18 J | GS-05 | 7.45 | 6.5 | 15.9 J | 2.34 T | 38.2 UJ | DMMU-3-A | 10.1 | 9.15 J | 18.6 UJ |
| Sulfide | mg/kg | 211 | 179 | 84.8 | 0.43 J | 796 J | HC-S-07 | 28.9 | 8.8 J | 133 J | 0.4 UJ | 796 J | HC-S-07 | 24.8 | 6.2 J | 107 J |
| Total organic carbon | percent | 2036 | 1923 | 94.4 | 0.02 J | 35.5 | C302 | 1.551 | 1.46 | 3.467 | 0.02 J | 35.5 | C302 | 1.466 | 1.3 | 3.4 J |
| Total solids | percent | 2248 | 2248 | 100 | 32 | 95 | WB-47 | 65.9 | 66.3 | 83.2 | 32 | 95 | WB-47 | 65.9 | 66.3 | 83.2 |
| Total volatile solids | percent | 143 | 143 | 100 | 1.73 | 10.5 | HC-S-11 | 6.57 | 7.13 | 8.53 | 1.73 | 10.5 | HC-S-11 | 6.57 | 7.13 | 8.53 |
| **Metals** | | | | | | | | | | | | | | | | |
| Aluminum | mg/kg | 1092 | 1092 | 100 | 5730 | 45900 | SD151 | 22800 | 23400 | 35900 | 5730 | 45900 | SD151 | 22800 | 23400 | 35900 |

Table D1.3-3. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Antimony | mg/kg | 1248 | 890 | 71.3 | 0.02 J | 55.1 | HA-43 | 0.837 | 0.21 J | 3.01 J | 0.02 J | 55.1 | HA-43 | 0.677 | 0.17 J | 2.5 UJ |
| Arsenic | mg/kg | 1553 | 1489 | 95.9 | 0.5 J | 51.4 | C708 | 4.08 | 3.56 | 7.33 J | 0.5 J | 51.4 | C708 | 4 | 3.51 | 7.16 |
| Arsenic pentavalent | mg/kg | 2 | 2 | 100 | 3.444 | 6.151 | SGP-06 | 4.798 | 4.798 | 6.016 | 3.444 | 6.151 | SGP-06 | 4.798 | 4.798 | 6.016 |
| Arsenic trivalent | mg/kg | 2 | 2 | 100 | 0.281 | 0.822 | SGP-06 | 0.552 | 0.552 | 0.795 | 0.281 | 0.822 | SGP-06 | 0.552 | 0.552 | 0.795 |
| Barium | mg/kg | 131 | 131 | 100 | 45.3 | 637 | HA-42 | 170 | 164 | 249 | 45.3 | 637 | HA-42 | 170 | 164 | 249 |
| Beryllium | mg/kg | 90 | 81 | 90 | 0.279 | 0.782 | GS-B2 | 0.521 | 0.532 | 0.7 | 0.279 | 1.05 U | RB13 | 0.511 | 0.515 | 0.7 |
| Cadmium | mg/kg | 1530 | 1435 | 93.8 | 0.011 J | 43.7 | C752 | 0.4149 | 0.27 | 0.863 | 0.008 UJ | 43.7 | C752 | 0.3991 | 0.26 | 0.8369 J |
| Calcium | mg/kg | 78 | 78 | 100 | 2810 | 16000 | SD133 | 6740 | 6260 | 9460 | 2810 | 16000 | SD133 | 6740 | 6260 | 9460 |
| Chromium | mg/kg | 1530 | 1524 | 99.6 | 6.41 J | 464 | HA-42 | 28.8 | 27 J | 46.7 | 6.41 J | 464 | HA-42 | 28.8 | 26.9 | 46.7 |
| Chromium hexavalent | mg/kg | 45 | 6 | 13.3 | 0.11 JT | 0.3 J | C349; C362 | 0.22 | 0.2 J | 0.3 J | 0.11 JT | 0.3 J | C349; C362 | 0.12 | 0.1 UT | 0.2 J |
| Cobalt | mg/kg | 37 | 37 | 100 | 16.2 | 24.6 | SD072 | 18.4 | 18.2 T | 20.6 | 16.2 | 24.6 | SD072 | 18.4 | 18.2 T | 20.6 |
| Copper | mg/kg | 1541 | 1541 | 100 | 9.42 J | 3290 | C384 | 55.2 | 35.9 | 107 | 9.42 J | 3290 | C384 | 55.2 | 35.9 | 107 |
| Iron | mg/kg | 81 | 81 | 100 | 18900 | 53900 | SD072 | 35900 | 36300 | 45700 | 18900 | 53900 | SD072 | 35900 | 36300 | 45700 |
| Lead | mg/kg | 1597 | 1589 | 99.5 | 1.54 | 3330 J | C326 | 46.6 | 20 | 131 J | 1.54 | 3330 J | C326 | 46.4 | 20 | 131 J |
| Magnesium | mg/kg | 88 | 88 | 100 | 2280 J | 8510 | SD133 | 5460 | 5810 | 7570 | 2280 J | 8510 | SD133 | 5460 | 5810 | 7570 |
| Manganese | mg/kg | 136 | 136 | 100 | 206 | 2330 | HA-43 | 566 | 531 J | 876 J | 206 | 2330 | HA-43 | 566 | 531 J | 876 J |
| Mercury | mg/kg | 1454 | 1373 | 94.4 | 0.004 J | 16.8 | C708 | 0.19 | 0.089 J | 0.55 | 0.004 J | 16.8 | C708 | 0.1806 | 0.083 | 0.5188 J |
| Nickel | mg/kg | 1521 | 1521 | 100 | 5.99 J | 716 | C356 | 25.5 | 23.5 T | 33.3 | 5.99 J | 716 | C356 | 25.5 | 23.5 T | 33.3 |
| Potassium | mg/kg | 88 | 82 | 93.2 | 321 J | 1550 | SD138 | 943 | 881 | 1420 | 321 J | 1550 | SD138 | 894 | 842 | 1420 |
| Selenium | mg/kg | 1101 | 424 | 38.5 | 0.02 J | 14 | SD072; SD133 | 0.977 | 0.12 J | 9 | 0.02 J | 14 | SD072; SD133 | 0.463 | 0.06 J | 1 U |
| Silver | mg/kg | 1517 | 1407 | 92.7 | 0.013 J | 4.32 J | WR-VC-110 | 0.329258 | 0.269 | 0.8855 | 0.000058 U | 4.32 J | WR-VC-110 | 0.317865 | 0.251 J | 0.8748 |
| Sodium | mg/kg | 88 | 88 | 100 | 167 J | 57800 J | SD100 | 1430 | 613 J | 1290 J | 167 J | 57800 J | SD100 | 1430 | 613 J | 1290 J |
| Thallium | mg/kg | 90 | 61 | 67.8 | 0.041 | 12 | SD090 | 1.98 | 0.09 | 9 | 0.041 | 12 | SD090 | 2.01 | 0.346 U | 8.1 |
| Tin | mg/kg | 3 | 3 | 100 | 2.28 J | 4.46 J | DM-24 | 3.72 | 4.42 J | 4.46 J | 2.28 J | 4.46 J | DM-24 | 3.72 | 4.42 J | 4.46 J |
| Titanium | mg/kg | 27 | 27 | 100 | 1790 | 3490 | DM-20 | 2050 | 1950 | 2770 | 1790 | 3490 | DM-20 | 2050 | 1950 | 2770 |
| Vanadium | mg/kg | 37 | 37 | 100 | 89.9 | 136 | SD072 | 103 | 103 | 111 | 89.9 | 136 | SD072 | 103 | 103 | 111 |
| Zinc | mg/kg | 1581 | 1581 | 100 | 24 | 9000 | HA-42 | 147 | 105 J | 333 | 24 | 9000 | HA-42 | 147 | 105 J | 333 |
| **Butyltins** | | | | | | | | | | | | | | | | |
| Butyltin ion | µg/kg | 365 | 184 | 50.4 | 0.081 J | 540 J | C392 | 12.3 | 0.923 J | 47.6 | 0.034 U | 540 J | C392 | 7.27 | 0.63 J | 15.4 J |
| Dibutyltin ion | µg/kg | 369 | 220 | 59.6 | 0.059 J | 6000 J | C392 | 68.8 | 2.2 | 131 | 0.037 U | 6000 J | C392 | 42 | 1.1 U | 70.6 |
| Tetrabutyltin | µg/kg | 369 | 69 | 18.7 | 0.22 J | 510 J | C392 | 24.6 | 1.8 | 118 | 0.079 U | 510 J | C392 | 5.76 | 0.185 U | 9.14 J |
| Tributyltin | µg/kg | 6 | 1 | 16.7 | 15.7 | 15.7 | HA-43 | 15.7 | 15.7 | 15.7 | 2.63 U | 15.7 | HA-43 | 3.82 | 1.45 U | 12.2 |
| Tributyltin ion | µg/kg | 433 | 223 | 51.5 | 0.32 J | 90000 | PSY30C | 1410 | 29 | 4040 | 0 U | 90000 | PSY30C | 729 | 2.1 | 1120 |
| **PCB Aroclors** | | | | | | | | | | | | | | | | |
| Aroclor 1016 | µg/kg | 1542 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.73 U | 75000 U | SD092 | 37.9 | 1.04 U | 10.5 UJ |
| Aroclor 1221 | µg/kg | 1542 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.73 U | 150000 U | SD092 | 65.5 | 1.52 U | 19.5 UJ |
| Aroclor 1232 | µg/kg | 1542 | 1 | 0.1 | 10 | 10 | PSY36C | 10 | 10 | 10 | 0.73 U | 75000 U | SD092 | 37.7 | 1.39 U | 13 U |
| Aroclor 1242 | µg/kg | 1542 | 124 | 8 | 2 J | 16400 | C455 | 232 | 20 J | 643 J | 0.73 U | 75000 U | SD092 | 55.4 | 1.25 U | 37.5 U |
| Aroclor 1248 | µg/kg | 1542 | 310 | 20.1 | 1.73 J | 1850 J | C025-1 | 81.7 | 27.9 J | 306 | 0.73 U | 75000 U | SD092 | 54.3 | 1.75 U | 92.2 J |
| Aroclor 1254 | µg/kg | 1542 | 679 | 44 | 0.82 J | 26000 | C092 | 243 | 42 J | 571 J | 0.662 U | 75000 U | SD092 | 151 | 9 | 268 J |
| Aroclor 1260 | µg/kg | 1542 | 832 | 54 | 0.88 J | 6200 T | C019 | 87.1 | 31 | 220 | 0.73 U | 75000 U | SD092 | 82.5 | 9.27 | 170 J |
| Aroclor 1262 | µg/kg | 1309 | 1 | 0.1 | 95 | 95 | C760 | 95 | 95 | 95 | 0.73 U | 2000 U | C356 | 9.57 | 0.865 U | 8.34 UJ |
| Aroclor 1268 | µg/kg | 1309 | 44 | 3.4 | 1.6 NJ | 474 J | C207-1 | 47.5 | 20 J | 190 J | 0.73 U | 2000 U | C356 | 10.8 | 0.845 U | 15 |
| Aroclors | µg/kg | 1541 | 910 | 59.1 | 0.82 JT | 26000 T | C092 | 323 | 70 J | 1000 J | 0.73 UT | 150000 UT | SD092 | 260 | 22 JT | 650 UT |
| **PCB Congeners** | | | | | | | | | | | | | | | | |
| PCB001 | pg/g | 161 | 126 | 78.3 | 5.28 | 65100 | C455 | 1310 | 71.5 | 3240 J | 4.75 UT | 65100 | C455 | 1020 | 45.5 J | 1720 J |
| PCB002 | pg/g | 161 | 124 | 77 | 5.01 | 7660 | C455 | 193 | 29.3 | 586 | 4.32 U | 7660 | C455 | 149 | 23 J | 504 |
| PCB003 | pg/g | 161 | 131 | 81.4 | 5.02 | 38400 | C455 | 859 | 65.4 | 2610 J | 4.75 UT | 38400 | C455 | 699 | 45 | 2540 |
| PCB004 & 010 | pg/g | 161 | 116 | 72 | 10.1 | 353000 | C455 | 4700 | 158 | 11500 J | 9.51 UT | 353000 | C455 | 3390 | 81.1 | 7750 |
| PCB005 & 008 | pg/g | 161 | 129 | 80.1 | 13.8 | 1240000 | C455 | 14500 | 474 J | 33600 J | 9.51 UT | 1240000 | C455 | 11600 | 283 | 16900 |
| PCB006 | pg/g | 161 | 111 | 68.9 | 10.3 | 202000 | C455 | 3040 | 162 | 7950 | 9.51 UT | 202000 | C455 | 2110 | 67.8 | 6040 J |
| PCB007 & 009 | pg/g | 161 | 90 | 55.9 | 9.93 J | 71300 | C455 | 1360 | 98.3 J | 3560 J | 8.64 U | 71300 | C455 | 768 | 25.9 T | 1570 |
| PCB011 | pg/g | 161 | 93 | 57.8 | 10.1 J | 3990 | C455 | 203 | 103 | 454 J | 8.64 U | 3990 | C455 | 128 | 39.8 | 382 |
| PCB012 & 013 | pg/g | 161 | 101 | 62.7 | 11.1 J | 32300 | C455 | 816 | 93.3 | 2480 J | 8.64 U | 32300 | C455 | 519 | 39.9 J | 1700 |
| PCB014 | pg/g | 161 | 1 | 0.6 | 16.2 JT | 16.2 JT | C384 | 16.2 | 16.2 JT | 16.2 JT | 3.31 U | 1290 U | C455 | 18.3 | 4.99 U | 51.5 U |
| PCB015 | pg/g | 161 | 124 | 77 | 10.5 | 334000 | C455 | 5450 | 368 | 16500 J | 9.51 UT | 334000 | C455 | 4210 | 217 | 14900 |
| PCB016 & 032 | pg/g | 161 | 139 | 86.3 | 5.06 | 1300000 | C455 | 14600 | 642 | 27700 J | 4.75 UT | 1300000 | C455 | 12600 | 485 | 25400 |
| PCB017 | pg/g | 161 | 132 | 82 | 6.54 | 858000 | C455 | 10600 | 541 J | 23700 J | 4.75 UT | 858000 | C455 | 8670 | 358 | 18800 |

Table D1.3-3. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| PCB018 | pg/g | 161 | 140 | 87 | 5.18 | 2330000 | C455 | 25500 | 807 J | 50300 J | 4.75 UT | 2330000 | C455 | 22200 | 628 | 50000 J |
| PCB019 | pg/g | 161 | 122 | 75.8 | 5.6 | 215000 | C455 | 2670 | 101 | 4830 J | 4.75 UT | 215000 | C455 | 2030 | 66.4 | 3910 |
| PCB020 & 021 & 033 | pg/g | 161 | 141 | 87.6 | 5.23 | 1650000 | C455 | 18300 | 673 | 29900 T | 4.75 UT | 1650000 | C455 | 16100 | 475 J | 21900 J |
| PCB022 | pg/g | 161 | 132 | 82 | 5.62 | 884000 | C455 | 10600 | 460 | 17300 | 4.75 UT | 884000 | C455 | 8720 | 294 | 13400 J |
| PCB023 | pg/g | 161 | 35 | 21.7 | 2.64 | 2480 | C455 | 108 | 16 | 223 | 2.54 U | 2480 | C455 | 29 | 2.51 U | 62.4 |
| PCB024 & 027 | pg/g | 161 | 122 | 75.8 | 4.97 | 142000 | C455 | 1800 | 89.4 J | 3250 J | 4.75 UT | 142000 | C455 | 1370 | 54.7 | 2590 |
| PCB025 | pg/g | 161 | 129 | 80.1 | 7.41 | 187000 | C455 | 2820 | 190 | 8520 J | 4.75 UT | 187000 | C455 | 2270 | 115 J | 6470 J |
| PCB026 | pg/g | 161 | 132 | 82 | 5.79 J | 354000 | C455 | 5430 | 273 | 15400 J | 4.75 UT | 354000 | C455 | 4450 | 194 | 12800 J |
| PCB028 | pg/g | 161 | 143 | 88.8 | 6.32 J | 2160000 | C455 | 24700 | 1780 | 56200 | 4.75 UT | 2160000 | C455 | 21900 | 1260 J | 51900 |
| PCB029 | pg/g | 161 | 69 | 42.9 | 1.87 | 15200 | C455 | 315 | 17.2 | 825 | 1.87 | 15200 | C455 | 140 | 5.22 J | 173 JT |
| PCB030 | pg/g | 161 | 9 | 5.6 | 4.87 J | 63.8 | LWMC19 | 19.7 | 14.9 J | 48.6 J | 1.66 U | 644 U | C455 | 9.78 | 2.5 U | 25.8 J |
| PCB031 | pg/g | 161 | 140 | 87 | 5.44 | 2060000 | C455 | 27300 | 1270 | 55400 J | 4.75 UT | 2060000 | C455 | 23700 | 915 | 53400 J |
| PCB034 | pg/g | 161 | 106 | 65.8 | 5.18 | 10600 | C455 | 248 | 41.2 J | 748 J | 4.66 UJ | 10600 | C455 | 167 | 16.7 | 655 |
| PCB035 | pg/g | 161 | 118 | 73.3 | 4.82 J | 21000 | C455 | 293 | 35.3 | 434 J | 4.75 UT | 21000 | C455 | 217 | 23.4 J | 389 J |
| PCB036 | pg/g | 161 | 24 | 14.9 | 2.22 J | 36.6 | C600 | 14.3 | 10.7 J | 28.5 J | 2.22 J | 644 U | C455 | 10.5 | 2.5 U | 31 U |
| PCB037 | pg/g | 161 | 133 | 82.6 | 6.7 | 510000 | C455 | 6150 | 483 | 11600 J | 4.75 UT | 510000 | C455 | 5090 | 322 J | 10200 |
| PCB038 | pg/g | 161 | 112 | 69.6 | 4.66 JT | 7450 | C455 | 192 | 39.7 | 657 | 4.66 JT | 7450 | C455 | 137 | 21.3 | 544 J |
| PCB039 | pg/g | 161 | 101 | 62.7 | 4.71 JT | 1410 | C455 | 57.1 | 23.7 | 176 | 4.66 UJ | 1410 | C455 | 39.3 | 12.7 J | 155 J |
| PCB040 | pg/g | 161 | 131 | 81.4 | 5.29 | 345000 | C455 | 4330 | 391 | 8930 J | 4.75 UT | 345000 | C455 | 3520 | 246 J | 8120 |
| PCB041 & 064 & 071 & 072 | pg/g | 161 | 143 | 88.8 | 6.18 | 1650000 | C455 | 21100 | 1830 | 50400 J | 4.75 UT | 1650000 | C455 | 18800 | 1470 J | 48800 J |
| PCB042 & 059 | pg/g | 161 | 137 | 85.1 | 5.08 J | 624000 | C455 | 7880 | 790 | 16600 J | 4.75 UT | 624000 | C455 | 6710 | 539 T | 15800 |
| PCB043 & 049 | pg/g | 161 | 143 | 88.8 | 5.23 | 1320000 | C455 | 21200 | 2800 J | 70800 | 4.75 UT | 1320000 | C455 | 18800 | 1860 | 66900 |
| PCB044 | pg/g | 161 | 144 | 89.4 | 4.98 | 1810000 | C455 | 25700 | 2360 J | 85300 | 4.75 UT | 1810000 | C455 | 22900 | 1770 | 59500 |
| PCB045 | pg/g | 161 | 130 | 80.7 | 7 | 363000 | C455 | 4520 | 299 | 8980 J | 4.75 UT | 363000 | C455 | 3650 | 189 | 8610 |
| PCB046 | pg/g | 161 | 128 | 79.5 | 5.48 | 149000 | C455 | 2100 | 160 J | 5770 | 4.75 UT | 149000 | C455 | 1670 | 99.1 | 5240 T |
| PCB047 | pg/g | 161 | 139 | 86.3 | 4.82 T | 453000 | C455 | 7640 | 1130 | 23800 | 4.76 UJ | 453000 | C455 | 6600 | 726 | 23300 |
| PCB048 & 075 | pg/g | 161 | 132 | 82 | 8.2 | 464000 | C455 | 5720 | 489 J | 11900 J | 4.75 UT | 464000 | C455 | 4690 | 320 | 11000 J |
| PCB050 | pg/g | 161 | 87 | 54 | 4.82 JT | 5860 | C455 | 135 | 20 | 365 | 4.32 U | 5860 | C455 | 76.7 | 8.99 J | 260 |
| PCB051 | pg/g | 161 | 128 | 79.5 | 6.52 J | 101000 | C455 | 1700 | 180 J | 4960 J | 4.75 UT | 101000 | C455 | 1350 | 121 | 4420 T |
| PCB052 & 069 | pg/g | 161 | 145 | 90.1 | 5.4 | 1680000 | C455 | 30400 | 3240 J | 92600 | 4.75 UT | 1680000 | C455 | 27400 | 2350 J | 86400 |
| PCB053 | pg/g | 161 | 133 | 82.6 | 5.79 | 314000 | C455 | 4570 | 442 | 13900 J | 4.75 UT | 314000 | C455 | 3780 | 277 J | 12400 |
| PCB054 | pg/g | 161 | 97 | 60.2 | 2.76 JT | 5090 | C455 | 111 | 13.7 J | 246 J | 2.76 JT | 5090 | C455 | 70.7 | 8.46 | 189 |
| PCB055 | pg/g | 161 | 120 | 74.5 | 5.64 | 27100 | C455 | 448 | 45.8 J | 1510 | 4.75 UT | 27100 | C455 | 337 | 32.4 | 749 |
| PCB056 & 060 | pg/g | 161 | 139 | 86.3 | 5.38 J | 1030000 | C455 | 13500 | 1190 | 33000 | 4.75 UT | 1030000 | C455 | 11700 | 915 J | 30000 |
| PCB057 | pg/g | 161 | 108 | 67.1 | 5.05 | 8230 | C455 | 186 | 28 | 490 | 4.66 UJ | 8230 | C455 | 127 | 15.8 | 385 J |
| PCB058 | pg/g | 161 | 111 | 68.9 | 5.2 | 5900 | C453 | 155 | 35.7 | 331 J | 4.75 UT | 5900 | C453 | 110 | 20.3 | 219 |
| PCB061 & 070 | pg/g | 161 | 146 | 90.7 | 4.9 | 1570000 | C455 | 26300 | 3250 J | 89900 | 4.75 UT | 1570000 | C455 | 23800 | 2450 | 75600 |
| PCB062 | pg/g | 161 | 7 | 4.3 | 8.83 | 810 | C455 | 129 | 12.4 J | 578 | 1.66 U | 810 | C455 | 12.5 | 2.5 U | 31 U |
| PCB063 | pg/g | 161 | 128 | 79.5 | 5.19 | 56400 | C455 | 978 | 146 | 3340 | 4.75 UT | 56400 | C455 | 780 | 84.5 J | 2830 J |
| PCB065 | pg/g | 161 | 11 | 6.8 | 2.59 | 1490 | C455 | 165 | 22.9 | 823 | 2.54 U | 1490 | C455 | 18.1 | 2.5 U | 31.3 U |
| PCB066 & 076 | pg/g | 161 | 143 | 88.8 | 4.99 | 1280000 | C455 | 19200 | 2750 | 55500 | 4.75 UT | 1280000 | C455 | 17100 | 1820 | 42800 |
| PCB067 | pg/g | 161 | 126 | 78.3 | 5 | 58900 | C455 | 802 | 78.8 | 1710 | 4.75 UT | 58900 | C455 | 630 | 49 | 1430 |
| PCB068 | pg/g | 161 | 122 | 75.8 | 5.15 | 4300 | C455 | 215 | 74.3 | 768 J | 4.75 UT | 4300 | C455 | 166 | 41.1 J | 527 J |
| PCB073 | pg/g | 161 | 7 | 4.3 | 7.02 | 713 | LWMC24 | 246 | 173 | 610 | 2.47 U | 713 | LWMC24 | 19.3 | 2.5 U | 49.8 U |
| PCB074 | pg/g | 161 | 138 | 85.7 | 5.3 J | 739000 | C455 | 10900 | 1060 J | 41300 | 4.75 UT | 739000 | C455 | 9300 | 802 JT | 24500 |
| PCB077 | pg/g | 161 | 135 | 83.9 | 1.21 JT | 120000 | C455 | 1710 | 219 | 4970 J | 0.839 U | 120000 | C455 | 1440 | 170 | 4050 J |
| PCB078 | pg/g | 161 | 9 | 5.6 | 6.87 J | 1020 | LWMC3 | 149 | 31.8 | 665 | 1.66 U | 1020 | LWMC3 | 16.9 | 2.5 U | 35.9 |
| PCB079 | pg/g | 161 | 127 | 78.9 | 6.7 J | 7670 JT | C384 | 352 | 88.7 | 796 | 4.75 UT | 7670 JT | C384 | 280 | 67 J | 532 |
| PCB080 | pg/g | 161 | 1 | 0.6 | 13.7 | 13.7 | C382 | 13.7 | 13.7 | 13.7 | 1.66 U | 644 U | C455 | 9.16 | 2.5 U | 25.8 U |
| PCB081 | pg/g | 161 | 116 | 72 | 0.896 J | 5010 | C455 | 128 | 14.3 | 422 J | 0.336 UT | 5010 | C455 | 93.3 | 7.83 T | 313 |
| PCB082 | pg/g | 161 | 133 | 82.6 | 7.67 | 129000 | C455 | 3830 | 527 | 10600 | 4.75 UT | 129000 | C455 | 3170 | 328 T | 7860 |
| PCB083 | pg/g | 161 | 13 | 8.1 | 4.56 | 1450 | C455 | 153 | 32.6 J | 701 J | 2.47 U | 1450 | C455 | 18.7 | 2.5 U | 40.8 |
| PCB084 & 092 | pg/g | 161 | 142 | 88.2 | 5.91 | 350000 JT | C384 | 13600 | 2180 | 24500 | 4.75 UT | 350000 JT | C384 | 12000 | 1760 | 21600 |
| PCB085 & 116 | pg/g | 161 | 135 | 83.9 | 5.84 | 165000 | C455 | 4880 | 765 | 12100 | 4.75 UT | 165000 | C455 | 4100 | 449 | 9790 |
| PCB086 | pg/g | 161 | 96 | 59.6 | 4.05 JT | 13300 | C455 | 313 | 31 | 997 | 4.05 JT | 13300 | C455 | 191 | 11.2 | 674 J |
| PCB087 & 117 & 125 | pg/g | 161 | 140 | 87 | 6.17 J | 321000 JT | C384 | 11000 | 1240 | 21500 | 4.75 UT | 321000 JT | C384 | 9580 | 956 | 18100 |
| PCB088 & 091 | pg/g | 161 | 139 | 86.3 | 6.84 | 130000 | C455 | 4740 | 930 | 15500 | 4.75 UT | 130000 | C455 | 4090 | 696 | 9570 |
| PCB089 | pg/g | 161 | 121 | 75.2 | 5.14 | 23700 | C455 | 493 | 69 | 1470 | 4.75 UT | 23700 | C455 | 374 | 41.7 | 1130 |

Table D1.3-3. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Units | # Analyzed | # Detected | % Detected | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th[b] | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th (half DL)[b] |
| PCB090 & 101 | pg/g | 161 | 150 | 93.2 | 5.06 T | 822000 JT | C384 | 29200 | 4490 | 49200 | 4.76 UJ | 822000 JT | C384 | 27200 | 4090 | 46700 |
| PCB093 | pg/g | 161 | 2 | 1.2 | 7.06 J | 685 | C302 | 346 | 346 J | 651 J | 1.66 U | 685 | C302 | 12.6 | 2.5 U | 25.8 U |
| PCB094 | pg/g | 161 | 116 | 72 | 5.79 J | 6570 | C455 | 233 | 43.7 | 928 J | 4.75 UT | 6570 | C455 | 171 | 24.5 | 535 J |
| PCB095 & 098 & 102 | pg/g | 161 | 146 | 90.7 | 6.05 | 679000 JT | C384 | 24300 | 3780 | 41200 | 4.75 UT | 679000 JT | C384 | 22000 | 3250 | 39400 |
| PCB096 | pg/g | 161 | 123 | 76.4 | 5.38 | 14700 | C455 | 374 | 62.8 | 1300 J | 4.75 UT | 14700 | C455 | 289 | 40.1 | 931 |
| PCB097 | pg/g | 161 | 139 | 86.3 | 5.78 J | 243000 | C455 | 9240 | 1300 | 19700 | 4.75 UT | 243000 | C455 | 7980 | 931 J | 16100 |
| PCB099 | pg/g | 161 | 143 | 88.8 | 5.76 | 307000 | C455 | 13200 | 2380 | 25000 | 4.75 UT | 307000 | C455 | 11700 | 2180 | 23200 |
| PCB100 | pg/g | 161 | 125 | 77.6 | 4.92 | 6370 | LWMC24 | 248 | 71.3 | 1170 | 4.75 UT | 6370 | LWMC24 | 195 | 51.6 | 633 J |
| PCB103 | pg/g | 161 | 131 | 81.4 | 5.11 | 8040 T | C708 | 430 | 147 | 1440 | 4.75 UT | 8040 T | C708 | 352 | 118 | 1340 |
| PCB104 | pg/g | 161 | 26 | 16.1 | 2.09 J | 191 | LWMC24 | 30 | 11 J | 120 J | 2.09 J | 312 U | LWMC11 | 11.3 | 2.5 U | 46 U |
| PCB105 | pg/g | 161 | 150 | 93.2 | 0.865 J | 237000 | C455 | 7460 | 829 | 16700 | 0.865 J | 237000 | C455 | 6950 | 751 | 15400 |
| PCB106 & 118 | pg/g | 161 | 154 | 95.7 | 1.65 J | 636000 JT | C384 | 21600 | 2930 | 41600 | 1.45 U | 636000 JT | C384 | 20600 | 2690 | 40400 |
| PCB107 & 109 | pg/g | 161 | 136 | 84.5 | 8.16 | 44700 JT | C384 | 1970 | 385 | 3780 | 4.75 UT | 44700 JT | C384 | 1660 | 306 | 3100 |
| PCB108 & 112 | pg/g | 161 | 132 | 82 | 5.67 | 40300 | C455 | 1580 | 286 J | 3840 | 4.75 UT | 40300 | C455 | 1290 | 175 | 2600 |
| PCB110 | pg/g | 161 | 148 | 91.9 | 4.88 T | 946000 JT | C384 | 32500 | 4800 | 55400 | 4.76 UJ | 946000 JT | C384 | 29800 | 3880 | 50800 |
| PCB111 & 115 | pg/g | 161 | 127 | 78.9 | 5.2 | 20600 | C455 | 602 | 66.4 | 2520 | 4.75 UT | 20600 | C455 | 477 | 44.2 | 1270 |
| PCB113 | pg/g | 161 | 97 | 60.2 | 5.08 | 1100 T | C708 | 80.3 | 34.7 J | 258 | 2.47 U | 1100 T | C708 | 54.4 | 14.6 J | 156 U |
| PCB114 | pg/g | 161 | 129 | 80.1 | 1.43 J | 19100 | C455 | 585 | 72.8 J | 1820 | 0.566 UT | 19100 | C455 | 470 | 44.3 | 1050 |
| PCB119 | pg/g | 161 | 135 | 83.9 | 6.43 | 16900 T | C708 | 835 | 230 | 2950 | 4.75 UT | 16900 T | C708 | 701 | 172 T | 1620 |
| PCB120 | pg/g | 161 | 114 | 70.8 | 5.01 | 2250 T | C708 | 113 | 37.9 | 513 | 4.75 UT | 2250 T | C708 | 83.7 | 26 | 181 |
| PCB121 | pg/g | 161 | 9 | 5.6 | 3.32 JT | 106 | C739 | 27.1 | 11 J | 85.8 | 2.47 U | 644 U | C455 | 10.5 | 2.5 U | 31.3 U |
| PCB122 | pg/g | 161 | 124 | 77 | 5.79 | 9550 | C455 | 301 | 49 | 890 | 4.75 UT | 9550 | C455 | 234 | 29.3 | 627 |
| PCB123 | pg/g | 161 | 128 | 79.5 | 1.87 J | 13500 | C455 | 434 | 55.2 J | 1750 | 0.569 UT | 13500 | C455 | 346 | 38.3 | 787 |
| PCB124 | pg/g | 161 | 127 | 78.9 | 5.99 | 31000 JT | C384 | 1040 | 131 | 2690 | 4.75 UT | 31000 JT | C384 | 822 | 102 J | 1510 |
| PCB126 | pg/g | 161 | 128 | 79.5 | 1 J | 3320 JT | C384 | 113 | 23.2 J | 254 | 0.642 UT | 3320 JT | C384 | 90.7 | 16.3 | 191 J |
| PCB127 | pg/g | 161 | 1 | 0.6 | 48.6 J | 48.6 J | C263 | 48.6 | 48.6 J | 48.6 J | 1.66 U | 644 U | C455 | 9.11 | 2.5 U | 25.8 U |
| PCB128 & 162 | pg/g | 161 | 139 | 86.3 | 5.08 J | 123000 JT | C384 | 3800 | 603 | 7220 | 4.75 UT | 123000 JT | C384 | 3290 | 455 T | 5260 |
| PCB129 | pg/g | 161 | 133 | 82.6 | 5.09 | 40300 JT | C384 | 1220 | 169 J | 2450 | 4.75 UT | 40300 JT | C384 | 1010 | 120 | 1740 |
| PCB130 | pg/g | 161 | 135 | 83.9 | 10.2 | 50300 JT | C384 | 1770 | 401 | 3270 | 4.75 UT | 50300 JT | C384 | 1490 | 307 T | 2640 |
| PCB131 | pg/g | 161 | 16 | 9.9 | 3.17 J | 639 | LWMC14 | 70.2 | 13.1 J | 287 J | 1.66 U | 644 U | C455 | 15.3 | 2.5 U | 46 U |
| PCB132 & 161 | pg/g | 161 | 141 | 87.6 | 6.43 | 210000 JT | C384 | 7600 | 1360 | 14700 J | 4.75 UT | 210000 JT | C384 | 6660 | 1220 | 11600 |
| PCB133 & 142 | pg/g | 161 | 136 | 84.5 | 7.02 | 21100 JT | C384 | 889 | 246 J | 3350 | 4.75 UT | 21100 JT | C384 | 752 | 195 | 2930 |
| PCB134 & 143 | pg/g | 161 | 135 | 83.9 | 5.27 | 42600 JT | C384 | 1510 | 281 J | 3370 | 4.75 UT | 42600 JT | C384 | 1260 | 219 | 2090 |
| PCB135 | pg/g | 161 | 140 | 87 | 5.59 | 92700 JT | C384 | 3760 | 1030 | 12100 | 4.75 UT | 92700 JT | C384 | 3270 | 839 | 10600 |
| PCB136 | pg/g | 161 | 140 | 87 | 5.13 J | 96700 JT | C384 | 3760 | 881 | 10400 | 4.75 UT | 96700 JT | C384 | 3270 | 736 T | 6770 |
| PCB137 | pg/g | 161 | 132 | 82 | 5.95 | 39500 JT | C384 | 1290 | 177 J | 3020 | 4.75 UT | 39500 JT | C384 | 1060 | 127 | 1790 |
| PCB138 & 163 & 164 | pg/g | 161 | 151 | 93.8 | 5.1 T | 646000 JT | C384 | 23000 | 4590 | 50800 J | 4.76 UJ | 646000 JT | C384 | 21500 | 4330 | 37500 |
| PCB139 & 149 | pg/g | 161 | 148 | 91.9 | 5.93 T | 543000 JT | C384 | 20300 | 4850 | 47800 J | 4.76 UJ | 543000 JT | C384 | 18700 | 4400 | 46900 |
| PCB140 | pg/g | 161 | 124 | 77 | 4.97 | 4170 T | C708 | 259 | 93 | 1400 | 2.47 U | 4170 T | C708 | 203 | 60.1 | 676 |
| PCB141 | pg/g | 161 | 139 | 86.3 | 6.27 J | 119000 JT | C384 | 4610 | 890 | 16800 J | 4.75 UT | 119000 JT | C384 | 3980 | 766 | 7670 |
| PCB144 | pg/g | 161 | 132 | 82 | 5.57 | 33900 JT | C384 | 1240 | 232 | 3960 J | 4.75 UT | 33900 JT | C384 | 1020 | 189 T | 1940 |
| PCB145 | pg/g | 161 | 27 | 16.8 | 2.11 J | 320 JT | C384 | 45 | 10.6 | 180 J | 1.66 U | 320 JT | C384 | 13.7 | 2.5 U | 49.8 U |
| PCB146 & 165 | pg/g | 161 | 140 | 87 | 5.39 J | 84000 JT | C384 | 4180 | 1320 | 19500 | 4.75 UT | 84000 JT | C384 | 3640 | 1160 | 17600 |
| PCB147 | pg/g | 161 | 131 | 81.4 | 5.16 | 18600 JT | C384 | 731 | 144 | 3410 | 4.75 UT | 18600 JT | C384 | 597 | 116 | 1180 |
| PCB148 | pg/g | 161 | 113 | 70.2 | 4.92 J | 1070 | C739; LWMC24 | 112 | 51.3 | 436 | 4.75 UT | 1070 | C739; LWMC24 | 82.6 | 29.5 | 331 J |
| PCB150 | pg/g | 161 | 111 | 68.9 | 5.59 | 1530 | LWMC24 | 92.2 | 39 | 392 | 4.75 UT | 1530 | LWMC24 | 67.2 | 21.3 T | 286 |
| PCB151 | pg/g | 161 | 141 | 87.6 | 8.09 J | 132000 JT | C384 | 5680 | 1520 J | 20300 | 4.75 UT | 132000 JT | C384 | 4970 | 1350 | 15100 J |
| PCB152 | pg/g | 161 | 65 | 40.4 | 4.68 J | 801 JT | C384 | 65.1 | 11.5 | 396 J | 2.54 U | 801 JT | C384 | 31.2 | 5.25 | 130 U |
| PCB153 | pg/g | 161 | 148 | 91.9 | 6.45 J | 532000 JT | C384 | 21700 | 5340 J | 64300 J | 4.76 UJ | 532000 JT | C384 | 20000 | 4990 | 55700 |
| PCB154 | pg/g | 161 | 135 | 83.9 | 7.07 | 9000 T | C708 | 619 | 258 | 2640 | 4.75 UT | 9000 T | C708 | 521 | 159 | 2150 |
| PCB155 | pg/g | 161 | 18 | 11.2 | 2.65 J | 70.3 | LWMC24 | 13.7 | 8.01 J | 41.3 | 2.47 U | 644 U | C455 | 10.1 | 2.5 UJ | 31.3 U |
| PCB156 | pg/g | 161 | 146 | 90.7 | 0.614 J | 78000 JT | C384 | 2370 | 349 J | 4410 J | 0.431 U | 78000 JT | C384 | 2150 | 317 | 3720 |
| PCB157 | pg/g | 161 | 134 | 83.2 | 0.612 J | 17000 JT | C384 | 519 | 73.5 J | 1160 | 0.4 U | 17000 JT | C384 | 432 | 56.2 | 734 |
| PCB158 & 160 | pg/g | 161 | 137 | 85.1 | 5.66 | 84200 JT | C384 | 2790 | 425 | 6440 J | 4.75 UT | 84200 JT | C384 | 2380 | 351 | 4380 |
| PCB159 | pg/g | 161 | 32 | 19.9 | 16.1 T | 3710 | C455 | 419 | 161 | 1530 | 4.32 U | 3710 | C455 | 88.6 | 2.5 U | 382 |
| PCB166 | pg/g | 161 | 101 | 62.7 | 2.98 JT | 3330 JT | C384 | 141 | 20.1 | 916 | 2.98 JT | 3330 JT | C384 | 91.5 | 9.36 J | 220 |
| PCB167 | pg/g | 161 | 142 | 88.2 | 0.792 J | 28300 JT | C384 | 916 | 153 J | 1880 J | 0.464 U | 28300 JT | C384 | 808 | 131 J | 1430 |
| PCB168 | pg/g | 161 | 96 | 59.6 | 4.09 JT | 815 JT | C384 | 58.9 | 21.2 | 277 J | 4.09 JT | 815 JT | C384 | 39 | 12.7 | 156 U |

Table D1.3-3. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| PCB169 | pg/g | 161 | 24 | 14.9 | 0.495 JT | 45.1 JT | C384 | 6.65 | 2.6 J | 35.4 J | 0.282 U | 83.6 U | LWMC11 | 3.18 | 1.18 UJ | 11.7 U |
| PCB170 | pg/g | 161 | 143 | 88.8 | 5.36 | 106000 JT | C384 | 5400 | 1520 | 28600 | 4.75 UT | 106000 JT | C384 | 4800 | 1310 J | 16200 |
| PCB171 | pg/g | 161 | 137 | 85.1 | 6.23 | 31400 JT | C384 | 1630 | 460 | 7810 | 4.75 UT | 31400 JT | C384 | 1380 | 375 J | 4500 |
| PCB172 | pg/g | 161 | 136 | 84.5 | 6.6 | 17800 JT | C384 | 974 | 284 J | 4340 | 4.75 UT | 17800 JT | C384 | 824 | 242 J | 3160 |
| PCB173 | pg/g | 161 | 123 | 76.4 | 5.86 J | 3330 JT | C384 | 170 | 44.8 | 859 J | 4.75 UT | 3330 JT | C384 | 133 | 33.5 | 484 |
| PCB174 | pg/g | 161 | 143 | 88.8 | 5.55 | 118000 | C455 | 6110 | 1880 T | 23700 | 4.75 UT | 118000 | C455 | 5430 | 1660 | 21700 |
| PCB175 | pg/g | 161 | 123 | 76.4 | 5.21 | 5890 JT | C384 | 365 | 94.2 | 1340 J | 2.47 U | 5890 JT | C384 | 282 | 72 | 823 |
| PCB176 | pg/g | 161 | 136 | 84.5 | 7.75 | 17000 JT | C384 | 930 | 278 | 3540 J | 4.75 UT | 17000 JT | C384 | 787 | 243 | 3100 |
| PCB177 | pg/g | 161 | 140 | 87 | 5.15 | 65400 JT | C384 | 3760 | 1180 | 15900 | 4.75 UT | 65400 JT | C384 | 3270 | 1050 | 14300 |
| PCB178 | pg/g | 161 | 138 | 85.7 | 8.74 | 22400 JT | C384 | 1400 | 491 J | 5530 J | 4.75 UT | 22400 JT | C384 | 1200 | 413 | 4910 |
| PCB179 | pg/g | 161 | 139 | 86.3 | 11.5 | 54700 | C455 | 3050 | 1010 | 11600 J | 4.75 UT | 54700 | C455 | 2640 | 876 | 10800 |
| PCB180 | pg/g | 161 | 147 | 91.3 | 5.01 T | 255000 | C455 | 12800 | 3790 | 49000 | 4.76 UJ | 255000 | C455 | 11700 | 3490 J | 46100 |
| PCB181 | pg/g | 161 | 92 | 57.1 | 5.37 T | 9550 | LWMC19 | 261 | 24.8 | 636 | 2.51 UT | 9550 | LWMC19 | 152 | 11.7 | 471 |
| PCB182 & 187 | pg/g | 161 | 143 | 88.8 | 6.93 | 141000 | C455 | 7990 | 2660 | 30000 | 4.75 UT | 141000 | C455 | 7100 | 2460 | 29100 |
| PCB183 | pg/g | 161 | 141 | 87.6 | 5.28 | 67500 | C455 | 3590 | 1050 | 14600 | 4.75 UT | 67500 | C455 | 3140 | 904 J | 10900 |
| PCB184 | pg/g | 161 | 31 | 19.3 | 2.7 J | 115 JT | C384 | 22 | 9.04 J | 94 | 2.47 U | 644 U | C455 | 12.1 | 2.5 U | 48.4 |
| PCB185 | pg/g | 161 | 133 | 82.6 | 6.47 | 13500 | C455 | 728 | 211 | 2550 | 4.75 UT | 13500 | C455 | 603 | 171 | 1940 |
| PCB186 | pg/g | 161 | 9 | 5.6 | 3.29 J | 192 | LWMC14 | 38.8 | 11.7 J | 143 J | 1.66 U | 644 U | C455 | 10.6 | 2.5 U | 31 U |
| PCB188 | pg/g | 161 | 72 | 44.7 | 2.58 JT | 311 | LWMC24 | 27 | 11.8 J | 110 | 2.47 U | 644 U | C455 | 18.8 | 6.2 UT | 66.7 |
| PCB189 | pg/g | 161 | 137 | 85.1 | 0.639 J | 4320 JT | C384 | 218 | 58.8 | 1160 J | 0.18 UJ | 4320 JT | C384 | 186 | 47.4 J | 629 |
| PCB190 | pg/g | 161 | 137 | 85.1 | 6.12 | 22500 JT | C384 | 1160 | 320 | 5320 | 4.75 UT | 22500 JT | C384 | 986 | 278 | 3570 |
| PCB191 | pg/g | 161 | 127 | 78.9 | 5.18 | 4760 JT | C384 | 257 | 70.7 | 1120 | 4.75 UT | 4760 JT | C384 | 204 | 56.1 | 692 |
| PCB192 | pg/g | 161 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.66 U | 644 U | C455 | 9.11 | 2.5 U | 25.8 U |
| PCB193 | pg/g | 161 | 137 | 85.1 | 5.04 | 11600 JT | C384 | 674 | 210 | 2760 | 4.75 UT | 11600 JT | C384 | 574 | 188 | 1980 |
| PCB194 | pg/g | 161 | 140 | 87 | 5.01 | 57300 | C455 | 2900 | 917 | 11700 | 4.75 UT | 57300 | C455 | 2530 | 770 | 7070 |
| PCB195 | pg/g | 161 | 137 | 85.1 | 6.63 | 23300 | C455 | 1330 | 427 | 5260 | 4.75 UT | 23300 | C455 | 1130 | 324 T | 3150 |
| PCB196 & 203 | pg/g | 161 | 142 | 88.2 | 5.07 | 67000 | C455 | 3780 | 1240 | 11300 | 4.75 UT | 67000 | C455 | 3340 | 1040 | 10300 |
| PCB197 | pg/g | 161 | 121 | 75.2 | 5.32 J | 2200 | C455 | 150 | 50.6 | 519 J | 4.75 UT | 2200 | C455 | 116 | 34.9 | 469 |
| PCB198 | pg/g | 161 | 126 | 78.3 | 7.49 | 4150 | C453 | 256 | 68.9 | 809 | 4.75 UT | 4150 | C453 | 203 | 51.5 | 789 J |
| PCB199 | pg/g | 161 | 141 | 87.6 | 5.12 | 64100 | C455 | 3640 | 1210 | 13200 J | 4.75 UT | 64100 | C455 | 3190 | 1000 | 10500 |
| PCB200 | pg/g | 161 | 132 | 82 | 6.89 | 7830 | C455 | 485 | 169 J | 1660 | 4.75 UT | 7830 | C455 | 399 | 131 J | 1650 |
| PCB201 | pg/g | 161 | 131 | 81.4 | 5.35 | 7690 | C455 | 488 | 168 | 1690 J | 4.75 UT | 7690 | C455 | 400 | 128 | 1230 |
| PCB202 | pg/g | 161 | 135 | 83.9 | 6.26 | 12600 | C455 | 741 | 253 | 2570 | 4.75 UT | 12600 | C455 | 623 | 205 J | 2000 |
| PCB204 | pg/g | 161 | 7 | 4.3 | 8.74 | 280 | LWMC14 | 53.4 | 18.6 J | 202 J | 1.66 U | 644 U | C455 | 11 | 2.5 U | 25.8 U |
| PCB205 | pg/g | 161 | 124 | 77 | 5.48 | 2610 | C455 | 152 | 47.3 J | 591 | 4.75 UT | 2610 | C455 | 120 | 35.5 | 384 |
| PCB206 | pg/g | 161 | 140 | 87 | 5.25 | 78300 | C207-1 | 3220 | 540 J | 13500 J | 4.75 UT | 78300 | C207-1 | 2800 | 456 | 12000 T |
| PCB207 | pg/g | 161 | 129 | 80.1 | 5 | 5410 | C455 | 285 | 76.1 J | 1440 | 4.75 UT | 5410 | C455 | 230 | 54.3 | 1330 |
| PCB208 | pg/g | 161 | 129 | 80.1 | 7.14 J | 32800 | C207-1 | 1130 | 190 | 4480 | 4.75 UT | 32800 | C207-1 | 911 | 116 | 2980 T |
| PCB209 | pg/g | 161 | 138 | 85.7 | 11.1 | 128000 | C453 | 5030 | 424 | 14000 | 4.75 UT | 128000 | C453 | 4320 | 301 J | 7760 |
| Total PCB Congeners | pg/g | 161 | 157 | 97.5 | 1.38 JT | 36800000 T | C455 | 693060.1 | 106363.3 T | 2230605.5 J | 1.38 JT | 36800000 T | C455 | 675841.34 | 99600 JT | 2195812.1 JT |
| **PCBs[c]** | | | | | | | | | | | | | | | | |
| Total PCBs | µg/kg | 1543 | 939 | 60.9 | 0.00138 JT | 36800 T | C455 | 351.21186 | 70 T | 1000 J | 0.00138 JT | 150000 UT | SD092 | 282.16061 | 22.6 JT | 666.2 J |
| **PCB Homologs** | | | | | | | | | | | | | | | | |
| Dichlorobiphenyl homologs | pg/g | 149 | 119 | 79.9 | 13.8 T | 2230000 T | C455 | 28300 | 1320 JT | 57600 J | 9.51 UT | 2230000 T | C455 | 22600 | 780 JT | 30700 |
| Heptachlorobiphenyl homologs | pg/g | 149 | 135 | 90.6 | 5.01 T | 943000 T | C455 | 49100 | 14800 T | 163000 | 4.76 UJT | 943000 T | C455 | 44500 | 13300 JT | 123000 |
| Hexachlorobiphenyl homologs | pg/g | 149 | 140 | 94 | 1.14 JT | 3050000 JT | C384 | 104000 | 24400 J | 214000 J | 1.14 JT | 3050000 JT | C384 | 97900 | 22600 T | 200000 J |
| Monochlorobiphenyl homologs | pg/g | 149 | 121 | 81.2 | 5.28 T | 111000 T | C455 | 2250 | 147 JT | 6010 T | 4.75 UT | 111000 T | C455 | 1830 | 104 T | 3840 J |
| Nonachlorobiphenyl homologs | pg/g | 149 | 128 | 85.9 | 5.25 T | 115000 T | C207-1 | 4070 | 710 | 13600 | 4.75 UT | 115000 T | C207-1 | 3500 | 551 T | 12100 |
| Octachlorobiphenyl homologs | pg/g | 149 | 130 | 87.2 | 10.2 T | 248000 T | C455 | 13400 | 4380 J | 41400 | 4.75 UT | 248000 T | C455 | 11700 | 3580 T | 34800 |
| Pentachlorobiphenyl homologs | pg/g | 149 | 142 | 95.3 | 2.32 JT | 5010000 JT | C384 | 165000 | 26500 J | 222000 J | 2.32 JT | 5010000 JT | C384 | 157000 | 22500 T | 219000 J |
| Tetrachlorobiphenyl homologs | pg/g | 149 | 140 | 94 | 1.21 JT | 14200000 T | C455 | 191000 | 18300 J | 440000 J | 1.21 JT | 14200000 T | C455 | 180000 | 16100 T | 434000 J |
| Trichlorobiphenyl homologs | pg/g | 149 | 132 | 88.6 | 5.06 T | 12700000 T | C455 | 145000 | 6910 J | 272000 J | 4.75 UT | 12700000 T | C455 | 128000 | 5350 T | 260000 J |
| **PCDD/Fs Homologs** | | | | | | | | | | | | | | | | |
| Heptachlorodibenzofuran homologs | pg/g | 326 | 295 | 90.5 | 0.012 | 44000 | WB-39 | 815.762 | 19.9 T | 2603 | 0.006 U | 44000 | WB-39 | 738.196 | 14.121 | 2277.5 |
| Heptachlorodibenzo-p-dioxin homologs | pg/g | 326 | 319 | 97.9 | 0.089 | 30500 | C302 | 315.4731 | 37.702 | 641.0153 | 0.041 U | 30500 | C302 | 308.7044 | 34.8945 | 632.5128 |
| Hexachlorodibenzofuran homologs | pg/g | 327 | 297 | 90.8 | 0.014 | 120000 | WB-36; WB-39 | 2479.11 | 14.6 | 5106 | 0.00399 U | 120000 | WB-36; WB-39 | 2251.67 | 10.4 | 3634 J |
| Hexachlorodibenzo-p-dioxin homologs | pg/g | 326 | 308 | 94.5 | 0.02 | 4280 | C302 | 45.129 | 6.255 | 94.575 | 0.009 U | 4280 | C302 | 42.8948 | 5.6965 | 91.675 |
| Octachlorodibenzofuran | pg/g | 331 | 258 | 77.9 | 0.014 J | 23000 | WB-39 | 678.607 | 23.4375 | 3530 | 0.008 U | 23000 | WB-39 | 529.166 | 10.327 | 2405 |

Table D1.3-3. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Octachlorodibenzo-p-dioxin | pg/g | 331 | 288 | 87 | 0.241 J | 183000 | C455 | 1793.601 | 211.1195 | 3557 J | 0.241 J | 183000 | C455 | 1560.924 | 160 | 3181.089 J |
| Pentachlorodibenzofuran homologs | pg/g | 327 | 278 | 85 | 0.01 | 140000 | WB-36 | 2503.747 | 9.0715 | 6895 | 0.003 U | 140000 | WB-36 | 2128.574 | 5.481 | 3200 J |
| Pentachlorodibenzo-p-dioxin homologs | pg/g | 327 | 219 | 67 | 0.016 | 288 | C302 | 8.8987 | 1.79 | 36.14 J | 0.004 U | 288 | C302 | 6.0862 | 0.639 | 26.67 |
| Tetrachlorodibenzofuran homologs | pg/g | 326 | 260 | 79.8 | 0.021 T | 110000 | WB-36 | 1808.32 | 5.8 | 5502 J | 0.00322 U | 110000 | WB-36 | 1442.32 | 2.75 | 3435.63 |
| Tetrachlorodibenzo-p-dioxin homologs | pg/g | 326 | 248 | 76.1 | 0.015 | 185.67 | C334 | 5.4107 | 0.7225 | 25.865 J | 0.00219 U | 185.67 | C334 | 4.2696 | 0.387 | 16.613 |
| Total PCDD/F | pg/g | 327 | 325 | 99.4 | 0.0578 JT | 425000 JT | WB-36 | 9052.084 | 290 T | 28240 J | 0.0578 JT | 425000 JT | WB-36 | 8996.728 | 281 T | 28160 J |
| **PCDD/Fs** | | | | | | | | | | | | | | | | |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran | pg/g | 331 | 271 | 81.9 | 0.01 J | 26000 | WB-39 | 484.902 | 8.35 | 1580 | 0.007 U | 26000 | WB-39 | 397.032 | 5.478 | 1100 |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin | pg/g | 331 | 277 | 83.7 | 0.038 J | 10800 | C455 | 158.301 | 25.6 | 322.4 | 0.038 J | 10800 | C455 | 132.531 | 15.763 | 254.5 |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran | pg/g | 331 | 210 | 63.4 | 0.02 J | 9000 | WB-39 | 248.01 | 1.591 J | 1200 | 0.005 U | 9000 | WB-39 | 157.38 | 0.368 J | 445 |
| 1,2,3,4,7,8-Hexachlorodibenzofuran | pg/g | 330 | 250 | 75.8 | 0.014 J | 84000 | WB-39 | 1882.75 | 2.368 | 5940 | 0.00399 U | 84000 | WB-39 | 1426.36 | 0.9425 J | 2757.5 J |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 331 | 181 | 54.7 | 0.017 J | 33.3 | C678 | 1.1698 | 0.33 J | 3.872 | 0.003 U | 33.3 | C678 | 0.72912 | 0.104 J | 2.825 J |
| 1,2,3,6,7,8-Hexachlorodibenzofuran | pg/g | 331 | 241 | 72.8 | 0.0113 J | 20000 | WB-36; WB-39 | 455.802 | 1.49 JT | 1500 | 0.003 U | 20000 | WB-36; WB-39 | 340.439 | 0.556 J | 695 J |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 330 | 248 | 75.2 | 0.008 J | 265 | C678 | 6.5668 | 1.653 | 16.195 | 0.004 U | 265 | C678 | 5.2078 | 0.829 J | 15.42 |
| 1,2,3,7,8,9-Hexachlorodibenzofuran | pg/g | 331 | 108 | 32.6 | 0.011 JT | 9480 | WB-35 | 233.8 | 0.7575 J | 665.1 | 0.003 U | 9480 | WB-35 | 76.31 | 0.0305 U | 90.5 J |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | pg/g | 331 | 243 | 73.4 | 0.013 J | 103 | C678 | 2.8335 | 0.689 J | 8.8879 J | 0.004 U | 103 | C678 | 2.1283 | 0.354 J | 7.26 J |
| 1,2,3,7,8-Pentachlorodibenzofuran | pg/g | 331 | 212 | 64 | 0.016 J | 50000 | WB-36 | 1312.41 | 1.045 J | 4625 | 0.003 U | 50000 | WB-36 | 868.597 | 0.313 J | 1435 J |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | pg/g | 331 | 159 | 48 | 0.0173 J | 58.293 | C334 | 1.7573 | 0.351 J | 7.176 J | 0.004 U | 58.293 | C334 | 0.93868 | 0.0975 U | 3.475 U |
| 2,3,4,6,7,8-Hexachlorodibenzofuran | pg/g | 331 | 218 | 65.9 | 0.021 J | 5580 | WB-35 | 97.401 | 0.942 J | 214.5 | 0.003 U | 5580 | WB-35 | 64.165 | 0.341 J | 90.95 |
| 2,3,4,7,8-Pentachlorodibenzofuran | pg/g | 331 | 231 | 69.8 | 0.0142 J | 28000 | WB-36 | 609.999 | 0.798 J | 1800 | 0.003 U | 28000 | WB-36 | 425.722 | 0.27 J | 875 |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/g | 330 | 187 | 56.7 | 0.095 J | 37000 | WB-36 | 1024.02 | 1.8 | 6520 | 0.00322 U | 37000 | WB-36 | 580.311 | 0.3395 U | 1423.5 J |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | pg/g | 331 | 97 | 29.3 | 0.0217 J | 83.6 | C455 | 2.6505 | 0.526 J | 10.52 | 0.002 U | 83.6 | C455 | 0.83218 | 0.0334 U | 2.535 |
| TCDD TEQ (ND = 0) | pg/g | 331 | 313 | 94.6 | 0.000262 JT | 24400 JT | WB-36 | 433.575 | 1.35 JT | 1124 J | 0.000262 JT | 24400 JT | WB-36 | 409.997 | 1.12 JT | 864 J |
| Total TCDD TEQ (ND = 0) | pg/g | 433 | 412 | 95.2 | 0.0000696 JT | 24400 JA | WB-36 | 333.339504 | 1.65 J | 488.1 J | 0.0000696 JT | 24400 JA | WB-36 | 317.174302 | 1.38 JA | 407.4 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | pg/g | 161 | 155 | 96.3 | 0.0000696 JT | 365 JT | C384 | 10.49746 | 1.86 T | 21.11296 J | 0.0000696 JT | 365 JT | C384 | 10.10929 | 1.72 T | 20.4 JT |
| **Pesticides** | | | | | | | | | | | | | | | | |
| 2,4'-DDD | µg/kg | 1490 | 928 | 62.3 | 0.056 NJ | 420000 J | WB-37 | 1185 | 3.8 J | 560 | 0.0277 U | 420000 J | WB-37 | 738.7 | 1.3 J | 246.5 |
| 2,4'-DDE | µg/kg | 1490 | 397 | 26.6 | 0.041 J | 3700 J | WB-37 | 59.8 | 2.5 | 218 | 0.0294 U | 11000 U | WB-36 | 26.1 | 0.205 U | 39.6 J |
| 2,4'-DDT | µg/kg | 1490 | 755 | 50.7 | 0.077 J | 290000 J | WB-36 | 673 | 2.2 | 530 J | 0.0389 UJ | 290000 J | WB-36 | 343.5 | 0.53 J | 130 J |
| 4,4'-DDD | µg/kg | 1679 | 1267 | 75.5 | 0.087 J | 810000 | WB-37 | 3397 | 5.2 J | 1297 J | 0.0415 U | 810000 | WB-37 | 2563 | 2.6 | 865.7 J |
| 4,4'-DDE | µg/kg | 1679 | 1114 | 66.3 | 0.054 NJ | 24000 | WB-9 | 115.4 | 4.2 J | 240 J | 0.027 U | 24000 | WB-9 | 85.55 | 2.4 NJ | 150 |
| 4,4'-DDT | µg/kg | 1660 | 1060 | 63.9 | 0.069 J | 3500000 | WB-24 | 9009 | 4.9 J | 3800 | 0.049 UJ | 3500000 | WB-24 | 5753 | 1.7 | 1400 J |
| Aldrin | µg/kg | 1172 | 135 | 11.5 | 0.11 J | 1340 J | C356 | 23.33 | 0.88 J | 72.96 J | 0.0269 UJ | 14000 U | WB-36 | 20.87 | 0.11 U | 17.23 U |
| alpha-Endosulfan | µg/kg | 1146 | 90 | 7.9 | 0.065 J | 180 NJ | C092 | 4.398 | 0.33 J | 10.33 J | 0.0248 U | 11000 UJ | WB-36 | 15.08 | 0.1 U | 9.913 J |
| alpha-Hexachlorocyclohexane | µg/kg | 1117 | 93 | 8.3 | 0.074 J | 120 | WB-13 | 3.979 | 0.482 J | 9.4 J | 0.0288 U | 8700 U | WB-36 | 13.13 | 0.1145 UJ | 5.55 J |
| Atrazine | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 200 UJ | 320 U | WB-34 | 120 | 120 U | 150 U |
| beta-Endosulfan | µg/kg | 1146 | 163 | 14.2 | 0.047 J | 170 J | C301 | 2.171 | 0.46 | 2.7 J | 0.0216 UJ | 38000 U | WB-9 | 39.17 | 0.1078 UJ | 9.875 U |
| beta-Hexachlorocyclohexane | µg/kg | 1146 | 360 | 31.4 | 0.057 JT | 1000 | WB-35 | 7.94 | 2.345 J | 12.51 J | 0.0291 U | 13000 U | WB-36 | 18.52 | 0.4975 U | 13.08 J |
| Chlordane (cis & trans) | µg/kg | 71 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.5 U | 320 U | WR-VC-52 | 14 | 6.5 U | 36 U |
| Chlordane (technical) | µg/kg | 33 | 0 | 0 | -- | -- | -- | -- | -- | -- | 8.1 U | 968 U | S2 | 50.2 | 25.7 UJT | 225 U |
| cis-Chlordane | µg/kg | 1178 | 281 | 23.9 | 0.046 J | 630 J | C455 | 5.622 | 0.65 J | 16.8 | 0.0286 U | 10000 U | WB-36 | 15.02 | 0.1785 UJ | 18.72 U |
| cis-Nonachlor | µg/kg | 996 | 187 | 18.8 | 0.044 J | 330 NJ | C531 | 6.948 | 0.574 J | 12.17 J | 0.0359 U | 2000 U | LWMC14 | 3.911 | 0.25 J | 5.125 U |
| delta-Hexachlorocyclohexane | µg/kg | 1125 | 47 | 4.2 | 0.12 NJ | 45.4 NJ | C302 | 2.511 | 0.512 J | 10.84 J | 0.0615 UJ | 13000 U | WB-36 | 16.83 | 0.16 U | 7 U |
| Dieldrin | µg/kg | 1208 | 77 | 6.4 | 0.038 NJ | 100 J | C092 | 3.595 | 0.43 | 13.36 J | 0.03 U | 12000 U | WB-36 | 17.15 | 0.1693 UJ | 8 J |
| Endosulfan sulfate | µg/kg | 1144 | 22 | 1.9 | 0.13 J | 2200 J | WB-42 | 173.9 | 0.77 J | 646.5 J | 0.051 U | 10000 U | WB-36 | 18.42 | 0.2 UJ | 8.5 U |
| Endrin | µg/kg | 925 | 130 | 14.1 | 0.12 J | 311 J | C301 | 14.58 | 1.9 J | 69.5 J | 0.0367 U | 22000 U | WB-9 | 40.47 | 0.18 U | 38.7 U |
| Endrin aldehyde | µg/kg | 1146 | 63 | 5.5 | 0.069 NJ | 407 NJ | C455 | 21.08 | 1.4 J | 90.9 J | 0.039 UJ | 7500 U | SD092 | 14.97 | 0.1353 U | 15.5 U |
| Endrin ketone | µg/kg | 1123 | 128 | 11.4 | 0.11 NJ | 263 NJ | C301 | 10.42 | 1.5 J | 26.55 J | 0.0253 U | 13000 U | WB-36 | 20.19 | 0.145 UT | 12.35 U |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 1220 | 121 | 9.9 | 0.052 J | 172 NJ | C356 | 5.275 | 1.3 J | 12 J | 0.051 U | 9900 U | WB-36 | 13.76 | 0.225 U | 14.33 J |
| Heptachlor | µg/kg | 1220 | 60 | 4.9 | 0.099 J | 22 NJ | C527 | 1.243 | 0.5125 J | 4.914 J | 0.0262 U | 14000 U | WB-36 | 16.23 | 0.103 UJ | 5.655 J |
| Heptachlor epoxide | µg/kg | 1157 | 126 | 10.9 | 0.091 J | 610 J | WB-35 | 8.186 | 0.81 J | 5.9 J | 0.0341 U | 10000 U | WB-36 | 14.63 | 0.15 U | 8.1 UJ |
| Hexachlorocyclohexanes | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 400 U | OSS004 | 33 | 13 U | 130 U |
| Methoxychlor | µg/kg | 1158 | 66 | 5.7 | 0.14 | 3000 J | WB-35 | 66.87 | 1.9 J | 176.8 J | 0.034 UJ | 38000 U | SD092 | 54.33 | 0.155 U | 32.07 U |
| Mirex | µg/kg | 987 | 34 | 3.4 | 0.12 JT | 240 J | C302 | 16.77 | 0.415 J | 88.75 J | 0.0309 U | 2000 U | LWMC14 | 1.923 | 0.089 UJ | 1 U |
| Oxychlordane | µg/kg | 994 | 114 | 11.5 | 0.092 NJ | 339 J | C356 | 7.792 | 0.737 J | 28.31 J | 0.0155 U | 2000 U | LWMC14 | 2.242 | 0.06675 U | 2.5 J |
| Total chlordanes | µg/kg | 1195 | 648 | 54.2 | 0.038 JT | 2330 JT | C455 | 19.53 | 1.57 J | 55.33 J | 0.0359 UT | 10000 UA | WB-36 | 25.41 | 0.95 UJT | 55 J |
| Total endosulfan | µg/kg | 1127 | 249 | 22.1 | 0.047 JT | 2200 JT | WB-42 | 18.38 | 0.495 JT | 20 J | 0.0393 UA | 38000 UT | WB-9 | 41.82 | 0.265 UT | 16.7 U |

Table D1.3-3. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Total DDD | µg/kg | 1660 | 1287 | 77.5 | 0.079 JT | 1230000 JT | WB-37 | 4197 | 7.6 A | 1700 J | 0.0415 UT | 1230000 JT | WB-37 | 3255 | 3.74 J | 1215 J |
| DDx | µg/kg | 1659 | 1374 | 82.8 | 0.058 JT | 3643000 A | WB-24 | 11367 | 15.4 J | 4938.2 J | 0.049 UJT | 3643000 A | WB-24 | 9414.2 | 9.9 JT | 3050.6 J |
| Total DDE | µg/kg | 1660 | 1136 | 68.4 | 0.041 JT | 24000 A | WB-9 | 134 | 4.365 J | 320 J | 0.0389 UT | 24000 A | WB-9 | 101.3 | 2.6 J | 189.3 J |
| Total DDT | µg/kg | 1659 | 1155 | 69.6 | 0.069 JT | 3500000 A | WB-24 | 8707 | 5.3 JT | 3515 J | 0.0427 UT | 3500000 A | WB-24 | 6063 | 2.1 NJT | 1551 J |
| Total 4,4'-DDx | µg/kg | 1034 | 827 | 80 | 0.07 T | 4764000 T | WB-9 | 14272 | 10.7 JT | 1251 J | 0.049 UJT | 4764000 T | WB-9 | 11415 | 7.115 J | 839.2 J |
| Toxaphene | µg/kg | 1158 | 1 | 0.1 | 1900 NJ | 1900 NJ | C531 | 1900 | 1900 NJ | 1900 NJ | 2.4 U | 750000 U | WB-36 | 1150 | 25 U | 1100 U |
| Toxaphene Peak 1 | µg/kg | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1800 U | 750000 U | WB-36 | 52000 | 12000 U | 220000 U |
| Toxaphene Peak 2 | µg/kg | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1800 U | 750000 U | WB-36 | 52000 | 12000 U | 220000 U |
| Toxaphene Peak 3 | µg/kg | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1800 U | 750000 U | WB-36 | 52000 | 12000 U | 220000 U |
| Toxaphene Peak 4 | µg/kg | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1800 U | 750000 U | WB-36 | 52000 | 12000 U | 220000 U |
| Toxaphene Peak 5 | µg/kg | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1800 U | 750000 U | WB-36 | 52000 | 12000 U | 220000 U |
| trans-Chlordane | µg/kg | 1161 | 430 | 37 | 0.034 NJ | 1140 J | C455 | 15.26 | 0.7115 J | 26.35 J | 0.0181 U | 9800 U | WB-36 | 19.81 | 0.414 J | 28 U |
| trans-Nonachlor | µg/kg | 996 | 225 | 22.6 | 0.042 JT | 886 NJ | C348 | 10.14 | 0.524 J | 27.24 J | 0.0312 U | 2000 U | LWMC14 | 3.899 | 0.125 U | 5.075 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| 1,6,7-Trimethylnaphthalene | µg/kg | 211 | 113 | 53.6 | 0.25 J | 290 | T4-B411-06 | 47 | 23 | 150 | 0.25 J | 990 U | T4-S3-01 | 37 | 3.9 J | 150 |
| 1-Methylnaphthalene | µg/kg | 478 | 347 | 72.6 | 0.31 J | 1300000 | C662 | 4500 | 11 | 1400 | 0.31 J | 1300000 | C662 | 3200 | 5.3 | 760 |
| 1-Methylphenanthrene | µg/kg | 211 | 141 | 66.8 | 0.15 J | 2000 | T4-S3-01 | 130 | 30 | 580 | 0.15 J | 2000 | T4-S3-01 | 91 | 9.4 | 450 |
| 2,6-Dimethylnaphthalene | µg/kg | 211 | 113 | 53.6 | 0.15 J | 510 | T4-PS20 | 43 | 21 | 150 | 0.15 J | 990 U | T4-S3-01 | 34 | 4 J | 140 |
| 2-Methylnaphthalene | µg/kg | 1677 | 1317 | 78.5 | 0.3 J | 3800000 | C302 | 15700 | 21 | 10100 | 0.3 J | 3800000 | C302 | 12300 | 13 | 2340 |
| Acenaphthene | µg/kg | 1715 | 1426 | 83.1 | 0.19 J | 3900000 | C302 | 17200 | 37.5 J | 19800 | 0.18 U | 3900000 | C302 | 14300 | 22 | 11100 |
| Acenaphthylene | µg/kg | 1715 | 1309 | 76.3 | 0.2 J | 1500000 J | C301 | 3860 | 15 J | 1610 | 0.2 J | 1500000 J | C301 | 2960 | 9.5 U | 943 |
| Anthracene | µg/kg | 1715 | 1429 | 83.3 | 0.22 J | 1310000 | GP26 | 8630 | 40 | 16600 | 0.22 J | 1310000 | GP26 | 7200 | 26 | 11200 |
| Benzo(a)anthracene | µg/kg | 1715 | 1524 | 88.9 | 0.17 J | 772000 | GP26 | 5630 | 91.5 J | 16000 | 0.17 J | 772000 | GP26 | 5010 | 67 | 13000 |
| Benzo(a)pyrene | µg/kg | 1715 | 1508 | 87.9 | 0.16 J | 1010000 | GP26 | 6860 | 104 | 19000 | 0.14 U | 1010000 | GP26 | 6040 | 78 | 17000 |
| Benzo(b)fluoranthene | µg/kg | 1715 | 1500 | 87.5 | 0.19 J | 850000 | GP26 | 5480 | 110 | 15100 | 0.19 J | 850000 | GP26 | 4790 | 78 | 14000 |
| Benzo(b+k)fluoranthene | µg/kg | 436 | 370 | 84.9 | 0.21 T | 157000 T | AN-1-3 | 2800 | 159 | 15000 | 0.21 T | 157000 T | AN-1-3 | 2390 | 94 | 13000 |
| Benzo(e)pyrene | µg/kg | 382 | 323 | 84.6 | 0.18 J | 340000 | C662 | 2600 | 92 | 9800 | 0.18 J | 340000 | C662 | 2200 | 52 | 9000 |
| Benzo(g,h,i)perylene | µg/kg | 1714 | 1503 | 87.7 | 0.15 J | 730000 | C302 | 4850 | 85.1 | 14900 | 0.15 J | 730000 | C302 | 4250 | 62 J | 13000 |
| Benzo(k)fluoranthene | µg/kg | 1715 | 1460 | 85.1 | 0.19 J | 540000 | C302 | 2910 | 63 | 10000 | 0.15 U | 540000 | C302 | 2480 | 41 | 7060 |
| C1-Chrysene | µg/kg | 178 | 153 | 86 | 0.52 J | 210000 | C662 | 2520 | 100 | 5060 | 0.25 U | 210000 | C662 | 2170 | 60 | 4160 |
| C1-Dibenzothiophene | µg/kg | 178 | 133 | 74.7 | 1.2 J | 68000 | C662 | 880 | 43 | 1700 J | 0.21 U | 68000 | C662 | 658 | 16 | 1330 J |
| C1-Fluoranthene/pyrene | µg/kg | 178 | 155 | 87.1 | 0.84 J | 510000 | C662 | 5740 | 150 | 12300 J | 0.61 U | 510000 | C662 | 5000 | 84 | 11200 J |
| C1-Fluorene | µg/kg | 178 | 143 | 80.3 | 0.52 J | 150000 | C662 | 1660 | 25 | 1890 | 0.5 U | 150000 | C662 | 1330 | 11.5 | 1550 |
| C1-Naphthalene | µg/kg | 7 | 2 | 28.6 | 37.2 | 58.1 | SGP-14 | 47.7 | 47.7 | 57.1 | 4.55 UT | 111 UJ | SGP-13 | 27.6 | 22.3 UT | 57.3 J |
| C1-Phenanthrene/anthracene | µg/kg | 178 | 153 | 86 | 0.95 J | 880000 | C662 | 10000 | 110 | 13200 J | 0.75 U | 880000 | C662 | 8600 | 72.5 | 12000 J |
| C2-Chrysene | µg/kg | 178 | 143 | 80.3 | 0.87 J | 97000 | C662 | 1350 | 75 | 2640 | 0.25 U | 97000 | C662 | 1080 | 48 | 2020 |
| C2-Dibenzothiophene | µg/kg | 178 | 135 | 75.8 | 0.88 J | 140000 | C662 | 2130 | 61 | 3030 J | 0.21 U | 140000 | C662 | 1620 | 24.5 | 2900 |
| C2-Fluoranthene/pyrene | µg/kg | 170 | 141 | 82.9 | 0.88 J | 210000 | C662 | 2600 | 86 | 4400 | 0.61 U | 210000 | C662 | 2200 | 55 | 3000 |
| C2-Fluorene | µg/kg | 178 | 141 | 79.2 | 0.6 J | 180000 | C662 | 2260 | 57 | 3200 | 0.5 U | 180000 | C662 | 1790 | 24 | 2460 |
| C2-Naphthalene | µg/kg | 178 | 154 | 86.5 | 0.47 J | 1300000 | C662 | 11300 | 37 | 7590 J | 0.37 U | 1300000 | C662 | 9810 | 22 | 6930 |
| C2-Phenanthrene/anthracene | µg/kg | 178 | 153 | 86 | 1 J | 370000 | C662 | 5190 | 120 T | 8020 J | 0.75 U | 370000 | C662 | 4460 | 71.5 | 7280 J |
| C3-Chrysene | µg/kg | 178 | 133 | 74.7 | 3.3 | 46000 | C662 | 749 | 57 | 1820 | 0.25 U | 46000 | C662 | 567 | 36 | 1330 |
| C3-Dibenzothiophene | µg/kg | 178 | 134 | 75.3 | 0.4 J | 87000 | C662 | 1030 | 66.5 | 1740 | 0.21 U | 87000 | C662 | 776 | 25 | 1420 |
| C3-Fluoranthene/pyrene | µg/kg | 171 | 134 | 78.4 | 0.84 J | 89000 | C662 | 1400 | 66 | 2700 | 0.61 U | 89000 | C662 | 1100 | 43 | 2000 |
| C3-Fluorene | µg/kg | 178 | 136 | 76.4 | 0.8 J | 170000 | C662 | 2440 | 89.5 | 3630 J | 0.5 U | 170000 | C662 | 1860 | 37.5 | 2730 |
| C3-Naphthalene | µg/kg | 178 | 148 | 83.1 | 0.48 J | 570000 | C662 | 6250 | 82.5 | 7040 | 0.37 U | 570000 | C662 | 5190 | 27.5 | 5550 J |
| C3-Phenanthrene/anthracene | µg/kg | 178 | 155 | 87.1 | 0.84 J | 230000 | C662 | 2890 | 130 | 4700 | 0.75 U | 230000 | C662 | 2510 | 69 | 4020 |
| C4-Chrysene | µg/kg | 178 | 91 | 51.1 | 6.2 | 6900 | C662 | 208 | 43 | 685 | 0.25 U | 6900 | C662 | 116 | 16 | 490 |
| C4-Naphthalene | µg/kg | 178 | 141 | 79.2 | 0.74 J | 290000 | C662 | 3370 | 83 | 5400 J | 0.37 U | 290000 | C662 | 2670 | 31 | 3300 J |
| C4-Phenanthrene/anthracene | µg/kg | 177 | 138 | 78 | 0.81 J | 95000 | C662 | 1290 | 79 | 2290 | 0.75 U | 95000 | C662 | 1010 | 35 | 1960 J |
| Chrysene | µg/kg | 1715 | 1511 | 88.1 | 0.17 J | 980000 | C302 | 6620 | 130 | 19000 | 0.17 J | 980000 | C302 | 5830 | 92.1 | 15000 |
| Dibenzo(a,h)anthracene | µg/kg | 1715 | 1314 | 76.6 | 0.22 J | 88000 | GP26 | 709 | 19 | 2330 J | 0.22 J | 88000 | GP26 | 554 | 11 T | 1870 |
| Dibenzothiophene | µg/kg | 257 | 215 | 83.7 | 0.21 J | 570000 | C662 | 3700 | 13 | 3290 | 0.21 J | 570000 | C662 | 3100 | 8.3 | 2920 |
| Fluoranthene | µg/kg | 1715 | 1541 | 89.9 | 0.24 J | 3500000 | C302 | 21200 | 231 | 47000 | 0.24 J | 3500000 | C302 | 19000 | 170 | 41300 |
| Fluorene | µg/kg | 1715 | 1396 | 81.4 | 0.22 J | 1500000 | C302 | 8800 | 32 | 14300 J | 0.21 U | 1500000 | C302 | 7180 | 19 | 6910 |
| Total HPAHs | µg/kg | 1696 | 1596 | 94.1 | 0.15 JT | 13400000 T | C302 | 81526 | 1055 | 200000 | 0.15 JT | 13400000 T | C302 | 76720 | 845.5 J | 187750 |
| Indeno(1,2,3-cd)pyrene | µg/kg | 1715 | 1471 | 85.8 | 0.18 J | 610000 | C302 | 4500 | 82 | 14000 | 0.16 U | 610000 | C302 | 3860 | 57 | 12000 |
| Total LPAHs | µg/kg | 1696 | 1575 | 92.9 | 0.22 JT | 39900000 T | C302 | 174190 | 328 JT | 111800 | 0.22 JT | 39900000 T | C302 | 161760 | 258 | 98450 |

Table D1.3-3. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Naphthalene | µg/kg | 1758 | 1285 | 73.1 | 0.27 J | 20000000 | C302 | 102000 | 55 | 11000 | 0.17 U | 20000000 | C302 | 74800 | 26 J | 2780 |
| Perylene | µg/kg | 382 | 349 | 91.4 | 0.26 J | 140000 | C662 | 1100 | 92 | 4400 | 0.26 J | 140000 | C662 | 970 | 82 | 4200 |
| Phenanthrene | µg/kg | 1715 | 1538 | 89.7 | 0.24 J | 8500000 | C302 | 44800 | 170 | 64000 | 0.24 J | 8500000 | C302 | 40200 | 130 | 52300 |
| Pyrene | µg/kg | 1715 | 1563 | 91.1 | 0.15 J | 4700000 | C302 | 26400 | 250 | 53300 | 0.15 J | 4700000 | C302 | 24100 | 200 J | 46300 |
| Total BaPEq | µg/kg | 1696 | 1553 | 91.6 | 0.00017 JT | 1310000 T | GP26 | 8806.5 | 133 T | 24880 | 0.00017 JT | 1310000 T | GP26 | 8066.9 | 110 | 23075 |
| Total cPAHs | µg/kg | 1696 | 1553 | 91.6 | 0.17 JT | 4500000 T | C302 | 31490 | 530 T | 89400 | 0.17 JT | 4500000 T | C302 | 28840 | 417.5 | 82250 |
| Total PAHs | µg/kg | 1696 | 1624 | 95.8 | 0.15 JT | 53300000 T | C302 | 248670 | 1390 J | 288550 | 0.15 JT | 53300000 T | C302 | 238120 | 1174 J | 280000 |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl) phthalate | µg/kg | 1591 | 635 | 39.9 | 2.4 J | 18000 | WR-VC-110 | 345 | 95 J | 1100 | 2 U | 40000 U | HA-43 | 227 | 40.5 U | 740 |
| Butylbenzyl phthalate | µg/kg | 1589 | 264 | 16.6 | 2 J | 11800 | HA-42 | 74.6 | 11 J | 160 | 1.7 U | 11800 | HA-42 | 47.9 | 6.5 U | 125 U |
| Dibutyl phthalate | µg/kg | 1591 | 379 | 23.8 | 3.2 J | 3200 J | C521 | 34.5 | 8.8 J | 84.3 J | 3 U | 20000 U | HA-43 | 67.6 | 10 U | 140 U |
| Diethyl phthalate | µg/kg | 1583 | 102 | 6.4 | 1.3 J | 1950 | GP25 | 103 | 4.45 J | 696 | 1.3 J | 8800 U | C301 | 47.9 | 5.5 U | 144 U |
| Dimethyl phthalate | µg/kg | 1589 | 42 | 2.6 | 0.5 J | 5100 J | C302 | 164 | 8.75 J | 218 | 0.5 J | 6600 U | HA-43 | 39.6 | 4.6 U | 105 U |
| Di-n-octyl phthalate | µg/kg | 1583 | 35 | 2.2 | 3.1 J | 3180 | DM-24 | 158 | 16 J | 591 J | 0.2 U | 12000 U | SD05 | 38.6 | 4.5 UJ | 109 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | µg/kg | 1375 | 25 | 1.8 | 2.6 JT | 530 | OSS004 | 55.4 | 15 J | 174 J | 0.23 U | 8900 U | GS-07 | 32.4 | 2.65 U | 83.7 UJ |
| 1,2-Dichlorobenzene | µg/kg | 1390 | 37 | 2.7 | 1.4 J | 730 J | WB-35 | 59.9 | 9.9 J | 284 J | 0.079 U | 3720 U | DMMU-2-A | 28.6 | 2.3 U | 65 U |
| 1,2-Diphenylhydrazine | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 200 UJ | 320 U | WB-34 | 120 | 120 U | 150 U |
| 1,3-Dichlorobenzene | µg/kg | 1353 | 17 | 1.3 | 0.23 J | 330 JT | C019 | 31.3 | 11 | 111 J | 0.068 U | 7530 U | GP27 | 36.3 | 2.65 U | 80 U |
| 1,4-Dichlorobenzene | µg/kg | 1449 | 85 | 5.9 | 0.42 J | 2000 J | WB-35 | 111 | 8.8 J | 690 J | 0.13 U | 5400 U | LWMTCLP11B | 33.8 | 1.75 U | 74 U |
| 2,4-Dinitrotoluene | µg/kg | 1250 | 3 | 0.2 | 11 J | 2100 | C283 | 937 | 700 | 1960 | 0.38 U | 36000 U | LWMTCLP11C | 114 | 3.98 U | 277 U |
| 2,6-Dinitrotoluene | µg/kg | 1240 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.2 U | 11700 U | GP26 | 81.8 | 4.7 U | 266 U |
| 2-Chloronaphthalene | µg/kg | 1242 | 2 | 0.2 | 11 J | 41 | C293-2 | 26 | 26 J | 39.5 J | 0.27 U | 9000 U | C301 | 44.5 | 4 U | 159 UJ |
| 2-Nitroaniline | µg/kg | 1240 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.64 U | 11700 U | GP26 | 75.1 | 4.5 U | 260 U |
| 3,3'-Dichlorobenzidine | µg/kg | 1218 | 1 | 0.1 | 6.6 J | 6.6 J | C635 | 6.6 | 6.6 J | 6.6 J | 1.2 U | 11700 U | GP26 | 120 | 6.5 U | 440 U |
| 3-Nitroaniline | µg/kg | 1236 | 2 | 0.2 | 4.8 JT | 21 J | WB-39 | 12.9 | 12.9 J | 20.2 J | 0.89 U | 12000 U | SD05 | 103 | 4.35 U | 279 U |
| 4-Bromophenyl phenyl ether | µg/kg | 1240 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.5 U | 3550 U | S2 | 31.6 | 2.35 U | 115 U |
| 4-Chloroaniline | µg/kg | 1235 | 10 | 0.8 | 2.5 J | 13 J | C757 | 6.19 | 5.65 J | 11.7 J | 1.7 U | 21500 U | S2 | 94.7 | 3.55 U | 173 U |
| 4-Chlorophenyl phenyl ether | µg/kg | 1240 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.87 U | 5000 U | C301 | 35.1 | 3.35 U | 115 U |
| 4-Nitroaniline | µg/kg | 1238 | 2 | 0.2 | 12 J | 30 | C362 | 21 | 21 J | 29.1 J | 1.8 UJ | 11700 U | GP26 | 80.1 | 4.83 U | 266 U |
| Acetophenone | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 200 UJ | 320 U | WB-34 | 120 | 120 U | 150 U |
| Aniline | µg/kg | 962 | 31 | 3.2 | 2.6 J | 320 | WR-VC-64 | 31 | 14 J | 110 J | 1.5 UJ | 3800 U | C301 | 21 | 2.1 U | 100 U |
| Azobenzene | µg/kg | 1019 | 1 | 0.1 | 1.1 JT | 1.1 JT | C7482 | 1.1 | 1.1 JT | 1.1 JT | 0.46 U | 6000 U | C301 | 20 | 2.3 U | 41 U |
| Benzaldehyde | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 200 UJ | 320 U | WB-34 | 120 | 120 U | 150 U |
| Benzoic acid | µg/kg | 1249 | 105 | 8.4 | 8.7 J | 2600 | SD092 | 315 | 200 | 868 J | 8.7 J | 240000 U | C301 | 893 | 130 J | 2400 U |
| Benzyl alcohol | µg/kg | 1327 | 167 | 12.6 | 2.2 J | 3700 | C199 | 37.9 | 7.7 J | 70.7 | 1.5 U | 11700 U | GP26 | 95 | 6.5 U | 275 U |
| Bis(2-chloro-1-methylethyl) ether | µg/kg | 103 | 2 | 1.9 | 3.2 J | 4 JT | WB-41 | 3.6 | 3.6 J | 4 J | 1 U | 910 U | SD143 | 40 | 9.5 U | 130 U |
| Bis(2-chloroethoxy) methane | µg/kg | 1240 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.46 U | 3550 U | S2 | 30.7 | 2.15 U | 115 U |
| Bis(2-chloroethyl) ether | µg/kg | 1240 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 6000 U | C301 | 43.9 | 4 U | 135 U |
| Bis(2-chloroisopropyl) ether | µg/kg | 1137 | 2 | 0.2 | 2.6 JT | 13 JT | C7482 | 7.8 | 7.8 J | 12.5 J | 1.4 U | 3550 U | S2 | 29.9 | 1.85 U | 105 U |
| Caprolactam | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 200 UJ | 320 U | WB-34 | 120 | 120 U | 150 U |
| Carbazole | µg/kg | 1199 | 631 | 52.6 | 0.6 J | 520000 | C301 | 4060 | 17 J | 5850 | 0.6 J | 520000 | C301 | 2140 | 6.8 J | 1100 |
| Dibenzofuran | µg/kg | 1478 | 1122 | 75.9 | 0.22 J | 230000 | C302 | 1440 | 12 J | 2700 | 0 U | 230000 | C302 | 1110 | 9.25 | 1900 |
| Diphenyl | µg/kg | 231 | 92 | 39.8 | 0.29 J | 150 | T4-B414-02 | 18 | 11 | 65 | 0.29 J | 990 U | T4-S3-01 | 27 | 3.5 J | 120 U |
| Hexachlorobenzene | µg/kg | 1367 | 236 | 17.3 | 0.066 J | 14000 | OSS004 | 71.95 | 0.9445 J | 50.65 J | 0.0162 U | 14000 | OSS004 | 44.99 | 1.13 J | 110 U |
| Hexachlorobutadiene | µg/kg | 1436 | 97 | 6.8 | 0.081 J | 34000 | SD092 | 652.1 | 1.4 | 110.4 J | 0.0297 U | 34000 | SD092 | 88.16 | 0.29 J | 101.3 UJ |
| Hexachlorocyclopentadiene | µg/kg | 1226 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.4 U | 38000 U | C301 | 213 | 24.3 U | 750 U |
| Hexachloroethane | µg/kg | 1327 | 129 | 9.7 | 0.063 JT | 20000 | SD092 | 180.5 | 1.2 NJ | 184 | 0.037 U | 20000 | SD092 | 67.04 | 0.25 U | 115 U |
| Isophorone | µg/kg | 1240 | 3 | 0.2 | 10 J | 43 | OSS004 | 24.3 | 20 | 40.7 | 0.75 U | 4000 U | C301 | 31.7 | 2.5 U | 115 U |
| Nitrobenzene | µg/kg | 1251 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.2 U | 7100 U | LWMTCLP11C | 39.3 | 3.45 U | 120 U |
| N-Nitrosodimethylamine | µg/kg | 1146 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.1 UJ | 16000 U | C301 | 69.2 | 9 U | 168 U |
| N-Nitrosodiphenylamine | µg/kg | 1329 | 74 | 5.6 | 1.7 J | 560 J | C316 | 70.4 | 29.5 J | 234 | 0.4 U | 5500 U | C301 | 44.7 | 4 U | 155 UJ |
| N-Nitrosodipropylamine | µg/kg | 1240 | 2 | 0.2 | 13 J | 25 J | SDDA18SB | 19 | 19 J | 24.4 J | 1.7 U | 8000 U | C301 | 51.2 | 5 U | 150 U |
| Pyridine | µg/kg | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | 310 U | 36000 U | LWMTCLP11C | 1800 | 170 U | 9200 U |
| Retene | µg/kg | 2 | 2 | 100 | 69.6 | 93.7 J | SED08 | 81.7 | 81.7 J | 92.5 J | 69.6 | 93.7 J | SED08 | 81.7 | 81.7 J | 92.5 J |
| **Phenols** | | | | | | | | | | | | | | | | |
| 2,3,4,5-Tetrachlorophenol | µg/kg | 1040 | 55 | 5.3 | 0.47 J | 1100 J | C356 | 48 | 2.8 J | 110 | 0.23 U | 1100 J | C356 | 4.1 | 0.46 U | 5.5 U |
| 2,3,4,6;2,3,5,6-Tetrachlorophenol coelution | µg/kg | 506 | 43 | 8.5 | 0.76 J | 1000 | C301; C302 | 55 | 2.5 J | 85 | 0.4 U | 1000 | C301; C302 | 5.3 | 0.31 U | 5 U |

Table D1.3-3. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| 2,3,4,6-Tetrachlorophenol | µg/kg | 34 | 2 | 5.9 | 47 J | 85 | WB-36 | 66 | 66 J | 83 J | 1.2 U | 320 U | WB-34 | 74 | 110 U | 140 U |
| 2,3,5,6-Tetrachlorophenol | µg/kg | 568 | 36 | 6.3 | 0.32 J | 450 | C302 | 25 | 1.7 J | 110 J | 0.19 U | 450 | C302 | 7 | 0.32 J | 35 J |
| 2,4,5-Trichlorophenol | µg/kg | 1294 | 60 | 4.6 | 0.48 J | 200 J | C301 | 11.5 | 4.6 J | 38.4 J | 0.32 U | 36000 U | LWMTCLP11C | 64.9 | 1.2 J | 230 U |
| 2,4,6-Trichlorophenol | µg/kg | 1294 | 128 | 9.9 | 0.17 J | 1400 | C360-2 | 33.6 | 1.4 J | 54.9 | 0.12 U | 36000 U | LWMTCLP11C | 66.9 | 0.325 U | 241 U |
| 2,4-Dichlorophenol | µg/kg | 1283 | 18 | 1.4 | 4.7 JT | 140 | SD081C | 31.2 | 20.5 | 75.4 | 0.46 U | 7010 U | GP26 | 52 | 2.95 U | 159 UJ |
| 2,4-Dimethylphenol | µg/kg | 1072 | 2 | 0.2 | 23 J | 28 JT | C6012 | 25.5 | 25.5 J | 27.8 J | 0.32 U | 14000 U | C301 | 119 | 9.5 U | 452 U |
| 2,4-Dinitrophenol | µg/kg | 1271 | 3 | 0.2 | 18 J | 678 | GP30 | 263 | 93 J | 620 J | 2.1 U | 90000 U | C301 | 385 | 55 U | 1680 U |
| 2-Chlorophenol | µg/kg | 1283 | 27 | 2.1 | 4 J | 310 | WB-42 | 62.9 | 20 JT | 204 | 1.3 U | 4300 U | C301 | 35.1 | 3.1 U | 119 U |
| 2-Methylphenol | µg/kg | 1382 | 8 | 0.6 | 1.8 J | 12 JT | C011-1 | 5.83 | 5.05 J | 11.3 J | 1.1 U | 12000 U | SD05 | 55.8 | 4.85 U | 150 U |
| 2-Nitrophenol | µg/kg | 1274 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.66 U | 11700 U | GP26 | 68.6 | 3.95 U | 251 U |
| 3- and 4-Methylphenol Coelution | µg/kg | 127 | 20 | 15.7 | 4.8 J | 466 | GP26 | 112 | 46 | 365 | 4.8 J | 12000 U | SD05 | 442 | 225 U | 1030 U |
| 3-Methylphenol | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 200 UJ | 320 U | WB-34 | 120 | 120 U | 150 U |
| 4,6-Dinitro-2-methylphenol | µg/kg | 1282 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 12000 U | SD05 | 112 | 3 U | 367 UJ |
| 4-Chloro-3-methylphenol | µg/kg | 1283 | 7 | 0.5 | 4.4 J | 32 J | C402 | 11.7 | 6.8 J | 27.8 J | 1.1 U | 5300 U | C301 | 44.7 | 3.5 U | 129 U |
| 4-Methylphenol | µg/kg | 1238 | 660 | 53.3 | 1.6 J | 800 | C263 | 60.7 | 31.5 | 221 | 1.5 U | 7300 U | C301 | 67.9 | 20 | 220 |
| 4-Nitrophenol | µg/kg | 1280 | 3 | 0.2 | 5.2 | 600 J | SD05 | 218 | 48 JT | 545 J | 0.36 U | 75000 U | C301 | 272 | 31 U | 1000 UJ |
| m,p-Cresol | µg/kg | 14 | 13 | 92.9 | 6.8 J | 200 | WB-36 | 72 | 67 | 190 | 3.6 U | 200 | WB-36 | 67 | 43 J | 190 |
| Pentachlorophenol | µg/kg | 1379 | 390 | 28.3 | 0.32 J | 5600 | C301 | 36.3 | 3.85 J | 65.6 | 0.16 UT | 36000 U | LWMTCLP11C | 129 | 2 NJ | 276 U |
| Phenol | µg/kg | 1383 | 329 | 23.8 | 2.1 J | 347 | GP27 | 22.3 | 11 J | 77.6 J | 2 U | 7100 U | LWMTCLP11C | 57.1 | 9 U | 160 UJ |
| **Petroleum** | | | | | | | | | | | | | | | | |
| C10-C12 Aliphatics | mg/kg | 16 | 10 | 62.5 | 3.5 | 80 J | C532 | 18 | 11 | 54 J | 2.4 U | 80 J | C532 | 12 | 4.5 | 37 J |
| C10-C12 Aromatics | mg/kg | 16 | 3 | 18.8 | 4.4 | 41 | C527 | 17 | 5.6 J | 37 J | 2.4 U | 41 | C527 | 4.4 | 1.7 U | 14 J |
| C12-C16 Aliphatics | mg/kg | 16 | 11 | 68.8 | 3.3 | 550 J | C532 | 120 | 62 | 380 J | 2.4 U | 550 J | C532 | 80 | 35 | 300 J |
| C12-C16 Aromatics | mg/kg | 16 | 9 | 56.3 | 5.8 | 110 | C527; C531 | 46 | 33 | 110 | 2.4 U | 110 | C527; C531 | 27 | 6.7 | 110 |
| C16-C21 Aliphatics | mg/kg | 16 | 12 | 75 | 4.1 | 850 J | C532 | 190 | 120 | 590 J | 2.4 U | 850 J | C532 | 150 | 100 | 500 J |
| C16-C21 Aromatics | mg/kg | 16 | 11 | 68.8 | 3.9 | 560 | C531 | 220 | 120 | 540 | 2.4 U | 560 | C531 | 150 | 58 | 520 |
| C21-C34 Aliphatics | mg/kg | 16 | 15 | 93.8 | 3.4 | 1500 J | C532 | 330 | 250 | 880 J | 2.4 U | 1500 J | C532 | 310 | 250 | 840 J |
| C21-C34 Aromatics | mg/kg | 16 | 11 | 68.8 | 5.6 | 570 J | C532 | 250 | 220 | 550 J | 2.4 U | 570 J | C532 | 170 | 110 | 530 J |
| C8-C10 Aliphatics | mg/kg | 16 | 5 | 31.3 | 3.2 | 17 J | C532 | 8.8 | 6.1 | 16 J | 2.4 UJ | 17 J | C532 | 3.8 | 1.7 U | 15 J |
| C8-C10 Aromatics | mg/kg | 16 | 1 | 6.3 | 3.8 | 3.8 | C527 | 3.8 | 3.8 | 3.8 | 2.4 U | 3.8 | C527; C528 | 1.7 | 1.6 U | 2.4 |
| Diesel fuels | mg/kg | 34 | 25 | 73.5 | 2.1 J | 2400 | SDDC24SB | 600 | 530 | 1900 | 2.1 J | 2400 | SDDC24SB | 450 | 130 | 1500 |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 1075 | 879 | 81.8 | 0.045 J | 190000 J | C301 | 1310 | 200 J | 2910 J | 0.045 J | 190000 J | C301 | 1070 | 130 J | 2130 J |
| Total Petroleum Hydrocarbons (Diesel)(silica gel treated) | mg/kg | 250 | 205 | 82 | 1.8 J | 88000 J | C662 | 807 | 170 J | 1720 J | 1.3 U | 88000 J | C662 | 662 | 120 J | 1310 J |
| Total Petroleum Hydrocarbons (Gasoline) | mg/kg | 847 | 233 | 27.5 | 0.74 J | 21000 J | C301 | 310 | 19 J | 580 J | 0.02 U | 21000 J | C301 | 86.7 | 1.7 U | 57 J |
| Total Petroleum Hydrocarbons (Heavy Oil) | mg/kg | 31 | 23 | 74.2 | 54 J | 2560 | HA-43 | 408 | 227 J | 1170 | 25 U | 2560 | HA-43 | 312 | 169 J | 1080 |
| Jet fuel A | mg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | RB13 | 5 | 5 U | 5 U |
| JP-4 jet fuel | mg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | RB13 | 5 | 5 U | 5 U |
| Kerosene | mg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | RB13 | 5 | 5 U | 5 U |
| Lube Oil | mg/kg | 4 | 1 | 25 | 79 | 79 | RB13 | 79 | 79 | 79 | 79 | 100 U | HC-S-11; HC-S-13 | 57 | 50 U | 75 |
| Mineral spirits | mg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | RB13 | 5 | 5 U | 5 U |
| Motor oil | mg/kg | 55 | 54 | 98.2 | 14 | 11000 J | LWMC11 | 800 | 345 J | 2510 | 13 U | 11000 J | LWMC11 | 786 | 340 | 2480 |
| Naphtha distillate | mg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | RB13 | 5 | 5 U | 5 U |
| Pencil pitch | mg/kg | 14 | 14 | 100 | 21 | 2300 | HC-S-11 | 764 | 404 | 2110 | 21 | 2300 | HC-S-11 | 764 | 404 | 2110 |
| Phytane | mg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.5 U | 0.5 U | HC-S-11; HC-S-13 | 0.3 | 0.3 U | 0.3 U |
| Pristane | mg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.5 U | 0.5 U | HC-S-11; HC-S-13 | 0.3 | 0.3 U | 0.3 U |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 1020 | 854 | 83.7 | 0.24 | 110000 J | C301 | 1170 | 550 J | 2920 J | 0.1 U | 110000 J | C301 | 987 | 420 J | 2400 J |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 250 | 205 | 82 | 3.6 J | 15000 J | C662 | 632 | 370 J | 1560 J | 3 U | 15000 J | C662 | 519 | 275 J | 1360 J |
| Total Petroleum Hydrocarbons | mg/kg | 1090 | 951 | 87.2 | 0.32 JT | 321000 JT | C301 | 2390 | 690 JT | 5350 J | 0.1 UT | 321000 JT | C301 | 2090 | 560 J | 4520 J |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 250 | 214 | 85.6 | 2.6 JA | 103000 JA | C662 | 1380 | 518 J | 3540 J | 2.6 JA | 103000 JA | C662 | 1180 | 405 J | 2460 J |
| **Herbicides** | | | | | | | | | | | | | | | | |
| 2,4,5-T | µg/kg | 182 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.45 U | 21 U | WR-VC-03 | 1.08 | 0.61 U | 7.95 U |
| 2,4-D | µg/kg | 194 | 5 | 2.6 | 7.14 | 473 | C335 | 128 | 45.5 J | 395 J | 0.31 U | 473 | C335 | 5.81 | 0.43 U | 26.9 U |
| 2,4-DB | µg/kg | 182 | 1 | 0.5 | 797 | 797 | C335 | 797 | 797 | 797 | 0.45 U | 797 | C335 | 5.57 | 0.62 U | 8.5 U |
| Dalapon | µg/kg | 182 | 3 | 1.6 | 6.9 | 16 J | WR-VC-62 | 11.6 | 12 J | 15.6 J | 0.27 U | 110 U | WR-VC-03 | 3.16 | 0.368 U | 40.2 U |
| Dicamba | µg/kg | 182 | 1 | 0.5 | 3 J | 3 J | C527 | 3 | 3 J | 3 J | 0.97 U | 42 U | WR-VC-03 | 2.25 | 1.32 U | 15.9 U |

Table D1.3-3. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Dichloroprop | µg/kg | 182 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.49 U | 21 U | WR-VC-03 | 1.14 | 0.665 U | 7.95 U |
| Dinoseb | µg/kg | 182 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.62 U | 21 U | WR-VC-03 | 1.29 | 0.843 U | 7.95 U |
| MCPA | µg/kg | 182 | 3 | 1.6 | 1.58 | 144 | C335 | 52.6 | 12.1 J | 131 J | 0.65 U | 480 U | WR-VC-62 | 4.41 | 0.895 U | 8.5 U |
| MCPP | µg/kg | 182 | 3 | 1.6 | 1.62 | 3000 J | WR-VC-62 | 1010 | 37.2 | 2700 J | 0.6 U | 3100 U | WR-VC-58 | 26.4 | 0.815 U | 8.5 U |
| Silvex | µg/kg | 194 | 1 | 0.5 | 2.25 J | 2.25 J | C333 | 2.25 | 2.25 J | 2.25 J | 0.45 U | 21 U | WR-VC-03 | 1.44 | 0.625 U | 8 U |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | µg/kg | 600 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.035 U | 7800 U | C301 | 35.1 | 0.0285 U | 74.1 U |
| 1,1,1-Trichloroethane | µg/kg | 626 | 3 | 0.5 | 0.41 J | 0.63 J | WB-42 | 0.547 | 0.6 J | 0.627 J | 0.067 U | 7800 U | C301 | 36.5 | 0.055 U | 81.5 UJ |
| 1,1,2,2-Tetrachloroethane | µg/kg | 625 | 16 | 2.6 | 0.18 J | 18 J | WB-42 | 3.3 | 0.84 J | 11 J | 0.11 U | 9700 U | C301 | 57.9 | 0.09 U | 165 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | µg/kg | 25 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.3 U | 3100 U | WB-35 | 220 | 3.9 U | 1300 U |
| 1,1,2-Trichloroethane | µg/kg | 626 | 2 | 0.3 | 0.55 J | 1.9 J | WB-42 | 1.23 | 1.23 J | 1.83 J | 0.067 U | 7000 U | C301 | 38.4 | 0.055 U | 86 U |
| 1,1-Dichloroethane | µg/kg | 625 | 21 | 3.4 | 0.095 JT | 3.7 | WB-36 | 0.727 | 0.36 J | 2.7 J | 0.064 U | 6400 U | C301 | 32.9 | 0.055 U | 73.4 U |
| 1,1-Dichloroethene | µg/kg | 637 | 4 | 0.6 | 0.31 J | 3.7 J | WB-42 | 1.73 | 1.46 J | 3.49 J | 0.069 U | 8400 U | C301 | 43.6 | 0.075 UT | 83.6 UJ |
| 1,1-Dichloropropene | µg/kg | 93 | 0 | 0 | -- | -- | -- | -- | -- | -- | 5 U | 2170 U | GP27 | 32.5 | 7.4 U | 83.7 UJ |
| 1,2,3-Trichlorobenzene | µg/kg | 119 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.3 U | 7530 U | GP27 | 170 | 8.65 U | 819 U |
| 1,2,3-Trichloropropane | µg/kg | 601 | 5 | 0.8 | 0.38 J | 3.7 | C166 | 1.53 | 0.88 J | 3.34 | 0.13 U | 15000 U | C301 | 64.3 | 0.105 U | 84.5 U |
| 1,2,4,5-Tetrachlorobenzene | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 200 UJ | 320 U | WB-34 | 120 | 120 U | 150 U |
| 1,2,4-Trimethylbenzene | µg/kg | 97 | 17 | 17.5 | 64.9 | 13100 | GP26 | 1940 | 720 | 9090 | 0.18 U | 13100 | GP26 | 476 | 14.6 U | 1810 |
| 1,2-Dibromo-3-chloropropane | µg/kg | 117 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.3 U | 7530 U | GP27 | 187 | 8.75 U | 849 U |
| 1,2-Dichloroethane | µg/kg | 637 | 9 | 1.4 | 0.055 J | 12 | WB-36 | 1.78 | 0.37 J | 7.68 J | 0.035 U | 8000 U | C301 | 42.6 | 0.0295 U | 83.6 UJ |
| 1,2-Dichloropropane | µg/kg | 625 | 1 | 0.2 | 0.31 J | 0.31 J | WB-42 | 0.31 | 0.31 J | 0.31 J | 0.04 U | 8700 U | C301 | 40.9 | 0.0325 U | 84.4 U |
| 1,3,5-Trimethylbenzene | µg/kg | 97 | 15 | 15.5 | 19.2 | 3860 | GP26 | 456 | 209 | 1680 | 0.077 U | 7530 U | GP27 | 207 | 9 U | 757 |
| 1,3-Dichloropropane | µg/kg | 93 | 0 | 0 | -- | -- | -- | -- | -- | -- | 5 U | 2170 U | GP27 | 72.2 | 7.25 U | 665 U |
| 1,4-Dichloro-trans-2-butene | µg/kg | 503 | 3 | 0.6 | 8.7 J | 170 J | WB-33 | 90 | 91 JT | 160 J | 0.38 U | 45000 U | GS-07 | 200 | 0.41 U | 70 U |
| 1,4-Dioxane | µg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 130 U | 140 U | WB-56 | 66 | 65 U | 69 U |
| 1-Methyl-4-isopropylbenzene | µg/kg | 85 | 10 | 11.8 | 27.7 | 206 | GP31 | 98.5 | 105 | 204 | 12 U | 7530 U | GP27 | 172 | 9.45 UJ | 739 U |
| 2,2-Dichloropropane | µg/kg | 93 | 0 | 0 | -- | -- | -- | -- | -- | -- | 5 U | 2170 U | GP27 | 32.3 | 7 UJT | 83.7 UJ |
| 2-Chloroethyl vinyl ether | µg/kg | 505 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.17 UJT | 23000 U | GS-07 | 65 | 0.13 U | 14 U |
| 2-Chlorotoluene | µg/kg | 93 | 0 | 0 | -- | -- | -- | -- | -- | -- | 11.6 UJ | 7530 U | GP27 | 144 | 7.9 U | 737 U |
| 4-Chlorotoluene | µg/kg | 93 | 0 | 0 | -- | -- | -- | -- | -- | -- | 8.48 U | 7530 U | GP27 | 144 | 7.9 U | 737 U |
| Acetone | µg/kg | 601 | 157 | 26.1 | 3.6 J | 60000 J | GS-B7 | 577 | 31 | 322 | 2.1 U | 89000 UJ | GS-07 | 486 | 14 UJ | 670 UJT |
| Acrolein | µg/kg | 106 | 2 | 1.9 | 0.86 J | 1.4 J | C062 | 1.1 | 1.1 J | 1.4 J | 0.63 U | 89000 UJ | GS-07 | 1100 | 60 UJ | 6100 UJ |
| Acrylonitrile | µg/kg | 494 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.26 U | 89000 UJ | GS-07 | 200 | 0.2 U | 37 U |
| Benzene | µg/kg | 666 | 221 | 33.2 | 0.03 J | 270000 | C301 | 4340 | 0.33 J | 14000 | 0.01 U | 270000 | C301 | 1460 | 0.14 J | 320 J |
| Bromobenzene | µg/kg | 93 | 0 | 0 | -- | -- | -- | -- | -- | -- | 5 U | 7530 U | GP27 | 143 | 7.95 U | 737 U |
| Bromochloromethane | µg/kg | 625 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.068 U | 8900 U | C301 | 39.1 | 0.06 U | 82.8 UJ |
| Bromodichloromethane | µg/kg | 625 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.045 UT | 6000 U | C301 | 31.9 | 0.06 U | 72.5 U |
| Bromoform | µg/kg | 625 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.052 U | 20000 U | C301 | 71.7 | 0.0425 U | 198 U |
| Bromomethane | µg/kg | 625 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.32 UT | 16000 U | C301 | 58.5 | 0.325 U | 185 U |
| BTEX | µg/kg | 642 | 313 | 48.8 | 0.062 JT | 850000 T | C301 | 9543.3 | 0.89 JT | 18000 J | 0.02 UT | 850000 T | C301 | 4677.6 | 0.36 J | 2409.2 J |
| Carbon disulfide | µg/kg | 625 | 142 | 22.7 | 0.098 J | 850 | C263 | 7.27 | 0.325 J | 4.15 J | 0.069 U | 12000 U | C301 | 51.9 | 0.14 U | 188 U |
| Carbon tetrachloride | µg/kg | 637 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.057 UT | 8600 U | C301 | 44.1 | 0.09 U | 84.1 U |
| Chlorobenzene | µg/kg | 637 | 91 | 14.3 | 0.14 J | 390000 | WB-35 | 30300 | 5.3 | 210000 J | 0.062 U | 390000 | WB-35 | 4370 | 0.065 U | 1170 U |
| Chlorodibromomethane | µg/kg | 625 | 1 | 0.2 | 0.28 J | 0.28 J | WB-33 | 0.28 | 0.28 J | 0.28 J | 0.077 U | 5800 U | C301 | 37.3 | 0.065 U | 86.1 U |
| Chloroethane | µg/kg | 615 | 5 | 0.8 | 0.9 | 1600 J | WB-35 | 327 | 9.2 J | 1280 J | 0.23 UT | 13000 U | C301 | 49.2 | 0.24 U | 84.2 U |
| Chloroform | µg/kg | 637 | 42 | 6.6 | 0.078 J | 2300 J | WB-35 | 116 | 2.05 | 308 J | 0.063 U | 6700 U | C301 | 44 | 0.055 U | 140 J |
| Chloromethane | µg/kg | 625 | 4 | 0.6 | 0.38 J | 3.7 | C358 | 1.35 | 0.665 J | 3.27 | 0.085 UT | 9600 U | C301 | 43.1 | 0.165 U | 115 UJ |
| cis-1,2-Dichloroethene | µg/kg | 232 | 8 | 3.4 | 16.9 | 1920 | GP25 | 348 | 138 | 1340 | 0.11 UT | 3100 U | WB-35 | 62.1 | 4 U | 269 |
| cis-1,3-Dichloropropene | µg/kg | 626 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.035 U | 5700 U | C301 | 31.3 | 0.0288 U | 75.4 U |
| Dichlorodifluoromethane | µg/kg | 625 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.067 UT | 12000 U | C301 | 48.4 | 0.095 U | 143 U |
| Ethylbenzene | µg/kg | 655 | 124 | 18.9 | 0.05 J | 140000 | C301 | 6700 | 22 | 40500 | 0.009 U | 140000 | C301 | 1290 | 0.065 U | 1440 U |
| Ethylene dibromide | µg/kg | 606 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.058 U | 8900 U | GS-07 | 47.1 | 0.046 U | 128 U |
| Hexahydrobenzene | µg/kg | 25 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.3 U | 3100 U | WB-35 | 240 | 3.9 U | 1300 U |
| Isopropylbenzene | µg/kg | 629 | 167 | 26.6 | 0.063 J | 19000 J | C301 | 549 | 2.3 J | 3140 J | 0.05 U | 19000 J | C301 | 167 | 0.085 UT | 468 J |
| m,p-Xylene | µg/kg | 655 | 134 | 20.5 | 0.05 J | 200000 | C301 | 4770 | 5.05 | 24700 | 0.02 U | 200000 | C301 | 1000 | 0.125 U | 615 J |
| Methyl acetate | µg/kg | 25 | 2 | 8 | 140 J | 530 J | WB-40 | 340 | 340 J | 510 J | 6.3 U | 3100 U | WB-35 | 230 | 3.9 U | 1300 UJ |
| Methyl iodide | µg/kg | 507 | 1 | 0.2 | 7100 J | 7100 J | C302 | 7100 | 7100 J | 7100 J | 0.38 U | 23000 U | GS-07 | 110 | 0.55 U | 73 UJ |
| Methyl isobutyl ketone | µg/kg | 588 | 12 | 2 | 0.36 JT | 34 | GS-C7 | 4.33 | 1.6 J | 18.4 J | 0.27 U | 97000 UJ | GS-C7 | 355 | 0.22 U | 440 U |

Table D1.3-3. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Methyl n-butyl ketone | µg/kg | 596 | 3 | 0.5 | 4.7 J | 9.3 | C092 | 6.73 | 6.2 | 8.99 | 0.71 U | 120000 UJ | GS-C7 | 362 | 0.6 U | 483 U |
| Methyl tert-butyl ether | µg/kg | 620 | 93 | 15 | 0.074 J | 14 J | GS-09 | 0.5698 | 0.24 J | 1.8 | 0.044 U | 5200 U | C301 | 32.19 | 0.085 J | 83.53 UJ |
| Methylcyclohexane | µg/kg | 25 | 1 | 4 | 3.9 J | 3.9 J | WB-64 | 3.9 | 3.9 J | 3.9 J | 3.9 J | 3100 U | WB-35 | 240 | 3.9 U | 1300 U |
| Methylene bromide | µg/kg | 600 | 1 | 0.2 | 0.55 J | 0.55 J | WB-33 | 0.55 | 0.55 J | 0.55 J | 0.079 UT | 6900 U | C301 | 27.2 | 0.075 U | 34.8 U |
| Methylene chloride | µg/kg | 626 | 50 | 8 | 0.34 J | 7100 J | GS-C7 | 235 | 78.2 | 373 J | 0.17 U | 14000 U | C301 | 101 | 1.85 U | 421 U |
| Methylethyl ketone | µg/kg | 437 | 274 | 62.7 | 1.5 J | 120000 J | GS-C7 | 447 | 5.2 J | 23.4 J | 1.4 UJ | 120000 J | GS-C7 | 659 | 6.8 J | 687 UJ |
| Methylisopropylbenzene | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | 20 U | 200 U | OSS003 | 26 | 19 U | 69 U |
| n-Butylbenzene | µg/kg | 93 | 8 | 8.6 | 18.2 | 151 | GP31 | 49.6 | 34.4 | 122 | 12 U | 7530 U | GP27 | 159 | 8.35 U | 737 U |
| n-Propylbenzene | µg/kg | 97 | 9 | 9.3 | 25.3 | 218 | GP31 | 84.2 | 66.9 | 182 | 0.12 U | 7530 U | GP27 | 151 | 8.3 U | 736 U |
| o-Xylene | µg/kg | 655 | 167 | 25.5 | 0.04 J | 80000 | C301 | 1950 | 2.6 J | 10600 | 0.008 U | 80000 | C301 | 514 | 0.17 J | 665 U |
| Sec-butylbenzene | µg/kg | 93 | 8 | 8.6 | 13 | 50.9 | GP26 | 35.1 | 37.5 J | 50.5 | 9.94 U | 7530 U | GP27 | 147 | 8.3 U | 737 U |
| Styrene | µg/kg | 626 | 15 | 2.4 | 0.13 J | 22000 | C301 | 1470 | 0.22 J | 6640 | 0.081 U | 22000 | C301 | 73.9 | 0.09 U | 92.1 U |
| tert-Butylbenzene | µg/kg | 93 | 0 | 0 | -- | -- | -- | -- | -- | -- | 12 U | 7530 U | GP27 | 145 | 8.75 U | 737 U |
| Tetrachloroethene | µg/kg | 654 | 39 | 6 | 0.23 J | 19000 | WB-42 | 761 | 1.5 | 3110 J | 0.092 U | 19000 | WB-42 | 87.2 | 0.09 U | 205 U |
| Toluene | µg/kg | 655 | 140 | 21.4 | 0.03 J | 190000 | C301 | 2920 | 2.65 | 8760 | 0.01 U | 190000 | C301 | 644 | 0.15 U | 230 U |
| trans-1,2-Dichloroethene | µg/kg | 625 | 5 | 0.8 | 0.44 J | 8.1 J | WB-42 | 3.57 | 1.3 J | 7.94 J | 0.067 UT | 9800 U | C301 | 41.4 | 0.165 U | 83.9 UJ |
| trans-1,3-Dichloropropene | µg/kg | 626 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.05 U | 6100 U | C301 | 38.1 | 0.0405 U | 92.1 U |
| Trichloroethene | µg/kg | 654 | 122 | 18.7 | 0.11 J | 1900000 | C299 | 18100 | 0.56 J | 379 J | 0.07 U | 1900000 | C299 | 3420 | 0.213 J | 149 J |
| Trichlorofluoromethane | µg/kg | 626 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.091 U | 9200 U | C301 | 40.5 | 0.075 U | 84.4 U |
| Vinyl acetate | µg/kg | 180 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.44 U | 23000 UJ | GS-07 | 160 | 0.63 UJ | 290 UJ |
| Vinyl chloride | µg/kg | 638 | 19 | 3 | 0.14 J | 4000 J | C299 | 223 | 0.96 J | 449 J | 0.096 U | 15000 U | C301 | 64.1 | 0.08 U | 94.2 U |
| Xylene | µg/kg | 642 | 185 | 28.8 | 0.04 JT | 280000 T | C301 | 5210 | 3.53 JT | 28500 | 0.02 UT | 280000 T | C301 | 1530 | 0.178 J | 1330 U |
| **Atterberg Limits** | | | | | | | | | | | | | | | | |
| Liquid Limit | percent | 59 | 23 | 39 | 27.3 | 54.1 | C019 | 36 | 36.4 | 47.5 | 0.1 U | 54.1 | C019 | 14.1 | 0.05 U | 39.6 |
| Plastic Limit | percent | 59 | 23 | 39 | 22 | 37.3 | C019 | 29.5 | 30.5 | 35.1 | 0.1 U | 37.3 | C019 | 11.5 | 0.05 U | 34 |
| Plasticity Index | percent | 59 | 23 | 39 | 4.1 | 16.9 | C019 | 6.47 | 5.6 | 13.6 | 0.01 U | 16.9 | C019 | 2.52 | 0.005 U | 7.75 |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

-- data not available.
BaPEq - benzo(a)pyrene equivalent
BTEX - benzene, toluene, ethylbenzene, and total xylene
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - non-detect
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TEQ - toxic equivalent concentration

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-4. Summary Statistics for All Chemicals in Surface Sediment, Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Grainsize** | | | | | | | | | | | | | | | | |
| < 0.075 mm | percent | 2 | 2 | 100 | 52.1 | 73.8 | HC-REF-02 | 63 | 63 | 72.7 | 52.1 | 73.8 | HC-REF-02 | 63 | 63 | 72.7 |
| > 0.075 mm | percent | 2 | 2 | 100 | 26.2 | 47.9 | HC-REF-01 | 37.1 | 37.1 | 46.8 | 26.2 | 47.9 | HC-REF-01 | 37.1 | 37.1 | 46.8 |
| >10 Phi clay | percent | 3 | 3 | 100 | 0.6 | 0.7 | WR01; WR07SD | 0.7 | 0.7 | 0.7 | 0.6 | 0.7 | WR01; WR07SD | 0.7 | 0.7 | 0.7 |
| >9 Phi clay | percent | 50 | 50 | 100 | 0.24 | 13 | U6TOC-2 | 3.01 | 2.56 | 5.74 | 0.24 | 13 | U6TOC-2 | 3.01 | 2.56 | 5.74 |
| 8-9 Phi clay | percent | 53 | 53 | 100 | 0.16 | 13.5 | U6TOC-2 | 2.16 | 1.8 | 3.84 | 0.16 | 13.5 | U6TOC-2 | 2.16 | 1.8 | 3.84 |
| 9-10 Phi clay | percent | 3 | 3 | 100 | 0.4 | 0.9 | WR01 | 0.6 | 0.4 | 0.9 | 0.4 | 0.9 | WR01 | 0.6 | 0.4 | 0.9 |
| Clay | percent | 7 | 7 | 100 | 1 | 8.82 | WR-PG-Ref03 | 4.7 | 4 | 8.27 | 1 | 8.82 | WR-PG-Ref03 | 4.7 | 4 | 8.27 |
| Coarse sand | percent | 71 | 71 | 100 | 0.15 | 21.8 | WR06SD | 2.57 | 1.03 | 9.9 | 0.15 | 21.8 | WR06SD | 2.57 | 1.03 | 9.9 |
| Coarse silt | percent | 53 | 53 | 100 | 0.803 T | 40.7 | UG12A | 13.7 | 12.2 | 29.6 | 0.803 T | 40.7 | UG12A | 13.7 | 12.2 | 29.6 |
| Fine gravel | percent | 53 | 53 | 100 | 0 | 14.2 | G079 | 0.6827 | 0.23 | 1.564 | 0 | 14.2 | G079 | 0.6827 | 0.23 | 1.564 |
| Fine sand | percent | 71 | 71 | 100 | 0.7 | 58.7 | U1C-3; UG11C | 27.8 | 29.2 T | 50.9 | 0.7 | 58.7 | U1C-3; UG11C | 27.8 | 29.2 T | 50.9 |
| Fine silt | percent | 53 | 53 | 100 | 0.13 | 21.4 | U6TOC-3 | 4.5 | 3.43 | 9.37 | 0.13 | 21.4 | U6TOC-3 | 4.5 | 3.43 | 9.37 |
| Fines | percent | 80 | 80 | 100 | 0.28 | 98.4 T | U6TOC-2 | 30.5 | 28.3 | 67.4 | 0.28 | 98.4 T | U6TOC-2 | 30.5 | 28.3 | 67.4 |
| Gravel | percent | 20 | 19 | 95 | 0.09 | 12.3 | WR07SD | 2.373 | 0.36 | 11.04 | 0.0001 U | 12.3 | WR07SD | 2.255 | 0.33 | 10.97 |
| Medium gravel | percent | 53 | 53 | 100 | 0 T | 12.2 | G079 | 0.4013 | 0.04 | 1.044 | 0 T | 12.2 | G079 | 0.4013 | 0.04 | 1.044 |
| Medium sand | percent | 71 | 71 | 100 | 0.37 | 56.1 | U3C-3 | 20.2 | 13.5 | 53.6 | 0.37 | 56.1 | U3C-3 | 20.2 | 13.5 | 53.6 |
| Medium silt | percent | 53 | 53 | 100 | 0.34 | 25.5 | U6TOC-3 | 7.5 | 6.98 | 14.1 | 0.34 | 25.5 | U6TOC-3 | 7.5 | 6.98 | 14.1 |
| Sand | percent | 9 | 9 | 100 | 58.5 T | 99.36 | SED099-41 | 86.69 | 96 | 99.28 | 58.5 T | 99.36 | SED099-41 | 86.69 | 96 | 99.28 |
| Silt | percent | 7 | 7 | 100 | 2 | 48.9 | WR-PG-Ref03 | 21.2 | 12.1 | 44.6 | 2 | 48.9 | WR-PG-Ref03 | 21.2 | 12.1 | 44.6 |
| Very coarse sand | percent | 71 | 70 | 98.6 | 0 | 7.8 | WR04SD | 0.827 | 0.395 | 3.298 | 0 | 7.8 | WR04SD | 0.8154 | 0.39 | 3.28 |
| Very fine sand | percent | 71 | 71 | 100 | 1.16 | 42 | UG11A | 15.4 | 16.1 | 29.7 | 1.16 | 42 | UG11A | 15.4 | 16.1 | 29.7 |
| Very fine silt | percent | 53 | 53 | 100 | 0.19 | 21.9 | U6TOC-2 | 3.37 | 2.51 | 6.17 | 0.19 | 21.9 | U6TOC-2 | 3.37 | 2.51 | 6.17 |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Ammonia | mg/kg | 40 | 40 | 100 | 1.9 | 132 | U6TOC-2 | 51 | 51 J | 98.9 | 1.9 | 132 | U6TOC-2 | 51 | 51 J | 98.9 |
| Moisture | percent | 2 | 2 | 100 | 68 | 101 | HC-REF-02 | 84.5 | 84.5 | 99.4 | 68 | 101 | HC-REF-02 | 84.5 | 84.5 | 99.4 |
| Specific Gravity | NA | 27 | 27 | 100 | 0.87 | 2.07 | G788 | 1.38 | 1.44 | 1.57 | 0.87 | 2.07 | G788 | 1.38 | 1.44 | 1.57 |
| Sulfide | mg/kg | 40 | 24 | 60 | 0.4 J | 49.3 | WR-PG-Ref03 | 5.63 | 2.7 J | 11.5 J | 0.2 U | 49.3 | WR-PG-Ref03 | 3.45 | 1.15 | 9.61 J |
| Total organic carbon | percent | 77 | 77 | 100 | 0.12 | 2.57 | U6TOC-2 | 1.13 | 1.18 | 2.29 | 0.12 | 2.57 | U6TOC-2 | 1.13 | 1.18 | 2.29 |
| Total solids | percent | 74 | 74 | 100 | 32.6 | 80.3 | G788 | 55.9 | 54.7 | 69.7 | 32.6 | 80.3 | G788 | 55.9 | 54.7 | 69.7 |
| Total volatile solids | percent | 22 | 22 | 100 | 2.35 | 7.41 | CD01 | 5.16 | 5.05 | 7.22 | 2.35 | 7.41 | CD01 | 5.16 | 5.05 | 7.22 |
| **Metals** | | | | | | | | | | | | | | | | |
| Aluminum | mg/kg | 63 | 63 | 100 | 8100 | 35000 | WR-PG-Ref03 | 21600 | 23200 | 32300 | 8100 | 35000 | WR-PG-Ref03 | 21600 | 23200 | 32300 |
| Antimony | mg/kg | 72 | 40 | 55.6 | 0.05 J | 5.45 | G079 | 0.385 | 0.1 J | 0.761 J | 0.05 J | 5.45 | G079 | 0.346 | 0.09 J | 1.23 UJ |
| Arsenic | mg/kg | 77 | 73 | 94.8 | 1.9 J | 5.29 | U6TOC-2 | 2.94 | 2.84 T | 4.05 | 1.9 J | 5.29 | U6TOC-2 | 2.85 | 2.78 | 4.04 |
| Barium | mg/kg | 10 | 10 | 100 | 82.1 J | 108 J | WR07SD | 91 | 89.5 J | 103 J | 82.1 J | 108 J | WR07SD | 91 | 89.5 J | 103 J |
| Beryllium | mg/kg | 10 | 10 | 100 | 0.27 J | 0.47 J | WR06SD | 0.35 | 0.33 J | 0.43 J | 0.27 J | 0.47 J | WR06SD | 0.35 | 0.33 J | 0.43 J |
| Cadmium | mg/kg | 72 | 63 | 87.5 | 0.04 J | 0.281 T | G027 | 0.1256 | 0.12 | 0.2099 | 0.04 J | 0.3 UJ | HC-SS29; HC-SS31; HC-SS32 | 0.1201 | 0.118 | 0.2095 |
| Calcium | mg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.0001 U | 0.0001 U | WR03SD | 0.00005 | 0.00005 U | 0.00005 U |
| Chromium | mg/kg | 66 | 66 | 100 | 11.9 J | 40.5 | HC08 | 23.1 | 23.1 J | 32.4 | 11.9 J | 40.5 | HC08 | 23.1 | 23.1 J | 32.4 |
| Cobalt | mg/kg | 10 | 10 | 100 | 10 J | 13.8 J | WR06SD | 11.5 | 11.6 J | 13.1 J | 10 J | 13.8 J | WR06SD | 11.5 | 11.6 J | 13.1 J |
| Copper | mg/kg | 72 | 72 | 100 | 10.5 J | 50.9 | HC08 | 24.6 | 24.5 | 35.9 J | 10.5 J | 50.9 | HC08 | 24.6 | 24.5 | 35.9 J |
| Lead | mg/kg | 72 | 72 | 100 | 3.96 JT | 31.6 J | BH04SD | 8.55 | 7.68 J | 14 | 3.96 JT | 31.6 J | BH04SD | 8.55 | 7.68 J | 14 |
| Manganese | mg/kg | 10 | 10 | 100 | 269 J | 399 J | WR01 | 323 | 314 J | 387 J | 269 J | 399 J | WR01 | 323 | 314 J | 387 J |
| Mercury | mg/kg | 68 | 60 | 88.2 | 0.009 J | 0.061 | G786 | 0.03314 | 0.034 | 0.05115 | 0.009 J | 0.19 U | HC-SS29; HC-SS31; HC-SS32 | 0.03535 | 0.034 | 0.07985 |
| Nickel | mg/kg | 72 | 72 | 100 | 12.3 J | 35.7 | HC08 | 21.3 | 21.3 | 26.5 J | 12.3 J | 35.7 | HC08 | 21.3 | 21.3 | 26.5 J |
| Selenium | mg/kg | 36 | 16 | 44.4 | 0.03 | 0.19 J | WR05SD | 0.109 | 0.109 | 0.174 J | 0.03 | 3.2 U | WR01 | 0.339 | 0.077 J | 1.45 U |
| Silver | mg/kg | 72 | 58 | 80.6 | 0.024 | 0.235 | U6TOC-2 | 0.1132 | 0.1095 | 0.2112 | 0.024 | 0.81 U | WR01 | 0.1376 | 0.11 | 0.3523 U |
| Thallium | mg/kg | 10 | 1 | 10 | 0.09 J | 0.09 J | WR07SD | 0.09 | 0.09 J | 0.09 J | 0.02 UJ | 1.6 U | WR01 | 0.51 | 0.68 U | 0.78 U |
| Vanadium | mg/kg | 10 | 10 | 100 | 39.7 J | 70.8 J | WR05SD | 56.8 | 57 J | 68.7 J | 39.7 J | 70.8 J | WR05SD | 56.8 | 57 J | 68.7 J |
| Zinc | mg/kg | 72 | 72 | 100 | 41.1 J | 165 | U2C-2 | 75.2 | 74.5 | 100 | 41.1 J | 165 | U2C-2 | 75.2 | 74.5 | 100 |
| **Butyltins** | | | | | | | | | | | | | | | | |
| Butyltin ion | µg/kg | 8 | 5 | 62.5 | 0.24 J | 1.3 J | G028 | 0.738 | 0.79 J | 1.26 J | 0.044 U | 1.3 J | G028 | 0.47 | 0.24 J | 1.24 J |
| Dibutyltin ion | µg/kg | 8 | 5 | 62.5 | 0.15 J | 0.83 J | G028 | 0.554 | 0.6 JT | 0.812 J | 0.041 U | 0.83 J | G028 | 0.355 | 0.3 J | 0.799 J |
| Tetrabutyltin | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 0.15 U | WR-PG-Ref03 | 0.061 | 0.058 U | 0.073 U |
| Tributyltin ion | µg/kg | 8 | 4 | 50 | 0.72 J | 2.3 | G028 | 1.31 | 1.1 J | 2.12 J | 0.082 U | 2.3 | G028 | 0.675 | 0.388 J | 1.88 J |

Table D1.3-4. Summary Statistics for All Chemicals in Surface Sediment, Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **PCB Aroclors** | | | | | | | | | | | | | | | | |
| Aroclor 1016 | µg/kg | 81 | 1 | 1.2 | 15 | 15 | UG02C | 15 | 15 | 15 | 1 U | 21 U | HC08 | 2.96 | 0.87 U | 9.5 U |
| Aroclor 1221 | µg/kg | 81 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 42 U | HC08 | 4.33 | 1.44 U | 18.5 U |
| Aroclor 1232 | µg/kg | 81 | 1 | 1.2 | 21 NJ | 21 NJ | UG02C | 21 | 21 NJ | 21 NJ | 1 U | 34 U | UG03B | 3.56 | 1.35 U | 10 U |
| Aroclor 1242 | µg/kg | 81 | 1 | 1.2 | 13 NJ | 13 NJ | UG02C | 13 | 13 NJ | 13 NJ | 1 U | 21 U | HC08 | 2.9 | 0.885 U | 9.5 U |
| Aroclor 1248 | µg/kg | 81 | 1 | 1.2 | 4.82 J | 4.82 J | U6TOC-3 | 4.82 | 4.82 J | 4.82 J | 1 U | 21 U | HC08 | 2.71 | 1.01 U | 9.5 U |
| Aroclor 1254 | µg/kg | 81 | 20 | 24.7 | 1.16 J | 26 | U2C-2 | 4.06 | 2.65 | 7.52 J | 0.784 U | 26 | U2C-2 | 3.38 | 1.9 J | 9.5 U |
| Aroclor 1260 | µg/kg | 81 | 22 | 27.2 | 1.3 NJ | 11 J | U2C-2 | 2.94 | 2.15 J | 7.73 | 1 U | 21 U | HC08 | 3.19 | 1.8 J | 9.5 U |
| Aroclor 1262 | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 9.8 U | WR01 | 1.33 | 0.71 U | 4.64 U |
| Aroclor 1268 | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 9.8 U | WR01 | 1.29 | 0.65 U | 4.64 U |
| Aroclors | µg/kg | 81 | 25 | 30.9 | 1.47 JT | 52.8 NJT | UG02C | 7.99 | 4.46 T | 32.5 J | 1 UT | 52.8 NJT | UG02C | 6.46 | 3.8 NJT | 19.5 UT |
| **PCB Congeners** | | | | | | | | | | | | | | | | |
| PCB001 | pg/g | 26 | 2 | 7.7 | 1.91 J | 7.99 | U2C-2 | 4.95 | 4.95 J | 7.69 J | 1.91 J | 29.5 U | WR01 | 6.95 | 2.52 U | 14.7 U |
| PCB002 | pg/g | 26 | 12 | 46.2 | 5.41 | 13.7 | UG02A | 8.72 | 7.53 | 13.5 | 4.74 U | 29.5 U | WR01 | 9.53 | 9.63 U | 14.7 U |
| PCB003 | pg/g | 26 | 2 | 7.7 | 2.55 J | 13.9 | U2C-2 | 8.23 | 8.23 J | 13.3 J | 2.55 J | 29.5 U | WR01 | 7.2 | 2.54 J | 14.7 U |
| PCB004 | pg/g | 10 | 1 | 10 | 2 | 2 | BH03SD | 2 | 2 | 2 | 1.77 U | 29.5 U | WR01 | 6.46 | 1.49 | 14.6 U |
| PCB004 & 010 | pg/g | 16 | 2 | 12.5 | 4.75 | 14.6 | U2C-2 | 9.68 | 9.68 | 14.1 | 4.75 | 20.2 U | UG02A | 5.85 | 4.96 U | 11.2 |
| PCB005 | pg/g | 10 | 1 | 10 | 3.41 | 3.41 | BH03SD | 3.41 | 3.41 | 3.41 | 1.77 U | 29.5 U | WR01 | 6.6 | 2.2 | 14.6 U |
| PCB005 & 008 | pg/g | 16 | 9 | 56.3 | 11.1 | 60.1 | U2C-2 | 18.9 | 13.7 JT | 42.6 | 9.48 U | 60.1 | U2C-2 | 13.1 | 11.7 | 27.3 |
| PCB006 | pg/g | 26 | 2 | 7.7 | 3.35 | 15.7 | U2C-2 | 9.53 | 9.53 | 15.1 | 1.77 U | 29.5 U | WR01 | 6.04 | 4.95 U | 14.7 U |
| PCB007 | pg/g | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.77 U | 29.5 U | WR01 | 6.35 | 0.978 U | 14.6 U |
| PCB007 & 009 | pg/g | 16 | 1 | 6.3 | 7.92 | 7.92 | U2C-2 | 7.92 | 7.92 | 7.92 | 2.49 U | 20.2 U | UG02A | 5.22 | 4.96 U | 8.47 |
| PCB008 | pg/g | 10 | 2 | 20 | 2 | 2.51 | WR06SD | 2.26 | 2.26 | 2.48 | 1.85 U | 29.5 U | WR01 | 6.62 | 2.26 | 14.6 U |
| PCB009 | pg/g | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.77 U | 29.5 U | WR01 | 6.35 | 0.978 U | 14.6 U |
| PCB010 | pg/g | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.77 U | 29.5 U | WR01 | 6.35 | 0.978 U | 14.6 U |
| PCB011 | pg/g | 26 | 23 | 88.5 | 2.81 | 162 | UG12A | 78.7 | 96.5 | 140 | 2.81 | 162 | UG12A | 71.3 | 73.9 | 139 |
| PCB012 | pg/g | 10 | 1 | 10 | 57.3 | 57.3 | BH04SD | 57.3 | 57.3 | 57.3 | 3.54 U | 59.1 U | WR01 | 15.6 | 1.95 U | 44.8 |
| PCB012 & 013 | pg/g | 16 | 1 | 6.3 | 15.3 | 15.3 | U2C-2 | 15.3 | 15.3 | 15.3 | 2.49 U | 20.2 U | UG02A | 5.68 | 4.96 U | 11.4 |
| PCB013 | pg/g | 10 | 1 | 10 | 57.3 | 57.3 | BH04SD | 57.3 | 57.3 | 57.3 | 3.54 U | 59.1 U | WR01 | 15.6 | 1.95 U | 44.8 |
| PCB014 | pg/g | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.77 U | 29.5 U | WR01 | 5.45 | 4.95 U | 14.4 U |
| PCB015 | pg/g | 26 | 15 | 57.7 | 1.98 | 104 | U2C-2 | 17.2 | 14.1 | 43.7 | 1.85 U | 104 | U2C-2 | 13.8 | 12.9 J | 17.6 |
| PCB016 | pg/g | 10 | 1 | 10 | 1.85 | 1.85 | WR06SD | 1.85 | 1.85 | 1.85 | 1.85 | 29.5 U | WR01 | 6.45 | 1.42 | 14.6 U |
| PCB016 & 032 | pg/g | 16 | 15 | 93.8 | 6.43 | 91 | U2C-2 | 19.3 | 14.7 | 42.3 | 4.97 U | 91 | U2C-2 | 18.3 | 14.3 | 38.9 |
| PCB017 | pg/g | 26 | 14 | 53.8 | 2.05 | 62.4 | U2C-2 | 13.1 | 10.3 | 31 | 1.85 U | 62.4 | U2C-2 | 9.88 | 9.63 | 14.7 U |
| PCB018 | pg/g | 26 | 17 | 65.4 | 3.74 | 151 | U2C-2 | 27.1 | 22.2 | 56.7 | 3.7 U | 151 | U2C-2 | 22.6 | 21.8 | 32.2 |
| PCB019 | pg/g | 26 | 2 | 7.7 | 2.5 | 9.57 | U2C-2 | 6.04 | 6.04 | 9.22 | 1.77 U | 29.5 U | WR01 | 4.34 | 2.48 U | 14.4 U |
| PCB020 | pg/g | 10 | 6 | 60 | 4.33 | 19.4 | BH03SD | 8.96 | 7.22 | 16.9 | 4.33 | 59.1 U | WR01 | 16.9 | 14.4 | 29.2 U |
| PCB020 & 021 & 033 | pg/g | 16 | 15 | 93.8 | 7.37 | 125 | U2C-2 | 26.4 | 20 | 57.7 | 4.97 U | 125 | U2C-2 | 24.9 | 19.4 | 52.9 |
| PCB021 | pg/g | 10 | 1 | 10 | 4.25 | 4.25 | BH03SD | 4.25 | 4.25 | 4.25 | 3.54 U | 59.1 U | WR01 | 12.9 | 3.1 | 29.2 U |
| PCB022 | pg/g | 26 | 17 | 65.4 | 2.35 | 88.5 | U2C-2 | 17.3 | 13.4 | 36 | 1.85 U | 88.5 | U2C-2 | 13.8 | 13.4 | 22.2 |
| PCB023 | pg/g | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.24 U | 29.5 U | WR01 | 3.95 | 2.47 U | 14.4 U |
| PCB024 | pg/g | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.77 U | 29.5 U | WR01 | 6.35 | 0.978 U | 14.6 U |
| PCB024 & 027 | pg/g | 16 | 2 | 12.5 | 2.2 | 10.6 | U2C-2 | 6.4 | 6.4 | 10.2 | 2.2 | 10.6 | U2C-2 | 3.12 | 2.48 U | 6.44 |
| PCB025 | pg/g | 26 | 11 | 42.3 | 4.96 | 67.6 | U2C-2 | 11.7 | 6.47 | 37.7 | 1.77 U | 67.6 | U2C-2 | 7.96 | 5.17 | 14.7 U |
| PCB026 | pg/g | 26 | 13 | 50 | 6.92 J | 106 | U2C-2 | 17.1 | 9.73 | 50.9 | 3.54 U | 106 | U2C-2 | 13.7 | 8.31 | 29.4 U |
| PCB027 | pg/g | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.77 U | 57.3 U | BH04SD | 7.78 | 0.978 U | 22.4 U |
| PCB028 | pg/g | 26 | 22 | 84.6 | 4.33 | 378 | U2C-2 | 47.3 | 40.4 | 57.9 | 4.33 | 378 | U2C-2 | 44.5 | 33.8 | 57.7 |
| PCB029 | pg/g | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.24 U | 59.1 U | WR01 | 6.39 | 2.47 U | 28.8 U |
| PCB030 | pg/g | 26 | 2 | 7.7 | 3.74 | 4.45 | BH03SD | 4.1 | 4.1 | 4.41 | 1.24 U | 59.1 U | WR01 | 6.56 | 2.48 U | 28.8 U |
| PCB031 | pg/g | 26 | 22 | 84.6 | 2.94 | 253 | U2C-2 | 37.9 | 35.5 | 50.7 | 2.94 | 253 | U2C-2 | 33.8 | 31.2 | 50.2 |
| PCB032 | pg/g | 10 | 2 | 20 | 1.79 | 2.38 | BH03SD | 2.09 | 2.09 | 2.35 | 1.79 | 59.1 U | WR01 | 8.07 | 2.09 | 22.7 U |
| PCB033 | pg/g | 10 | 1 | 10 | 4.25 | 4.25 | BH03SD | 4.25 | 4.25 | 4.25 | 3.54 U | 57.6 U | WR07SD | 11.5 | 3.1 | 28.8 U |
| PCB034 | pg/g | 26 | 1 | 3.8 | 2.98 | 2.98 | U2C-2 | 2.98 | 2.98 | 2.98 | 1.24 U | 29.5 U | WR01 | 4.01 | 2.48 U | 14.4 U |
| PCB035 | pg/g | 26 | 2 | 7.7 | 2.2 | 10.3 | U2C-2 | 6.25 | 6.25 | 9.9 | 1.77 U | 29.5 U | WR01 | 4.35 | 2.48 U | 14.4 U |
| PCB036 | pg/g | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.24 U | 29.5 U | WR01 | 3.95 | 2.47 U | 14.4 U |
| PCB037 | pg/g | 26 | 25 | 96.2 | 1.98 | 117 | U2C-2 | 15.3 | 13.2 | 22.1 | 1.98 | 117 | U2C-2 | 14.8 | 12.8 | 22.1 |
| PCB038 | pg/g | 26 | 1 | 3.8 | 3.92 | 3.92 | U2C-2 | 3.92 | 3.92 | 3.92 | 1.24 U | 29.5 U | WR01 | 4.05 | 2.48 U | 14.4 U |
| PCB039 | pg/g | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.24 U | 29.5 U | WR01 | 3.95 | 2.47 U | 14.4 U |
| PCB040 | pg/g | 26 | 15 | 57.7 | 6.25 | 83.1 | U2C-2 | 14.9 | 9.14 | 39.1 | 4.74 U | 83.1 | U2C-2 | 9.82 | 6.88 | 19.3 |

Table D1.3-4. Summary Statistics for All Chemicals in Surface Sediment, Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Units | # Analyzed | # Detected | % Detected | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th[b] | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th (half DL)[b] |
| PCB041 | pg/g | 10 | 4 | 40 | 6.25 | 20.3 | WR01 | 12.9 | 12.5 | 19.7 | 5.31 U | 20.3 | WR01 | 6.85 | 2.91 U | 18.5 |
| PCB041 & 064 & 071 & 072 | pg/g | 16 | 16 | 100 | 6.52 | 637 | U2C-2 | 75.6 | 40.1 | 214 | 6.52 | 637 | U2C-2 | 75.6 | 40.1 | 214 |
| PCB042 | pg/g | 10 | 7 | 70 | 2.01 | 10 | WR01 | 4.52 | 3.02 | 9.27 | 1.85 U | 10 | WR01 | 3.45 | 2.29 | 8.9 |
| PCB042 & 059 | pg/g | 16 | 14 | 87.5 | 4.93 | 215 | U2C-2 | 29.9 | 15.8 | 91.4 | 4.93 | 215 | U2C-2 | 26.4 | 15 | 72.4 |
| PCB043 | pg/g | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.77 U | 1.97 U | WR01 | 0.955 | 0.958 U | 0.983 U |
| PCB043 & 049 | pg/g | 16 | 16 | 100 | 5.2 | 695 | U2C-2 | 84.9 | 50.6 | 223 | 5.2 | 695 | U2C-2 | 84.9 | 50.6 | 223 |
| PCB044 | pg/g | 26 | 26 | 100 | 5.65 | 725 | U2C-2 | 62.3 | 42.3 | 79.6 | 5.65 | 725 | U2C-2 | 62.3 | 42.3 | 79.6 |
| PCB045 | pg/g | 26 | 16 | 61.5 | 3.93 | 53.8 | U2C-2 | 9.65 | 6.63 J | 22.9 | 3.54 U | 53.8 | U2C-2 | 6.73 | 5.26 | 11.4 |
| PCB046 | pg/g | 26 | 4 | 15.4 | 2.21 | 23.3 | U2C-2 | 8.64 | 4.52 | 20.7 | 1.77 U | 23.3 | U2C-2 | 2.99 | 2.46 U | 5.55 |
| PCB047 | pg/g | 26 | 22 | 84.6 | 4.97 | 235 | U2C-2 | 27.9 | 17.6 | 42.5 | 4.95 U | 235 | U2C-2 | 24.5 | 14.8 | 40.5 |
| PCB048 | pg/g | 10 | 3 | 30 | 2.48 | 8.11 | WR01 | 5.08 | 4.66 | 7.77 | 1.77 U | 8.11 | WR01 | 2.19 | 0.958 U | 6.56 |
| PCB048 & 075 | pg/g | 16 | 13 | 81.3 | 6.2 | 114 | U2C-2 | 17.8 | 10.4 | 54.6 | 4.74 U | 114 | U2C-2 | 14.9 | 8.81 | 39.8 |
| PCB049 | pg/g | 10 | 8 | 80 | 5.07 | 29.6 | WR01 | 13.4 | 8.02 | 26.9 | 3.7 U | 29.6 | WR01 | 11.1 | 6.87 | 26.1 |
| PCB050 | pg/g | 26 | 2 | 7.7 | 4.81 | 6.6 | BH03SD | 5.71 | 5.71 | 6.51 | 1.24 U | 10.1 U | UG02A | 2.52 | 2.46 U | 4.99 |
| PCB051 | pg/g | 26 | 6 | 23.1 | 2.63 | 17.1 | U2C-2 | 6.77 | 5.21 | 14.5 | 2.63 | 17.1 | U2C-2 | 3.43 | 2.48 U | 6.68 |
| PCB052 | pg/g | 10 | 10 | 100 | 6.56 | 44.7 | WR01 | 22.1 | 17.2 | 44.4 | 6.56 | 44.7 | WR01 | 22.1 | 17.2 | 44.4 |
| PCB052 & 069 | pg/g | 16 | 16 | 100 | 8.42 | 1040 | U2C-2 | 124 | 68.8 | 337 | 8.42 | 1040 | U2C-2 | 124 | 68.8 | 337 |
| PCB053 | pg/g | 26 | 16 | 61.5 | 3.7 | 55.4 | U2C-2 | 10.4 | 7.62 J | 22.5 | 3.54 U | 55.4 | U2C-2 | 7.18 | 6.05 | 11 |
| PCB054 | pg/g | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.24 U | 10.1 U | UG02A | 1.87 | 2.39 U | 2.52 U |
| PCB055 | pg/g | 26 | 2 | 7.7 | 10 | 28.7 | BH04SD | 19.4 | 19.4 | 27.8 | 1.24 U | 29.5 U | WR01 | 5.7 | 2.49 U | 14.7 U |
| PCB056 | pg/g | 10 | 10 | 100 | 2.53 | 17.1 | WR01 | 7.26 | 4.62 | 16.8 | 2.53 | 17.1 | WR01 | 7.26 | 4.62 | 16.8 |
| PCB056 & 060 | pg/g | 16 | 14 | 87.5 | 9.03 | 277 | U2C-2 | 48.5 | 34.3 | 128 | 4.97 U | 277 | U2C-2 | 42.9 | 33.2 | 105 |
| PCB057 | pg/g | 26 | 1 | 3.8 | 4.59 | 4.59 | U2C-2 | 4.59 | 4.59 | 4.59 | 1.24 U | 10.1 U | UG02A | 2 | 2.43 U | 4.07 |
| PCB058 | pg/g | 26 | 1 | 3.8 | 4.18 | 4.18 | U2C-2 | 4.18 | 4.18 | 4.18 | 1.24 U | 10.1 U | UG02A | 1.98 | 2.43 U | 3.77 |
| PCB059 | pg/g | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 5.31 U | 5.91 U | WR01 | 2.86 | 2.88 U | 2.95 U |
| PCB060 | pg/g | 10 | 6 | 60 | 2.08 | 8.77 | WR01 | 4.91 | 3.95 | 8.67 | 1.85 U | 8.77 | WR01 | 3.33 | 2.2 | 8.59 |
| PCB061 | pg/g | 10 | 10 | 100 | 12.1 | 73.3 | WR01 | 29.7 | 22.4 | 63.4 | 12.1 | 73.3 | WR01 | 29.7 | 22.4 | 63.4 |
| PCB061 & 070 | pg/g | 16 | 16 | 100 | 8.12 | 707 | U2C-2 | 109 | 81.5 | 256 | 8.12 | 707 | U2C-2 | 109 | 81.5 | 256 |
| PCB062 | pg/g | 26 | 2 | 7.7 | 5.31 | 5.91 | WR01 | 5.61 | 5.61 | 5.88 | 1.24 U | 10.1 U | UG02A | 2.82 | 2.51 U | 5.25 |
| PCB063 | pg/g | 26 | 2 | 7.7 | 2.92 | 22 | U2C-2 | 12.5 | 12.5 | 21 | 1.77 U | 22 | U2C-2 | 2.76 | 2.46 U | 4.52 |
| PCB064 | pg/g | 10 | 10 | 100 | 2.6 | 18.5 | WR01 | 7.77 | 5.25 | 17.8 | 2.6 | 18.5 | WR01 | 7.77 | 5.25 | 17.8 |
| PCB065 | pg/g | 26 | 10 | 38.5 | 5.65 | 43 | WR01 | 16.4 | 11.4 | 38.5 | 1.24 U | 43 | WR01 | 7.83 | 2.51 U | 30.4 |
| PCB066 | pg/g | 10 | 10 | 100 | 5.96 | 40.6 | WR01 | 16.9 | 10.5 | 38.9 | 5.96 | 40.6 | WR01 | 16.9 | 10.5 | 38.9 |
| PCB066 & 076 | pg/g | 16 | 16 | 100 | 6.49 | 544 | U2C-2 | 86.8 | 64.8 | 205 | 6.49 | 544 | U2C-2 | 86.8 | 64.8 | 205 |
| PCB067 | pg/g | 26 | 2 | 7.7 | 2.06 | 39.8 | U2C-2 | 20.9 | 20.9 | 37.9 | 1.77 U | 39.8 | U2C-2 | 3.41 | 2.43 U | 4.42 U |
| PCB068 | pg/g | 26 | 1 | 3.8 | 14.6 | 14.6 | U2C-2 | 14.6 | 14.6 | 14.6 | 1.24 U | 14.6 | U2C-2 | 2.38 | 2.43 U | 4.42 U |
| PCB069 | pg/g | 10 | 8 | 80 | 5.07 | 29.6 | WR01 | 13.4 | 8.02 | 26.9 | 3.7 U | 29.6 | WR01 | 11.1 | 6.87 | 26.1 |
| PCB070 | pg/g | 10 | 10 | 100 | 12.1 | 73.3 | WR01 | 29.7 | 22.4 | 63.4 | 12.1 | 73.3 | WR01 | 29.7 | 22.4 | 63.4 |
| PCB071 | pg/g | 10 | 5 | 50 | 5.69 | 20.3 | WR01 | 11.4 | 8.59 | 19.5 | 5.31 U | 20.3 | WR01 | 7.13 | 4.31 | 18.5 |
| PCB072 | pg/g | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.77 U | 1.97 U | WR01 | 0.955 | 0.958 U | 0.983 U |
| PCB073 | pg/g | 26 | 1 | 3.8 | 25.7 | 25.7 | U2C-2 | 25.7 | 25.7 | 25.7 | 1.24 U | 25.7 | U2C-2 | 2.81 | 2.43 U | 4.42 U |
| PCB074 | pg/g | 26 | 25 | 96.2 | 7.43 | 218 | U2C-2 | 35.4 | 26.7 | 68.9 | 4.97 U | 218 | U2C-2 | 34.2 | 25.7 | 67.8 |
| PCB075 | pg/g | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 5.31 U | 5.91 U | WR01 | 2.86 | 2.88 U | 2.95 U |
| PCB076 | pg/g | 10 | 10 | 100 | 12.1 | 73.3 | WR01 | 29.7 | 22.4 | 63.4 | 12.1 | 73.3 | WR01 | 29.7 | 22.4 | 63.4 |
| PCB077 | pg/g | 26 | 14 | 53.8 | 2.46 | 56.8 | U2C-2 | 11.8 | 9.12 | 27.4 | 1.77 U | 56.8 | U2C-2 | 7.06 | 4.9 | 11.5 |
| PCB078 | pg/g | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.24 U | 10.1 U | UG02A | 1.87 | 2.39 U | 2.52 U |
| PCB079 | pg/g | 26 | 2 | 7.7 | 1.99 | 14 | U2C-2 | 8 | 8 | 13.4 | 1.77 U | 14 | U2C-2 | 2.41 | 2.43 U | 4.42 U |
| PCB080 | pg/g | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.24 U | 10.1 U | UG02A | 1.87 | 2.39 U | 2.52 U |
| PCB081 | pg/g | 26 | 3 | 11.5 | 0.348 J | 1.28 J | U2C-2 | 0.71 | 0.501 J | 1.2 J | 0.348 J | 2.14 U | UG12A | 0.67 | 0.723 U | 1.05 U |
| PCB082 | pg/g | 26 | 14 | 53.8 | 4.52 | 137 | U2C-2 | 22 | 13.9 | 60.2 | 4.52 | 137 | U2C-2 | 16.6 | 13.6 U | 18.7 |
| PCB083 | pg/g | 26 | 6 | 23.1 | 14.9 | 120 | WR04SD | 41.8 | 23 | 104 | 1.24 U | 120 | WR04SD | 15.5 | 2.51 U | 48.3 |
| PCB084 | pg/g | 10 | 7 | 70 | 2.94 | 51 | BH03SD | 15.9 | 7.56 | 42.7 | 1.96 U | 51 | BH03SD | 14 | 10.4 | 38.5 |
| PCB084 & 092 | pg/g | 16 | 15 | 93.8 | 6.24 | 643 | U2C-2 | 80.1 | 45.9 | 239 | 6.24 | 643 | U2C-2 | 75.5 | 43.4 | 210 |
| PCB085 | pg/g | 10 | 4 | 40 | 8.72 | 25 | BH03SD | 15.3 | 13.7 | 23.8 | 5.55 U | 88.6 U | WR01 | 27.8 | 32.4 | 44.2 U |
| PCB085 & 116 | pg/g | 16 | 15 | 93.8 | 6.96 | 243 | U2C-2 | 35.7 | 23.1 | 94.9 | 4.97 U | 243 | U2C-2 | 33.7 | 22.6 | 84.3 |
| PCB086 | pg/g | 26 | 8 | 30.8 | 5.05 | 177 | WR01 | 50.5 | 24.4 | 144 | 1.24 U | 177 | WR01 | 20.5 | 2.52 U | 82.2 |
| PCB087 | pg/g | 10 | 7 | 70 | 14.7 | 177 | WR01 | 56.9 | 29.1 | 149 | 11.1 U | 177 | WR01 | 49 | 24.4 | 135 |
| PCB087 & 117 & 125 | pg/g | 16 | 16 | 100 | 5.6 | 554 | U2C-2 | 66.3 | 38.2 | 184 | 5.6 | 554 | U2C-2 | 66.3 | 38.2 | 184 |
| PCB088 | pg/g | 10 | 5 | 50 | 3.93 | 34.2 | BH03SD | 15.9 | 8 | 32.9 | 3.7 U | 59.1 U | WR01 | 14.1 | 6.72 | 32.1 |

Table D1.3-4. Summary Statistics for All Chemicals in Surface Sediment, Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Units | # Analyzed | # Detected | % Detected | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th[b] | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th (half DL)[b] |
| PCB088 & 091 | pg/g | 16 | 15 | 93.8 | 5.37 | 243 | U2C-2 | 30.2 | 16.1 | 88.1 | 4.97 U | 243 | U2C-2 | 28.5 | 15.8 | 77 |
| PCB089 | pg/g | 26 | 3 | 11.5 | 1.6 | 13.6 | U2C-2 | 5.74 | 2.02 | 12.4 | 1.6 | 29.5 U | WR01 | 3.43 | 2.47 U | 13.5 |
| PCB090 | pg/g | 10 | 8 | 80 | 8.72 | 524 | WR04SD | 92.5 | 25.4 | 367 | 8.72 | 524 | WR04SD | 82.4 | 33.8 | 322 |
| PCB090 & 101 | pg/g | 16 | 16 | 100 | 16.9 | 1680 | U2C-2 | 199 | 117 | 545 | 16.9 | 1680 | U2C-2 | 199 | 117 | 545 |
| PCB091 | pg/g | 10 | 5 | 50 | 3.93 | 34.2 | BH03SD | 15.9 | 8 | 32.9 | 3.7 U | 59.1 U | WR01 | 14.1 | 6.72 | 32.1 |
| PCB092 | pg/g | 10 | 7 | 70 | 2.9 | 83.1 | WR04SD | 17.6 | 5.09 | 62.6 | 1.96 U | 83.1 | WR04SD | 15.2 | 7.23 | 52.4 |
| PCB093 | pg/g | 26 | 8 | 30.8 | 10.7 | 311 | WR04SD | 88.7 | 38.5 | 254 | 1.24 U | 311 | WR04SD | 31.5 | 2.51 U | 144 |
| PCB094 | pg/g | 26 | 1 | 3.8 | 6.23 | 6.23 | U2C-2 | 6.23 | 6.23 | 6.23 | 1.24 U | 29.5 U | WR01 | 3.07 | 2.47 U | 11.5 |
| PCB095 | pg/g | 10 | 8 | 80 | 10.7 | 311 | WR04SD | 88.7 | 38.5 | 254 | 9.78 U | 311 | WR04SD | 78.1 | 38.5 | 238 |
| PCB095 & 098 & 102 | pg/g | 16 | 16 | 100 | 12.3 | 1310 | U2C-2 | 146 | 78.4 | 409 | 12.3 | 1310 | U2C-2 | 146 | 78.4 | 409 |
| PCB096 | pg/g | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.24 U | 29.5 U | WR01 | 2.87 | 2.46 U | 11.2 U |
| PCB097 | pg/g | 26 | 22 | 84.6 | 9.23 | 442 | U2C-2 | 57.4 | 32.7 | 172 | 4.97 U | 442 | U2C-2 | 52.1 | 32 | 154 |
| PCB098 | pg/g | 10 | 8 | 80 | 10.7 | 311 | WR04SD | 88.7 | 38.5 | 254 | 9.78 U | 311 | WR04SD | 78.1 | 38.5 | 238 |
| PCB099 | pg/g | 26 | 22 | 84.6 | 7.15 | 680 | U2C-2 | 77.4 | 54.1 | 118 | 7.15 | 680 | U2C-2 | 69.9 | 47.5 | 112 |
| PCB100 | pg/g | 26 | 9 | 34.6 | 6.74 | 311 | WR04SD | 79.6 | 27.1 | 246 | 1.24 U | 311 | WR04SD | 31.8 | 2.52 U | 144 |
| PCB101 | pg/g | 10 | 8 | 80 | 8.72 | 524 | WR04SD | 92.5 | 25.4 | 367 | 8.72 | 524 | WR04SD | 82.4 | 33.8 | 322 |
| PCB102 | pg/g | 10 | 8 | 80 | 10.7 | 311 | WR04SD | 88.7 | 38.5 | 254 | 9.78 U | 311 | WR04SD | 78.1 | 38.5 | 238 |
| PCB103 | pg/g | 26 | 2 | 7.7 | 9.04 | 22.7 | U2C-2 | 15.9 | 15.9 | 22 | 1.24 U | 29.5 U | WR01 | 4.01 | 2.47 U | 14.4 U |
| PCB104 | pg/g | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.24 U | 10.1 U | UG02A | 1.87 | 2.39 U | 2.52 U |
| PCB105 | pg/g | 26 | 25 | 96.2 | 4.66 | 389 | U2C-2 | 44.3 | 34.6 | 59 | 4.66 | 389 | U2C-2 | 43.1 | 32.9 | 58.7 |
| PCB106 | pg/g | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.85 U | 29.5 U | WR01 | 3.57 | 0.968 U | 14.1 U |
| PCB106 & 118 | pg/g | 16 | 16 | 100 | 12.9 | 1200 | U2C-2 | 170 | 121 | 415 | 12.9 | 1200 | U2C-2 | 170 | 121 | 415 |
| PCB107 | pg/g | 10 | 6 | 60 | 2.13 | 8.54 | WR04SD | 4.07 | 3.23 | 7.61 | 1.85 U | 29.5 U | WR01 | 5.43 | 3.23 | 14.1 U |
| PCB107 & 109 | pg/g | 16 | 12 | 75 | 5.14 | 101 | U2C-2 | 17.7 | 10.1 | 53.4 | 4.74 U | 101 | U2C-2 | 14 | 9.55 | 36.1 |
| PCB108 | pg/g | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.7 U | 59.1 U | WR01 | 7.53 | 1.93 U | 28.2 U |
| PCB108 & 112 | pg/g | 16 | 9 | 56.3 | 5.25 | 73.8 | U2C-2 | 13.6 | 5.98 | 47.2 | 4.74 U | 73.8 | U2C-2 | 8.71 | 5.29 | 23.9 |
| PCB109 | pg/g | 10 | 7 | 70 | 14.7 | 177 | WR01 | 56.9 | 29.1 | 149 | 1.85 U | 177 | WR01 | 48.5 | 24.4 | 135 |
| PCB110 | pg/g | 26 | 24 | 92.3 | 11.1 | 1920 | U2C-2 | 186 | 137 | 220 | 11.1 | 1920 | U2C-2 | 174 | 122 | 217 |
| PCB111 | pg/g | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.85 U | 29.5 U | WR01 | 3.57 | 0.968 U | 14.1 U |
| PCB111 & 115 | pg/g | 16 | 2 | 12.5 | 3.56 | 24.3 | U2C-2 | 13.9 | 13.9 | 23.3 | 3.56 | 24.3 | U2C-2 | 4.06 | 2.49 U | 9.86 |
| PCB112 | pg/g | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.85 U | 29.5 U | WR01 | 9.84 | 13.8 U | 14.7 U |
| PCB113 | pg/g | 26 | 9 | 34.6 | 8.72 | 524 | WR04SD | 83.3 | 23.1 | 344 | 1.24 U | 524 | WR04SD | 33.5 | 2.52 U | 67 |
| PCB114 | pg/g | 26 | 14 | 53.8 | 1.57 J | 22.8 | U2C-2 | 3.95 | 2.46 J | 10.2 J | 0.739 U | 26.5 U | WR06SD | 3 | 2.1 J | 10.8 J |
| PCB115 | pg/g | 10 | 8 | 80 | 11.1 | 224 | WR04SD | 81.8 | 47.3 | 214 | 11.1 | 224 | WR04SD | 72.2 | 36 | 211 |
| PCB116 | pg/g | 10 | 4 | 40 | 8.72 | 25 | BH03SD | 15.3 | 13.7 | 23.8 | 5.55 U | 88.6 U | WR01 | 27.8 | 32.4 | 44.2 U |
| PCB117 | pg/g | 10 | 4 | 40 | 8.72 | 25 | BH03SD | 15.3 | 13.7 | 23.8 | 5.55 U | 88.6 U | WR01 | 27.8 | 32.4 | 44.2 U |
| PCB118 | pg/g | 10 | 9 | 90 | 10.5 | 129 | WR04SD | 42.4 | 27.9 | 102 | 10.5 | 129 | WR04SD | 39.5 | 26.4 | 98.3 |
| PCB119 | pg/g | 26 | 9 | 34.6 | 5.62 | 177 | WR01 | 50.9 | 29.1 | 139 | 4.74 U | 177 | WR01 | 22.5 | 3.79 U | 82.2 |
| PCB120 | pg/g | 26 | 2 | 7.7 | 2.03 | 6.47 | U2C-2 | 4.25 | 4.25 | 6.25 | 1.24 U | 29.5 U | WR01 | 3.12 | 2.47 U | 11.6 |
| PCB121 | pg/g | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.24 U | 29.5 U | WR01 | 2.87 | 2.46 U | 11.2 U |
| PCB122 | pg/g | 26 | 2 | 7.7 | 2.3 | 11.7 | U2C-2 | 7 | 7 | 11.2 | 1.85 U | 29.5 U | WR01 | 3.34 | 2.47 U | 12.9 |
| PCB123 | pg/g | 26 | 12 | 46.2 | 1.02 J | 17.2 | U2C-2 | 3.82 | 2.95 J | 9.73 | 0.913 U | 29.5 U | WR01 | 3.34 | 1.52 J | 14.4 U |
| PCB124 | pg/g | 26 | 10 | 38.5 | 3.89 | 41.8 | U2C-2 | 9.28 | 5.91 J | 26 | 3.7 U | 59.1 U | WR01 | 7.05 | 3.19 | 28.8 U |
| PCB125 | pg/g | 10 | 7 | 70 | 14.7 | 177 | WR01 | 56.9 | 29.1 | 149 | 11.1 U | 177 | WR01 | 49 | 24.4 | 135 |
| PCB126 | pg/g | 26 | 9 | 34.6 | 0.757 J | 6.61 | U2C-2 | 2.57 | 1.54 J | 6.55 J | 0.617 U | 26.5 U | WR06SD | 1.91 | 0.968 U | 6.58 J |
| PCB127 | pg/g | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.24 U | 29.5 U | WR01 | 2.87 | 2.46 U | 11.2 U |
| PCB128 | pg/g | 10 | 8 | 80 | 4.83 | 132 | WR04SD | 28.8 | 13 | 98.8 | 3.91 U | 132 | WR04SD | 25.9 | 13 | 89.3 |
| PCB128 & 162 | pg/g | 16 | 15 | 93.8 | 7.33 | 228 | U2C-2 | 36.6 | 25.2 | 93 | 4.97 U | 228 | U2C-2 | 34.5 | 24.9 | 83.4 |
| PCB129 | pg/g | 26 | 19 | 73.1 | 5.34 | 1620 | WR04SD | 126 | 18.9 | 337 | 4.74 U | 1620 | WR04SD | 94.6 | 6.69 | 173 |
| PCB130 | pg/g | 26 | 19 | 73.1 | 2.31 | 126 | U2C-2 | 17.9 | 12.1 | 55.3 | 1.85 U | 126 | U2C-2 | 14.2 | 9.12 | 39.5 |
| PCB131 | pg/g | 26 | 2 | 7.7 | 3.13 | 7.57 | WR04SD | 5.35 | 5.35 | 7.35 | 1.24 U | 29.5 U | WR01 | 3.21 | 2.47 U | 11.8 |
| PCB132 | pg/g | 10 | 9 | 90 | 4.09 | 438 | WR04SD | 72.2 | 21.3 | 299 | 4.09 | 438 | WR04SD | 66.3 | 17.3 | 281 |
| PCB132 & 161 | pg/g | 16 | 16 | 100 | 6.24 | 502 | U2C-2 | 60.8 | 36.6 | 166 | 6.24 | 502 | U2C-2 | 60.8 | 36.6 | 166 |
| PCB133 | pg/g | 10 | 2 | 20 | 3.25 | 20.3 | WR04SD | 11.8 | 11.8 | 19.4 | 1.85 U | 26.5 U | WR06SD | 4.35 | 0.97 U | 17.1 |
| PCB133 & 142 | pg/g | 16 | 5 | 31.3 | 5.01 T | 47.9 | U2C-2 | 14.5 | 5.65 | 40 | 4.74 U | 47.9 | U2C-2 | 6.39 | 2.51 U | 18.4 |
| PCB134 | pg/g | 10 | 4 | 40 | 4.23 | 58 | WR04SD | 20.7 | 10.2 | 51.4 | 3.7 U | 58 | WR04SD | 11.9 | 3.1 | 43.8 |
| PCB134 & 143 | pg/g | 16 | 9 | 56.3 | 4.98 | 93.2 | U2C-2 | 16.8 | 7.46 T | 59.9 | 4.74 U | 93.2 | U2C-2 | 10.7 | 5.21 | 30.7 |
| PCB135 | pg/g | 26 | 22 | 84.6 | 5.77 | 804 | WR04SD | 71.5 | 19.2 | 318 | 4.97 U | 804 | WR04SD | 62.4 | 19 | 265 |
| PCB136 | pg/g | 26 | 22 | 84.6 | 3.1 | 326 | U2C-2 | 38.9 | 14.1 | 257 | 1.96 U | 326 | U2C-2 | 33.6 | 13.2 | 209 |

Table D1.3-4. Summary Statistics for All Chemicals in Surface Sediment, Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Units | # Analyzed | # Detected | % Detected | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th[b] | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th (half DL)[b] |
| PCB137 | pg/g | 26 | 17 | 65.4 | 1.98 | 66 | U2C-2 | 9.84 | 6.97 | 20.8 | 1.85 U | 66 | U2C-2 | 7.62 | 5.9 | 12.3 |
| PCB138 | pg/g | 10 | 9 | 90 | 18.9 | 1620 | WR04SD | 252 | 97.7 | 1050 | 18.9 | 1620 | WR04SD | 232 | 75.4 | 979 |
| PCB138 & 163 & 164 | pg/g | 16 | 16 | 100 | 24.7 | 1700 | U2C-2 | 235 | 151 | 603 | 24.7 | 1700 | U2C-2 | 235 | 151 | 603 |
| PCB139 | pg/g | 10 | 2 | 20 | 4.6 | 5.96 | WR04SD | 5.28 | 5.28 | 5.89 | 3.7 U | 53.1 U | WR06SD | 5.05 | 1.94 U | 17.3 |
| PCB139 & 149 | pg/g | 16 | 16 | 100 | 20.9 | 2190 | U2C-2 | 227 | 106 | 665 | 20.9 | 2190 | U2C-2 | 227 | 106 | 665 |
| PCB140 | pg/g | 26 | 5 | 19.2 | 2.66 | 17.7 | U2C-2 | 6.95 | 4.6 | 15.4 | 2.66 | 53.1 U | WR06SD | 4.23 | 2.48 U | 14.8 |
| PCB141 | pg/g | 26 | 24 | 92.3 | 2.62 | 437 | WR04SD | 49.2 | 21.8 | 268 | 2.62 | 437 | WR04SD | 46 | 21.3 | 241 |
| PCB142 | pg/g | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.85 U | 26.5 U | WR06SD | 2.19 | 0.968 U | 7.73 U |
| PCB143 | pg/g | 10 | 5 | 50 | 3.82 | 58 | WR04SD | 17.3 | 6.21 | 49.2 | 3.7 U | 58 | WR04SD | 12.1 | 4.03 | 43.8 |
| PCB144 | pg/g | 26 | 15 | 57.7 | 3.22 | 104 | WR04SD | 19.1 | 6.24 | 103 | 1.85 U | 104 | WR04SD | 12.2 | 5.69 | 80.6 |
| PCB145 | pg/g | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.24 U | 29.5 U | WR01 | 5.45 | 2.49 U | 14.6 U |
| PCB146 | pg/g | 10 | 9 | 90 | 2.53 | 251 | WR04SD | 37.9 | 13.1 | 162 | 2.53 | 251 | WR04SD | 35.5 | 13.2 | 151 |
| PCB146 & 165 | pg/g | 16 | 15 | 93.8 | 7.38 | 269 | U2C-2 | 39.6 | 24.5 | 116 | 4.97 U | 269 | U2C-2 | 37.3 | 24.3 | 106 |
| PCB147 | pg/g | 26 | 11 | 42.3 | 4.08 | 1720 | WR04SD | 213 | 55.9 | 961 | 4.08 | 1720 | WR04SD | 92.8 | 3.3 | 178 |
| PCB148 | pg/g | 26 | 3 | 11.5 | 1.33 | 5.2 | U2C-2 | 3.05 | 2.63 | 4.94 | 1.33 | 29.5 U | WR01 | 6.03 | 2.51 U | 14.6 U |
| PCB149 | pg/g | 10 | 9 | 90 | 11.3 | 1720 | WR04SD | 254 | 67.1 | 1110 | 11.3 | 1720 | WR04SD | 230 | 53.2 | 1040 |
| PCB150 | pg/g | 26 | 2 | 7.7 | 2.64 | 4.95 | U2C-2 | 3.8 | 3.8 | 4.83 | 1.24 U | 26.5 U | WR06SD | 2.55 | 2.47 U | 5.03 |
| PCB151 | pg/g | 26 | 24 | 92.3 | 6.06 | 804 | WR04SD | 84.2 | 29.7 | 502 | 5.87 U | 804 | WR04SD | 79.4 | 29.7 | 451 |
| PCB152 | pg/g | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.24 U | 26.5 U | WR06SD | 2.34 | 2.43 U | 4.42 U |
| PCB153 | pg/g | 26 | 26 | 100 | 14.4 | 1940 | WR04SD | 235 | 117 | 1270 | 14.4 | 1940 | WR04SD | 235 | 117 | 1270 |
| PCB154 | pg/g | 26 | 10 | 38.5 | 6.48 | 804 | WR04SD | 106 | 28.9 | 473 | 4.74 U | 804 | WR04SD | 44 | 2.73 U | 63.7 |
| PCB155 | pg/g | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.24 U | 26.5 U | WR06SD | 2.34 | 2.43 U | 4.42 U |
| PCB156 | pg/g | 26 | 22 | 84.6 | 2.18 J | 132 | U2C-2 | 21.2 | 13.5 | 104 | 2.18 J | 132 | U2C-2 | 19.3 | 13 | 87.6 |
| PCB157 | pg/g | 26 | 22 | 84.6 | 0.798 J | 108 | WR04SD | 10.2 | 4.17 J | 26.1 | 0.798 J | 108 | WR04SD | 9.93 | 4.17 J | 26.7 |
| PCB158 | pg/g | 10 | 8 | 80 | 2.65 | 132 | WR04SD | 22.9 | 7.62 | 91.9 | 1.96 U | 132 | WR04SD | 19.7 | 7.62 | 80.4 |
| PCB158 & 160 | pg/g | 16 | 15 | 93.8 | 5.25 | 170 | U2C-2 | 25.1 | 16.6 | 66.4 | 4.97 U | 170 | U2C-2 | 23.7 | 16 | 59 |
| PCB159 | pg/g | 26 | 6 | 23.1 | 2.01 | 46.4 | WR04SD | 12.3 | 3.42 | 38.9 | 1.85 U | 46.4 | WR04SD | 4.96 | 2.48 U | 15.5 |
| PCB160 | pg/g | 10 | 9 | 90 | 18.9 | 1620 | WR04SD | 252 | 97.7 | 1050 | 18.9 | 1620 | WR04SD | 232 | 75.4 | 979 |
| PCB161 | pg/g | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.85 U | 26.5 U | WR06SD | 2.19 | 0.968 U | 7.73 U |
| PCB162 | pg/g | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.85 U | 26.5 U | WR06SD | 2.19 | 0.968 U | 7.73 U |
| PCB163 | pg/g | 10 | 9 | 90 | 18.9 | 1620 | WR04SD | 252 | 97.7 | 1050 | 18.9 | 1620 | WR04SD | 232 | 75.4 | 979 |
| PCB164 | pg/g | 10 | 8 | 80 | 2.19 | 114 | WR04SD | 20.1 | 5.79 | 80.9 | 1.96 U | 114 | WR04SD | 17.5 | 5.79 | 71.4 |
| PCB165 | pg/g | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.85 U | 26.5 U | WR06SD | 2.19 | 0.968 U | 7.73 U |
| PCB166 | pg/g | 26 | 9 | 34.6 | 4.83 | 132 | WR04SD | 26.2 | 12 | 94 | 1.24 U | 132 | WR04SD | 11.6 | 2.51 U | 34.5 |
| PCB167 | pg/g | 26 | 21 | 80.8 | 0.867 J | 53 | U2C-2 | 9.52 | 6.35 | 40.6 | 0.867 J | 53 | U2C-2 | 8.34 | 5.83 | 33.8 |
| PCB168 | pg/g | 26 | 9 | 34.6 | 3.33 | 113 | BH03SD | 50.6 | 43.1 | 103 | 1.24 U | 113 | BH03SD | 20.7 | 2.52 U | 83.2 |
| PCB169 | pg/g | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.362 U | 29.2 U | WR04SD | 1.7 | 0.895 U | 10.4 U |
| PCB170 | pg/g | 26 | 22 | 84.6 | 4.3 | 341 | U2C-2 | 46.8 | 35.1 | 62.5 | 4.3 | 341 | U2C-2 | 42.8 | 32.6 | 61.1 |
| PCB171 | pg/g | 26 | 16 | 61.5 | 5.9 | 96.5 | U2C-2 | 16.2 | 11.1 | 38.5 | 3.82 U | 96.5 | U2C-2 | 14.3 | 10.6 | 28.5 U |
| PCB172 | pg/g | 26 | 15 | 57.7 | 4.33 | 58.4 | U2C-2 | 11.3 | 7.66 | 26.3 | 1.91 U | 58.4 | U2C-2 | 9.76 | 7.29 | 23.6 U |
| PCB173 | pg/g | 26 | 6 | 23.1 | 1.48 | 19.1 | BH03SD | 9.6 | 9.38 | 17.2 | 1.48 | 58.4 U | WR04SD | 7.6 | 2.5 U | 28.5 U |
| PCB174 | pg/g | 26 | 22 | 84.6 | 4.07 | 433 | U2C-2 | 54.9 | 42.7 | 66.6 | 4.07 | 433 | U2C-2 | 48.6 | 37.5 | 65.1 |
| PCB175 | pg/g | 26 | 3 | 11.5 | 2.55 | 21.6 | U2C-2 | 8.91 | 2.58 | 19.7 | 1.9 U | 29.2 U | WR04SD | 4.8 | 2.49 U | 14.5 U |
| PCB176 | pg/g | 26 | 14 | 53.8 | 2.34 | 67.4 | U2C-2 | 9.98 | 5.7 | 28.4 | 1.91 U | 67.4 | U2C-2 | 8.17 | 5.55 | 14.5 U |
| PCB177 | pg/g | 26 | 21 | 80.8 | 2.28 | 239 | U2C-2 | 33.3 | 23.7 | 43.1 | 2.28 | 239 | U2C-2 | 29.2 | 21.1 | 42 |
| PCB178 | pg/g | 26 | 16 | 61.5 | 5.38 | 97.9 | U2C-2 | 15.6 | 10.3 | 36.4 | 1.91 U | 97.9 | U2C-2 | 12.3 | 9.78 | 15.6 |
| PCB179 | pg/g | 26 | 20 | 76.9 | 3.41 | 237 | U2C-2 | 29.8 | 20.3 | 39.7 | 1.96 U | 237 | U2C-2 | 25.8 | 17.4 | 29 |
| PCB180 | pg/g | 26 | 22 | 84.6 | 9.86 | 830 | U2C-2 | 113 | 81.7 | 139 | 9.86 | 830 | U2C-2 | 99.6 | 78 | 139 |
| PCB181 | pg/g | 26 | 1 | 3.8 | 3.61 | 3.61 | U2C-2 | 3.61 | 3.61 | 3.61 | 1.24 U | 29.2 U | WR04SD | 3.97 | 2.48 U | 14.2 U |
| PCB182 | pg/g | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 55.5 U | WR03SD | 7.58 | 0.983 U | 21.8 U |
| PCB182 & 187 | pg/g | 16 | 16 | 100 | 12.4 | 608 | U2C-2 | 92.9 | 67.3 | 220 | 12.4 | 608 | U2C-2 | 92.9 | 67.3 | 220 |
| PCB183 | pg/g | 26 | 20 | 76.9 | 6.01 | 263 | U2C-2 | 35.3 | 25 | 56.6 | 3.91 U | 263 | U2C-2 | 31.1 | 25 | 42.3 |
| PCB184 | pg/g | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.24 U | 55.5 U | WR03SD | 4.42 | 2.47 U | 14.5 U |
| PCB185 | pg/g | 26 | 14 | 53.8 | 5.12 | 45.7 | BH03SD | 15.5 | 7.14 | 44.5 | 3.91 U | 58.4 U | WR04SD | 12.9 | 6.48 J | 40.9 |
| PCB186 | pg/g | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.24 U | 29.2 U | WR04SD | 3.88 | 2.47 U | 14.2 U |
| PCB187 | pg/g | 10 | 6 | 60 | 6.36 | 83 | BH03SD | 41.2 | 41.7 | 78.2 | 6.36 | 83 | BH03SD | 30.4 | 14.5 U | 74.3 |
| PCB188 | pg/g | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.24 U | 26.5 U | WR06SD | 2.34 | 2.43 U | 4.42 U |
| PCB189 | pg/g | 26 | 12 | 46.2 | 0.457 J | 19.5 | BH03SD | 4.02 | 1.94 J | 15.7 | 0.425 U | 29.5 U | WR01 | 6.21 | 1.97 J | 14.7 U |
| PCB190 | pg/g | 26 | 17 | 65.4 | 3.93 | 68.2 | U2C-2 | 12.7 | 9.51 | 24.5 | 1.91 U | 68.2 | U2C-2 | 10.8 | 9.48 | 14.5 U |

Table D1.3-4. Summary Statistics for All Chemicals in Surface Sediment, Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| PCB191 | pg/g | 26 | 3 | 11.5 | 1.96 | 13.5 | U2C-2 | 6.13 | 2.93 | 12.4 | 1.9 U | 29.2 U | WR04SD | 4.48 | 2.48 U | 14.2 U |
| PCB192 | pg/g | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.24 U | 29.2 U | WR04SD | 3.88 | 2.47 U | 14.2 U |
| PCB193 | pg/g | 26 | 16 | 61.5 | 4.92 J | 138 | BH03SD | 28.9 | 7.5 | 93.2 | 4.74 U | 138 | BH03SD | 22.7 | 6.85 J | 78.1 |
| PCB194 | pg/g | 26 | 21 | 80.8 | 2.8 | 424 | WR04SD | 44 | 21.2 | 155 | 2.8 | 424 | WR04SD | 37.4 | 18 | 124 |
| PCB195 | pg/g | 26 | 16 | 61.5 | 3.25 | 61.3 | U2C-2 | 11.5 | 9.13 | 25.2 | 1.96 U | 61.3 | U2C-2 | 10.5 | 9.23 | 14.5 U |
| PCB196 | pg/g | 10 | 5 | 50 | 3.59 | 256 | WR04SD | 59.6 | 13.3 | 209 | 1.85 U | 256 | WR04SD | 33.7 | 11.4 U | 150 |
| PCB196 & 203 | pg/g | 16 | 16 | 100 | 6.37 | 221 | U2C-2 | 38.7 | 29.4 | 85.3 | 6.37 | 221 | U2C-2 | 38.7 | 29.4 | 85.3 |
| PCB197 | pg/g | 26 | 3 | 11.5 | 6.91 | 82.5 | WR04SD | 32.2 | 7.27 | 75 | 1.24 U | 82.5 | WR04SD | 11.2 | 2.5 U | 29.3 U |
| PCB198 | pg/g | 26 | 9 | 34.6 | 1.72 | 451 | WR04SD | 64.6 | 10.4 | 288 | 1.72 | 451 | WR04SD | 26.6 | 2.52 U | 43 |
| PCB199 | pg/g | 26 | 23 | 88.5 | 4.26 | 451 | WR04SD | 52.1 | 30.2 | 194 | 4.26 | 451 | WR04SD | 48.9 | 27.9 | 169 |
| PCB200 | pg/g | 26 | 4 | 15.4 | 3.93 | 82.5 | WR04SD | 30.2 | 17.3 | 74.3 | 3.7 U | 82.5 | WR04SD | 12.1 | 2.51 U | 29.3 U |
| PCB201 | pg/g | 26 | 6 | 23.1 | 2.26 | 52.8 | WR04SD | 18.5 | 12.8 | 46.1 | 1.85 U | 52.8 | WR04SD | 7.24 | 2.49 U | 24.4 |
| PCB202 | pg/g | 26 | 14 | 53.8 | 2.13 | 90 | WR04SD | 16 | 7.53 | 58.1 | 1.85 U | 90 | WR04SD | 10.9 | 6.95 | 35.6 |
| PCB203 | pg/g | 10 | 7 | 70 | 2.94 | 278 | WR04SD | 48 | 8.89 | 200 | 2.94 | 278 | WR04SD | 37.3 | 11.4 U | 162 |
| PCB204 | pg/g | 26 | 1 | 3.8 | 25.8 | 25.8 | BH03SD | 25.8 | 25.8 | 25.8 | 1.24 U | 28.7 U | BH04SD | 4.14 | 2.47 U | 14.1 U |
| PCB205 | pg/g | 26 | 3 | 11.5 | 1.39 | 26.5 | WR04SD | 11.8 | 7.42 | 24.6 | 1.39 | 26.5 | WR04SD; WR06SD | 3.59 | 2.47 U | 11.8 |
| PCB206 | pg/g | 26 | 23 | 88.5 | 2.14 | 90.9 | WR04SD | 18.8 | 15.1 | 67.8 | 2.14 | 90.9 | WR04SD | 17.3 | 13.3 | 60.6 |
| PCB207 | pg/g | 26 | 2 | 7.7 | 2.91 | 9.59 | U2C-2 | 6.25 | 6.25 | 9.26 | 1.9 U | 29.2 U | WR04SD | 3.78 | 2.48 U | 13.7 U |
| PCB208 | pg/g | 26 | 15 | 57.7 | 2.84 | 19.2 | U2C-2 | 6.47 | 6.01 J | 11.3 | 1.91 U | 29.2 U | WR04SD | 5.92 | 5.51 | 14.4 U |
| PCB209 | pg/g | 26 | 19 | 73.1 | 4.05 | 41.6 | U2C-2 | 22.4 | 24.3 | 38.5 | 4.03 U | 41.6 | U2C-2 | 17.6 | 14.9 | 38.2 |
| Total PCB Congeners | pg/g | 26 | 26 | 100 | 290 JT | 31000 T | U2C-2 | 4220 | 2710 J | 19700 | 290 JT | 31000 T | U2C-2 | 4220 | 2710 J | 19700 |
| **PCBs[c]** | | | | | | | | | | | | | | | | |
| Total PCBs | µg/kg | 81 | 42 | 51.9 | 0.29 JT | 31 T | U2C-2 | 4.48 | 2.99 J | 14.3 J | 0.29 JT | 42 UT | HC08 | 5.69 | 2.9 JT | 19.5 UT |
| **PCB Homologs** | | | | | | | | | | | | | | | | |
| Dichlorobiphenyl homologs | pg/g | 26 | 24 | 92.3 | 8.48 T | 312 T | U2C-2 | 101 | 120 | 178 J | 8.48 T | 312 T | U2C-2 | 95.5 | 108 | 176 J |
| Heptachlorobiphenyl homologs | pg/g | 26 | 22 | 84.6 | 36.7 T | 3480 T | U2C-2 | 469 | 381 J | 737 | 36.7 T | 3480 T | U2C-2 | 401 | 315 J | 695 |
| Hexachlorobiphenyl homologs | pg/g | 26 | 26 | 100 | 60.3 T | 16800 T | WR04SD | 1580 | 679 J | 7310 | 60.3 T | 16800 T | WR04SD | 1580 | 679 J | 7310 |
| Monochlorobiphenyl homologs | pg/g | 26 | 12 | 46.2 | 5.41 T | 28.7 T | U2C-2 | 10.9 | 8.5 | 21.9 | 4.74 UT | 29.5 UT | WR01 | 10.6 | 10 | 16 |
| Nonachlorobiphenyl homologs | pg/g | 26 | 23 | 88.5 | 2.14 T | 101 T | U2C-2 | 23.5 | 21.3 T | 85.3 | 2.14 T | 101 T | U2C-2 | 21.5 | 14.6 | 76.9 |
| Octachlorobiphenyl homologs | pg/g | 26 | 23 | 88.5 | 12.6 T | 2190 T | WR04SD | 207 | 94.1 T | 709 | 12.6 T | 2190 T | WR04SD | 186 | 93.1 J | 623 |
| Pentachlorobiphenyl homologs | pg/g | 26 | 25 | 96.2 | 63.5 T | 9870 T | U2C-2 | 1230 | 757 JT | 4180 | 63.5 T | 9870 T | U2C-2 | 1180 | 736 J | 4050 |
| Tetrachlorobiphenyl homologs | pg/g | 26 | 26 | 100 | 41.2 T | 5830 T | U2C-2 | 581 | 437 | 708 | 41.2 T | 5830 T | U2C-2 | 581 | 437 | 708 |
| Trichlorobiphenyl homologs | pg/g | 26 | 26 | 100 | 2.41 T | 1480 T | U2C-2 | 168 | 122 | 261 | 2.41 T | 1480 T | U2C-2 | 168 | 122 | 261 |
| **PCDD/Fs Homologs** | | | | | | | | | | | | | | | | |
| Heptachlorodibenzofuran homologs | pg/g | 39 | 38 | 97.4 | 0.487 | 28.9 JT | G027 | 4.5344 | 2.486 | 20.179 | 0.487 | 28.9 JT | G027 | 4.4248 | 2.382 | 19.919 |
| Heptachlorodibenzo-p-dioxin homologs | pg/g | 39 | 38 | 97.4 | 1.58 | 102 JT | G027 | 14.411 | 8.9435 | 35.447 | 1.58 | 102 JT | G027 | 14.062 | 8.437 | 35.131 |
| Hexachlorodibenzofuran homologs | pg/g | 39 | 38 | 97.4 | 0.11 J | 18.148 T | U1C-1 | 2.2439 | 1.192 | 8.0575 J | 0.0289 U | 18.148 T | U1C-1 | 2.1868 | 1.191 | 7.555 J |
| Hexachlorodibenzo-p-dioxin homologs | pg/g | 39 | 38 | 97.4 | 0.053 | 18.1 JT | G027 | 2.572 | 1.582 | 6.347 | 0.0337 U | 18.1 JT | G027 | 2.506 | 1.539 | 6.238 |
| Octachlorodibenzofuran | pg/g | 48 | 32 | 66.7 | 1.021 J | 55.8 | WR04SD | 8.5298 | 5.2025 J | 31.36 J | 0.462 U | 55.8 | WR04SD | 5.8979 | 2.81 | 24.255 J |
| Octachlorodibenzo-p-dioxin | pg/g | 49 | 35 | 71.4 | 5.46 | 521 JT | G027 | 89.8951 | 62.6 | 238.1 | 5.46 | 521 JT | G027 | 66.4365 | 41.823 | 215.599 J |
| Pentachlorodibenzofuran homologs | pg/g | 39 | 36 | 92.3 | 0.069 | 7.94 JT | G027 | 0.87911 | 0.5495 J | 2.118 J | 0.00787 U | 7.94 JT | G027 | 0.81211 | 0.42 J | 1.8672 J |
| Pentachlorodibenzo-p-dioxin homologs | pg/g | 39 | 26 | 66.7 | 0.029 J | 2.37 JT | G027 | 0.35467 | 0.238 J | 0.9855 J | 0.009 U | 2.37 JT | G027 | 0.24266 | 0.0719 J | 0.6878 J |
| Tetrachlorodibenzofuran homologs | pg/g | 39 | 29 | 74.4 | 0.047 | 4 JT | G027 | 0.52423 | 0.392 T | 0.9236 J | 0.00701 U | 4 JT | G027 | 0.39628 | 0.185 | 0.8956 J |
| Tetrachlorodibenzo-p-dioxin homologs | pg/g | 39 | 31 | 79.5 | 0.0403 J | 2.01 JT | G027 | 0.4322 | 0.337 | 1.1 | 0.014 U | 2.01 JT | G027 | 0.3478 | 0.167 | 1.076 |
| Total PCDD/F | pg/g | 39 | 38 | 97.4 | 2.39 T | 733 T | G027 | 90.3 | 59.1 J | 298 J | 2.39 T | 733 T | G027 | 88.1 | 57.1 JT | 297 J |
| **PCDD/Fs** | | | | | | | | | | | | | | | | |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran | pg/g | 49 | 34 | 69.4 | 0.154 J | 16.6 | WR04SD | 2.0034 | 1.13 J | 8.9085 J | 0.154 J | 16.6 | WR04SD | 1.6283 | 0.885 J | 6.764 J |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin | pg/g | 49 | 34 | 69.4 | 0.985 J | 87.9 | WR01 | 12.858 | 7.72 | 43.2 J | 0.784 U | 87.9 | WR01 | 9.2722 | 5.09 | 38.198 |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran | pg/g | 49 | 21 | 42.9 | 0.016 J | 11.1 | WR04SD | 0.6627 | 0.1 J | 0.682 JT | 0.009 U | 11.1 | WR04SD | 0.3871 | 0.055 J | 0.523 U |
| 1,2,3,4,7,8-Hexachlorodibenzofuran | pg/g | 49 | 24 | 49 | 0.033 J | 16.2 | WR04SD | 0.85111 | 0.133 J | 0.80615 J | 0.00976 U | 16.2 | WR04SD | 0.52749 | 0.0972 J | 0.6408 J |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 49 | 23 | 46.9 | 0.011 J | 0.528 JT | G027 | 0.09917 | 0.065 J | 0.2816 J | 0.011 J | 1.24 U | WR03SD | 0.1749 | 0.048 J | 0.615 U |
| 1,2,3,6,7,8-Hexachlorodibenzofuran | pg/g | 49 | 23 | 46.9 | 0.015 J | 2.62 | WR04SD | 0.2098 | 0.051 J | 0.6823 J | 0.005 U | 2.62 | WR04SD | 0.2083 | 0.04775 U | 0.6456 J |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 49 | 37 | 75.5 | 0.053 J | 2.41 JT | G027 | 0.4679 | 0.265 J | 1.578 | 0.0382 U | 2.41 JT | G027 | 0.4466 | 0.398 J | 1.352 J |
| 1,2,3,7,8,9-Hexachlorodibenzofuran | pg/g | 49 | 1 | 2 | 0.117 JT | 0.117 JT | G027 | 0.117 | 0.117 JT | 0.117 JT | 0.003 U | 1.17 U | WR02SD | 0.1176 | 0.0123 U | 0.523 U |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | pg/g | 49 | 36 | 73.5 | 0.041 J | 2.75 | BH03SD | 0.3571 | 0.187 J | 1.24 J | 0.016 U | 2.75 | BH03SD | 0.3584 | 0.206 J | 1.1 J |
| 1,2,3,7,8-Pentachlorodibenzofuran | pg/g | 49 | 11 | 22.4 | 0.017 J | 0.353 JT | U1C-1 | 0.090273 | 0.0394 J | 0.312 J | 0.00417 U | 1.17 U | WR06SD | 0.13211 | 0.01805 U | 0.523 U |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | pg/g | 49 | 16 | 32.7 | 0.015 J | 0.391 JT | G027 | 0.074869 | 0.0365 J | 0.18175 J | 0.006 U | 1.18 U | WR03SD | 0.14842 | 0.033 JT | 0.585 U |
| 2,3,4,6,7,8-Hexachlorodibenzofuran | pg/g | 49 | 18 | 36.7 | 0.014 J | 1.41 | WR04SD | 0.2405 | 0.0825 J | 0.917 J | 0.004 U | 1.41 | WR04SD | 0.1954 | 0.046 J | 0.6756 J |
| 2,3,4,7,8-Pentachlorodibenzofuran | pg/g | 49 | 16 | 32.7 | 0.011 J | 1.83 | WR04SD | 0.19147 | 0.05825 J | 0.717 J | 0.005 U | 1.83 | WR04SD | 0.1635 | 0.026 J | 0.52 U |

Table D1.3-4. Summary Statistics for All Chemicals in Surface Sediment, Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/g | 49 | 11 | 22.4 | 0.046 J | 0.69 | WR04SD | 0.2432 | 0.164 J | 0.597 J | 0.012 U | 0.69 | WR04SD | 0.09478 | 0.0465 U | 0.2986 |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | pg/g | 49 | 1 | 2 | 0.244 JT | 0.244 JT | G027 | 0.244 | 0.244 JT | 0.244 JT | 0.0036 U | 0.244 JT | G027 | 0.036632 | 0.0105 U | 0.11 U |
| TCDD TEQ (ND = 0) | pg/g | 49 | 48 | 98 | 0.00684 JT | 2.99 T | WR04SD | 0.31492 | 0.1135 J | 1.1571 | 0.00684 JT | 2.99 T | WR04SD | 0.30903 | 0.111 A | 1.1424 |
| Total TCDD TEQ (ND = 0) | pg/g | 54 | 54 | 100 | 0.000674 JA | 3.01 T | WR04SD | 0.327086 | 0.119 J | 1.1105 J | 0.000674 JA | 3.01 T | WR04SD | 0.327086 | 0.119 J | 1.1105 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | pg/g | 26 | 25 | 96.2 | 0.000455 T | 0.723 JT | U2C-2 | 0.0996443 | 0.00608 JT | 0.5618 J | 0.000455 T | 2.65 UT | WR06SD | 0.146773 | 0.006205 J | 0.70575 J |
| **PBDE Congeners** | | | | | | | | | | | | | | | | |
| PBDE028 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.94 U | 1 U | UG02B; UG06B | 0.49 | 0.5 U | 0.5 U |
| PBDE047 | µg/kg | 3 | 3 | 100 | 1 | 1.3 | UG02B | 1.1 | 1.1 | 1.3 | 1 | 1.3 | UG02B | 1.1 | 1.1 | 1.3 |
| PBDE099 | µg/kg | 3 | 3 | 100 | 0.86 J | 1.3 | UG02B | 1 | 0.9 J | 1.3 J | 0.86 J | 1.3 | UG02B | 1 | 0.9 J | 1.3 J |
| PBDE100 | µg/kg | 3 | 3 | 100 | 0.19 J | 0.44 J | UG02B | 0.29 | 0.24 J | 0.42 J | 0.19 J | 0.44 J | UG02B | 0.29 | 0.24 J | 0.42 J |
| PBDE153 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.94 U | 1 U | UG02B; UG06B | 0.49 | 0.5 U | 0.5 U |
| PBDE154 | µg/kg | 3 | 2 | 66.7 | 0.16 J | 0.2 J | UG06B | 0.18 | 0.18 J | 0.2 J | 0.16 J | 1 U | UG02B | 0.29 | 0.2 J | 0.47 J |
| PBDE183 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.94 U | 1 U | UG02B; UG06B | 0.49 | 0.5 U | 0.5 U |
| PBDE209 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 9.4 U | 10 U | UG02B; UG06B | 4.9 | 5 U | 5 U |
| **Pesticides** | | | | | | | | | | | | | | | | |
| 2,4'-DDD | µg/kg | 63 | 12 | 19 | 0.045 NJ | 1.35 JT | G027 | 0.2803 | 0.1715 J | 0.8308 J | 0.032 U | 2.5 U | UG04A | 0.2193 | 0.115 U | 0.7 U |
| 2,4'-DDE | µg/kg | 63 | 13 | 20.6 | 0.061 J | 0.391 | U6TOC-2 | 0.202 | 0.159 | 0.3874 J | 0.03 U | 0.5 UJ | WR01 | 0.1153 | 0.075 U | 0.2497 J |
| 2,4'-DDT | µg/kg | 63 | 16 | 25.4 | 0.11 NJ | 0.439 J | U6TOC-2 | 0.2509 | 0.2365 J | 0.3798 J | 0.03 U | 0.5 UJ | WR01 | 0.1354 | 0.1 U | 0.3158 J |
| 4,4'-DDD | µg/kg | 81 | 47 | 58 | 0.12 J | 2.25 T | G027 | 0.5892 | 0.494 J | 1.2 J | 0.047 U | 3.3 U | HC-SS29; HC-SS31; HC-SS32 | 0.5941 | 0.465 UJ | 1.65 U |
| 4,4'-DDE | µg/kg | 81 | 55 | 67.9 | 0.087 J | 2.3 NJ | G786 | 0.882 | 0.82 | 1.77 | 0.034 U | 2.3 NJ | G786; HC-SS29; HC-SS31; HC-SS32 | 0.815 | 0.78 | 1.5 J |
| 4,4'-DDT | µg/kg | 76 | 17 | 22.4 | 0.163 NJ | 13 | HC10 | 1.549 | 0.69 J | 4.84 | 0.0585 UJ | 13 | HC10 | 0.7392 | 0.291 J | 3.35 U |
| Aldrin | µg/kg | 77 | 7 | 9.1 | 0.17 J | 0.55 | UG03B | 0.3341 | 0.32 J | 0.508 | 0.0329 UJ | 2.1 U | HC08 | 0.243 | 0.135 U | 0.95 U |
| alpha-Endosulfan | µg/kg | 75 | 22 | 29.3 | 0.079 J | 1.3 | UG11C | 0.259 | 0.155 J | 0.7035 J | 0.025 U | 2.1 U | HC08 | 0.2669 | 0.12 J | 0.965 U |
| alpha-Hexachlorocyclohexane | µg/kg | 75 | 2 | 2.7 | 0.128 J | 5.03 NJ | U5Q-1 | 2.579 | 2.579 J | 4.785 J | 0.0351 U | 5.03 NJ | U5Q-1 | 0.2705 | 0.055 U | 0.965 U |
| beta-Endosulfan | µg/kg | 75 | 2 | 2.7 | 0.075 J | 0.261 J | U5Q-3 | 0.168 | 0.168 J | 0.2517 J | 0.0252 U | 2.1 U | HC08 | 0.2217 | 0.0265 U | 0.95 U |
| beta-Hexachlorocyclohexane | µg/kg | 75 | 17 | 22.7 | 0.18 J | 2.01 J | U2C-1 | 0.8198 | 0.561 J | 1.898 J | 0.0356 U | 2.1 U | HC08 | 0.4027 | 0.22 UJ | 1.211 J |
| Chlordane (cis & trans) | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 7.1 U | WR-PG-Ref01 | 2.2 | 2.1 U | 3.4 U |
| cis-Chlordane | µg/kg | 77 | 18 | 23.4 | 0.055 J | 0.5 T | G027 | 0.181 | 0.136 J | 0.4813 J | 0.031 U | 2.1 U | HC08 | 0.2225 | 0.082 J | 0.95 U |
| cis-Nonachlor | µg/kg | 63 | 4 | 6.3 | 0.128 J | 0.213 NJ | U6TOC-2 | 0.164 | 0.1575 J | 0.2051 J | 0.0438 U | 0.9 UT | G027 | 0.09736 | 0.06 U | 0.24 UJ |
| delta-Hexachlorocyclohexane | µg/kg | 75 | 4 | 5.3 | 0.217 J | 0.287 J | U6TOC-3 | 0.2523 | 0.2525 J | 0.2819 J | 0.037 U | 2.1 U | HC08 | 0.2214 | 0.06 U | 0.95 U |
| Dieldrin | µg/kg | 77 | 10 | 13 | 0.092 NJ | 0.4 T | G027 | 0.2089 | 0.162 J | 0.3955 | 0.03 U | 2.1 U | HC08 | 0.2515 | 0.092 NJ | 0.95 U |
| Endosulfan sulfate | µg/kg | 75 | 1 | 1.3 | 0.67 | 0.67 | G029 | 0.67 | 0.67 | 0.67 | 0.053 U | 2.1 U | HC08 | 0.2754 | 0.105 U | 0.95 U |
| Endrin | µg/kg | 57 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.046 U | 2.1 U | HC08 | 0.287 | 0.06 U | 0.96 U |
| Endrin aldehyde | µg/kg | 75 | 2 | 2.7 | 0.045 JT | 0.147 NJ | U1C-2 | 0.096 | 0.096 J | 0.1419 J | 0.042 UJ | 2.1 U | HC08 | 0.2277 | 0.045 JT | 0.95 U |
| Endrin ketone | µg/kg | 75 | 6 | 8 | 0.089 J | 0.12 J | UG03C | 0.105 | 0.11 J | 0.1175 J | 0.029 U | 2.1 U | HC08 | 0.2274 | 0.04 U | 0.95 U |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 77 | 1 | 1.3 | 0.32 NJ | 0.32 NJ | UG12C | 0.32 | 0.32 NJ | 0.32 NJ | 0.043 U | 2.1 U | HC08 | 0.2134 | 0.086 U | 0.95 U |
| Heptachlor | µg/kg | 77 | 1 | 1.3 | 0.5 NJ | 0.5 NJ | UG12C | 0.5 | 0.5 NJ | 0.5 NJ | 0.0319 U | 2.1 U | HC08 | 0.2137 | 0.0395 U | 0.95 U |
| Heptachlor epoxide | µg/kg | 65 | 1 | 1.5 | 0.14 NJ | 0.14 NJ | G787 | 0.14 | 0.14 NJ | 0.14 NJ | 0.0417 U | 2.1 U | HC08 | 0.2222 | 0.1 U | 0.95 U |
| Methoxychlor | µg/kg | 75 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.0415 U | 5 UJ | WR01 | 0.508 | 0.1 U | 2.33 UJ |
| Mirex | µg/kg | 53 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.0377 U | 0.34 U | WR-PG-Ref03 | 0.05032 | 0.06 U | 0.095 U |
| Oxychlordane | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.0189 U | 1.5 U | UG12C | 0.1284 | 0.1 U | 0.289 U |
| Total chlordanes | µg/kg | 77 | 38 | 49.4 | 0.057 JT | 1.53 T | G027 | 0.3909 | 0.3445 J | 0.806 J | 0.0438 UT | 2.1 UA | HC08 | 0.3825 | 0.24 UJT | 1 U |
| Total endosulfan | µg/kg | 75 | 24 | 32 | 0.079 JT | 1.3 T | UG11C | 0.2795 | 0.18 J | 0.7125 | 0.053 UT | 2.1 UT | HC08 | 0.3284 | 0.1745 UT | 0.965 U |
| Total DDD | µg/kg | 81 | 47 | 58 | 0.12 JT | 3.6 T | G027 | 0.661 | 0.5 T | 1.34 J | 0.047 UT | 3.6 T | G027 | 0.6381 | 0.47 UJT | 1.65 UA |
| DDx | µg/kg | 81 | 56 | 69.1 | 0.087 JT | 14.57 JA | HC10 | 2.011 | 1.715 J | 5.375 J | 0.087 JT | 14.57 JA | HC10 | 1.707 | 1.2 T | 3.35 UA |
| Total DDE | µg/kg | 81 | 55 | 67.9 | 0.087 JT | 2.45 T | U6TOC-2 | 0.929 | 0.86 T | 1.79 J | 0.034 UT | 2.45 T | U6TOC-2 | 0.847 | 0.79 T | 1.5 JT |
| Total DDT | µg/kg | 81 | 23 | 28.4 | 0.21 JT | 13 A | HC10 | 1.321 | 0.69 T | 2.84 J | 0.0486 UJT | 13 A | HC10 | 0.7361 | 0.36 T | 3.35 UA |
| Total 4,4'-DDx | µg/kg | 39 | 26 | 66.7 | 0.087 JT | 14.57 T | HC10 | 1.788 | 1.198 J | 3.78 J | 0.087 JT | 14.57 T | HC10 | 1.729 | 0.986 JT | 3.414 J |
| Toxaphene | µg/kg | 75 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.4 U | 110 U | HC08 | 14.4 | 6.35 U | 46.5 U |
| trans-Chlordane | µg/kg | 77 | 32 | 41.6 | 0.061 NJ | 0.715 T | G027 | 0.2393 | 0.214 J | 0.409 J | 0.0221 U | 2.1 U | HC08 | 0.2818 | 0.21 J | 0.95 U |
| trans-Nonachlor | µg/kg | 63 | 23 | 36.5 | 0.044 J | 0.376 NJ | U6TOC-2 | 0.1427 | 0.116 J | 0.328 J | 0.034 U | 0.5 UJ | WR01 | 0.11 | 0.07 J | 0.268 J |

Table D1.3-4. Summary Statistics for All Chemicals in Surface Sediment, Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| 1-Methylnaphthalene | µg/kg | 32 | 28 | 87.5 | 0.41 J | 2.9 | G029 | 0.89 | 0.75 J | 2 J | 0.31 U | 2.9 | G029 | 0.8 | 0.72 J | 1.8 J |
| 2-Methylnaphthalene | µg/kg | 71 | 31 | 43.7 | 0.41 J | 4.6 | G029 | 1.24 | 1.1 J | 2.68 J | 0.39 U | 50 U | HC-SS29; HC-SS31; HC-SS32 | 2.71 | 1.05 U | 17.8 U |
| Acenaphthene | µg/kg | 78 | 24 | 30.8 | 0.3 J | 6.5 JT | G027 | 0.831 | 0.555 J | 1 J | 0.23 U | 50 U | HC-SS29; HC-SS31; HC-SS32 | 2.52 | 0.488 J | 12.7 U |
| Acenaphthylene | µg/kg | 77 | 36 | 46.8 | 0.27 J | 7.85 JT | G027 | 1.79 | 1.5 J | 3.75 J | 0.24 U | 50 U | HC-SS29; HC-SS31; HC-SS32 | 2.85 | 1.2 U | 11.3 J |
| Anthracene | µg/kg | 78 | 25 | 32.1 | 0.43 J | 30.5 JT | G027 | 3.41 | 1.6 J | 11.4 J | 0.33 U | 50 U | HC-SS29; HC-SS31; HC-SS32 | 3.39 | 1.18 UJ | 25 U |
| Benzo(a)anthracene | µg/kg | 78 | 57 | 73.1 | 0.61 J | 118 JT | G027 | 9.48 | 5.5 | 28.8 | 0.24 U | 118 JT | G027 | 8.63 | 4.9 | 25.5 |
| Benzo(a)pyrene | µg/kg | 78 | 51 | 65.4 | 0.53 J | 124 JT | G027 | 11 | 6.9 T | 27.5 | 0.33 U | 124 JT | G027 | 9.06 | 5.55 | 25.3 |
| Benzo(b)fluoranthene | µg/kg | 78 | 55 | 70.5 | 0.45 J | 155 JT | G027 | 13.2 | 7.9 | 34.4 | 0.45 J | 155 JT | G027 | 11.1 | 6.8 | 26 |
| Benzo(b+k)fluoranthene | µg/kg | 18 | 9 | 50 | 3.2 T | 43 T | SED099-42 | 16.7 | 15.4 T | 34.6 | 3.2 T | 50 UT | HC-SS29; HC-SS31; HC-SS32 | 15.1 | 15.2 | 27.7 |
| Benzo(e)pyrene | µg/kg | 32 | 32 | 100 | 0.37 J | 90.5 JT | G027 | 9.36 | 5.45 | 28.7 | 0.37 J | 90.5 JT | G027 | 9.36 | 5.45 | 28.7 |
| Benzo(g,h,i)perylene | µg/kg | 77 | 52 | 67.5 | 0.86 J | 92.5 JT | G027 | 9.22 | 5.9 J | 24.3 | 0.45 U | 92.5 JT | G027 | 8.07 | 5.2 | 25 U |
| Benzo(k)fluoranthene | µg/kg | 78 | 50 | 64.1 | 0.19 J | 52 JT | G027 | 5.09 | 3 | 14.6 | 0.19 J | 52 JT | G027 | 5.11 | 2.6 J | 25 U |
| C1-Chrysene | µg/kg | 32 | 32 | 100 | 0.57 J | 80 JT | G027 | 14 | 12 | 27 | 0.57 J | 80 JT | G027 | 14 | 12 | 27 |
| C1-Dibenzothiophene | µg/kg | 32 | 22 | 68.8 | 0.61 J | 8.6 | UG02B | 1.85 | 1.2 J | 5.48 J | 0.21 U | 8.6 | UG02B | 1.31 | 0.97 J | 3.81 J |
| C1-Fluoranthene/pyrene | µg/kg | 32 | 32 | 100 | 1.2 J | 91.5 JT | G027 | 13.5 | 9.7 | 31.7 | 1.2 J | 91.5 JT | G027 | 13.5 | 9.7 | 31.7 |
| C1-Fluorene | µg/kg | 32 | 28 | 87.5 | 0.58 J | 7.2 JT | G027 | 1.7 | 1.6 J | 3.7 | 0.5 U | 7.2 JT | G027 | 1.5 | 1.3 J | 3.4 |
| C1-Phenanthrene/anthracene | µg/kg | 32 | 31 | 96.9 | 1.7 J | 55.5 JT | G027 | 6.91 | 5.8 | 11.5 | 0.75 U | 55.5 JT | G027 | 6.71 | 5.45 | 11.3 |
| C2-Chrysene | µg/kg | 32 | 31 | 96.9 | 1.6 J | 60.5 JT | G027 | 10.4 | 7.6 | 21 | 0.25 U | 60.5 JT | G027 | 10.1 | 7.55 | 20.6 |
| C2-Dibenzothiophene | µg/kg | 32 | 26 | 81.3 | 1.3 J | 11.8 T | G027 | 3.4 | 2.7 J | 7.2 | 0.21 U | 11.8 T | G027 | 2.79 | 2.55 | 7.08 |
| C2-Fluoranthene/pyrene | µg/kg | 32 | 32 | 100 | 1.7 J | 46 JT | G027 | 11 | 9.8 | 20 | 1.7 J | 46 JT | G027 | 11 | 9.8 | 20 |
| C2-Fluorene | µg/kg | 32 | 30 | 93.8 | 0.55 J | 8 T | G027 | 3 | 2.7 J | 6.2 | 0.5 U | 8 T | G027 | 2.8 | 2.4 J | 6.1 |
| C2-Naphthalene | µg/kg | 32 | 32 | 100 | 0.49 J | 8.05 T | G027 | 2.28 | 1.9 J | 5.36 | 0.49 J | 8.05 T | G027 | 2.28 | 1.9 J | 5.36 |
| C2-Phenanthrene/anthracene | µg/kg | 32 | 31 | 96.9 | 1.8 J | 47.5 JT | G027 | 11 | 11 | 20 | 0.75 U | 47.5 JT | G027 | 10.7 | 11 | 19.6 |
| C3-Chrysene | µg/kg | 32 | 30 | 93.8 | 2.1 | 53 T | G027 | 9.2 | 6.7 | 21 | 0.25 U | 53 T | G027 | 8.7 | 6.6 | 20 |
| C3-Dibenzothiophene | µg/kg | 32 | 26 | 81.3 | 1.4 J | 17 T | G027 | 3.7 | 3 | 6.5 | 0.21 U | 17 T | G027 | 3 | 2.5 J | 6.4 |
| C3-Fluoranthene/pyrene | µg/kg | 32 | 28 | 87.5 | 1.8 J | 33 T | G027 | 7.3 | 5.9 | 17 | 0.61 U | 33 T | G027 | 6.4 | 5.6 | 15 |
| C3-Fluorene | µg/kg | 32 | 27 | 84.4 | 1.4 J | 14.1 JT | G027 | 4.65 | 4.1 | 7.93 | 0.5 U | 14.1 JT | G027 | 3.96 | 3.85 | 7.71 |
| C3-Naphthalene | µg/kg | 32 | 31 | 96.9 | 0.55 J | 12 | UG02B | 2.2 | 1.5 J | 7.2 | 0.37 U | 12 | UG02B | 2.1 | 1.5 J | 6.9 |
| C3-Phenanthrene/anthracene | µg/kg | 32 | 32 | 100 | 1.6 J | 44 | UG03B | 11 | 7.7 | 28 | 1.6 J | 44 | UG03B | 11 | 7.7 | 28 |
| C4-Chrysene | µg/kg | 32 | 6 | 18.8 | 4.3 | 28 T | G027 | 9.9 | 6.9 | 23 | 0.25 U | 28 T | G027 | 2 | 0.13 U | 8.9 |
| C4-Naphthalene | µg/kg | 32 | 29 | 90.6 | 0.7 J | 18 | UG02B | 3.2 | 2.4 J | 9.5 J | 0.37 U | 18 | UG02B | 2.9 | 2.4 J | 8.2 J |
| C4-Phenanthrene/anthracene | µg/kg | 32 | 27 | 84.4 | 1.6 J | 21 T | G027 | 6.4 | 5.4 | 15 | 0.75 U | 21 T | G027 | 5.5 | 5.2 | 14 |
| Chrysene | µg/kg | 78 | 56 | 71.8 | 0.42 J | 135 JT | G027 | 12.9 | 7.85 | 48.3 | 0.42 J | 135 JT | G027 | 11 | 6.5 | 33.9 |
| Dibenzo(a,h)anthracene | µg/kg | 78 | 42 | 53.8 | 0.47 J | 19 JT | G027 | 1.71 | 0.995 J | 4 J | 0.28 U | 50 U | HC-SS29; HC-SS31; HC-SS32 | 3.2 | 1.15 UJ | 19.9 J |
| Dibenzothiophene | µg/kg | 32 | 16 | 50 | 0.25 J | 6.55 T | G027 | 0.806 | 0.38 J | 2.46 J | 0.21 U | 6.55 T | G027 | 0.472 | 0.245 J | 0.809 J |
| Fluoranthene | µg/kg | 78 | 55 | 70.5 | 1 J | 260 JT | G027 | 19.3 | 12 | 45.3 | 0.77 U | 260 JT | G027 | 15.4 | 9.3 J | 33.9 |
| Fluorene | µg/kg | 78 | 29 | 37.2 | 0.56 J | 8.55 JT | G027 | 1.23 | 0.98 JT | 1.5 J | 0.28 U | 50 U | HC-SS29; HC-SS31; HC-SS32 | 2.78 | 0.98 J | 12.7 U |
| Total HPAHs | µg/kg | 78 | 62 | 79.5 | 1.7 JT | 1320 T | G027 | 96 | 61.3 J | 265 J | 1 UT | 1320 T | G027 | 77.9 | 49.8 J | 188 J |
| Indeno(1,2,3-cd)pyrene | µg/kg | 78 | 51 | 65.4 | 0.25 J | 99 JT | G027 | 7.99 | 5.2 | 15 | 0.25 J | 99 JT | G027 | 7.04 | 4.65 | 25 U |
| Total LPAHs | µg/kg | 78 | 54 | 69.2 | 0.44 JT | 192 T | G027 | 15.4 | 10.8 J | 29.1 J | 0.44 JT | 192 T | G027 | 12.5 | 7.3 J | 26.4 J |
| Naphthalene | µg/kg | 78 | 28 | 35.9 | 1.5 J | 9.9 | UG03B | 5.06 | 4.7 | 8.1 | 0.55 U | 50 U | HC-SS29; HC-SS31; HC-SS32 | 4.37 | 2.98 | 12.2 |
| Perylene | µg/kg | 32 | 32 | 100 | 0.49 J | 59 | G787 | 16 | 14 | 42 | 0.49 J | 59 | G787 | 16 | 14 | 42 |
| Phenanthrene | µg/kg | 77 | 40 | 51.9 | 0.91 J | 128 JT | G027 | 11.2 | 6.2 | 21.6 | 0.59 U | 128 JT | G027 | 8.02 | 4.3 J | 25 U |
| Pyrene | µg/kg | 78 | 60 | 76.9 | 0.82 J | 265 JT | G027 | 18.8 | 11 | 36.2 | 0.77 U | 265 JT | G027 | 16.1 | 10 J | 30.8 |
| Total BaPEq | µg/kg | 78 | 62 | 79.5 | 0.17 JT | 181 JT | G027 | 13 | 8.5 J | 34.3 J | 0.17 JT | 181 JT | G027 | 11.9 | 8.01 J | 27.1 J |
| Total cPAHs | µg/kg | 78 | 62 | 79.5 | 0.49 JT | 700 JT | G027 | 53.1 | 34.2 J | 140 J | 0.49 JT | 700 JT | G027 | 43.8 | 25 J | 140 J |
| Total PAHs | µg/kg | 78 | 63 | 80.8 | 0.91 JT | 1510 T | G027 | 107.4 | 74.4 T | 270.1 J | 0.91 JT | 1510 T | G027 | 88.39 | 55.75 J | 195.8 J |

Table D1.3-4. Summary Statistics for All Chemicals in Surface Sediment, Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl) phthalate | µg/kg | 72 | 56 | 77.8 | 4.2 J | 2100 | U1C-3 | 94 | 40 | 210 | 3.2 UJ | 2100 | U1C-3 | 84 | 34 J | 200 |
| Butylbenzyl phthalate | µg/kg | 72 | 17 | 23.6 | 2.7 J | 33 J | UG11C | 10 | 8 J | 21 J | 2.2 U | 100 U | HC-SS29; HC-SS31; HC-SS32 | 8 | 2.8 J | 41 J |
| Dibutyl phthalate | µg/kg | 72 | 40 | 55.6 | 4.8 J | 360 | G786 | 22 | 13 | 24 | 4.1 U | 360 | G786 | 18 | 11 UJ | 50 U |
| Diethyl phthalate | µg/kg | 72 | 25 | 34.7 | 1.4 J | 7.3 J | UG11C | 3.1 | 2.9 J | 4.8 J | 1.3 U | 100 U | HC-SS29; HC-SS31; HC-SS32 | 7.1 | 3.2 J | 29 UJ |
| Dimethyl phthalate | µg/kg | 72 | 3 | 4.2 | 1.2 J | 4.7 J | UG03B | 2.9 | 2.8 J | 4.5 J | 1 U | 100 U | HC-SS29; HC-SS31; HC-SS32 | 5.7 | 1.5 U | 29 UJ |
| Di-n-octyl phthalate | µg/kg | 72 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.7 U | 100 U | HC-SS29; HC-SS31; HC-SS32 | 5.6 | 1 U | 29 UJ |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | µg/kg | 72 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.2 U | 21 U | HC08 | 2.8 | 1.4 U | 10 U |
| 1,2-Dichlorobenzene | µg/kg | 72 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 21 U | HC08 | 2.5 | 1.5 U | 7.5 U |
| 1,2-Diphenylhydrazine | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 21 U | 25 U | WR01 | 12 | 12 U | 12 UJ |
| 1,3-Dichlorobenzene | µg/kg | 72 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.4 U | 21 U | HC08 | 2.6 | 1.5 UJ | 7.5 U |
| 1,4-Dichlorobenzene | µg/kg | 72 | 2 | 2.8 | 0.23 J | 0.29 J | WR-PG-Ref03 | 0.26 | 0.26 J | 0.29 J | 0.19 U | 21 U | HC08 | 2.6 | 1.6 U | 7.5 U |
| 2,4-Dinitrotoluene | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 25 UJ | WR01 | 3.2 | 2.1 U | 12 U |
| 2,6-Dinitrotoluene | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 U | 25 U | WR01 | 3.4 | 2.1 U | 12 U |
| 2-Chloronaphthalene | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.6 U | 25 UJ | WR01 | 3.5 | 2.7 U | 12 U |
| 2-Nitroaniline | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.2 U | 120 UJ | WR01; WR02SD; WR03SD; WR05SD; WR06SD; WR07SD | 10 | 2.1 U | 60 U |
| 3,3'-Dichlorobenzidine | µg/kg | 61 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.7 U | 25 UJ | WR01 | 4.3 | 2.9 U | 12 U |
| 3-Nitroaniline | µg/kg | 62 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.5 UJ | 130 UJ | WR01 | 11 | 2.1 U | 60 U |
| 4-Bromophenyl phenyl ether | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.6 U | 25 UJ | WR01 | 2.8 | 1.1 U | 12 U |
| 4-Chloroaniline | µg/kg | 61 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 25 UJ | WR01 | 3.2 | 1.7 U | 12 U |
| 4-Chlorophenyl phenyl ether | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 25 UJ | WR01 | 2.9 | 1.5 U | 12 U |
| 4-Nitroaniline | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.8 U | 120 UJ | WR01; WR02SD; WR03SD; WR05SD; WR06SD; WR07SD | 11 | 2.5 U | 60 U |
| Aniline | µg/kg | 62 | 12 | 19.4 | 5.1 J | 230 | U3C-2 | 31 | 11 J | 120 | 1.5 U | 230 | U3C-2 | 8.7 | 1.3 U | 20 J |
| Azobenzene | µg/kg | 53 | 1 | 1.9 | 1.2 JT | 1.2 JT | UG03A2 | 1.2 | 1.2 JT | 1.2 JT | 1.1 U | 7.2 U | U6TOC-2; U6TOC-3 | 1.3 | 1.1 U | 2.8 U |
| Benzoic acid | µg/kg | 72 | 21 | 29.2 | 7.8 J | 180 J | UG12B | 110 | 120 J | 170 J | 7.8 J | 480 U | G027; UG11C | 89 | 88 UJ | 160 J |
| Benzyl alcohol | µg/kg | 72 | 29 | 40.3 | 2.5 J | 17 | UG02B | 9.1 | 7 J | 16 J | 2.1 U | 25 UJ | HC-SS29; HC-SS31; HC-SS32; WR01 | 7.6 | 6.4 J | 14 J |
| Bis(2-chloro-1-methylethyl) ether | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 21 U | 25 UJ | WR01 | 12 | 12 U | 12 UJ |
| Bis(2-chloroethoxy) methane | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 25 UJ | WR01 | 2.8 | 1.1 U | 12 U |
| Bis(2-chloroethyl) ether | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 25 UJ | WR01 | 3.2 | 1.9 U | 12 U |
| Bis(2-chloroisopropyl) ether | µg/kg | 53 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.8 U | 13 U | G027; UG11C | 1.5 | 1.3 U | 2.9 U |
| Carbazole | µg/kg | 63 | 11 | 17.5 | 1.4 JT | 11.3 JT | G027 | 2.73 | 1.7 J | 7.3 J | 1.3 U | 25 UJ | WR01 | 3 | 1.2 U | 12 UJ |
| Dibenzofuran | µg/kg | 72 | 19 | 26.4 | 0.59 J | 3.3 JT | G027 | 0.96 | 0.76 J | 1.7 J | 0.25 U | 50 U | HC-SS29; HC-SS31; HC-SS32 | 2.4 | 0.63 J | 17 U |
| Hexachlorobenzene | µg/kg | 72 | 26 | 36.1 | 0.075 J | 1.04 J | U2C-3 | 0.347 | 0.208 J | 0.975 J | 0.068 U | 24 U | WR03SD; WR05SD | 2.1 | 0.255 J | 10.7 U |
| Hexachlorobutadiene | µg/kg | 72 | 4 | 5.6 | 0.21 | 0.4 | UG12A | 0.3325 | 0.36 J | 0.394 J | 0.0363 U | 21 U | HC08 | 1.103 | 0.07 U | 10 U |
| Hexachlorocyclopentadiene | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 21 UJ | 150 U | G027; UG11C | 17 | 15 U | 30 U |
| Hexachloroethane | µg/kg | 72 | 3 | 4.2 | 0.56 J | 1.3 NJ | WR-PG-Ref03 | 0.8267 | 0.62 J | 1.232 J | 0.0536 U | 50 UJ | HC-SS29; HC-SS31; HC-SS32 | 1.941 | 0.08 U | 17.03 U |
| Isophorone | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 25 UJ | WR01 | 2.7 | 1.2 U | 12 U |
| Nitrobenzene | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.2 U | 25 UJ | WR01 | 3.2 | 1.6 U | 12 U |
| N-Nitrosodimethylamine | µg/kg | 63 | 1 | 1.6 | 6.6 JT | 6.6 JT | UG03A2 | 6.6 | 6.6 JT | 6.6 JT | 6.1 UJ | 31 U | G027; UG11C | 5.9 | 4.8 U | 12 U |
| N-Nitrosodiphenylamine | µg/kg | 72 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.6 U | 25 UJ | WR01 | 3.7 | 1.8 U | 12 U |
| N-Nitrosodipropylamine | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.4 U | 25 UJ | WR01 | 3.6 | 2.4 U | 12 U |

Table D1.3-4. Summary Statistics for All Chemicals in Surface Sediment, Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Phenols** | | | | | | | | | | | | | | | | |
| 2,3,4,5-Tetrachlorophenol | µg/kg | 63 | 1 | 1.6 | 7.5 J | 7.5 J | UG11C | 7.5 | 7.5 J | 7.5 J | 0.33 U | 25 UJ | WR01 | 2.9 | 0.6 U | 12 U |
| 2,3,4,6;2,3,5,6-Tetrachlorophenol coelution | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.53 U | 5.4 U | U6TOC-2; U6TOC-3 | 1.2 | 1.4 U | 2.7 U |
| 2,3,4,6-Tetrachlorophenol | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 21 U | 25 U | WR01 | 12 | 12 UJ | 12 UJ |
| 2,3,5,6-Tetrachlorophenol | µg/kg | 35 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.21 U | 7.1 U | G080 | 0.59 | 0.17 U | 3 U |
| 2,4,5-Trichlorophenol | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.43 U | 25 U | WR01 | 2.7 | 0.65 U | 12 UJ |
| 2,4,6-Trichlorophenol | µg/kg | 63 | 2 | 3.2 | 0.27 J | 2.1 J | U1C-1 | 1.2 | 1.2 J | 2 J | 0.14 U | 25 UJ | WR01 | 2.4 | 0.27 U | 12 UJ |
| 2,4-Dichlorophenol | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 25 UJ | WR01 | 2.7 | 1.4 U | 12 U |
| 2,4-Dimethylphenol | µg/kg | 60 | 0 | 0 | -- | -- | -- | -- | -- | -- | 5.5 UJ | 110 U | HC08 | 8.1 | 4.8 U | 15 UJ |
| 2,4-Dinitrophenol | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 17 U | 120 UJ | WR01; WR02SD; WR03SD; WR05SD; WR06SD | 26 | 27 U | 60 UJ |
| 2-Chlorophenol | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 U | 25 UJ | WR01 | 3.1 | 1.4 U | 12 U |
| 2-Methylphenol | µg/kg | 72 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 25 UJ | WR01 | 4 | 2.7 U | 12 U |
| 2-Nitrophenol | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 25 UJ | WR01 | 3.2 | 1.9 U | 12 U |
| 3- and 4-Methylphenol Coelution | µg/kg | 7 | 2 | 28.6 | 7.3 J | 11 J | HC08 | 9.2 | 9.2 J | 11 J | 7.3 J | 100 U | HC-SS29; HC-SS31; HC-SS32 | 32 | 50 U | 50 U |
| 4,6-Dinitro-2-methylphenol | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 130 UJ | WR01 | 10 | 1.4 U | 60 U |
| 4-Chloro-3-methylphenol | µg/kg | 63 | 2 | 3.2 | 2 J | 5.2 J | G080 | 3.6 | 3.6 J | 5 J | 1.4 U | 25 UJ | WR01 | 3.1 | 1.7 U | 12 UJ |
| 4-Methylphenol | µg/kg | 65 | 35 | 53.8 | 1.6 J | 44 J | UG11C | 9.5 | 6.4 J | 25 J | 1.5 U | 44 J | UG11C | 7.5 | 6 J | 16 J |
| 4-Nitrophenol | µg/kg | 63 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.5 UT | 120 UJ | WR01; WR02SD; WR03SD; WR05SD; WR06SD; WR07SD | 24 | 22 U | 60 U |
| Pentachlorophenol | µg/kg | 78 | 6 | 7.7 | 1.5 J | 12 | U1C-1 | 4.6 | 2.6 J | 11 J | 0.25 U | 250 U | HC-SS29; HC-SS31; HC-SS32 | 14 | 1.6 U | 110 U |
| Phenol | µg/kg | 72 | 13 | 18.1 | 2.4 J | 18 J | G080 | 6.2 | 4.6 J | 14 J | 2.2 U | 100 U | HC-SS29; HC-SS31; HC-SS32 | 9.9 | 7 U | 40 U |
| **Petroleum** | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 43 | 34 | 79.1 | 2.6 T | 69 J | UG02F | 36.1 | 35.5 J | 59.1 J | 2.6 T | 69 J | UG02F | 30.1 | 30.3 JT | 57.8 J |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 32 | 32 | 100 | 1.7 T | 49.5 JT | G027 | 22.1 | 20.4 J | 38.9 J | 1.7 T | 49.5 JT | G027 | 22.1 | 20.4 J | 38.9 J |
| Total Petroleum Hydrocarbons (Gasoline) | mg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.6 U | 37 U | HC04 | 8.8 | 6.8 U | 18 U |
| Total Petroleum Hydrocarbons (Heavy Oil) | mg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 25 U | 25 U | HC-SS29; HC-SS31; HC-SS32 | 13 | 13 U | 13 U |
| Jet fuel A | mg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | HC-SS29; HC-SS31; HC-SS32 | 5 | 5 U | 5 U |
| JP-4 jet fuel | mg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 UJ | 10 UJ | HC-SS29; HC-SS31; HC-SS32 | 5 | 5 UJ | 5 UJ |
| Kerosene | mg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | HC-SS29; HC-SS31; HC-SS32 | 5 | 5 U | 5 U |
| Lube Oil | mg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 25 U | 25 U | HC-SS29; HC-SS31; HC-SS32 | 13 | 13 U | 13 U |
| Mineral spirits | mg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | HC-SS29; HC-SS31; HC-SS32 | 5 | 5 U | 5 U |
| Naphtha distillate | mg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 UJ | 10 UJ | HC-SS29; HC-SS31; HC-SS32 | 5 | 5 UJ | 5 UJ |
| Non-petroleum hydrocarbons | mg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 50 U | 50 U | HC-SS29; HC-SS31; HC-SS32 | 30 | 30 U | 30 U |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 39 | 36 | 92.3 | 9.2 T | 420 J | UG02F | 226 | 219 J | 390 J | 9.2 T | 420 J | UG02F | 210 | 214 JT | 390 J |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 32 | 32 | 100 | 6.9 T | 315 JT | G027 | 96.8 | 86 J | 182 J | 6.9 T | 315 JT | G027 | 96.8 | 86 J | 182 J |
| Total Petroleum Hydrocarbons | mg/kg | 43 | 39 | 90.7 | 11.8 A | 489 JA | UG02F | 254 | 250 JA | 447 J | 11.8 A | 489 JA | UG02F | 232 | 240 | 445 J |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 32 | 32 | 100 | 8.6 A | 365 T | G027 | 119 | 108 J | 217 J | 8.6 A | 365 T | G027 | 119 | 108 J | 217 J |

Table D1.3-4. Summary Statistics for All Chemicals in Surface Sediment, Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Herbicides** | | | | | | | | | | | | | | | | |
| 2,4,5-T | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3 U | 4.1 U | WR-PG-Ref03 | 1.7 | 1.5 U | 2 U |
| 2,4-D | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.6 U | 4.9 U | WR-PG-Ref03 | 2 | 1.9 U | 2.4 U |
| 2,4-DB | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 21 U | 28 U | WR-PG-Ref03 | 12 | 11 U | 14 U |
| Dalapon | µg/kg | 3 | 1 | 33.3 | 24 J | 24 J | WR-PG-Ref01 | 24 | 24 J | 24 J | 11 U | 24 J | WR-PG-Ref01 | 12 | 7.5 U | 22 J |
| Dicamba | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.4 U | 6 U | WR-PG-Ref03 | 2.5 | 2.3 U | 2.9 U |
| Dichloroprop | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.9 U | 5.4 U | WR-PG-Ref03 | 2.2 | 2 U | 2.6 U |
| Dinoseb | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.9 U | 5.4 U | WR-PG-Ref03 | 2.2 | 2 U | 2.6 U |
| MCPA | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 380 U | 510 U | WR-PG-Ref03 | 210 | 190 U | 250 U |
| MCPP | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 590 U | 2500 U | WR-PG-Ref03 | 730 | 650 U | 1200 U |
| Silvex | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.8 U | 3.9 U | WR-PG-Ref03 | 1.6 | 1.5 U | 1.9 U |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.048 U | 0.066 U | WR-PG-Ref03 | 0.0272 | 0.0245 U | 0.0322 U |
| 1,1,1-Trichloroethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.092 U | 10 U | WR01 | 3.15 | 3.7 U | 4.94 U |
| 1,1,2,2-Tetrachloroethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.15 U | 10 U | WR01 | 3.2 | 3.7 U | 4.9 U |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.6 U | 10 U | WR01 | 4.1 | 4 U | 5 U |
| 1,1,2-Trichloroethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.092 U | 10 U | WR01 | 3.15 | 3.7 U | 4.94 U |
| 1,1-Dichloroethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.088 U | 10 U | WR01 | 3.15 | 3.7 U | 4.94 U |
| 1,1-Dichloroethene | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 9.8 U | BH04SD | 2.7 | 3.6 U | 4.5 U |
| 1,2,3-Trichlorobenzene | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.6 U | 10 U | WR01 | 4.1 | 4 U | 5 U |
| 1,2,3-Trichloropropane | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.17 U | 0.24 U | WR-PG-Ref03 | 0.098 | 0.09 U | 0.12 U |
| 1,2-Dibromo-3-chloropropane | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.6 U | 10 U | WR01 | 4.1 | 4 U | 5 U |
| 1,2-Dichloroethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.048 U | 10 U | WR01 | 3.15 | 3.7 U | 4.94 U |
| 1,2-Dichloropropane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.055 U | 10 U | WR01 | 3.15 | 3.7 U | 4.94 U |
| 1,4-Dichloro-trans-2-butene | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.79 U | 1.1 U | WR-PG-Ref03 | 0.45 | 0.41 U | 0.54 U |
| 2-Chloroethyl vinyl ether | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.24 UJ | 0.32 UJ | WR-PG-Ref03 | 0.13 | 0.12 UJ | 0.16 UJ |
| Acetone | µg/kg | 13 | 1 | 7.7 | 54 | 54 | BH04SD | 54 | 54 | 54 | 8.9 U | 54 | BH04SD | 11 | 8 U | 28 |
| Acrylonitrile | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.36 U | 0.49 U | WR-PG-Ref03 | 0.2 | 0.19 U | 0.24 U |
| Benzene | µg/kg | 17 | 3 | 17.6 | 0.079 J | 0.12 J | WR-PG-Ref03 | 0.0927 | 0.079 J | 0.116 J | 0.079 J | 10 U | WR01 | 3.01 | 3.6 U | 4.92 U |
| Bromochloromethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.093 U | 10 U | WR01 | 3.15 | 3.7 U | 4.94 U |
| Bromodichloromethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 10 U | WR01 | 3.2 | 3.7 U | 4.9 U |
| Bromoform | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.071 U | 10 U | WR01 | 3.15 | 3.7 U | 4.94 U |
| Bromomethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.58 UJ | 10 U | WR01 | 3.2 | 3.7 U | 4.9 U |
| BTEX | µg/kg | 17 | 3 | 17.6 | 0.079 JT | 2 JT | WR-PG-Ref03 | 0.719 | 0.079 JT | 1.81 J | 0.079 JT | 10 UT | WR01 | 3.12 | 3.6 UT | 4.92 U |
| Carbon disulfide | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.21 U | 10 U | WR01 | 3.2 | 3.7 U | 4.9 U |
| Carbon tetrachloride | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.16 U | 10 U | WR01 | 3.2 | 3.7 U | 4.9 U |
| Chlorobenzene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 10 U | WR01 | 3.2 | 3.7 U | 4.9 U |
| Chlorodibromomethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 10 U | WR01 | 3.2 | 3.7 U | 4.9 U |
| Chloroethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.44 U | 10 U | WR01 | 3.2 | 3.7 U | 4.9 U |
| Chloroform | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.087 U | 10 U | WR01 | 3.15 | 3.7 U | 4.94 U |
| Chloromethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.3 U | 10 U | WR01 | 3.2 | 3.7 U | 4.9 U |
| cis-1,2-Dichloroethene | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.6 U | 10 U | WR01 | 4.1 | 4 U | 5 U |
| cis-1,3-Dichloropropene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.048 U | 10 U | WR01 | 3.15 | 3.7 U | 4.94 U |
| Dichlorodifluoromethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.17 U | 10 U | WR01 | 3.2 | 3.7 U | 4.9 U |
| Ethylbenzene | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 10 U | WR01 | 3 | 3.6 U | 4.9 U |
| Ethylene dibromide | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.079 U | 10 U | WR01 | 3.15 | 3.7 U | 4.94 U |
| Hexahydrobenzene | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.6 U | 10 U | WR01 | 4.1 | 4 U | 5 U |
| Isopropylbenzene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.068 U | 10 U | WR01 | 3.15 | 3.7 U | 4.94 U |
| m,p-Xylene | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.21 U | 10 U | WR01 | 3 | 3.6 U | 4.9 U |
| Methyl acetate | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.6 U | 10 U | WR01 | 4.1 | 4 U | 5 U |
| Methyl iodide | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.1 U | 1.5 U | WR-PG-Ref03 | 0.62 | 0.55 U | 0.73 U |
| Methyl isobutyl ketone | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.38 U | 21 U | WR01 | 6.4 | 7.5 U | 10 U |
| Methyl n-butyl ketone | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.99 U | 21 U | WR01 | 6.4 | 7.5 U | 10 U |
| Methyl tert-butyl ether | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.061 U | 10 U | WR01 | 3.15 | 3.7 U | 4.94 U |
| Methylcyclohexane | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.6 U | 10 U | WR01 | 4.1 | 4 U | 5 U |
| Methylene bromide | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 0.18 U | WR-PG-Ref03 | 0.073 | 0.065 U | 0.088 U |
| Methylene chloride | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.6 U | 23 U | WR02SD | 6.2 | 6 U | 11 U |
| Methylethyl ketone | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.9 UJ | 21 U | WR01 | 7.8 | 7.8 U | 10 U |
| o-Xylene | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.12 U | 10 U | WR01 | 3 | 3.6 U | 4.9 U |

Table D1.3-4. Summary Statistics for All Chemicals in Surface Sediment, Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Styrene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.12 U | 10 U | WR01 | 3.2 | 3.7 U | 4.9 U |
| Tetrachloroethene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.15 U | 10 U | WR01 | 3.2 | 3.7 U | 4.9 U |
| Toluene | µg/kg | 17 | 1 | 5.9 | 1.9 | 1.9 | WR-PG-Ref03 | 1.9 | 1.9 | 1.9 | 0.24 U | 10 U | WR01 | 3.1 | 3.6 U | 4.9 U |
| trans-1,2-Dichloroethene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.3 U | 10 U | WR01 | 3.2 | 3.7 U | 4.9 U |
| trans-1,3-Dichloropropene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.068 U | 10 U | WR01 | 3.15 | 3.7 U | 4.94 U |
| Trichloroethene | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.096 U | 10 U | WR01 | 3 | 3.6 U | 4.92 U |
| Trichlorofluoromethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 10 U | WR01 | 3.2 | 3.7 U | 4.9 U |
| Vinyl chloride | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.14 U | 10 U | WR01 | 3.2 | 3.7 U | 4.9 U |
| Xylene | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.21 UT | 10 UT | WR01 | 3 | 3.6 UT | 4.9 U |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

-- data not available.
BaPEq - benzo(a)pyrene equivalent
BTEX - benzene, toluene, ethylbenzene, and total xylene
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - non-detect
PAH - polycyclic aromatic hydrocarbon
PBDE - polybrominated diphenyl ether
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TEQ - toxic equivalent concentration

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-5. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Grainsize** | | | | | | | | | | | | | | | | |
| >9 Phi clay | percent | 3 | 3 | 100 | 3.19 T | 4.18 | C016 | 3.69 | 3.7 | 4.13 | 3.19 T | 4.18 | C016 | 3.69 | 3.7 | 4.13 |
| 8-9 Phi clay | percent | 3 | 3 | 100 | 2.24 T | 3.21 | C016 | 2.73 | 2.73 | 3.16 | 2.24 T | 3.21 | C016 | 2.73 | 2.73 | 3.16 |
| Coarse sand | percent | 3 | 3 | 100 | 0.39 | 1.3 T | C032 | 0.97 | 1.22 | 1.29 | 0.39 | 1.3 T | C032 | 0.97 | 1.22 | 1.29 |
| Coarse silt | percent | 3 | 3 | 100 | 10.3 T | 23.7 | C016 | 15.1 | 11.4 | 22.5 | 10.3 T | 23.7 | C016 | 15.1 | 11.4 | 22.5 |
| Fine gravel | percent | 3 | 3 | 100 | 0.1 | 0.37 | C016 | 0.25 | 0.29 T | 0.36 | 0.1 | 0.37 | C016 | 0.25 | 0.29 T | 0.36 |
| Fine sand | percent | 3 | 3 | 100 | 25.2 | 51.6 | C017 | 40.5 | 44.8 T | 50.9 | 25.2 | 51.6 | C017 | 40.5 | 44.8 T | 50.9 |
| Fine silt | percent | 3 | 3 | 100 | 2.55 T | 4.96 | C016 | 3.69 | 3.55 | 4.82 | 2.55 T | 4.96 | C016 | 3.69 | 3.55 | 4.82 |
| Fines | percent | 3 | 3 | 100 | 22.2 T | 43.6 T | C016 | 30.6 | 25.9 T | 41.8 | 22.2 T | 43.6 T | C016 | 30.6 | 25.9 T | 41.8 |
| Medium gravel | percent | 3 | 3 | 100 | 0 T | 0 T | C016; C017; C032 | 0 | 0 | 0 | 0 T | 0 T | C016; C017; C032 | 0 | 0 | 0 |
| Medium sand | percent | 3 | 3 | 100 | 2.74 | 12.8 T | C032 | 8.44 | 9.78 | 12.5 | 2.74 | 12.8 T | C032 | 8.44 | 9.78 | 12.5 |
| Medium silt | percent | 3 | 3 | 100 | 1.11 T | 2.89 | C016 | 1.74 | 1.22 | 2.72 | 1.11 T | 2.89 | C016 | 1.74 | 1.22 | 2.72 |
| Very coarse sand | percent | 3 | 3 | 100 | 0.25 | 0.72 | C016 | 0.541 | 0.653 T | 0.713 | 0.25 | 0.72 | C016 | 0.541 | 0.653 T | 0.713 |
| Very fine sand | percent | 3 | 3 | 100 | 16 | 24.5 | C016 | 20.3 | 20.3 T | 24.1 | 16 | 24.5 | C016 | 20.3 | 20.3 T | 24.1 |
| Very fine silt | percent | 3 | 3 | 100 | 2.8 T | 4.68 | C016 | 3.6 | 3.31 | 4.54 | 2.8 T | 4.68 | C016 | 3.6 | 3.31 | 4.54 |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Total organic carbon | percent | 3 | 3 | 100 | 1.15 | 1.8 T | C016 | 1.47 | 1.47 | 1.77 | 1.15 | 1.8 T | C016 | 1.47 | 1.47 | 1.77 |
| Total solids | percent | 3 | 3 | 100 | 59.8 | 65.7 | C017 | 62 | 60.4 T | 65.2 | 59.8 | 65.7 | C017 | 62 | 60.4 T | 65.2 |
| **Metals** | | | | | | | | | | | | | | | | |
| Aluminum | mg/kg | 3 | 3 | 100 | 18900 | 25100 | C032 | 22700 | 24200 | 25000 | 18900 | 25100 | C032 | 22700 | 24200 | 25000 |
| Antimony | mg/kg | 3 | 3 | 100 | 0.138 J | 0.365 J | C017 | 0.228 | 0.18 J | 0.347 J | 0.138 J | 0.365 J | C017 | 0.228 | 0.18 J | 0.347 J |
| Arsenic | mg/kg | 3 | 3 | 100 | 2.37 | 2.45 | C032 | 2.41 | 2.4 | 2.45 | 2.37 | 2.45 | C032 | 2.41 | 2.4 | 2.45 |
| Cadmium | mg/kg | 3 | 3 | 100 | 0.132 | 0.217 | C016 | 0.179 | 0.187 | 0.214 | 0.132 | 0.217 | C016 | 0.179 | 0.187 | 0.214 |
| Chromium | mg/kg | 3 | 3 | 100 | 19.7 | 23.4 | C032 | 21.2 | 20.5 | 23.1 | 19.7 | 23.4 | C032 | 21.2 | 20.5 | 23.1 |
| Copper | mg/kg | 3 | 3 | 100 | 26 | 33 | C016 | 28.6 | 26.8 | 32.4 | 26 | 33 | C016 | 28.6 | 26.8 | 32.4 |
| Lead | mg/kg | 3 | 3 | 100 | 9.34 J | 19.4 J | C016 | 14.4 | 14.6 J | 18.9 J | 9.34 J | 19.4 J | C016 | 14.4 | 14.6 J | 18.9 J |
| Mercury | mg/kg | 3 | 3 | 100 | 0.031 | 0.172 T | C016 | 0.0943 | 0.08 | 0.163 | 0.031 | 0.172 T | C016 | 0.0943 | 0.08 | 0.163 |
| Nickel | mg/kg | 3 | 3 | 100 | 19 | 21.1 | C017 | 20.2 | 20.6 | 21.1 | 19 | 21.1 | C017 | 20.2 | 20.6 | 21.1 |
| Selenium | mg/kg | 3 | 3 | 100 | 0.08 | 0.11 | C016 | 0.09 | 0.08 | 0.11 | 0.08 | 0.11 | C016 | 0.09 | 0.08 | 0.11 |
| Silver | mg/kg | 3 | 3 | 100 | 0.109 | 0.174 | C017 | 0.145 | 0.151 | 0.172 | 0.109 | 0.174 | C017 | 0.145 | 0.151 | 0.172 |
| Zinc | mg/kg | 3 | 3 | 100 | 65.8 | 119 | C017 | 87.6 | 78.1 | 115 | 65.8 | 119 | C017 | 87.6 | 78.1 | 115 |
| **Butyltins** | | | | | | | | | | | | | | | | |
| Butyltin ion | µg/kg | 3 | 1 | 33.3 | 0.96 J | 0.96 J | C032 | 0.96 | 0.96 J | 0.96 J | 0.046 U | 0.96 J | C032 | 0.336 | 0.025 U | 0.867 J |
| Dibutyltin ion | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.043 U | 0.047 U | C016; C032 | 0.0228 | 0.0235 U | 0.0235 U |
| Tetrabutyltin | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 0.12 U | C016; C032 | 0.058 | 0.06 U | 0.06 U |
| Tributyltin ion | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.085 U | 0.094 U | C032 | 0.0453 | 0.0465 U | 0.047 U |
| **PCB Aroclors** | | | | | | | | | | | | | | | | |
| Aroclor 1016 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1.4 U | C032 | 0.57 | 0.5 U | 0.68 U |
| Aroclor 1221 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | C016; C017; C032 | 0.5 | 0.5 U | 0.5 U |
| Aroclor 1232 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 2.8 U | C032 | 0.8 | 0.5 U | 1.3 U |
| Aroclor 1242 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1.5 U | C032 | 0.58 | 0.5 U | 0.73 U |
| Aroclor 1248 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 11 U | C017 | 2.3 | 0.85 U | 5 U |
| Aroclor 1254 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1.8 U | C032 | 0.63 | 0.5 U | 0.86 U |
| Aroclor 1260 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 9.9 U | C017 | 2.8 | 2.8 U | 4.7 U |
| Aroclor 1262 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | C016; C017; C032 | 0.5 | 0.5 U | 0.5 U |
| Aroclor 1268 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | C016; C017; C032 | 0.5 | 0.5 U | 0.5 U |
| Aroclors | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.8 UT | 11 UT | C017 | 3.2 | 2.8 UT | 5.2 U |
| **PCBs[c]** | | | | | | | | | | | | | | | | |
| Total PCBs | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.8 UT | 11 UT | C017 | 3.2 | 2.8 UT | 5.2 U |
| **PCDD/Fs Homologs** | | | | | | | | | | | | | | | | |
| Heptachlorodibenzofuran homologs | pg/g | 3 | 3 | 100 | 14.9 | 50.6 | C016 | 35.4 | 40.7 | 49.6 | 14.9 | 50.6 | C016 | 35.4 | 40.7 | 49.6 |
| Heptachlorodibenzo-p-dioxin homologs | pg/g | 3 | 3 | 100 | 51.2 | 125 | C016 | 93.1 | 103 | 123 | 51.2 | 125 | C016 | 93.1 | 103 | 123 |
| Hexachlorodibenzofuran homologs | pg/g | 3 | 3 | 100 | 6.52 J | 34.5 | C016 | 20.5 | 20.4 | 33.1 | 6.52 J | 34.5 | C016 | 20.5 | 20.4 | 33.1 |
| Hexachlorodibenzo-p-dioxin homologs | pg/g | 3 | 3 | 100 | 5.94 J | 20.4 | C016 | 14.7 | 17.9 | 20.2 | 5.94 J | 20.4 | C016 | 14.7 | 17.9 | 20.2 |
| Octachlorodibenzofuran | pg/g | 3 | 3 | 100 | 14.8 | 43.6 | C017 | 32.8 | 40.1 | 43.3 | 14.8 | 43.6 | C017 | 32.8 | 40.1 | 43.3 |
| Octachlorodibenzo-p-dioxin | pg/g | 3 | 3 | 100 | 261 | 779 | C016 | 601 | 763 | 777 | 261 | 779 | C016 | 601 | 763 | 777 |
| Pentachlorodibenzofuran homologs | pg/g | 3 | 3 | 100 | 2.05 J | 23.4 | C016 | 11.1 | 7.95 | 21.9 | 2.05 J | 23.4 | C016 | 11.1 | 7.95 | 21.9 |
| Pentachlorodibenzo-p-dioxin homologs | pg/g | 3 | 3 | 100 | 0.563 J | 5.13 J | C016 | 2.37 | 1.41 J | 4.76 J | 0.563 J | 5.13 J | C016 | 2.37 | 1.41 J | 4.76 J |
| Tetrachlorodibenzofuran homologs | pg/g | 3 | 3 | 100 | 0.87 J | 9.63 | C016 | 4.37 | 2.62 | 8.93 | 0.87 J | 9.63 | C016 | 4.37 | 2.62 | 8.93 |
| Tetrachlorodibenzo-p-dioxin homologs | pg/g | 3 | 2 | 66.7 | 0.936 J | 5.57 | C016 | 3.25 | 3.25 J | 5.34 J | 0.142 U | 5.57 | C016 | 2.19 | 0.936 J | 5.11 J |
| Total PCDD/F | pg/g | 3 | 3 | 100 | 359 T | 1090 T | C016 | 816 | 1000 T | 1080 | 359 T | 1090 T | C016 | 816 | 1000 T | 1080 |

Table D1.3-5. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Units | # Analyzed | # Detected | % Detected | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th[b] | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th (half DL)[b] |
| **PCDD/Fs** | | | | | | | | | | | | | | | | |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran | pg/g | 3 | 3 | 100 | 3.87 J | 15.7 | C016 | 9.81 | 9.86 | 15.1 | 3.87 J | 15.7 | C016 | 9.81 | 9.86 | 15.1 |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin | pg/g | 3 | 3 | 100 | 27.4 | 54.8 | C016 | 41.7 | 42.8 | 53.6 | 27.4 | 54.8 | C016 | 41.7 | 42.8 | 53.6 |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran | pg/g | 3 | 3 | 100 | 0.333 J | 1.1 J | C016 | 0.738 | 0.782 J | 1.07 J | 0.333 J | 1.1 J | C016 | 0.738 | 0.782 J | 1.07 J |
| 1,2,3,4,7,8-Hexachlorodibenzofuran | pg/g | 3 | 3 | 100 | 0.305 J | 1.62 J | C016 | 0.869 | 0.683 J | 1.53 J | 0.305 J | 1.62 J | C016 | 0.869 | 0.683 J | 1.53 J |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 3 | 3 | 100 | 0.191 J | 0.527 J | C016 | 0.414 | 0.524 J | 0.527 J | 0.191 J | 0.527 J | C016 | 0.414 | 0.524 J | 0.527 J |
| 1,2,3,6,7,8-Hexachlorodibenzofuran | pg/g | 3 | 3 | 100 | 0.219 J | 1.42 J | C016 | 0.835 | 0.865 J | 1.36 J | 0.219 J | 1.42 J | C016 | 0.835 | 0.865 J | 1.36 J |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 3 | 3 | 100 | 1.01 J | 2.98 J | C016 | 2.01 | 2.03 J | 2.89 J | 1.01 J | 2.98 J | C016 | 2.01 | 2.03 J | 2.89 J |
| 1,2,3,7,8,9-Hexachlorodibenzofuran | pg/g | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.0593 U | 0.203 U | C016 | 0.06505 | 0.064 U | 0.09775 U |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | pg/g | 3 | 3 | 100 | 0.545 J | 1.49 J | C016 | 1.03 | 1.05 J | 1.45 J | 0.545 J | 1.49 J | C016 | 1.03 | 1.05 J | 1.45 J |
| 1,2,3,7,8-Pentachlorodibenzofuran | pg/g | 3 | 1 | 33.3 | 0.286 J | 0.286 J | C016 | 0.286 | 0.286 J | 0.286 J | 0.0356 U | 0.286 J | C016 | 0.1118 | 0.03155 U | 0.2606 J |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | pg/g | 3 | 1 | 33.3 | 0.532 J | 0.532 J | C016 | 0.532 | 0.532 J | 0.532 J | 0.0465 U | 0.532 J | C016 | 0.2046 | 0.0585 U | 0.4847 J |
| 2,3,4,6,7,8-Hexachlorodibenzofuran | pg/g | 3 | 3 | 100 | 0.301 J | 1.39 J | C016 | 0.811 | 0.742 J | 1.33 J | 0.301 J | 1.39 J | C016 | 0.811 | 0.742 J | 1.33 J |
| 2,3,4,7,8-Pentachlorodibenzofuran | pg/g | 3 | 1 | 33.3 | 0.485 J | 0.485 J | C016 | 0.485 | 0.485 J | 0.485 J | 0.0356 U | 0.485 J | C016 | 0.1779 | 0.031 U | 0.4396 J |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/g | 3 | 1 | 33.3 | 0.435 J | 0.435 J | C016 | 0.435 | 0.435 J | 0.435 J | 0.234 U | 0.435 J | C016 | 0.223 | 0.118 U | 0.403 J |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | pg/g | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.0445 U | 0.191 U | C016 | 0.06292 | 0.071 U | 0.09305 U |
| TCDD TEQ (ND = 0) | pg/g | 3 | 3 | 100 | 0.656 T | 2.63 T | C016 | 1.55 | 1.37 T | 2.5 | 0.656 T | 2.63 T | C016 | 1.55 | 1.37 T | 2.5 |
| Total TCDD TEQ (ND = 0) | pg/g | 3 | 3 | 100 | 0.656 T | 2.63 T | C016 | 1.55 | 1.37 T | 2.5 | 0.656 T | 2.63 T | C016 | 1.55 | 1.37 T | 2.5 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| 2,4'-DDD | µg/kg | 3 | 3 | 100 | 0.12 J | 2 | C016 | 1.2 | 1.6 J | 2 J | 0.12 J | 2 | C016 | 1.2 | 1.6 J | 2 J |
| 2,4'-DDE | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.044 U | 0.2 U | C016; C017 | 0.074 | 0.1 U | 0.1 U |
| 2,4'-DDT | µg/kg | 3 | 2 | 66.7 | 0.73 J | 0.95 | C017 | 0.84 | 0.84 J | 0.94 J | 0.2 U | 0.95 | C017 | 0.59 | 0.73 J | 0.93 J |
| 4,4'-DDD | µg/kg | 3 | 3 | 100 | 0.29 | 3.7 | C016 | 1.8 | 1.3 | 3.5 | 0.29 | 3.7 | C016 | 1.8 | 1.3 | 3.5 |
| 4,4'-DDE | µg/kg | 3 | 3 | 100 | 0.58 | 2.4 J | C016 | 1.7 | 2 J | 2.4 J | 0.58 | 2.4 J | C016 | 1.7 | 2 J | 2.4 J |
| 4,4'-DDT | µg/kg | 3 | 2 | 66.7 | 0.9 | 0.91 | C016 | 0.91 | 0.91 | 0.91 | 0.13 U | 0.91 | C016 | 0.63 | 0.9 | 0.91 |
| Aldrin | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.055 U | 0.2 U | C016 | 0.0517 | 0.0275 U | 0.0928 U |
| alpha-Endosulfan | µg/kg | 3 | 1 | 33.3 | 0.15 J | 0.15 J | C032 | 0.15 | 0.15 J | 0.15 J | 0.025 U | 0.2 U | C016 | 0.0875 | 0.1 U | 0.145 J |
| alpha-Hexachlorocyclohexane | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.047 U | 0.047 U | C016; C017; C032 | 0.0235 | 0.0235 U | 0.0235 U |
| beta-Endosulfan | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.051 U | 0.2 U | C017 | 0.0503 | 0.0255 U | 0.0926 U |
| beta-Hexachlorocyclohexane | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.054 U | 0.2 U | C032 | 0.0513 | 0.027 U | 0.0927 U |
| cis-Chlordane | µg/kg | 3 | 3 | 100 | 0.11 J | 0.98 J | C016 | 0.45 | 0.25 J | 0.91 J | 0.11 J | 0.98 J | C016 | 0.45 | 0.25 J | 0.91 J |
| cis-Nonachlor | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.053 U | 0.71 U | C017 | 0.217 | 0.27 U | 0.347 U |
| delta-Hexachlorocyclohexane | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.037 U | 0.037 U | C016; C017; C032 | 0.0185 | 0.0185 U | 0.0185 U |
| Dieldrin | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.036 U | 0.036 U | C016; C017; C032 | 0.018 | 0.018 U | 0.018 U |
| Endosulfan sulfate | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.053 U | 0.2 U | C016; C032 | 0.0755 | 0.1 U | 0.1 U |
| Endrin | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.046 U | 0.2 U | C017 | 0.0487 | 0.023 U | 0.0923 U |
| Endrin aldehyde | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.047 U | 0.047 U | C016; C017; C032 | 0.0235 | 0.0235 U | 0.0235 U |
| Endrin ketone | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.042 U | 0.23 U | C017 | 0.0787 | 0.1 U | 0.114 U |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.043 U | 0.2 U | C016; C032 | 0.0738 | 0.1 U | 0.1 U |
| Heptachlor | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.07 U | 0.07 U | C016; C017; C032 | 0.035 | 0.035 U | 0.035 U |
| Heptachlor epoxide | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.057 U | 0.24 U | C017 | 0.0828 | 0.1 U | 0.118 U |
| Methoxychlor | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.054 U | 0.4 U | C032 | 0.0973 | 0.065 U | 0.187 U |
| Mirex | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.049 U | 0.049 U | C016; C017; C032 | 0.0245 | 0.0245 U | 0.0245 U |
| Oxychlordane | µg/kg | 3 | 1 | 33.3 | 0.29 | 0.29 | C016 | 0.29 | 0.29 | 0.29 | 0.054 U | 0.29 | C016 | 0.115 | 0.027 U | 0.264 |
| Total chlordanes | µg/kg | 3 | 3 | 100 | 0.187 T | 2.93 T | C016 | 1.34 | 0.89 T | 2.73 | 0.187 T | 2.93 T | C016 | 1.34 | 0.89 T | 2.73 |
| Total endosulfan | µg/kg | 3 | 1 | 33.3 | 0.15 T | 0.15 T | C032 | 0.15 | 0.15 T | 0.15 T | 0.15 T | 0.2 UT | C016; C017 | 0.12 | 0.1 UT | 0.15 |
| Total DDD | µg/kg | 3 | 3 | 100 | 0.41 T | 5.7 T | C016 | 3 | 2.9 T | 5.4 | 0.41 T | 5.7 T | C016 | 3 | 2.9 T | 5.4 |
| DDx | µg/kg | 3 | 3 | 100 | 0.99 T | 9.74 T | C016 | 5.83 | 6.75 T | 9.44 | 0.99 T | 9.74 T | C016 | 5.83 | 6.75 T | 9.44 |
| Total DDE | µg/kg | 3 | 3 | 100 | 0.58 T | 2.4 T | C016 | 1.7 | 2 T | 2.4 | 0.58 T | 2.4 T | C016 | 1.7 | 2 T | 2.4 |
| Total DDT | µg/kg | 3 | 2 | 66.7 | 1.64 T | 1.85 T | C017 | 1.75 | 1.75 | 1.84 | 0.2 UT | 1.85 T | C017 | 1.2 | 1.64 T | 1.83 |
| Toxaphene | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.1 U | 14 U | C016; C017 | 5.7 | 7 U | 7 U |
| trans-Chlordane | µg/kg | 3 | 3 | 100 | 0.077 J | 0.94 | C016 | 0.552 | 0.64 | 0.91 | 0.077 J | 0.94 | C016 | 0.552 | 0.64 | 0.91 |
| trans-Nonachlor | µg/kg | 3 | 1 | 33.3 | 0.72 | 0.72 | C016 | 0.72 | 0.72 | 0.72 | 0.036 U | 0.72 | C016 | 0.253 | 0.022 U | 0.65 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| 1-Methylnaphthalene | µg/kg | 3 | 3 | 100 | 0.79 J | 4.4 | C016 | 3 | 3.8 | 4.3 | 0.79 J | 4.4 | C016 | 3 | 3.8 | 4.3 |
| 2-Methylnaphthalene | µg/kg | 3 | 3 | 100 | 1.3 J | 6.1 | C016 | 4.3 | 5.4 | 6 | 1.3 J | 6.1 | C016 | 4.3 | 5.4 | 6 |
| Acenaphthene | µg/kg | 3 | 3 | 100 | 0.71 J | 4.1 | C016 | 2.6 | 2.9 | 4 | 0.71 J | 4.1 | C016 | 2.6 | 2.9 | 4 |
| Acenaphthylene | µg/kg | 3 | 3 | 100 | 0.91 J | 8.4 | C016 | 3.7 | 1.8 J | 7.7 J | 0.91 J | 8.4 | C016 | 3.7 | 1.8 J | 7.7 J |
| Anthracene | µg/kg | 3 | 3 | 100 | 3 | 13 | C016 | 7.1 | 5.4 | 12 | 3 | 13 | C016 | 7.1 | 5.4 | 12 |
| Benzo(a)anthracene | µg/kg | 3 | 3 | 100 | 25 | 28 | C016 | 26 | 26 | 28 | 25 | 28 | C016 | 26 | 26 | 28 |
| Benzo(a)pyrene | µg/kg | 3 | 3 | 100 | 20 | 34 | C016 | 29 | 32 | 34 | 20 | 34 | C016 | 29 | 32 | 34 |
| Benzo(b)fluoranthene | µg/kg | 3 | 3 | 100 | 30 | 46 | C017 | 40 | 44 | 46 | 30 | 46 | C017 | 40 | 44 | 46 |

Table D1.3-5. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Benzo(e)pyrene | µg/kg | 3 | 3 | 100 | 17 | 29 | C016 | 25 | 28 | 29 | 17 | 29 | C016 | 25 | 28 | 29 |
| Benzo(g,h,i)perylene | µg/kg | 3 | 3 | 100 | 13 | 35 | C016 | 26 | 31 | 35 | 13 | 35 | C016 | 26 | 31 | 35 |
| Benzo(k)fluoranthene | µg/kg | 3 | 3 | 100 | 11 | 16 | C016; C017 | 14 | 16 | 16 | 11 | 16 | C016; C017 | 14 | 16 | 16 |
| C1-Chrysene | µg/kg | 3 | 3 | 100 | 11 | 22 | C017 | 17 | 18 | 22 | 11 | 22 | C017 | 17 | 18 | 22 |
| C1-Dibenzothiophene | µg/kg | 3 | 3 | 100 | 1.4 J | 12 | C016 | 7.3 | 8.4 | 12 | 1.4 J | 12 | C016 | 7.3 | 8.4 | 12 |
| C1-Fluoranthene/pyrene | µg/kg | 3 | 3 | 100 | 25 | 50 | C016 | 34 | 26 | 48 | 25 | 50 | C016 | 34 | 26 | 48 |
| C1-Fluorene | µg/kg | 3 | 3 | 100 | 1.1 J | 4.8 | C016 | 3.2 | 3.6 | 4.7 | 1.1 J | 4.8 | C016 | 3.2 | 3.6 | 4.7 |
| C1-Phenanthrene/anthracene | µg/kg | 3 | 3 | 100 | 9.1 | 33 | C016 | 19 | 15 | 31 | 9.1 | 33 | C016 | 19 | 15 | 31 |
| C2-Chrysene | µg/kg | 3 | 3 | 100 | 15 | 25 | C016 | 18 | 15 | 24 | 15 | 25 | C016 | 18 | 15 | 24 |
| C2-Dibenzothiophene | µg/kg | 3 | 3 | 100 | 3.1 | 13 | C016 | 7.2 | 5.6 | 12 | 3.1 | 13 | C016 | 7.2 | 5.6 | 12 |
| C2-Fluoranthene/pyrene | µg/kg | 3 | 3 | 100 | 16 | 28 | C016 | 20 | 17 | 27 | 16 | 28 | C016 | 20 | 17 | 27 |
| C2-Fluorene | µg/kg | 3 | 3 | 100 | 3.4 | 15 | C016 | 8.5 | 7 | 14 | 3.4 | 15 | C016 | 8.5 | 7 | 14 |
| C2-Naphthalene | µg/kg | 3 | 3 | 100 | 1.8 J | 24 | C017 | 14 | 16 | 23 | 1.8 J | 24 | C017 | 14 | 16 | 23 |
| C2-Phenanthrene/anthracene | µg/kg | 3 | 3 | 100 | 9.6 | 42 | C016 | 25 | 24 | 40 | 9.6 | 42 | C016 | 25 | 24 | 40 |
| C3-Chrysene | µg/kg | 3 | 3 | 100 | 13 | 29 | C016 | 19 | 14 | 28 | 13 | 29 | C016 | 19 | 14 | 28 |
| C3-Dibenzothiophene | µg/kg | 3 | 3 | 100 | 3.5 | 14 | C016 | 7.3 | 4.3 | 13 | 3.5 | 14 | C016 | 7.3 | 4.3 | 13 |
| C3-Fluoranthene/pyrene | µg/kg | 3 | 3 | 100 | 10 | 22 | C016 | 15 | 13 | 21 | 10 | 22 | C016 | 15 | 13 | 21 |
| C3-Fluorene | µg/kg | 3 | 3 | 100 | 4.7 | 21 | C016 | 12 | 11 | 20 | 4.7 | 21 | C016 | 12 | 11 | 20 |
| C3-Naphthalene | µg/kg | 3 | 3 | 100 | 1.9 J | 21 | C017 | 13 | 17 | 21 | 1.9 J | 21 | C017 | 13 | 17 | 21 |
| C3-Phenanthrene/anthracene | µg/kg | 3 | 3 | 100 | 10 | 43 | C016 | 24 | 20 | 41 | 10 | 43 | C016 | 24 | 20 | 41 |
| C4-Chrysene | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.25 U | 0.25 U | C016; C017; C032 | 0.13 | 0.13 U | 0.13 U |
| C4-Naphthalene | µg/kg | 3 | 3 | 100 | 3.7 | 26 | C016 | 17 | 20 | 25 | 3.7 | 26 | C016 | 17 | 20 | 25 |
| C4-Phenanthrene/anthracene | µg/kg | 3 | 3 | 100 | 5.7 | 20 | C016 | 12 | 9.7 | 19 | 5.7 | 20 | C016 | 12 | 9.7 | 19 |
| Chrysene | µg/kg | 3 | 3 | 100 | 29 | 37 | C016 | 34 | 36 | 37 | 29 | 37 | C016 | 34 | 36 | 37 |
| Dibenzo(a,h)anthracene | µg/kg | 3 | 3 | 100 | 4 | 7.9 | C017 | 6.3 | 7 | 7.8 | 4 | 7.9 | C017 | 6.3 | 7 | 7.8 |
| Dibenzothiophene | µg/kg | 3 | 3 | 100 | 0.5 J | 3.2 | C016 | 1.6 | 1.2 J | 3 J | 0.5 J | 3.2 | C016 | 1.6 | 1.2 J | 3 J |
| Fluoranthene | µg/kg | 3 | 3 | 100 | 42 | 79 | C016 | 54 | 42 | 75 | 42 | 79 | C016 | 54 | 42 | 75 |
| Fluorene | µg/kg | 3 | 3 | 100 | 1.1 J | 6.4 | C016 | 3.7 | 3.7 | 6.1 | 1.1 J | 6.4 | C016 | 3.7 | 3.7 | 6.1 |
| Total HPAHs | µg/kg | 3 | 3 | 100 | 230 T | 404 T | C016 | 317 | 317 T | 395 | 230 T | 404 T | C016 | 317 | 317 T | 395 |
| Indeno(1,2,3-cd)pyrene | µg/kg | 3 | 3 | 100 | 14 | 33 | C016 | 26 | 32 | 33 | 14 | 33 | C016 | 26 | 32 | 33 |
| Total LPAHs | µg/kg | 3 | 3 | 100 | 23.2 T | 129 T | C016 | 67.1 | 49.1 T | 121 | 23.2 T | 129 T | C016 | 67.1 | 49.1 T | 121 |
| Naphthalene | µg/kg | 3 | 3 | 100 | 4.2 | 36 | C016 | 16 | 8.9 | 33 | 4.2 | 36 | C016 | 16 | 8.9 | 33 |
| Perylene | µg/kg | 3 | 3 | 100 | 18 | 51 | C016 | 38 | 46 | 51 | 18 | 51 | C016 | 38 | 46 | 51 |
| Phenanthrene | µg/kg | 3 | 3 | 100 | 12 | 55 | C016 | 29 | 21 | 52 | 12 | 55 | C016 | 29 | 21 | 52 |
| Pyrene | µg/kg | 3 | 3 | 100 | 41 | 91 | C016 | 60 | 49 | 87 | 41 | 91 | C016 | 60 | 49 | 87 |
| Total BaPEq | µg/kg | 3 | 3 | 100 | 31.1 T | 51.7 T | C016 | 44.4 | 50.4 T | 51.6 | 31.1 T | 51.7 T | C016 | 44.4 | 50.4 T | 51.6 |
| Total cPAHs | µg/kg | 3 | 3 | 100 | 130 T | 200 T | C016 | 170 | 190 T | 200 | 130 T | 200 T | C016 | 170 | 190 T | 200 |
| Total PAHs | µg/kg | 3 | 3 | 100 | 253 T | 533 T | C016 | 384 | 366 T | 516 | 253 T | 533 T | C016 | 384 | 366 T | 516 |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl) phthalate | µg/kg | 3 | 3 | 100 | 20 J | 3800 | C032 | 1300 | 110 | 3400 | 20 J | 3800 | C032 | 1300 | 110 | 3400 |
| Butylbenzyl phthalate | µg/kg | 3 | 1 | 33.3 | 16 | 16 | C016 | 16 | 16 | 16 | 3.2 U | 16 | C016 | 6.4 | 1.6 U | 15 |
| Dibutyl phthalate | µg/kg | 3 | 3 | 100 | 9.9 | 17 | C017 | 13 | 12 | 17 | 9.9 | 17 | C017 | 13 | 12 | 17 |
| Diethyl phthalate | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.6 U | 5.3 U | C017 | 2.2 | 2 U | 2.6 U |
| Dimethyl phthalate | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | C016; C017; C032 | 0.5 | 0.5 U | 0.5 U |
| Di-n-octyl phthalate | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.7 U | 1.7 U | C016; C017; C032 | 0.85 | 0.85 U | 0.85 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.6 U | 2.6 U | C016; C017; C032 | 1.3 | 1.3 U | 1.3 U |
| 1,2-Dichlorobenzene | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.9 U | 2.9 U | C016; C017; C032 | 1.5 | 1.5 U | 1.5 U |
| 1,3-Dichlorobenzene | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3 U | 3 U | C016; C017; C032 | 2 | 2 U | 2 U |
| 1,4-Dichlorobenzene | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.9 U | 2.9 U | C016; C017; C032 | 1.5 | 1.5 U | 1.5 U |
| 2,4-Dinitrotoluene | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 1.5 U | C016; C017; C032 | 0.75 | 0.75 U | 0.75 U |
| 2,6-Dinitrotoluene | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 U | 2 U | C016; C017; C032 | 1 | 1 U | 1 U |
| 2-Chloronaphthalene | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.6 U | 1.6 U | C016; C017; C032 | 0.8 | 0.8 U | 0.8 U |
| 2-Nitroaniline | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.2 U | 3.2 U | C016; C017; C032 | 1.6 | 1.6 U | 1.6 U |
| 3,3'-Dichlorobenzidine | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.7 U | 3.7 U | C016; C017; C032 | 1.9 | 1.9 U | 1.9 U |
| 3-Nitroaniline | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.5 U | 2.5 U | C016; C017; C032 | 1.3 | 1.3 U | 1.3 U |
| 4-Bromophenyl phenyl ether | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.6 U | 1.6 U | C016; C017; C032 | 0.8 | 0.8 U | 0.8 U |
| 4-Chloroaniline | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 1.9 U | C016; C017; C032 | 0.95 | 0.95 U | 0.95 U |
| 4-Chlorophenyl phenyl ether | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 1.4 U | C016; C017; C032 | 0.7 | 0.7 U | 0.7 U |
| 4-Nitroaniline | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.8 U | 1.8 U | C016; C017; C032 | 0.9 | 0.9 U | 0.9 U |
| Aniline | µg/kg | 3 | 1 | 33.3 | 28 | 28 | C032 | 28 | 28 | 28 | 1.5 U | 28 | C032 | 9.8 | 0.75 U | 25 |
| Azobenzene | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.1 U | 1.1 U | C016; C017; C032 | 0.55 | 0.55 U | 0.55 U |

Table D1.3-5. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Benzoic acid | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 96 U | 96 U | C016; C017; C032 | 48 | 48 U | 48 U |
| Benzyl alcohol | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.1 U | 2.1 U | C016; C017; C032 | 1.1 | 1.1 U | 1.1 U |
| Bis(2-chloroethoxy) methane | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 1.5 U | C016; C017; C032 | 0.75 | 0.75 U | 0.75 U |
| Bis(2-chloroethyl) ether | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 1.9 U | C016; C017; C032 | 0.95 | 0.95 U | 0.95 U |
| Bis(2-chloroisopropyl) ether | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.6 U | 2.6 U | C016; C017; C032 | 1.3 | 1.3 U | 1.3 U |
| Carbazole | µg/kg | 3 | 3 | 100 | 1.8 J | 2.7 J | C016 | 2.2 | 2.2 J | 2.7 J | 1.8 J | 2.7 J | C016 | 2.2 | 2.2 J | 2.7 J |
| Dibenzofuran | µg/kg | 3 | 3 | 100 | 0.61 J | 4.6 | C016 | 2.5 | 2.3 J | 4.4 J | 0.61 J | 4.6 | C016 | 2.5 | 2.3 J | 4.4 J |
| Hexachlorobenzene | µg/kg | 3 | 1 | 33.3 | 0.28 | 0.28 | C016 | 0.28 | 0.28 | 0.28 | 0.12 U | 0.28 | C016 | 0.13 | 0.06 U | 0.26 |
| Hexachlorobutadiene | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.065 U | 0.065 U | C016; C017; C032 | 0.0325 | 0.0325 U | 0.0325 U |
| Hexachlorocyclopentadiene | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 29 U | 29 U | C016; C017; C032 | 15 | 15 U | 15 U |
| Hexachloroethane | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.079 U | 0.079 U | C016; C017; C032 | 0.0395 | 0.0395 U | 0.0395 U |
| Isophorone | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | C016; C017; C032 | 0.5 | 0.5 U | 0.5 U |
| Nitrobenzene | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.2 U | 2.2 U | C016; C017; C032 | 1.1 | 1.1 U | 1.1 U |
| N-Nitrosodimethylamine | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.1 U | 6.1 U | C016; C017; C032 | 3.1 | 3.1 U | 3.1 U |
| N-Nitrosodiphenylamine | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.6 U | 1.6 U | C016; C017; C032 | 0.8 | 0.8 U | 0.8 U |
| N-Nitrosodipropylamine | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.4 U | 2.4 U | C016; C017; C032 | 1.2 | 1.2 U | 1.2 U |
| **Phenols** | | | | | | | | | | | | | | | | |
| 2,3,4,5-Tetrachlorophenol | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.6 U | 5 U | C016; C032 | 2.4 | 2.5 U | 2.5 U |
| 2,3,5,6-Tetrachlorophenol | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 5.7 U | 6.2 U | C016 | 3 | 3.1 U | 3.1 U |
| 2,4,5-Trichlorophenol | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4 U | 4.3 U | C016; C032 | 2.1 | 2.2 U | 2.2 U |
| 2,4,6-Trichlorophenol | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.2 U | 4.5 U | C016; C032 | 2.2 | 2.3 U | 2.3 U |
| 2,4-Dichlorophenol | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | C016; C017; C032 | 0.5 | 0.5 U | 0.5 U |
| 2,4-Dimethylphenol | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 5.5 U | 5.5 U | C016; C017; C032 | 2.8 | 2.8 U | 2.8 U |
| 2,4-Dinitrophenol | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 17 U | 17 U | C016; C017; C032 | 8.5 | 8.5 U | 8.5 U |
| 2-Chlorophenol | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 U | 2 U | C016; C017; C032 | 1 | 1 U | 1 U |
| 2-Methylphenol | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 1.5 U | C016; C017; C032 | 0.75 | 0.75 U | 0.75 U |
| 2-Nitrophenol | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 1.5 U | C016; C017; C032 | 0.75 | 0.75 U | 0.75 U |
| 4,6-Dinitro-2-methylphenol | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 1.4 U | C016; C017; C032 | 0.7 | 0.7 U | 0.7 U |
| 4-Chloro-3-methylphenol | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 1.4 U | C016; C017; C032 | 0.7 | 0.7 U | 0.7 U |
| 4-Methylphenol | µg/kg | 3 | 2 | 66.7 | 42 | 80 | C016 | 61 | 61 | 78 | 1.5 U | 80 | C016 | 41 | 42 | 76 |
| 4-Nitrophenol | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 18 U | 18 U | C016; C017; C032 | 9 | 9 U | 9 U |
| Pentachlorophenol | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 5.4 U | 5.8 U | C016; C032 | 2.8 | 2.9 U | 2.9 U |
| Phenol | µg/kg | 3 | 2 | 66.7 | 3.4 J | 8.6 J | C032 | 6 | 6 J | 8.3 J | 2 U | 8.6 J | C032 | 4.3 | 3.4 J | 8.1 J |
| **Petroleum** | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 3 | 3 | 100 | 21 J | 58 J | C016 | 42 | 46 J | 57 J | 21 J | 58 J | C016 | 42 | 46 J | 57 J |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 3 | 3 | 100 | 130 J | 290 J | C016 | 190 | 160 J | 280 J | 130 J | 290 J | C016 | 190 | 160 J | 280 J |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 3 | 3 | 100 | 176 T | 348 T | C016 | 235 | 181 T | 331 | 176 T | 348 T | C016 | 235 | 181 T | 331 |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

-- data not available.
BaPEq - benzo(a)pyrene equivalent
BTEX - benzene, toluene, ethylbenzene, and xylene
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TEQ - toxic equivalent concentration

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Grain Size** | | | | | | | | | | | | | | | | |
| >10 Phi clay | percent | 7 | 7 | 100 | 0.27 T | 4.8 | G102-2 | 2.02 | 0.83 T | 4.63 | 0.27 T | 4.8 | G102-2 | 2.02 | 0.83 T | 4.63 |
| >9 Phi clay | percent | 90 | 90 | 100 | 0 T | 14.6 | G015 | 1.9 | 1.04 | 5.07 | 0 T | 14.6 | G015 | 1.9 | 1.04 | 5.07 |
| 8-9 Phi clay | percent | 97 | 97 | 100 | 0 | 5.78 | G015 | 1.269 | 0.9 | 3.854 | 0 | 5.78 | G015 | 1.269 | 0.9 | 3.854 |
| 9-10 Phi clay | percent | 7 | 7 | 100 | 0.4 T | 3.19 | G102-2 | 1.65 | 1.81 | 3.03 | 0.4 T | 3.19 | G102-2 | 1.65 | 1.81 | 3.03 |
| Clay | percent | 29 | 29 | 100 | 0.23 | 29.7 | WRS38 | 10.4 | 5.61 | 26 | 0.23 | 29.7 | WRS38 | 10.4 | 5.61 | 26 |
| Coarse sand | percent | 111 | 111 | 100 | 0.17 JT | 46.5 | PGC-02 | 8.33 | 5.71 | 29.7 | 0.17 JT | 46.5 | PGC-02 | 8.33 | 5.71 | 29.7 |
| Coarse silt | percent | 97 | 97 | 100 | 0.07 | 43.5 | G009 | 7.4 | 3.95 | 23.2 | 0.07 | 43.5 | G009 | 7.4 | 3.95 | 23.2 |
| Fine gravel | percent | 102 | 102 | 100 | 0 | 27.9 | G064 | 5.71 | 2.7 | 22.1 | 0 | 27.9 | G064 | 5.71 | 2.7 | 22.1 |
| Fine sand | percent | 111 | 111 | 100 | 1.27 | 54.9 | UG04-2 | 18.7 | 15.3 T | 48.6 | 1.27 | 54.9 | UG04-2 | 18.7 | 15.3 T | 48.6 |
| Fine silt | percent | 97 | 97 | 100 | 0 | 16.4 | G011 | 2.66 | 1.63 T | 9.4 | 0 | 16.4 | G011 | 2.66 | 1.63 T | 9.4 |
| Fines | percent | 135 | 135 | 100 | 0.3 T | 89.4 T | WRS38 | 21.9 | 14.4 T | 67.2 | 0.3 T | 89.4 T | WRS38 | 21.9 | 14.4 T | 67.2 |
| Gravel | percent | 31 | 31 | 100 | 0 T | 86 | WRS30 | 23 | 0.05 | 81 | 0 T | 86 | WRS30 | 23 | 0.05 | 81 |
| Medium gravel | percent | 102 | 102 | 100 | 0 T | 80 | PGC-12 | 23.01 | 6.3 | 70.46 | 0 T | 80 | PGC-12 | 23.01 | 6.3 | 70.46 |
| Medium sand | percent | 111 | 111 | 100 | 0.98 | 58.7 T | C099 | 13.3 | 11.2 T | 36.7 | 0.98 | 58.7 T | C099 | 13.3 | 11.2 T | 36.7 |
| Medium silt | percent | 97 | 97 | 100 | 0 T | 15.7 | G022 | 4.06 | 2.77 | 13.2 | 0 T | 15.7 | G022 | 4.06 | 2.77 | 13.2 |
| Sand | percent | 24 | 24 | 100 | 10.6 | 97.2 | WRS24 | 41.3 | 31 | 91 | 10.6 | 97.2 | WRS24 | 41.3 | 31 | 91 |
| Silt | percent | 29 | 29 | 100 | 0.83 | 59.7 | WRS38 | 27 | 26.1 | 55.4 | 0.83 | 59.7 | WRS38 | 27 | 26.1 | 55.4 |
| Very coarse sand | percent | 111 | 111 | 100 | 0 T | 29.8 | PGC-02 | 4.27 | 2.46 | 13.8 | 0 T | 29.8 | PGC-02 | 4.27 | 2.46 | 13.8 |
| Very fine sand | percent | 111 | 111 | 100 | 0.03 | 41.9 | G051 | 11.2 | 7.52 | 32.8 | 0.03 | 41.9 | G051 | 11.2 | 7.52 | 32.8 |
| Very fine silt | percent | 97 | 97 | 100 | 0.01 | 8.61 | G013 | 1.778 | 1.19 | 5.084 | 0.01 | 8.61 | G013 | 1.778 | 1.19 | 5.084 |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Ammonia | mg/kg | 14 | 14 | 100 | 0.64 T | 179 | G102-2 | 50.8 | 45.3 | 135 | 0.64 T | 179 | G102-2 | 50.8 | 45.3 | 135 |
| Cyanide | mg/kg | 12 | 3 | 25 | 0.12 J | 0.24 J | PGC-12 | 0.17 | 0.16 J | 0.23 J | 0.12 J | 0.45 UJ | PGC-08 | 0.17 | 0.17 UJ | 0.23 J |
| Phosphorus | mg/kg | 4 | 4 | 100 | 803 | 1020 | WRS07 | 915 | 919 | 1010 | 803 | 1020 | WRS07 | 915 | 919 | 1010 |
| Specific Gravity | NA | 10 | 10 | 100 | 1.38 | 2.43 | C782 | 1.64 | 1.59 | 2.11 | 1.38 | 2.43 | C782 | 1.64 | 1.59 | 2.11 |
| Sulfide | mg/kg | 25 | 23 | 92 | 0.55 J | 71 | G102-2 | 12.8 | 6.1 J | 55.4 J | 0.55 J | 71 | G102-2 | 11.8 | 3.86 T | 53 J |
| Total organic carbon | percent | 208 | 208 | 100 | 0.033 | 13.1 | G045 | 1.066 | 0.8475 | 2.327 | 0.033 | 13.1 | G045 | 1.066 | 0.8475 | 2.327 |
| Total solids | percent | 207 | 207 | 100 | 30.8 | 98.5 T | G115 | 67.18 | 65.4 T | 90.14 | 30.8 | 98.5 T | G115 | 67.18 | 65.4 T | 90.14 |
| **Metals** | | | | | | | | | | | | | | | | |
| Aluminum | mg/kg | 141 | 141 | 100 | 3940 | 32200 | UG07 | 13500 | 11700 | 26400 T | 3940 | 32200 | UG07 | 13500 | 11700 | 26400 T |
| Antimony | mg/kg | 249 | 190 | 76.3 | 0.05 | 873 J | R12 | 12.7955 | 0.2465 J | 45.87 J | 0.00913 UJ | 873 J | R12 | 10.5889 | 0.28 | 29.54 J |
| Arsenic | mg/kg | 233 | 201 | 86.3 | 1.07 | 126 | G006 | 6.2 | 3.05 | 16.4 | 1.07 | 126 | G006 | 5.54 | 2.79 | 14.4 J |
| Barium | mg/kg | 36 | 36 | 100 | 30.4 J | 1610 J | R31 | 229 | 160 | 432 J | 30.4 J | 1610 J | R31 | 229 | 160 | 432 J |
| Beryllium | mg/kg | 44 | 32 | 72.7 | 0.347 | 2.25 | R45 | 1.04 | 0.942 | 1.99 | 0.347 | 2.25 | R45 | 0.939 | 0.893 | 1.87 |
| Cadmium | mg/kg | 269 | 218 | 81 | 0.03 J | 132 J | R12 | 1.476 | 0.217 | 5.745 | 0.03 J | 132 J | R12 | 1.242 | 0.213 | 4.22 J |
| Chromium | mg/kg | 265 | 265 | 100 | 1.24 J | 758 J | R50 | 34.564 | 20.8 JT | 103.22 | 1.24 J | 758 J | R50 | 34.564 | 20.8 JT | 103.22 |
| Copper | mg/kg | 269 | 264 | 98.1 | 5.51 | 2150 J | R38 | 98.603 | 27 J | 371.1 J | 0.184 UJ | 2150 J | R38 | 96.831 | 26.8 | 369.6 J |
| Iron | mg/kg | 12 | 12 | 100 | 20100 | 34300 | PGC-03 | 29800 | 30500 | 34100 | 20100 | 34300 | PGC-03 | 29800 | 30500 | 34100 |
| Lead | mg/kg | 269 | 256 | 95.2 | 1.57 J | 20800 J | R12 | 214.1 | 23.6 | 625 J | 0.576 U | 20800 J | R12 | 203.9 | 22.9 J | 592.6 J |
| Manganese | mg/kg | 5 | 5 | 100 | 326 | 482 | GCR12W | 430 | 470 | 481 | 326 | 482 | GCR12W | 430 | 470 | 481 |
| Mercury | mg/kg | 263 | 227 | 86.3 | 0.005 J | 29.2 J | C029 | 0.43785 | 0.055 | 1.1379 J | 0.00172 U | 29.2 J | C029 | 0.38312 | 0.052 T | 0.9245 J |
| Nickel | mg/kg | 243 | 242 | 99.6 | 3.89 J | 11500 J | R50 | 77.73 | 19 J | 81.65 | 0.0508 U | 11500 J | R50 | 77.41 | 19 J | 81.3 |
| Selenium | mg/kg | 149 | 110 | 73.8 | 0.02 J | 0.7 J | O33-S006 | 0.126 | 0.08 | 0.4 J | 0.02 J | 1 U | WRS05; WRS06; WRS07; WRS08; WRS11; WRS12; WRS13; WRS15; WRS18; WRS19; WRS20; WRS21 | 0.139 | 0.08 | 0.5 U |
| Silver | mg/kg | 203 | 166 | 81.8 | 0.013 J | 9.95 | R47 | 0.6007 | 0.172 | 2.375 | 0.013 J | 9.95 | R47 | 0.6128 | 0.208 JT | 2 U |
| Thallium | mg/kg | 17 | 5 | 29.4 | 0.04 J | 0.081 J | GCRSP12E | 0.066 | 0.07 | 0.0804 J | 0.04 J | 1 U | WRS05; WRS06; WRS07; WRS08; WRS11; WRS12; WRS13; WRS15; WRS18; WRS19; WRS20; WRS21 | 0.372 | 0.5 U | 0.5 U |
| Zinc | mg/kg | 269 | 269 | 100 | 3.27 J | 6480 J | R50 | 293.9 | 90.5 T | 1218 J | 3.27 J | 6480 J | R50 | 293.9 | 90.5 T | 1218 J |
| **Butyltins** | | | | | | | | | | | | | | | | |
| Butyltin ion | µg/kg | 162 | 65 | 40.1 | 0.27 J | 1140 | WRS15 | 25.56 | 2 | 69.88 | 0.0013 U | 1140 | WRS15 | 10.33 | 0.2725 J | 7.595 |
| Dibutyltin ion | µg/kg | 162 | 76 | 46.9 | 0.15 NJ | 1300 T | G005 | 33.67 | 2.025 J | 132.3 | 0.0017 U | 1300 T | G005 | 15.86 | 0.4925 U | 16.95 |
| Tetrabutyltin | µg/kg | 183 | 1 | 0.5 | 39 | 39 | G005 | 39 | 39 | 39 | 0.00088 U | 150 U | WRS20 | 0.83894 | 0.065 U | 1.5 U |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Tributyltin | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.1 U | 0.1 U | R05; R09; R12; R14; R16; R20; R22; R24; R26; R30; R34; R36; R38; R41; R43; R44; R45 | 0.05 | 0.05 U | 0.05 U |
| Tributyltin ion | µg/kg | 174 | 62 | 35.6 | 0.4 J | 1990 | WRS20 | 74.61 | 4.1 | 174.6 | 0.0013 U | 1990 | WRS20 | 26.67 | 0.29 U | 39.35 |
| **PCB Aroclors** | | | | | | | | | | | | | | | | |
| Aroclor 1016 | µg/kg | 262 | 5 | 1.9 | 4 | 4740 | R50 | 958 | 7.77 | 3800 | 0.24 U | 4740 | R50 | 26.6 | 0.94 U | 55 U |
| Aroclor 1221 | µg/kg | 262 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.24 U | 200 U | WRS34 | 8.16 | 0.9 U | 55 U |
| Aroclor 1232 | µg/kg | 262 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.24 U | 200 U | WRS34 | 8.12 | 0.97 U | 55 U |
| Aroclor 1242 | µg/kg | 262 | 13 | 5 | 5.4 | 220 | G030 | 42.6 | 19 | 154 | 0.24 U | 220 | G030 | 10.2 | 1.05 U | 55 U |
| Aroclor 1248 | µg/kg | 262 | 4 | 1.5 | 1.8 J | 130 | C090 | 61.2 | 56.5 J | 120 J | 0.24 U | 200 U | WRS34 | 8.92 | 0.918 U | 55 U |
| Aroclor 1254 | µg/kg | 262 | 129 | 49.2 | 1.27 | 12300 | R49 | 347 | 29 J | 1440 J | 0.24 U | 12300 | R49 | 177 | 6.89 J | 514 |
| Aroclor 1260 | µg/kg | 262 | 173 | 66 | 2.2 J | 12900 | WRS-75 | 389.4 | 24 | 2434 | 0.24 U | 12900 | WRS-75 | 263.7 | 13.8 | 633.3 |
| Aroclor 1262 | µg/kg | 160 | 1 | 0.6 | 70 | 70 | O33-S004 | 70 | 70 | 70 | 0.24 U | 180 U | WRS35 | 3.88 | 0.65 U | 3.62 U |
| Aroclor 1268 | µg/kg | 160 | 7 | 4.4 | 2.6 | 101 T | WRS-95 | 26.1 | 14 | 81.8 | 0.24 U | 180 U | WRS35 | 4.54 | 0.65 UJ | 16.1 |
| Aroclors | µg/kg | 262 | 192 | 73.3 | 1.27 T | 19700 T | R50 | 614 | 44 | 3170 | 0.24 UT | 19700 T | R50 | 456 | 28 | 1120 |
| **PCB Congeners** | | | | | | | | | | | | | | | | |
| PCB001 | pg/g | 8 | 5 | 62.5 | 5.4 J | 633 | GCRSP12E | 217 | 9.26 | 593 | 5.01 U | 633 | GCRSP12E | 138 | 6.39 J | 563 |
| PCB002 | pg/g | 8 | 5 | 62.5 | 5.19 | 44.4 | GCRSP12E | 20.6 | 14.1 | 41.4 | 2.3 U | 44.4 | GCRSP12E | 14.5 | 7.91 | 39.2 |
| PCB003 | pg/g | 8 | 5 | 62.5 | 4.98 J | 186 T | PGC-01 | 75.3 | 10.9 | 182 | 4.98 J | 186 T | PGC-01 | 48.9 | 8.5 J | 178 |
| PCB004 | pg/g | 3 | 1 | 33.3 | 289 T | 289 T | PGC-01 | 289 | 289 T | 289 T | 115 U | 289 T | PGC-01 | 140 | 72.5 U | 267 |
| PCB004 & 010 | pg/g | 5 | 2 | 40 | 35.3 | 14500 | GCRSP12E | 7270 | 7270 | 13800 | 10 U | 14500 | GCRSP12E | 2910 | 12.5 U | 11600 |
| PCB005 | pg/g | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10.5 UT | 14.5 U | PGC-10 | 6.08 | 5.75 U | 7.1 U |
| PCB005 & 008 | pg/g | 5 | 3 | 60 | 14.6 | 3640 | GCRSP12E | 1250 | 86.7 | 3280 | 14.6 | 3640 | GCRSP12E | 753 | 14.6 | 2930 |
| PCB006 | pg/g | 8 | 3 | 37.5 | 21.5 | 799 | GCRSP12E | 299 | 75.4 T | 727 | 10 U | 799 | GCRSP12E | 117 | 12.1 U | 546 |
| PCB007 | pg/g | 3 | 1 | 33.3 | 24.3 T | 24.3 T | PGC-01 | 24.3 | 24.3 T | 24.3 T | 11.5 U | 24.3 T | PGC-01 | 12.4 | 7.25 U | 22.6 |
| PCB007 & 009 | pg/g | 5 | 2 | 40 | 10.8 | 400 | GCRSP12E | 205 | 205 | 381 | 10 U | 400 | GCRSP12E | 88 | 11.8 UT | 322 |
| PCB008 | pg/g | 3 | 1 | 33.3 | 205 T | 205 T | PGC-01 | 205 | 205 T | 205 T | 30 U | 205 T | PGC-01 | 97.5 | 72.5 U | 192 |
| PCB009 | pg/g | 3 | 1 | 33.3 | 26.5 T | 26.5 T | PGC-01 | 26.5 | 26.5 T | 26.5 T | 11.5 U | 26.5 T | PGC-01 | 13.2 | 7.25 U | 24.6 |
| PCB010 | pg/g | 3 | 1 | 33.3 | 16.6 T | 16.6 T | PGC-01 | 16.6 | 16.6 T | 16.6 T | 11.5 U | 16.6 T | PGC-01 | 9.87 | 7.25 U | 15.7 |
| PCB011 | pg/g | 8 | 4 | 50 | 35.1 T | 94.1 | GCR12W | 67 | 69.5 | 90.7 | 35.1 T | 274 UT | PGC-01 | 86 | 82.9 | 136 U |
| PCB012 & 013 | pg/g | 8 | 3 | 37.5 | 16.1 | 295 | GCRSP12E | 114 | 29.9 T | 268 | 10 U | 295 | GCRSP12E | 49.5 | 13.5 U | 202 |
| PCB014 | pg/g | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 9.44 U | 50 U | GCRSP12E | 11.9 | 11.6 U | 21.3 U |
| PCB015 | pg/g | 8 | 6 | 75 | 13.1 | 1240 | GCRSP12E | 250 | 61.5 | 954 J | 13.1 | 1240 | GCRSP12E | 198 | 61.5 | 840 J |
| PCB016 | pg/g | 3 | 1 | 33.3 | 105 T | 105 T | PGC-01 | 105 | 105 T | 105 T | 19.9 U | 105 T | PGC-01 | 44 | 17.2 U | 96.2 |
| PCB016 & 032 | pg/g | 5 | 5 | 100 | 19.9 | 14100 | GCRSP12E | 2920 | 67.7 JT | 11400 | 19.9 | 14100 | GCRSP12E | 2920 | 67.7 JT | 11400 |
| PCB017 | pg/g | 8 | 6 | 75 | 14.4 | 23300 | GCRSP12E | 3930 | 60.5 | 17500 | 10.3 U | 23300 | GCRSP12E | 2950 | 30.6 J | 15200 |
| PCB018 | pg/g | 5 | 5 | 100 | 26.9 | 4630 | GCRSP12E | 985 | 56.9 | 3740 | 26.9 | 4630 | GCRSP12E | 985 | 56.9 | 3740 |
| PCB018 & 030 | pg/g | 3 | 1 | 33.3 | 164 T | 164 T | PGC-01 | 164 | 164 T | 164 T | 20.9 U | 164 T | PGC-01 | 66.1 | 23.7 U | 150 |
| PCB019 | pg/g | 8 | 6 | 75 | 3.93 J | 30700 | GCRSP12E | 5130 | 15.4 J | 23000 | 3.93 J | 30700 | GCRSP12E | 3850 | 6.33 J | 20000 |
| PCB020 | pg/g | 3 | 3 | 100 | 7.66 J | 447 T | PGC-01 | 166 | 44 J | 407 J | 7.66 J | 447 T | PGC-01 | 166 | 44 J | 407 J |
| PCB020 & 021 & 033 | pg/g | 5 | 5 | 100 | 17.7 | 2470 | GCRSP12E | 557 | 75.7 JT | 2010 | 17.7 | 2470 | GCRSP12E | 557 | 75.7 JT | 2010 |
| PCB020 & 028 | pg/g | 3 | 1 | 33.3 | 507 T | 507 T | PGC-01 | 507 | 507 T | 507 T | 64.5 U | 507 T | PGC-01 | 210 | 90 U | 465 |
| PCB021 & 033 | pg/g | 3 | 1 | 33.3 | 210 T | 210 T | PGC-01 | 210 | 210 T | 210 T | 32.2 U | 210 T | PGC-01 | 89.5 | 42.3 U | 193 |
| PCB022 | pg/g | 8 | 6 | 75 | 12.5 | 2300 | GCRSP12E | 465 | 112 J | 1780 | 12.5 | 2300 | GCRSP12E | 354 | 63.1 J | 1570 |
| PCB023 | pg/g | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.72 U | 58.1 U | PGC-10 | 12.8 | 9.35 U | 26.9 U |
| PCB024 | pg/g | 3 | 1 | 33.3 | 1.89 JT | 1.89 JT | PGC-01 | 1.89 | 1.89 JT | 1.89 JT | 1.89 JT | 58.1 U | PGC-10 | 18 | 23 U | 28.4 U |
| PCB024 & 027 | pg/g | 5 | 2 | 40 | 19.9 | 4510 | GCRSP12E | 2260 | 2260 | 4290 | 5.01 U | 4510 | GCRSP12E | 909 | 6.2 U | 3610 |
| PCB025 | pg/g | 8 | 7 | 87.5 | 4.2 J | 1390 | GCRSP12E | 218 | 24.8 | 987 J | 4.2 J | 1390 | GCRSP12E | 192 | 21 J | 920 J |
| PCB026 | pg/g | 5 | 4 | 80 | 10.3 | 2280 | GCRSP12E | 593 | 41.7 | 1950 | 10.3 | 2280 | GCRSP12E | 476 | 32 | 1830 |
| PCB026 & 029 | pg/g | 3 | 1 | 33.3 | 57.1 JT | 57.1 JT | PGC-01 | 57.1 | 57.1 JT | 57.1 JT | 9.34 U | 57.1 JT | PGC-01 | 25.1 | 13.6 U | 52.8 J |
| PCB027 | pg/g | 3 | 2 | 66.7 | 3.35 J | 17.2 JT | PGC-01 | 10.3 | 10.3 J | 16.5 J | 3.35 J | 58.1 U | PGC-10 | 16.5 | 17.2 JT | 27.9 J |
| PCB028 | pg/g | 5 | 5 | 100 | 43.1 | 6770 | GCRSP12E | 1470 | 93.8 | 5490 | 43.1 | 6770 | GCRSP12E | 1470 | 93.8 | 5490 |
| PCB029 | pg/g | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.72 U | 25 U | GCRSP12E | 5.88 | 5.85 UT | 11.2 U |
| PCB030 | pg/g | 5 | 1 | 20 | 48.5 | 48.5 | GCRSP12E | 48.5 | 48.5 | 48.5 | 4.72 U | 48.5 | GCRSP12E | 13.1 | 5.85 UT | 40 |
| PCB031 | pg/g | 8 | 6 | 75 | 30.4 JT | 3870 | GCRSP12E | 773 | 158 | 3000 | 30.4 JT | 3870 | GCRSP12E | 591 | 73.3 | 2650 |
| PCB032 | pg/g | 3 | 2 | 66.7 | 58.5 | 231 T | PGC-01 | 145 | 145 | 222 | 58.1 U | 231 T | PGC-01 | 106 | 58.5 | 214 |
| PCB034 | pg/g | 8 | 3 | 37.5 | 2.54 JT | 154 | GCRSP12E | 53.9 | 5.08 | 139 | 2.54 JT | 154 | GCRSP12E | 28.5 | 6.03 U | 110 |
| PCB035 | pg/g | 8 | 3 | 37.5 | 3.66 J | 33.5 | GCRSP12E | 15 | 7.7 | 30.9 | 3.66 J | 58.1 U | PGC-10 | 11.4 | 6.03 U | 31.9 |
| PCB036 | pg/g | 8 | 1 | 12.5 | 11.5 J | 11.5 J | GCRSP12E | 11.5 | 11.5 J | 11.5 J | 4.72 U | 58.1 U | PGC-10 | 12.7 | 8.85 J | 26.9 U |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Units | # Analyzed | # Detected | % Detected | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th[b] | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th (half DL)[b] |
| PCB037 | pg/g | 8 | 6 | 75 | 15.6 | 356 | GCRSP12E | 99.8 | 55.1 J | 291 | 15.6 | 356 | GCRSP12E | 78.7 | 25 | 265 |
| PCB038 | pg/g | 8 | 3 | 37.5 | 99.4 JT | 1290 | GCRSP12E | 537 | 222 | 1180 | 5.01 U | 1290 | GCRSP12E | 212 | 26 U | 916 |
| PCB039 | pg/g | 8 | 1 | 12.5 | 87.5 | 87.5 | GCRSP12E | 87.5 | 87.5 | 87.5 | 4.72 U | 87.5 | GCRSP12E | 22.2 | 13.6 U | 67 |
| PCB040 | pg/g | 5 | 4 | 80 | 10.9 | 332 | GCRSP12E | 105 | 39.1 | 291 | 10.9 | 332 | GCRSP12E | 85.4 | 19.8 | 277 |
| PCB040 & 041 & 071 | pg/g | 3 | 2 | 66.7 | 167 | 600 T | PGC-01 | 384 | 384 | 578 | 30.9 U | 600 T | PGC-01 | 261 | 167 | 557 |
| PCB041 & 064 & 071 & 072 | pg/g | 5 | 5 | 100 | 54.2 | 9230 | GCRSP12E | 2040 | 146 JT | 7520 | 54.2 | 9230 | GCRSP12E | 2040 | 146 JT | 7520 |
| PCB042 | pg/g | 3 | 2 | 66.7 | 49.3 | 176 T | PGC-01 | 113 | 113 | 170 | 11.5 U | 176 T | PGC-01 | 77 | 49.3 | 163 |
| PCB042 & 059 | pg/g | 5 | 5 | 100 | 18.9 | 2110 | GCRSP12E | 471 | 64.2 JT | 1710 | 18.9 | 2110 | GCRSP12E | 471 | 64.2 JT | 1710 |
| PCB043 & 049 | pg/g | 5 | 5 | 100 | 76.5 | 52900 | GCRSP12E | 11200 | 379 JT | 42800 | 76.5 | 52900 | GCRSP12E | 11200 | 379 JT | 42800 |
| PCB043 & 073 | pg/g | 3 | 2 | 66.7 | 24.6 J | 152 T | PGC-01 | 88.3 | 88.3 J | 146 J | 24.6 J | 152 T | PGC-01 | 83 | 72.5 U | 144 |
| PCB044 | pg/g | 5 | 5 | 100 | 33.8 T | 5250 | GCRSP12E | 1180 | 131 | 4270 | 33.8 T | 5250 | GCRSP12E | 1180 | 131 | 4270 |
| PCB044 & 047 & 065 | pg/g | 3 | 2 | 66.7 | 1050 | 5710 T | PGC-01 | 3380 | 3380 | 5480 | 107 U | 5710 T | PGC-01 | 2270 | 1050 | 5240 |
| PCB045 | pg/g | 5 | 5 | 100 | 7.34 | 442 | GCRSP12E | 105 | 15.9 T | 363 | 7.34 | 442 | GCRSP12E | 105 | 15.9 T | 363 |
| PCB045 & 051 | pg/g | 3 | 3 | 100 | 20.9 J | 2260 T | PGC-01 | 910 | 450 | 2080 | 20.9 J | 2260 T | PGC-01 | 910 | 450 | 2080 |
| PCB046 | pg/g | 8 | 5 | 62.5 | 18.3 J | 2660 | GCRSP12E | 573 | 69.8 | 2150 | 5.01 U | 2660 | GCRSP12E | 363 | 31.2 | 1760 |
| PCB047 | pg/g | 5 | 5 | 100 | 43.6 | 84900 | GCRSP12E | 18400 | 637 JT | 69200 | 43.6 | 84900 | GCRSP12E | 18400 | 637 JT | 69200 |
| PCB048 | pg/g | 3 | 1 | 33.3 | 44.2 JT | 44.2 JT | PGC-01 | 44.2 | 44.2 JT | 44.2 JT | 12 U | 44.2 JT | PGC-01 | 20.7 | 12 U | 41 J |
| PCB048 & 075 | pg/g | 5 | 5 | 100 | 10.4 | 2550 | GCRSP12E | 549 | 48.2 JT | 2060 | 10.4 | 2550 | GCRSP12E | 549 | 48.2 JT | 2060 |
| PCB049 & 069 | pg/g | 3 | 2 | 66.7 | 499 | 2430 T | PGC-01 | 1460 | 1460 | 2330 | 47.5 U | 2430 T | PGC-01 | 984 | 499 | 2240 |
| PCB050 | pg/g | 5 | 1 | 20 | 1460 | 1460 | GCRSP12E | 1460 | 1460 | 1460 | 4.72 U | 1460 | GCRSP12E | 295 | 5.85 UT | 1170 |
| PCB050 & 053 | pg/g | 3 | 3 | 100 | 11 J | 1140 T | PGC-01 | 469 | 257 | 1050 | 11 J | 1140 T | PGC-01 | 469 | 257 | 1050 |
| PCB051 | pg/g | 5 | 5 | 100 | 11.8 | 57900 | GCRSP12E | 12300 | 333 JT | 46900 | 11.8 | 57900 | GCRSP12E | 12300 | 333 JT | 46900 |
| PCB052 | pg/g | 3 | 1 | 33.3 | 984 T | 984 T | PGC-01 | 984 | 984 T | 984 T | 164 U | 984 T | PGC-01 | 403 | 143 U | 900 |
| PCB052 & 069 | pg/g | 5 | 5 | 100 | 114 | 47000 | GCRSP12E | 9700 | 190 JT | 37800 | 114 | 47000 | GCRSP12E | 9700 | 190 JT | 37800 |
| PCB053 | pg/g | 5 | 5 | 100 | 17.2 | 51200 | GCRSP12E | 10500 | 205 JT | 41200 | 17.2 | 51200 | GCRSP12E | 10500 | 205 JT | 41200 |
| PCB054 | pg/g | 8 | 5 | 62.5 | 36.6 J | 10200 | GCRSP12E | 2130 | 179 T | 8200 | 5.01 U | 10200 | GCRSP12E | 1340 | 61.8 J | 6700 |
| PCB055 | pg/g | 8 | 3 | 37.5 | 18.9 T | 511 | GCRSP12E | 203 | 80.5 | 468 | 5.01 U | 511 | GCRSP12E | 100 | 55 U | 360 |
| PCB056 | pg/g | 3 | 2 | 66.7 | 70.4 | 151 T | PGC-01 | 111 | 111 | 147 | 28.2 U | 151 T | PGC-01 | 78.5 | 70.4 | 143 |
| PCB056 & 060 | pg/g | 5 | 5 | 100 | 40.2 | 785 | GCRSP12E | 246 | 76.8 JT | 684 | 40.2 | 785 | GCRSP12E | 246 | 76.8 JT | 684 |
| PCB057 | pg/g | 8 | 2 | 25 | 25.4 | 149 | GCRSP12E | 87.2 | 87.2 | 143 | 5.01 U | 149 | GCRSP12E | 46.4 | 39 | 122 |
| PCB058 | pg/g | 8 | 1 | 12.5 | 24.6 J | 24.6 J | GCRSP12E | 24.6 | 24.6 J | 24.6 J | 4.72 U | 145 U | PGC-10 | 28 | 15.4 J | 67.3 U |
| PCB059 & 062 & 075 | pg/g | 3 | 3 | 100 | 5.13 J | 106 T | PGC-01 | 44 | 21 J | 97.5 J | 5.13 J | 106 T | PGC-01 | 44 | 21 J | 97.5 J |
| PCB060 | pg/g | 3 | 2 | 66.7 | 39 J | 62.6 JT | PGC-01 | 50.8 | 50.8 J | 61.4 J | 14.9 U | 62.6 JT | PGC-01 | 36.4 | 39 J | 60.2 J |
| PCB061 & 070 | pg/g | 5 | 5 | 100 | 103 | 3470 | GCRSP12E | 884 | 136 | 2890 | 103 | 3470 | GCRSP12E | 884 | 136 | 2890 |
| PCB061 & 070 & 074 & 076 | pg/g | 3 | 2 | 66.7 | 308 | 791 T | PGC-01 | 550 | 550 | 767 | 138 U | 791 T | PGC-01 | 389 | 308 | 743 |
| PCB062 | pg/g | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.72 U | 25 U | GCRSP12E | 5.88 | 5.85 UT | 11.2 U |
| PCB063 | pg/g | 8 | 5 | 62.5 | 12.1 J | 240 | GCRSP12E | 74.2 | 43.4 | 204 J | 5.01 U | 240 | GCRSP12E | 56.6 | 28.5 | 181 |
| PCB064 | pg/g | 3 | 1 | 33.3 | 175 T | 175 T | PGC-01 | 175 | 175 T | 175 T | 30.4 U | 175 T | PGC-01 | 73.7 | 31 U | 161 |
| PCB065 | pg/g | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.72 U | 25 U | GCRSP12E | 5.88 | 5.85 UT | 11.2 U |
| PCB066 | pg/g | 3 | 2 | 66.7 | 171 | 494 T | PGC-01 | 333 | 333 | 478 | 50.8 U | 494 T | PGC-01 | 230 | 171 | 462 |
| PCB066 & 076 | pg/g | 5 | 5 | 100 | 71.1 | 3380 | GCRSP12E | 824 | 118 JT | 2800 | 71.1 | 3380 | GCRSP12E | 824 | 118 JT | 2800 |
| PCB067 | pg/g | 8 | 4 | 50 | 3.52 J | 357 | GCRSP12E | 115 | 48.9 J | 315 | 3.52 J | 357 | GCRSP12E | 68.2 | 14.9 J | 258 |
| PCB068 | pg/g | 8 | 4 | 50 | 11.1 J | 845 | GCRSP12E | 250 | 71.9 J | 731 J | 5.01 U | 845 | GCRSP12E | 136 | 34.6 J | 579 J |
| PCB072 | pg/g | 3 | 2 | 66.7 | 2.28 J | 15.9 JT | PGC-01 | 9.09 | 9.09 J | 15.2 J | 2.28 J | 145 U | PGC-10 | 30.2 | 15.9 JT | 66.8 J |
| PCB073 | pg/g | 5 | 3 | 60 | 38.9 JT | 3320 | GCRSP12E | 1170 | 162 | 3000 | 5.01 U | 3320 | GCRSP12E | 706 | 38.9 JT | 2690 |
| PCB074 | pg/g | 5 | 5 | 100 | 34 | 756 | GCRSP12E | 227 | 82.4 JT | 649 | 34 | 756 | GCRSP12E | 227 | 82.4 JT | 649 |
| PCB077 | pg/g | 8 | 8 | 100 | 6.56 J | 140 | GCRSP12E | 37.5 | 15.5 J | 113 | 6.56 J | 140 | GCRSP12E | 37.5 | 15.5 J | 113 |
| PCB078 | pg/g | 8 | 1 | 12.5 | 21.7 J | 21.7 J | GCRSP12E | 21.7 | 21.7 J | 21.7 J | 4.72 U | 145 U | PGC-10 | 27.6 | 14 J | 67.3 U |
| PCB079 | pg/g | 8 | 4 | 50 | 2.92 J | 247 | GCRSP12E | 79 | 33.1 J | 218 | 2.92 J | 247 | GCRSP12E | 50.4 | 10.9 J | 186 |
| PCB080 | pg/g | 8 | 1 | 12.5 | 19.1 JT | 19.1 JT | PGC-01 | 19.1 | 19.1 JT | 19.1 JT | 4.72 U | 145 U | PGC-10 | 22.3 | 9.35 U | 67.3 U |
| PCB081 | pg/g | 8 | 2 | 25 | 21.7 | 25.7 | GCRSP12E | 23.7 | 23.7 | 25.5 | 1.21 U | 145 U | PGC-10 | 29.1 | 23.7 | 67.3 U |
| PCB082 | pg/g | 8 | 6 | 75 | 41.1 | 558 | GCRSP12E | 168 | 93.9 | 461 | 24 U | 558 | GCRSP12E | 130 | 53.3 J | 423 |
| PCB083 | pg/g | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.72 U | 25 U | GCRSP12E | 5.88 | 5.85 UT | 11.2 U |
| PCB083 & 099 | pg/g | 3 | 2 | 66.7 | 441 | 2290 T | PGC-01 | 1370 | 1370 | 2200 | 116 U | 2290 T | PGC-01 | 930 | 441 | 2110 |
| PCB084 | pg/g | 3 | 1 | 33.3 | 430 T | 430 T | PGC-01 | 430 | 430 T | 430 T | 59.5 U | 430 T | PGC-01 | 172 | 57 U | 393 |
| PCB084 & 092 | pg/g | 5 | 5 | 100 | 121 | 7600 | GCRSP12E | 2130 | 174 JT | 6610 | 121 | 7600 | GCRSP12E | 2130 | 174 JT | 6610 |
| PCB085 & 116 | pg/g | 8 | 7 | 87.5 | 40.2 JT | 757 | GCRSP12E | 204 | 85.2 | 598 | 29.7 U | 757 | GCRSP12E | 180 | 74.1 | 572 |
| PCB086 | pg/g | 5 | 1 | 20 | 25.2 | 25.2 | GCRSP12E | 25.2 | 25.2 | 25.2 | 4.72 U | 25.2 | GCRSP12E | 8.42 | 5.85 UT | 21.4 |
| PCB086 & 087 & 097 & 109 & 119 & 125 | pg/g | 3 | 2 | 66.7 | 458 | 1830 T | PGC-01 | 1140 | 1140 | 1760 | 162 U | 1830 T | PGC-01 | 790 | 458 | 1690 |
| PCB087 & 117 & 125 | pg/g | 5 | 5 | 100 | 114 JT | 3370 | GCRSP12E | 1090 | 167 | 3030 | 114 JT | 3370 | GCRSP12E | 1090 | 167 | 3030 |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Units | # Analyzed | # Detected | % Detected | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th[b] | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th (half DL)[b] |
| PCB088 & 091 | pg/g | 8 | 7 | 87.5 | 49.6 | 21200 | GCRSP12E | 3680 | 357 | 15500 | 31.4 U | 21200 | GCRSP12E | 3230 | 286 J | 14500 |
| PCB089 | pg/g | 8 | 4 | 50 | 3.07 J | 45.6 | GCRSP12E | 18.6 | 12.8 J | 41.2 | 3.07 J | 145 U | PGC-10 | 20.2 | 7.85 J | 63.1 |
| PCB090 & 101 | pg/g | 5 | 5 | 100 | 344 | 20100 | GCRSP12E | 7520 | 525 JT | 19300 | 344 | 20100 | GCRSP12E | 7520 | 525 JT | 19300 |
| PCB090 & 101 & 113 | pg/g | 3 | 2 | 66.7 | 1140 | 5250 T | PGC-01 | 3200 | 3200 | 5040 | 286 U | 5250 T | PGC-01 | 2180 | 1140 | 4840 |
| PCB092 | pg/g | 3 | 2 | 66.7 | 224 | 1100 T | PGC-01 | 662 | 662 | 1060 | 43.9 U | 1100 T | PGC-01 | 449 | 224 | 1010 |
| PCB093 | pg/g | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.72 U | 25 U | GCRSP12E | 5.88 | 5.85 UT | 11.2 U |
| PCB093 & 100 | pg/g | 3 | 2 | 66.7 | 72.8 J | 774 T | PGC-01 | 423 | 423 J | 739 J | 72.8 J | 774 T | PGC-01 | 306 | 72.8 J | 704 J |
| PCB094 | pg/g | 8 | 5 | 62.5 | 53.7 J | 2210 | GCRSP12E | 637 | 389 T | 1860 | 5.01 U | 2210 | GCRSP12E | 408 | 77.8 J | 1590 |
| PCB095 | pg/g | 3 | 2 | 66.7 | 640 | 2610 T | PGC-01 | 1630 | 1630 | 2510 | 191 U | 2610 T | PGC-01 | 1120 | 640 | 2410 |
| PCB095 & 098 & 102 | pg/g | 5 | 5 | 100 | 248 | 24300 | GCRSP12E | 7230 | 427 JT | 21600 | 248 | 24300 | GCRSP12E | 7230 | 427 JT | 21600 |
| PCB096 | pg/g | 8 | 5 | 62.5 | 39.4 J | 3380 | GCRSP12E | 796 | 208 T | 2760 | 5.01 U | 3380 | GCRSP12E | 508 | 65.7 J | 2300 |
| PCB097 | pg/g | 5 | 5 | 100 | 78.9 JT | 1720 | GCRSP12E | 519 | 132 | 1490 | 78.9 JT | 1720 | GCRSP12E | 519 | 132 | 1490 |
| PCB098 & 102 | pg/g | 3 | 3 | 100 | 4.58 J | 280 T | PGC-01 | 112 | 50.6 J | 257 J | 4.58 J | 280 T | PGC-01 | 112 | 50.6 J | 257 J |
| PCB099 | pg/g | 5 | 5 | 100 | 164 | 9810 | GCRSP12E | 2450 | 324 JT | 8190 | 164 | 9810 | GCRSP12E | 2450 | 324 JT | 8190 |
| PCB100 | pg/g | 5 | 3 | 60 | 115 JT | 10700 | GCRSP12E | 4100 | 1490 | 9780 | 5.01 U | 10700 | GCRSP12E | 2460 | 115 JT | 8860 |
| PCB103 | pg/g | 8 | 6 | 75 | 2.68 J | 4170 | GCRSP12E | 859 | 215 J | 3250 | 2.68 J | 4170 | GCRSP12E | 645 | 57.7 J | 2880 |
| PCB104 | pg/g | 8 | 4 | 50 | 3.7 J | 1030 | GCRSP12E | 292 | 66.5 J | 889 | 3.7 J | 1030 | GCRSP12E | 157 | 23.6 J | 702 |
| PCB105 | pg/g | 8 | 7 | 87.5 | 82.5 JT | 1540 | GCRSP12E | 526 | 202 | 1390 | 81.1 UJ | 1540 | GCRSP12E | 465 | 194 J | 1370 |
| PCB106 | pg/g | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 105 UT | 145 U | PGC-10 | 60.8 | 57.5 U | 71 U |
| PCB106 & 118 | pg/g | 5 | 5 | 100 | 229 JT | 5720 | GCRSP12E | 2200 | 472 | 5440 | 229 JT | 5720 | GCRSP12E | 2200 | 472 | 5440 |
| PCB107 | pg/g | 3 | 2 | 66.7 | 53.5 J | 225 JT | PGC-01 | 139 | 139 J | 216 J | 17.6 U | 225 JT | PGC-01 | 95.8 | 53.5 J | 208 J |
| PCB107 & 109 | pg/g | 5 | 5 | 100 | 22.6 | 1110 | GCRSP12E | 289 | 34.1 T | 938 | 22.6 | 1110 | GCRSP12E | 289 | 34.1 T | 938 |
| PCB108 & 112 | pg/g | 5 | 5 | 100 | 14.6 | 411 | GCRSP12E | 110 | 25.3 T | 345 | 14.6 | 411 | GCRSP12E | 110 | 25.3 T | 345 |
| PCB108 & 124 | pg/g | 3 | 2 | 66.7 | 22.5 J | 66.5 JT | PGC-01 | 44.5 | 44.5 J | 64.3 J | 7.92 U | 66.5 JT | PGC-01 | 31 | 22.5 J | 62.1 J |
| PCB110 | pg/g | 5 | 5 | 100 | 411 JT | 12700 | GCRSP12E | 4180 | 592 | 11500 | 411 JT | 12700 | GCRSP12E | 4180 | 592 | 11500 |
| PCB110 & 115 | pg/g | 3 | 2 | 66.7 | 816 | 3010 T | PGC-01 | 1910 | 1910 | 2900 | 288 U | 3010 T | PGC-01 | 1320 | 816 | 2790 |
| PCB111 | pg/g | 3 | 1 | 33.3 | 14.1 JT | 14.1 JT | PGC-01 | 14.1 | 14.1 JT | 14.1 JT | 14.1 JT | 290 U | PGC-10 | 91.4 | 115 U | 142 U |
| PCB111 & 115 | pg/g | 5 | 3 | 60 | 7.86 | 165 | GCRSP12E | 70.5 | 38.7 | 152 | 7.86 | 165 | GCRSP12E | 44.7 | 7.86 | 140 |
| PCB112 | pg/g | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 211 UT | 290 U | PGC-10 | 122 | 115 U | 142 U |
| PCB113 | pg/g | 5 | 2 | 40 | 26.3 | 477 | GCRSP12E | 252 | 252 | 454 | 5.01 U | 477 | GCRSP12E | 104 | 6.2 U | 387 |
| PCB114 | pg/g | 8 | 7 | 87.5 | 3.39 J | 96.9 | GCRSP12E | 27.2 | 11.9 J | 77.4 J | 3.39 J | 96.9 | GCRSP12E | 24 | 11.4 J | 74.2 J |
| PCB117 | pg/g | 3 | 3 | 100 | 4.31 J | 266 T | PGC-01 | 99.2 | 27.4 J | 242 J | 4.31 J | 266 T | PGC-01 | 99.2 | 27.4 J | 242 J |
| PCB118 | pg/g | 3 | 2 | 66.7 | 512 J | 1760 JT | PGC-01 | 1140 | 1140 J | 1700 J | 203 UJ | 1760 JT | PGC-01 | 791 | 512 J | 1640 J |
| PCB119 | pg/g | 5 | 4 | 80 | 7.96 | 3690 | GCRSP12E | 1040 | 230 J | 3200 | 7.96 | 3690 | GCRSP12E | 833 | 48.7 JT | 3030 |
| PCB120 | pg/g | 8 | 4 | 50 | 2.76 J | 157 | GCRSP12E | 58.3 | 36.8 J | 141 | 2.76 J | 157 | GCRSP12E | 40 | 14.4 J | 127 |
| PCB121 | pg/g | 8 | 3 | 37.5 | 11.4 JT | 566 | GCRSP12E | 204 | 33.3 | 513 | 5.01 U | 566 | GCRSP12E | 94.4 | 22.4 J | 393 |
| PCB122 | pg/g | 8 | 5 | 62.5 | 6.03 J | 55 | GCRSP12E | 20 | 14.7 JT | 47.5 | 6.03 J | 145 U | PGC-10 | 23.1 | 10.9 J | 66.4 |
| PCB123 | pg/g | 8 | 7 | 87.5 | 4.09 JT | 69.2 | GCRSP12E | 19.6 | 7.35 | 55.9 | 4.09 JT | 145 U | PGC-10 | 26.2 | 13.2 J | 71.3 |
| PCB124 | pg/g | 5 | 5 | 100 | 13.9 | 166 | GCA12E | 75.9 | 26.9 T | 163 | 13.9 | 166 | GCA12E | 75.9 | 26.9 T | 163 |
| PCB126 | pg/g | 8 | 5 | 62.5 | 2.61 J | 42 | GCA12E | 16.3 | 4.54 JT | 39.3 | 2.61 J | 145 U | PGC-10 | 26.7 | 16.5 J | 67.3 U |
| PCB127 | pg/g | 8 | 1 | 12.5 | 3.99 JT | 3.99 JT | PGC-01 | 3.99 | 3.99 JT | 3.99 JT | 3.99 JT | 290 U | PGC-10 | 36.7 | 6.03 U | 135 U |
| PCB128 & 162 | pg/g | 5 | 5 | 100 | 47 JT | 2090 | GCA12E | 724 | 105 | 1930 | 47 JT | 2090 | GCA12E | 724 | 105 | 1930 |
| PCB128 & 166 | pg/g | 3 | 2 | 66.7 | 194 | 1170 T | PGC-01 | 682 | 682 | 1120 | 63.1 U | 1170 T | PGC-01 | 465 | 194 | 1070 |
| PCB129 | pg/g | 5 | 5 | 100 | 18.4 | 562 | GCA12E | 197 | 28 | 520 | 18.4 | 562 | GCA12E | 197 | 28 | 520 |
| PCB129 & 138 & 163 | pg/g | 3 | 2 | 66.7 | 2190 | 16000 JT | PGC-01 | 9100 | 9100 J | 15300 J | 486 U | 16000 JT | PGC-01 | 6140 | 2190 | 14600 J |
| PCB130 | pg/g | 8 | 7 | 87.5 | 27.4 | 1290 | GCA12E | 437 | 83.4 J | 1220 | 27.4 | 1290 | GCA12E | 384 | 67 J | 1200 |
| PCB131 | pg/g | 8 | 3 | 37.5 | 4.71 J | 68.5 JT | PGC-01 | 28.8 | 13.3 J | 63 J | 4.71 J | 68.5 JT | PGC-01 | 14.5 | 6.03 U | 49.2 J |
| PCB132 | pg/g | 3 | 2 | 66.7 | 615 | 3600 T | PGC-01 | 2110 | 2110 | 3450 | 147 U | 3600 T | PGC-01 | 1430 | 615 | 3300 |
| PCB132 & 161 | pg/g | 5 | 5 | 100 | 107 | 10800 | GCA12E | 3150 | 224 | 9530 | 107 | 10800 | GCA12E | 3150 | 224 | 9530 |
| PCB133 | pg/g | 3 | 3 | 100 | 8.56 J | 274 T | PGC-01 | 106 | 36.1 J | 250 J | 8.56 J | 274 T | PGC-01 | 106 | 36.1 J | 250 J |
| PCB133 & 142 | pg/g | 5 | 4 | 80 | 20.7 | 2130 | GCRSP12E | 783 | 491 | 1950 | 12.4 U | 2130 | GCRSP12E | 628 | 30.3 T | 1890 |
| PCB134 | pg/g | 3 | 2 | 66.7 | 99.6 J | 608 T | PGC-01 | 354 | 354 J | 583 J | 22.9 U | 608 T | PGC-01 | 240 | 99.6 J | 557 J |
| PCB134 & 143 | pg/g | 5 | 5 | 100 | 22.4 | 1770 | GCA12E | 629 | 66.2 JT | 1670 | 22.4 | 1770 | GCA12E | 629 | 66.2 JT | 1670 |
| PCB135 | pg/g | 5 | 5 | 100 | 53.9 | 6150 | GCA12E | 2390 | 159 | 6020 | 53.9 | 6150 | GCA12E | 2390 | 159 | 6020 |
| PCB135 & 151 | pg/g | 3 | 2 | 66.7 | 852 | 5340 T | PGC-01 | 3100 | 3100 | 5120 | 140 U | 5340 T | PGC-01 | 2090 | 852 | 4890 |
| PCB136 | pg/g | 8 | 7 | 87.5 | 49.4 | 8070 | GCRSP12E | 2490 | 273 | 7790 | 49.4 | 8070 | GCRSP12E | 2180 | 233 | 7740 |
| PCB137 | pg/g | 8 | 7 | 87.5 | 21.5 T | 632 | GCRSP12E | 158 | 44.3 J | 497 J | 14.9 U | 632 | GCRSP12E | 139 | 42.6 J | 475 J |
| PCB138 & 163 & 164 | pg/g | 5 | 5 | 100 | 407 | 43600 | GCA12E | 12900 | 1040 | 38600 | 407 | 43600 | GCA12E | 12900 | 1040 | 38600 |
| PCB139 & 140 | pg/g | 3 | 3 | 100 | 6.49 J | 80.8 JT | PGC-01 | 34 | 14.6 J | 74.2 J | 6.49 J | 80.8 JT | PGC-01 | 34 | 14.6 J | 74.2 J |
| PCB139 & 149 | pg/g | 5 | 5 | 100 | 287 | 43400 | GCA12E | 13800 | 1390 | 39300 | 287 | 43400 | GCA12E | 13800 | 1390 | 39300 |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| PCB140 | pg/g | 5 | 2 | 40 | 78.8 | 551 | GCRSP12E | 315 | 315 | 527 | 5.01 U | 551 | GCRSP12E | 129 | 6.2 U | 457 |
| PCB141 | pg/g | 8 | 7 | 87.5 | 87.5 | 13300 | GCA12E | 3060 | 469 | 10400 | 87.5 | 13300 | GCA12E | 2680 | 431 | 9920 |
| PCB142 | pg/g | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 211 UT | 290 U | PGC-10 | 122 | 115 U | 142 U |
| PCB143 | pg/g | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 105 UT | 145 U | PGC-10 | 60.8 | 57.5 U | 71 U |
| PCB144 | pg/g | 8 | 7 | 87.5 | 16.6 | 2930 | GCA12E | 647 | 99.8 J | 2260 | 16.6 | 2930 | GCA12E | 567 | 90.1 J | 2150 |
| PCB145 | pg/g | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.72 U | 290 U | PGC-10 | 49.4 | 9.35 U | 135 U |
| PCB146 | pg/g | 3 | 2 | 66.7 | 284 | 2060 T | PGC-01 | 1170 | 1170 | 1970 | 145 U | 2060 T | PGC-01 | 806 | 284 | 1880 |
| PCB146 & 165 | pg/g | 5 | 5 | 100 | 65.9 | 7290 | GCRSP12E | 2800 | 134 | 7120 | 65.9 | 7290 | GCRSP12E | 2800 | 134 | 7120 |
| PCB147 | pg/g | 5 | 4 | 80 | 15.8 | 11000 | GCRSP12E | 3240 | 970 J | 9630 | 12.4 U | 11000 | GCRSP12E | 2590 | 89.1 JT | 9170 |
| PCB147 & 149 | pg/g | 3 | 2 | 66.7 | 1890 | 12600 JT | PGC-01 | 7250 | 7250 J | 12100 J | 269 U | 12600 JT | PGC-01 | 4870 | 1890 | 11500 J |
| PCB148 | pg/g | 8 | 4 | 50 | 4.83 J | 1030 | GCRSP12E | 304 | 90.7 J | 893 | 4.83 J | 1030 | GCRSP12E | 172 | 36.8 J | 720 |
| PCB150 | pg/g | 8 | 4 | 50 | 16.7 J | 1940 | GCRSP12E | 589 | 199 J | 1680 | 5.01 U | 1940 | GCRSP12E | 314 | 80.9 J | 1340 |
| PCB151 | pg/g | 5 | 5 | 100 | 90.5 | 17000 | GCA12E | 5560 | 695 | 15600 | 90.5 | 17000 | GCA12E | 5560 | 695 | 15600 |
| PCB152 | pg/g | 8 | 4 | 50 | 12.9 J | 647 | GCRSP12E | 239 | 148 J | 579 | 5.01 U | 647 | GCRSP12E | 139 | 57.5 J | 488 |
| PCB153 | pg/g | 5 | 5 | 100 | 414 | 54300 | GCA12E | 17200 | 2270 | 49100 | 414 | 54300 | GCA12E | 17200 | 2270 | 49100 |
| PCB153 & 168 | pg/g | 3 | 2 | 66.7 | 1980 | 14700 JT | PGC-01 | 8340 | 8340 J | 14100 J | 400 U | 14700 JT | PGC-01 | 5630 | 1980 | 13400 J |
| PCB154 | pg/g | 8 | 7 | 87.5 | 5.47 J | 4740 | GCRSP12E | 816 | 37 J | 3500 | 5.47 J | 4740 | GCRSP12E | 715 | 30.3 J | 3290 |
| PCB155 | pg/g | 8 | 3 | 37.5 | 5.44 JT | 194 | GCRSP12E | 75.8 | 28 | 177 | 5.01 U | 290 U | PGC-10 | 62.7 | 17.1 | 177 |
| PCB156 | pg/g | 5 | 5 | 100 | 35.6 JT | 2640 | GCA12E | 781 | 77.3 | 2330 | 35.6 JT | 2640 | GCA12E | 781 | 77.3 | 2330 |
| PCB156 & 157 | pg/g | 3 | 2 | 66.7 | 165 | 1200 T | PGC-01 | 683 | 683 | 1150 | 38.7 U | 1200 T | PGC-01 | 461 | 165 | 1100 |
| PCB157 | pg/g | 5 | 5 | 100 | 9.11 J | 207 | GCRSP12E | 73.6 | 26.6 | 189 | 9.11 J | 207 | GCRSP12E | 73.6 | 26.6 | 189 |
| PCB158 | pg/g | 3 | 2 | 66.7 | 182 | 1260 T | PGC-01 | 721 | 721 | 1210 | 58.1 U | 1260 T | PGC-01 | 490 | 182 | 1150 |
| PCB158 & 160 | pg/g | 5 | 5 | 100 | 46.2 | 3900 | GCA12E | 1110 | 101 JT | 3400 | 46.2 | 3900 | GCA12E | 1110 | 101 JT | 3400 |
| PCB159 | pg/g | 8 | 4 | 50 | 13.8 T | 452 | GCRSP12E | 172 | 111 J | 415 | 4.72 U | 452 | GCRSP12E | 106 | 16.8 J | 365 |
| PCB160 | pg/g | 3 | 1 | 33.3 | 51.1 J | 51.1 J | PGC-10 | 51.1 | 51.1 J | 51.1 J | 51.1 J | 115 U | PGC-04 | 53.7 | 52.5 UT | 57 U |
| PCB161 | pg/g | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 211 UT | 290 U | PGC-10 | 122 | 115 U | 142 U |
| PCB162 | pg/g | 3 | 2 | 66.7 | 3.63 J | 18.3 JT | PGC-01 | 11 | 11 J | 17.6 J | 3.63 J | 290 U | PGC-10 | 55.6 | 18.3 JT | 132 J |
| PCB164 | pg/g | 3 | 2 | 66.7 | 150 | 1090 T | PGC-01 | 620 | 620 | 1040 | 32.9 U | 1090 T | PGC-01 | 419 | 150 | 996 |
| PCB165 | pg/g | 3 | 3 | 100 | 3.97 J | 67.1 J | PGC-10 | 30.9 | 21.5 JT | 62.5 J | 3.97 J | 67.1 J | PGC-10 | 30.9 | 21.5 JT | 62.5 J |
| PCB166 | pg/g | 5 | 1 | 20 | 19 J | 19 J | GCRSP12E | 19 | 19 J | 19 J | 4.72 U | 19 J | GCRSP12E | 7.18 | 5.85 UT | 16.4 J |
| PCB167 | pg/g | 8 | 7 | 87.5 | 15.3 JT | 947 | GCA12E | 284 | 57.5 J | 804 | 11.7 U | 947 | GCA12E | 249 | 41.9 J | 780 |
| PCB168 | pg/g | 5 | 2 | 40 | 75.5 | 253 | GCRSP12E | 164 | 164 | 244 | 5.01 U | 253 | GCRSP12E | 68.6 | 6.2 U | 218 |
| PCB169 | pg/g | 8 | 2 | 25 | 3.56 J | 35.5 JT | PGC-01 | 19.5 | 19.5 J | 33.9 J | 0.475 U | 145 U | PGC-10 | 14.7 | 1.65 U | 59.6 J |
| PCB170 | pg/g | 8 | 7 | 87.5 | 95.3 | 25000 | GCA12E | 6450 | 942 | 20400 J | 95.3 | 25000 | GCA12E | 5650 | 873 | 19600 J |
| PCB171 | pg/g | 5 | 4 | 80 | 78.9 JT | 6240 | GCA12E | 2210 | 1260 | 5640 | 23.9 UJ | 6240 | GCA12E | 1770 | 264 | 5440 |
| PCB171 & 173 | pg/g | 3 | 2 | 66.7 | 245 | 2740 T | PGC-01 | 1490 | 1490 | 2620 | 32.8 U | 2740 T | PGC-01 | 1000 | 245 | 2490 |
| PCB172 | pg/g | 8 | 6 | 75 | 16.2 | 4150 | GCA12E | 1270 | 857 | 3520 | 11.8 UT | 4150 | GCA12E | 956 | 167 J | 3260 |
| PCB173 | pg/g | 5 | 3 | 60 | 14.1 | 581 | GCA12E | 250 | 154 | 538 | 11.7 UT | 581 | GCA12E | 152 | 14.1 | 496 |
| PCB174 | pg/g | 8 | 7 | 87.5 | 116 | 30600 | GCA12E | 7340 | 2880 | 24200 | 105 U | 30600 | GCA12E | 6430 | 1810 | 23100 |
| PCB175 | pg/g | 8 | 7 | 87.5 | 4.49 J | 1500 | GCA12E | 350 | 98.4 | 1190 | 4.49 J | 1500 | GCA12E | 307 | 64.3 J | 1140 |
| PCB176 | pg/g | 8 | 7 | 87.5 | 17.2 | 3970 | GCA12E | 1010 | 360 | 3270 | 15.2 U | 3970 | GCA12E | 882 | 227 J | 3150 |
| PCB177 | pg/g | 8 | 7 | 87.5 | 68.2 | 16200 | GCA12E | 4210 | 1130 | 13700 | 46 U | 16200 | GCA12E | 3690 | 738 | 13300 |
| PCB178 | pg/g | 8 | 7 | 87.5 | 28.8 | 6180 | GCA12E | 1960 | 637 | 5890 | 22.8 U | 6180 | GCA12E | 1720 | 393 | 5840 |
| PCB179 | pg/g | 8 | 7 | 87.5 | 59.6 | 14100 | GCA12E | 3950 | 1870 | 12400 | 45.7 U | 14100 | GCA12E | 3460 | 1090 | 12100 |
| PCB180 | pg/g | 5 | 5 | 100 | 254 | 66600 | GCA12E | 19500 | 6880 | 58000 | 254 | 66600 | GCA12E | 19500 | 6880 | 58000 |
| PCB180 & 193 | pg/g | 3 | 3 | 100 | 229 | 19500 JT | PGC-01 | 7150 | 1720 | 17700 J | 229 | 19500 JT | PGC-01 | 7150 | 1720 | 17700 J |
| PCB181 | pg/g | 8 | 4 | 50 | 2.63 J | 135 | GCRSP12E | 62.3 | 55.7 J | 129 | 2.63 J | 290 U | PGC-10 | 51.1 | 12.7 J | 142 |
| PCB182 | pg/g | 3 | 2 | 66.7 | 1.27 J | 21.6 JT | PGC-01 | 11.4 | 11.4 J | 20.6 J | 1.27 J | 290 U | PGC-10 | 56 | 21.6 JT | 133 J |
| PCB182 & 187 | pg/g | 5 | 5 | 100 | 173 | 37400 | GCA12E | 14000 | 5780 | 35200 | 173 | 37400 | GCA12E | 14000 | 5780 | 35200 |
| PCB183 | pg/g | 8 | 7 | 87.5 | 75.6 | 16700 | GCA12E | 4520 | 2000 | 13800 | 58.4 U | 16700 | GCA12E | 3960 | 1230 | 13400 |
| PCB184 | pg/g | 8 | 2 | 25 | 6.11 | 50.4 | GCRSP12E | 28.3 | 28.3 | 48.2 | 5.01 U | 290 U | PGC-10 | 54.6 | 28.3 | 135 U |
| PCB185 | pg/g | 8 | 7 | 87.5 | 6.62 J | 3340 | GCA12E | 796 | 519 | 2620 | 6.62 J | 3340 | GCA12E | 698 | 284 J | 2500 |
| PCB186 | pg/g | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.72 U | 290 U | PGC-10 | 49.4 | 9.35 U | 135 U |
| PCB187 | pg/g | 3 | 2 | 66.7 | 859 | 8370 T | PGC-01 | 4610 | 4610 | 7990 | 135 U | 8370 T | PGC-01 | 3100 | 859 | 7620 |
| PCB188 | pg/g | 8 | 4 | 50 | 1.67 J | 642 | GCRSP12E | 185 | 49 J | 558 | 1.67 J | 642 | GCRSP12E | 104 | 12.4 J | 445 |
| PCB189 | pg/g | 8 | 8 | 100 | 3.15 J | 842 | GCA12E | 214 | 22.7 J | 691 | 3.15 J | 842 | GCA12E | 214 | 22.7 J | 691 |
| PCB190 | pg/g | 8 | 8 | 100 | 19.5 J | 5450 | GCA12E | 1260 | 238 | 4270 | 19.5 J | 5450 | GCA12E | 1260 | 238 | 4270 |
| PCB191 | pg/g | 8 | 7 | 87.5 | 3.58 J | 1040 | GCA12E | 269 | 39.9 | 842 | 3.58 J | 1040 | GCA12E | 236 | 36.2 J | 809 |
| PCB192 | pg/g | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.72 U | 290 U | PGC-10 | 49.4 | 9.35 U | 135 U |
| PCB193 | pg/g | 5 | 5 | 100 | 12.4 | 3170 | GCA12E | 1100 | 218 | 2950 | 12.4 | 3170 | GCA12E | 1100 | 218 | 2950 |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| PCB194 | pg/g | 8 | 8 | 100 | 53.3 J | 15000 | GCA12E; GCRSP12E | 4890 | 2240 | 15000 | 53.3 J | 15000 | GCA12E; GCRSP12E | 4890 | 2240 | 15000 |
| PCB195 | pg/g | 8 | 6 | 75 | 18.6 J | 7100 | GCA12E | 2880 | 1710 | 6970 | 11.8 UT | 7100 | GCA12E | 2160 | 839 J | 6910 |
| PCB196 | pg/g | 3 | 3 | 100 | 31.5 J | 2190 T | PGC-01 | 803 | 186 J | 1990 J | 31.5 J | 2190 T | PGC-01 | 803 | 186 J | 1990 J |
| PCB196 & 203 | pg/g | 5 | 5 | 100 | 82.5 | 19700 | GCA12E | 8300 | 6840 | 18700 | 82.5 | 19700 | GCA12E | 8300 | 6840 | 18700 |
| PCB197 | pg/g | 8 | 6 | 75 | 1.72 J | 598 | GCRSP12E | 251 | 162 J | 592 | 1.72 J | 598 | GCRSP12E | 190 | 83.9 J | 589 |
| PCB198 | pg/g | 5 | 3 | 60 | 265 | 1270 | GCA12E | 696 | 552 | 1200 | 11.7 UT | 1270 | GCA12E | 420 | 265 | 1130 |
| PCB198 & 199 | pg/g | 3 | 3 | 100 | 71.9 J | 3760 T | PGC-01 | 1410 | 399 | 3420 | 71.9 J | 3760 T | PGC-01 | 1410 | 399 | 3420 |
| PCB199 | pg/g | 5 | 5 | 100 | 94.2 | 17100 | GCA12E | 7600 | 7180 | 16400 | 94.2 | 17100 | GCA12E | 7600 | 7180 | 16400 |
| PCB200 | pg/g | 5 | 3 | 60 | 921 | 2240 | GCA12E | 1460 | 1230 | 2140 | 11.8 UT | 2240 | GCA12E | 881 | 921 | 2040 |
| PCB201 | pg/g | 8 | 7 | 87.5 | 6.42 J | 1870 | GCA12E | 717 | 422 T | 1830 | 6.42 J | 1870 | GCA12E | 628 | 234 J | 1830 |
| PCB202 | pg/g | 8 | 8 | 100 | 15.9 J | 2300 | GCA12E | 797 | 293 J | 2220 | 15.9 J | 2300 | GCA12E | 797 | 293 J | 2220 |
| PCB203 | pg/g | 3 | 3 | 100 | 40.4 J | 2560 T | PGC-01 | 957 | 271 | 2330 | 40.4 J | 2560 T | PGC-01 | 957 | 271 | 2330 |
| PCB204 | pg/g | 8 | 1 | 12.5 | 7.92 J | 7.92 J | GCRSP12E | 7.92 | 7.92 J | 7.92 J | 4.72 U | 290 U | PGC-10 | 48.8 | 7.06 J | 135 U |
| PCB205 | pg/g | 8 | 6 | 75 | 1.6 J | 772 | GCRSP12E | 300 | 188 J | 738 | 1.6 J | 772 | GCRSP12E | 227 | 83.9 J | 724 |
| PCB206 | pg/g | 8 | 7 | 87.5 | 27.3 JT | 4480 | GCRSP12E | 1540 | 693 T | 3960 | 27.3 JT | 4480 | GCRSP12E | 1350 | 427 J | 3870 |
| PCB207 | pg/g | 8 | 6 | 75 | 5.74 J | 552 | GCRSP12E | 230 | 223 J | 504 | 5.74 J | 552 | GCRSP12E | 174 | 57.2 J | 484 |
| PCB208 | pg/g | 8 | 7 | 87.5 | 11.1 J | 596 | GCA12W | 250 | 121 JT | 592 | 11.1 J | 596 | GCA12W | 219 | 80.9 J | 591 |
| PCB209 | pg/g | 8 | 8 | 100 | 15.2 T | 207 | GCRSP12E | 68.8 | 44.9 | 172 | 15.2 T | 207 | GCRSP12E | 68.8 | 44.9 | 172 |
| Total PCB Congeners | pg/g | 8 | 8 | 100 | 798 JT | 912000 JT | GCRSP12E | 228000 | 44500 J | 806000 J | 798 JT | 912000 JT | GCRSP12E | 228000 | 44500 J | 806000 J |
| **PCBs[c]** | | | | | | | | | | | | | | | | |
| Total PCBs | µg/kg | 265 | 195 | 73.6 | 0.798 JT | 19700 T | -- | 612 | 45 T | 3060 | 0.24 UT | 19700 T | -- | 456 | 28 T | 1120 |
| **PCB Homologs** | | | | | | | | | | | | | | | | |
| Dichlorobiphenyl homologs | pg/g | 8 | 7 | 87.5 | 26 JT | 20900 T | GCRSP12E | 3180 | 147 T | 14900 J | 26 JT | 20900 T | GCRSP12E | 2800 | 141 | 13900 J |
| Heptachlorobiphenyl homologs | pg/g | 8 | 8 | 100 | 267 JT | 243000 T | GCA12E | 56600 | 15200 J | 196000 | 267 JT | 243000 T | GCA12E | 56600 | 15200 J | 196000 |
| Hexachlorobiphenyl homologs | pg/g | 8 | 8 | 100 | 143 JT | 223000 T | GCA12E | 56600 | 8450 J | 194000 J | 143 JT | 223000 T | GCA12E | 56600 | 8450 J | 194000 J |
| Monochlorobiphenyl homologs | pg/g | 8 | 6 | 75 | 5.19 T | 841 T | GCRSP12E | 261 | 30.1 J | 793 | 5.19 T | 841 T | GCRSP12E | 197 | 20.7 J | 774 |
| Nonachlorobiphenyl homologs | pg/g | 8 | 8 | 100 | 16.8 JT | 5620 T | GCRSP12E | 1740 | 565 J | 4950 | 16.8 JT | 5620 T | GCRSP12E | 1740 | 565 J | 4950 |
| Octachlorobiphenyl homologs | pg/g | 8 | 8 | 100 | 241 JT | 67800 T | GCA12E | 20800 | 8810 J | 63900 J | 241 JT | 67800 T | GCA12E | 20800 | 8810 J | 63900 J |
| Pentachlorobiphenyl homologs | pg/g | 8 | 8 | 100 | 15 JT | 138000 T | GCRSP12E | 28400 | 4190 J | 108000 | 15 JT | 138000 T | GCRSP12E | 28400 | 4190 J | 108000 |
| Tetrachlorobiphenyl homologs | pg/g | 8 | 8 | 100 | 43.6 JT | 342000 JT | GCRSP12E | 47900 | 2920 J | 229000 J | 43.6 JT | 342000 JT | GCRSP12E | 47900 | 2920 J | 229000 J |
| Trichlorobiphenyl homologs | pg/g | 8 | 8 | 100 | 15.8 JT | 98300 JT | GCRSP12E | 13000 | 514 J | 64800 J | 15.8 JT | 98300 JT | GCRSP12E | 13000 | 514 J | 64800 J |
| **PCDD/Fs Homologs** | | | | | | | | | | | | | | | | |
| Heptachlorodibenzofuran homologs | pg/g | 57 | 54 | 94.7 | 0.484 J | 779 | G030 | 54.9 | 15.1 | 190 | 0.37 U | 779 | G030 | 52 | 14 J | 188 |
| Heptachlorodibenzo-p-dioxin homologs | pg/g | 57 | 55 | 96.5 | 1.73 J | 1830 | G030 | 157 | 58.7 J | 728 J | 1.5 U | 1830 | G030 | 152 | 49.8 | 698 J |
| Hexachlorodibenzofuran homologs | pg/g | 57 | 54 | 94.7 | 0.0977 J | 246 | G044 | 24.4 | 10.85 J | 87.92 | 0.0276 U | 246 | G044 | 23.12 | 9.41 | 85.64 |
| Hexachlorodibenzo-p-dioxin homologs | pg/g | 57 | 55 | 96.5 | 0.0828 J | 86.7 | G045 | 15.56 | 7.79 J | 59.11 | 0.0617 U | 86.7 | G045 | 15.01 | 7.6 T | 58.24 |
| Octachlorodibenzofuran | pg/g | 67 | 55 | 82.1 | 0.874 J | 2210 J | G030 | 87.1 | 20.5 JT | 215 | 0.238 U | 2210 J | G030 | 72.1 | 11.8 J | 197 |
| Octachlorodibenzo-p-dioxin | pg/g | 67 | 61 | 91 | 7.04 J | 10400 | G030 | 819 | 312 | 2710 T | 7.04 J | 10400 | G030 | 746 | 259 J | 2460 |
| Pentachlorodibenzofuran homologs | pg/g | 57 | 52 | 91.2 | 0.0356 J | 132 | G049 | 15.13 | 8.63 J | 51.01 | 0.0189 U | 132 | G049 | 13.81 | 6.65 T | 50.28 |
| Pentachlorodibenzo-p-dioxin homologs | pg/g | 57 | 41 | 71.9 | 0.0896 T | 7.64 J | G057 | 1.83 | 1.08 J | 5.51 J | 0.016 U | 7.64 J | G057 | 1.323 | 0.485 J | 5.302 J |
| Tetrachlorodibenzofuran homologs | pg/g | 57 | 46 | 80.7 | 0.103 J | 95.2 | G049 | 7.093 | 3.64 | 22.03 | 0.0178 U | 95.2 | G049 | 5.729 | 2.1 | 19 |
| Tetrachlorodibenzo-p-dioxin homologs | pg/g | 57 | 40 | 70.2 | 0.0766 J | 4.23 | G060 | 1.38 | 1.045 J | 3.96 | 0.0115 U | 4.23 | G060 | 0.9752 | 0.47 J | 3.67 J |
| Total PCDD/F | pg/g | 67 | 62 | 92.5 | 9.45 JT | 15400 JT | G030 | 1130 | 444 J | 3590 J | 9.45 JT | 15400 JT | G030 | 1040 | 387 JT | 3360 J |
| **PCDD/Fs** | | | | | | | | | | | | | | | | |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran | pg/g | 67 | 61 | 91 | 0.163 J | 121 | G030 | 13.7 | 4.72 J | 52.1 | 0.116 U | 121 | G030 | 12.6 | 4.21 J | 52.1 |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin | pg/g | 67 | 61 | 91 | 0.842 J | 1040 | G030 | 76.8 | 33.4 | 215 T | 0.842 J | 1040 | G030 | 70.1 | 25.6 | 211 |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran | pg/g | 67 | 43 | 64.2 | 0.0764 J | 9.06 J | G044 | 1.334 | 0.653 J | 3.948 J | 0.0239 U | 9.06 J | G044 | 0.9829 | 0.2875 U | 3.485 J |
| 1,2,3,4,7,8-Hexachlorodibenzofuran | pg/g | 67 | 53 | 79.1 | 0.0329 J | 13.7 | G044 | 1.938 | 0.926 J | 8.802 J | 0.0183 U | 13.7 | G044 | 1.546 | 0.617 J | 7.875 J |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 67 | 47 | 70.1 | 0.0449 J | 3.35 J | G057 | 0.6928 | 0.471 J | 2.09 J | 0.0228 U | 3.35 J | G057 | 0.4998 | 0.296 J | 1.8 J |
| 1,2,3,6,7,8-Hexachlorodibenzofuran | pg/g | 67 | 49 | 73.1 | 0.0588 J | 10.2 J | G044 | 1.006 | 0.495 J | 3.11 J | 0.0195 U | 10.2 J | G044 | 0.8227 | 0.429 JT | 3.13 J |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 67 | 56 | 83.6 | 0.109 J | 28.4 | G045 | 3.256 | 2.085 J | 10.33 J | 0.0316 U | 28.4 | G045 | 2.829 | 1.56 J | 9.623 |
| 1,2,3,7,8,9-Hexachlorodibenzofuran | pg/g | 67 | 16 | 23.9 | 0.0381 J | 0.471 J | G037 | 0.2003 | 0.1625 J | 0.4088 J | 0.0182 U | 2.03 U | O33-S010 | 0.1025 | 0.0505 U | 0.3277 J |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | pg/g | 67 | 49 | 73.1 | 0.0881 J | 6.5 J | G057 | 1.729 | 1.09 J | 5.32 J | 0.0217 U | 6.5 J | G057 | 1.282 | 0.78 J | 4.36 J |
| 1,2,3,7,8-Pentachlorodibenzofuran | pg/g | 67 | 36 | 53.7 | 0.07 T | 2.8 J | G049 | 0.44087 | 0.282 J | 0.97075 J | 0.00812 U | 2.8 J | G049 | 0.25968 | 0.141 J | 0.872 J |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | pg/g | 67 | 40 | 59.7 | 0.0367 J | 2.02 J | G057 | 0.4695 | 0.368 J | 1.073 J | 0.016 U | 2.02 J | G057 | 0.301 | 0.234 J | 0.8731 J |
| 2,3,4,6,7,8-Hexachlorodibenzofuran | pg/g | 67 | 48 | 71.6 | 0.0632 J | 35.4 | G044 | 1.9 | 0.74 J | 5.17 J | 0.0181 U | 35.4 | G044 | 1.386 | 0.474 JT | 4.546 J |
| 2,3,4,7,8-Pentachlorodibenzofuran | pg/g | 67 | 47 | 70.1 | 0.0515 J | 9.25 J | G049 | 0.7048 | 0.431 J | 1.638 J | 0.0116 U | 9.25 J | G049 | 0.5108 | 0.268 J | 1.34 J |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/g | 67 | 29 | 43.3 | 0.116 T | 8.58 | G049 | 0.82648 | 0.462 J | 1.114 J | 0.00463 U | 8.58 | G049 | 0.41246 | 0.149 T | 1.0095 J |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | pg/g | 67 | 27 | 40.3 | 0.0483 J | 0.605 J | G061 | 0.21647 | 0.168 J | 0.4599 J | 0.00896 U | 0.605 J | G061 | 0.11623 | 0.0615 U | 0.3613 J |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| TCDD TEQ (ND = 0) | pg/g | 67 | 63 | 94 | 0.0112 JT | 19.2 JT | G030 | 2.606 | 1.43 JT | 9.224 J | 0.0112 JT | 19.2 JT | G030 | 2.454 | 1.26 JT | 9.132 J |
| Total TCDD TEQ (ND = 0) | pg/g | 70 | 66 | 94.3 | 0.000879 JA | 19.2 JT | G030 | 2.64139 | 1.41 J | 9.155 J | 0.000879 JA | 19.2 JT | G030 | 2.49406 | 1.21 J | 9.063 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | pg/g | 8 | 8 | 100 | 0.000879 JT | 4.51 T | GCA12E | 1.27123 | 0.354 J | 4.034 | 0.000879 JT | 4.51 T | GCA12E | 1.27123 | 0.354 J | 4.034 |
| **PBDE Congeners** | | | | | | | | | | | | | | | | |
| PBDE028 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | G783; GCRSP12E; GSP12W-ALT | 0.5 | 0.5 U | 0.5 U |
| PBDE047 | µg/kg | 3 | 3 | 100 | 0.31 J | 1.2 | GCRSP12E | 0.61 | 0.33 J | 1.1 J | 0.31 J | 1.2 | GCRSP12E | 0.61 | 0.33 J | 1.1 J |
| PBDE099 | µg/kg | 3 | 3 | 100 | 0.3 J | 1.1 | GCRSP12E | 0.58 | 0.33 J | 1 J | 0.3 J | 1.1 | GCRSP12E | 0.58 | 0.33 J | 1 J |
| PBDE100 | µg/kg | 3 | 1 | 33.3 | 0.15 J | 0.15 J | GCRSP12E | 0.15 | 0.15 J | 0.15 J | 0.15 J | 1 U | G783; GSP12W-ALT | 0.38 | 0.5 U | 0.5 U |
| PBDE153 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | G783; GCRSP12E; GSP12W-ALT | 0.5 | 0.5 U | 0.5 U |
| PBDE154 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | G783; GCRSP12E; GSP12W-ALT | 0.5 | 0.5 U | 0.5 U |
| PBDE183 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | G783; GCRSP12E; GSP12W-ALT | 0.5 | 0.5 U | 0.5 U |
| PBDE209 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 9.9 U | 10 U | GCRSP12E; GSP12W-ALT | 5 | 5 U | 5 U |
| **Pesticides** | | | | | | | | | | | | | | | | |
| 2,4'-DDD | µg/kg | 143 | 56 | 39.2 | 0.095 J | 14 J | G048 | 2.19 | 1.35 J | 7.33 J | 0.032 U | 14 J | G048 | 0.984 | 0.24 U | 3.75 J |
| 2,4'-DDE | µg/kg | 143 | 5 | 3.5 | 0.0094 J | 0.77 J | G059 | 0.2259 | 0.14 J | 0.652 J | 0.0094 J | 5.8 U | G030 | 0.1782 | 0.08 U | 0.595 U |
| 2,4'-DDT | µg/kg | 143 | 78 | 54.5 | 0.0069 J | 17 J | G030 | 1.677 | 0.9 J | 5.58 J | 0.0069 J | 17 J | G030 | 1.047 | 0.39 J | 4.07 J |
| 4,4'-DDD | µg/kg | 149 | 106 | 71.1 | 0.086 J | 57 J | G048 | 1.64 | 0.64 J | 4.08 | 0.047 U | 57 J | G048 | 1.23 | 0.43 | 2.8 |
| 4,4'-DDE | µg/kg | 149 | 115 | 77.2 | 0.039 J | 15 | C090 | 1.26 | 0.76 J | 4.62 J | 0.027 U | 15 | C090 | 1.03 | 0.57 J | 3.78 J |
| 4,4'-DDT | µg/kg | 149 | 77 | 51.7 | 0.044 J | 38 | C090 | 3.67 | 2 J | 12.4 | 0.044 J | 38 | C090 | 2.24 | 0.82 J | 8.46 J |
| Aldrin | µg/kg | 145 | 22 | 15.2 | 0.0735 JT | 0.7 NJ | UG08 | 0.2624 | 0.215 J | 0.615 J | 0.012 UJ | 2 U | PA03; PA04 | 0.1064 | 0.07 U | 0.381 J |
| alpha-Endosulfan | µg/kg | 145 | 24 | 16.6 | 0.04 J | 0.83 | G007 | 0.249 | 0.175 J | 0.658 J | 0.025 U | 2 U | PA03; PA04 | 0.111 | 0.0405 U | 0.414 J |
| alpha-Hexachlorocyclohexane | µg/kg | 145 | 5 | 3.4 | 0.056 J | 0.3 J | GCR12W | 0.1528 | 0.13 J | 0.28 J | 0.0069 UJ | 2 U | PA03; PA04 | 0.0609 | 0.029 U | 0.218 U |
| beta-Endosulfan | µg/kg | 145 | 20 | 13.8 | 0.083 J | 1.8 J | O33-S010 | 0.405 | 0.245 J | 1.14 J | 0.031 U | 3.6 U | G007 | 0.171 | 0.07 U | 0.792 J |
| beta-Hexachlorocyclohexane | µg/kg | 145 | 5 | 3.4 | 0.094 J | 1.2 J | O33-S006 | 0.545 | 0.41 J | 1.12 J | 0.012 UJ | 2 U | PA03; PA04 | 0.116 | 0.09 U | 0.343 U |
| Chlordane (technical) | µg/kg | 22 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 63 U | O33-S004 | 5.2 | 2.2 U | 26 U |
| Chlorpyrifos | µg/kg | 4 | 3 | 75 | 0.55 J | 0.83 J | G058 | 0.66 | 0.6 J | 0.807 J | 0.0072 UJ | 0.83 J | G058 | 0.4959 | 0.575 J | 0.7955 J |
| cis-Chlordane | µg/kg | 145 | 31 | 21.4 | 0.067 J | 5.7 J | G054 | 0.556 | 0.29 | 1.65 J | 0.031 U | 14 U | O33-S004 | 0.255 | 0.06 U | 0.964 J |
| cis-Nonachlor | µg/kg | 143 | 13 | 9.1 | 0.021 J | 2 J | O33-C009 | 0.575 | 0.54 J | 1.58 J | 0.021 J | 8.3 U | GCA12E | 0.355 | 0.155 U | 1.29 |
| delta-Hexachlorocyclohexane | µg/kg | 145 | 2 | 1.4 | 0.12 J | 2 J | C025 | 1.06 | 1.06 J | 1.91 J | 0.011 UJ | 2 J | C025; PA03; PA04 | 0.0736 | 0.035 U | 0.167 U |
| Dieldrin | µg/kg | 145 | 14 | 9.7 | 0.042 J | 1.1 | G062 | 0.266 | 0.155 J | 0.762 J | 0.03 U | 2.1 U | O33-S010 | 0.119 | 0.07 U | 0.466 |
| Endosulfan sulfate | µg/kg | 145 | 4 | 2.8 | 0.11 J | 0.33 J | G057 | 0.253 | 0.285 J | 0.326 J | 0.017 UJ | 13 U | O33-S010 | 0.165 | 0.055 UT | 0.4 U |
| Endrin | µg/kg | 145 | 5 | 3.4 | 0.051 J | 8.8 | G061 | 1.94 | 0.36 | 7.12 J | 0.045 UJ | 8.8 | G061 | 0.149 | 0.041 U | 0.358 |
| Endrin aldehyde | µg/kg | 145 | 7 | 4.8 | 0.19 J | 1.8 J | IPC-S012 | 0.706 | 0.44 NJ | 1.59 J | 0.042 U | 2.1 U | G086 | 0.146 | 0.06 U | 0.66 U |
| Endrin ketone | µg/kg | 145 | 12 | 8.3 | 0.062 J | 8.5 NJ | G783 | 1.31 | 0.685 J | 4.7 J | 0.029 U | 8.5 NJ | G783 | 0.345 | 0.1 U | 1.08 J |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 145 | 20 | 13.8 | 0.059 J | 2.3 | C090 | 0.496 | 0.315 J | 1.45 J | 0.011 UJ | 2.3 | C090 | 0.156 | 0.055 UJ | 0.63 J |
| Heptachlor | µg/kg | 145 | 7 | 4.8 | 0.06 J | 0.52 NJ | G780 | 0.2274 | 0.17 J | 0.46 J | 0.0091 UJ | 2 U | PA03; PA04 | 0.08635 | 0.035 U | 0.344 J |
| Heptachlor epoxide | µg/kg | 145 | 8 | 5.5 | 0.058 J | 0.64 J | IPC-S014 | 0.27 | 0.225 J | 0.574 J | 0.03 UJ | 2.6 U | C090 | 0.14 | 0.09 U | 0.48 U |
| Methoxychlor | µg/kg | 145 | 4 | 2.8 | 0.35 J | 11 | G086 | 3.28 | 0.89 J | 9.53 | 0.018 UJ | 11 | G086 | 0.256 | 0.095 UT | 0.574 J |
| Mirex | µg/kg | 143 | 4 | 2.8 | 0.12 J | 0.33 J | IPC-S014 | 0.23 | 0.235 J | 0.317 J | 0.029 UJ | 1.1 U | IPC-S012 | 0.0469 | 0.0245 U | 0.125 J |
| Oxychlordane | µg/kg | 143 | 9 | 6.3 | 0.11 J | 0.74 J | C090 | 0.369 | 0.33 J | 0.66 J | 0.038 UJ | 8 U | O33-S004 | 0.135 | 0.0425 U | 0.437 J |
| Total chlordanes | µg/kg | 145 | 110 | 75.9 | 0.039 JT | 23.2 JT | G054 | 1.29 | 0.55 J | 3.97 J | 0.039 JT | 23.2 JT | G054 | 1.09 | 0.4 JT | 3.76 J |
| Total endosulfan | µg/kg | 145 | 41 | 28.3 | 0.04 JT | 1.8 JT | O33-S010 | 0.368 | 0.3 JT | 1 T | 0.04 JT | 2.8 UT | O33-S008 | 0.213 | 0.1 UT | 0.798 J |
| Total DDD | µg/kg | 149 | 113 | 75.8 | 0.086 JT | 71 JT | G048 | 2.62 | 0.88 JT | 9.42 J | 0.047 UT | 71 JT | G048 | 2.05 | 0.56 JT | 5.66 J |
| DDx | µg/kg | 149 | 130 | 87.2 | 0.047 JT | 73.3 JT | G048 | 6.59 | 3.09 J | 19.9 J | 0.047 JT | 73.3 JT | G048 | 5.85 | 2.34 T | 19 J |
| Total DDE | µg/kg | 149 | 115 | 77.2 | 0.039 JT | 15 T | C090 | 1.27 | 0.76 JT | 4.62 J | 0.034 UT | 15 T | C090 | 1.07 | 0.59 JT | 3.78 J |
| Total DDT | µg/kg | 149 | 104 | 69.8 | 0.045 JT | 46.4 JT | C090 | 3.983 | 1.66 J | 14.73 J | 0.045 JT | 46.4 JT | C090 | 3.032 | 1 JA | 10.52 J |
| Total 4,4' DDx | µg/kg | 12 | 8 | 66.7 | 0.27 JT | 8.4 JT | UG07 | 2.7 | 1.8 J | 7 J | 0.27 JT | 8.4 JT | UG07 | 2.9 | 2.8 | 6.3 J |
| Toxaphene | µg/kg | 145 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.4 U | 1800 U | G048 | 24 | 11 U | 65 U |
| trans-Chlordane | µg/kg | 145 | 92 | 63.4 | 0.045 J | 14 J | G030 | 1.12 | 0.505 J | 3.85 J | 0.027 U | 14 J | G030 | 0.772 | 0.28 J | 3.46 J |
| trans-Nonachlor | µg/kg | 143 | 37 | 25.9 | 0.039 J | 4.4 J | G054 | 0.301 | 0.16 J | 0.544 J | 0.034 U | 4.4 J | G054 | 0.134 | 0.06 U | 0.34 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| 1-Methylnaphthalene | µg/kg | 112 | 88 | 78.6 | 0.39 J | 610 | G003 | 20.6 | 2.65 J | 61.3 | 0.31 U | 610 | G003 | 16.2 | 1.7 J | 42.4 |
| 2-Methylnaphthalene | µg/kg | 193 | 142 | 73.6 | 0.41 J | 990 | G003 | 25.13 | 4.55 | 76.95 | 0.0088 U | 990 | G003 | 19.28 | 2.7 | 71.2 |
| Acenaphthene | µg/kg | 269 | 151 | 56.1 | 0.27 J | 4700 | PGC-10 | 89.96 | 6.5 | 220 | 0.0088 U | 4700 | PGC-10 | 51.62 | 2.5 J | 107.6 |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Acenaphthylene | µg/kg | 269 | 160 | 59.5 | 0.24 J | 895 | R20 | 36.35 | 5.05 | 146.3 | 0.0088 U | 895 | R20 | 22.62 | 2.5 J | 90.28 |
| Anthracene | µg/kg | 269 | 180 | 66.9 | 0.55 J | 2700 | PGC-10 | 80.5 | 11.3 | 371.8 J | 0.0088 U | 2700 | PGC-10 | 54.66 | 4.6 | 330.4 |
| Benzo(a)anthracene | µg/kg | 269 | 223 | 82.9 | 0.011 | 3830 | R20 | 172 | 27 | 743.7 | 0.011 | 3830 | R20 | 143.2 | 18 | 583.4 |
| Benzo(a)pyrene | µg/kg | 269 | 223 | 82.9 | 0.0097 | 3800 | PGC-10 | 181.73 | 33.2 | 736.6 | 0.0097 | 3800 | PGC-10 | 151.23 | 20 | 659 |
| Benzo(b)fluoranthene | µg/kg | 269 | 221 | 82.2 | 0.013 | 4330 | R20 | 204.21 | 38 | 993 | 0.013 | 4330 | R20 | 168.36 | 25 U | 904.2 |
| Benzo(b+k)fluoranthene | µg/kg | 6 | 2 | 33.3 | 13 T | 13 T | PA03; PA04 | 13 | 13 | 13 | 13 T | 50 UT | HC-SS02; HC-SS03; HC-SS04; HC-SS30 | 21 | 25 U | 25 U |
| Benzo(e)pyrene | µg/kg | 145 | 134 | 92.4 | 0.3 J | 2200 | C087 | 99.6 | 19 | 281 | 0.18 U | 2200 | C087 | 92.1 | 18 | 244 |
| Benzo(g,h,i)perylene | µg/kg | 269 | 216 | 80.3 | 0.015 | 3300 | C087 | 142 | 35 | 474.5 | 0.011 UT | 3300 | C087 | 114.6 | 23 | 380.4 |
| Benzo(k)fluoranthene | µg/kg | 269 | 213 | 79.2 | 0.0097 | 1500 | WRS16 | 78.99 | 16.4 | 370.4 | 0.0097 | 1500 | WRS16 | 63.12 | 10 | 341.2 |
| C1-Chrysene | µg/kg | 112 | 96 | 85.7 | 0.45 J | 1900 | PGC-10 | 85.8 | 32 | 195 | 0.25 U | 1900 | PGC-10 | 73.7 | 24.5 | 179 |
| C1-Dibenzothiophene | µg/kg | 100 | 59 | 59 | 0.76 J | 870 | G003 | 38.3 | 9.2 | 118 | 0.21 U | 870 | G003 | 22.9 | 2.5 J | 74.2 |
| C1-Fluoranthene/pyrene | µg/kg | 112 | 97 | 86.6 | 1.4 J | 4400 | PGC-10 | 153 | 32 | 414 | 0.61 U | 4400 | PGC-10 | 133 | 25.3 J | 368 |
| C1-Fluorene | µg/kg | 112 | 79 | 70.5 | 0.58 J | 1100 | PGC-10 | 37.5 | 4.9 | 130 | 0.5 U | 1100 | PGC-10 | 26.8 | 2.5 U | 79 |
| C1-Phenanthrene/anthracene | µg/kg | 112 | 94 | 83.9 | 0.99 J | 4300 | PGC-10 | 146 | 19.5 | 445 | 0.75 U | 4300 | PGC-10 | 123 | 14.4 J | 367 |
| C2-Chrysene | µg/kg | 112 | 92 | 82.1 | 1.7 J | 880 | PGC-10 | 76 | 34 | 280 | 0.25 U | 880 | PGC-10 | 63 | 25 | 260 |
| C2-Dibenzothiophene | µg/kg | 100 | 63 | 63 | 1.2 J | 970 | G003 | 41.6 | 13 | 107 | 0.21 U | 970 | G003 | 26.5 | 4.63 | 65.8 |
| C2-Fluoranthene/pyrene | µg/kg | 100 | 83 | 83 | 1.6 J | 1400 | G003 | 61 | 27 | 140 | 0.61 U | 1400 | G003 | 51 | 21 | 130 |
| C2-Fluorene | µg/kg | 112 | 89 | 79.5 | 0.5 J | 1100 | G003 | 47.3 | 7.5 | 158 | 0.5 J | 1100 | G003 | 37.9 | 5.55 | 96.2 |
| C2-Naphthalene | µg/kg | 112 | 91 | 81.3 | 0.44 J | 1800 | PGC-10 | 69.8 | 6.8 | 275 | 0.37 U | 1800 | PGC-10 | 57 | 5.1 | 222 |
| C2-Phenanthrene/anthracene | µg/kg | 112 | 96 | 85.7 | 0.78 J | 2500 | G003 | 106 | 31 | 320 | 0.75 U | 2500 | G003 | 90.8 | 23 | 298 |
| C3-Chrysene | µg/kg | 112 | 91 | 81.3 | 4.9 | 540 | G003 | 72.2 | 33 | 275 | 0.25 U | 540 | G003 | 59 | 23.5 | 248 |
| C3-Dibenzothiophene | µg/kg | 100 | 58 | 58 | 1.3 J | 660 | G003 | 44.3 | 16 | 143 | 0.21 U | 660 | G003 | 25.9 | 4.8 | 120 |
| C3-Fluoranthene/pyrene | µg/kg | 100 | 73 | 73 | 1.6 J | 900 | G003 | 58 | 31 | 192 | 0.61 U | 900 | G003 | 42.6 | 16.5 | 152 |
| C3-Fluorene | µg/kg | 112 | 76 | 67.9 | 1.6 J | 1900 | G003 | 75 | 17 | 223 | 0.5 U | 1900 | G003 | 51.1 | 8.5 | 126 |
| C3-Naphthalene | µg/kg | 112 | 90 | 80.4 | 0.46 J | 1400 | G003 | 78.5 | 8 | 367 | 0.37 U | 1400 | G003 | 63.4 | 4.6 | 295 |
| C3-Phenanthrene/anthracene | µg/kg | 112 | 95 | 84.8 | 1.6 J | 1900 | G003 | 84.2 | 30 | 266 | 0.75 U | 1900 | G003 | 71.6 | 24 | 230 |
| C4-Chrysene | µg/kg | 112 | 67 | 59.8 | 4 | 320 | G019 | 49 | 31 | 178 | 0.25 U | 320 | G019 | 29.9 | 10 | 135 |
| C4-Naphthalene | µg/kg | 112 | 84 | 75 | 0.48 J | 1500 | G003 | 67.4 | 12.5 J | 258 | 0.37 U | 1500 | G003 | 50.8 | 6.1 | 190 |
| C4-Phenanthrene/anthracene | µg/kg | 112 | 82 | 73.2 | 1.4 J | 1100 | G003 | 54.8 | 20.5 | 180 | 0.75 U | 1100 | G003 | 40.6 | 13 | 154 |
| Chrysene | µg/kg | 269 | 224 | 83.3 | 0.015 | 3300 | WRS16 | 173 | 30.6 | 624 | 0.015 | 3300 | WRS16 | 144 | 22 | 519 |
| Dibenzo(a,h)anthracene | µg/kg | 269 | 174 | 64.7 | 0.3 J | 660 | C087 | 34.07 | 9 | 174.8 | 0.0088 U | 660 | C087 | 22.86 | 3.9 | 115.2 |
| Dibenzothiophene | µg/kg | 112 | 80 | 71.4 | 0.39 J | 1100 J | PGC-10 | 35.7 | 2.7 J | 115 J | 0.21 U | 1100 J | PGC-10 | 25.6 | 1.5 J | 57.5 |
| Fluoranthene | µg/kg | 269 | 234 | 87 | 0.31 | 8900 | PGC-10 | 373.6 | 53.6 | 1735 | 0.0088 U | 8900 | PGC-10 | 325.4 | 37 | 1644 |
| Fluorene | µg/kg | 269 | 160 | 59.5 | 0.53 J | 2500 | PGC-10 | 53.48 | 7.265 | 190.4 | 0.0088 U | 2500 | PGC-10 | 32.79 | 3.3 | 100 |
| Total HPAHs | µg/kg | 269 | 242 | 90 | 0.0734 T | 38700 T | PGC-10 | 1740 | 295.5 | 6885 | 0.0734 T | 38700 T | PGC-10 | 1566 | 215 T | 6120 |
| Indeno(1,2,3-cd)pyrene | µg/kg | 269 | 213 | 79.2 | 0.12 | 3500 | C087 | 133 | 29 | 570 | 0.0088 U | 3500 | C087 | 105.9 | 18 | 372.4 |
| Total LPAHs | µg/kg | 269 | 227 | 84.4 | 0.11 T | 23800 T | PGC-10 | 522 | 69 A | 2285 | 0.0088 UT | 23800 T | PGC-10 | 441.2 | 41.2 JT | 2048 |
| Naphthalene | µg/kg | 269 | 195 | 72.5 | 0.57 J | 5300 | G003 | 95.27 | 12 | 165 | 0.0088 U | 5300 | G003 | 70.02 | 6.4 | 136 |
| Perylene | µg/kg | 145 | 138 | 95.2 | 0.34 J | 940 | C087 | 50.3 | 17.3 J | 96.5 | 0.32 U | 940 | C087 | 47.9 | 17 | 94 |
| Phenanthrene | µg/kg | 269 | 214 | 79.6 | 0.11 | 11000 | PGC-10 | 251 | 36.5 | 1214 | 0.0088 U | 11000 | PGC-10 | 200.3 | 23 | 856.4 |
| Pyrene | µg/kg | 269 | 237 | 88.1 | 0.31 | 10000 | PGC-10 | 376 | 55 | 1260 | 0.0088 U | 10000 | PGC-10 | 331.7 | 40 | 1138 |
| Total BaPEq | µg/kg | 269 | 232 | 86.2 | 0.004 T | 4970 T | PGC-10 | 249 | 46.5 | 1090 | 0.004 T | 4970 T | PGC-10 | 215 | 28.5 T | 961 |
| Total cPAHs | µg/kg | 269 | 232 | 86.2 | 0.058 T | 18400 T | C087 | 922 | 164 | 3840 | 0.058 T | 18400 T | C087 | 796 | 110 T | 3560 |
| Total PAHs | µg/kg | 269 | 248 | 92.2 | 0.0734 T | 62500 T | PGC-10 | 2174 | 337.5 J | 7860 | 0.0734 T | 62500 T | PGC-10 | 2004 | 283 JT | 7512 |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl) phthalate | µg/kg | 96 | 78 | 81.3 | 7.6 J | 18000 | GCRSP12E | 418 | 75.5 | 623 | 7 U | 18000 | GCRSP12E | 348 | 58.5 | 595 |
| Butylbenzyl phthalate | µg/kg | 96 | 29 | 30.2 | 3.6 J | 580 | G007 | 54 | 14 | 350 J | 2.6 U | 580 | G007 | 21 | 1.8 U | 50 U |
| Dibutyl phthalate | µg/kg | 96 | 42 | 43.8 | 1 J | 130 | G045 | 17 | 11 | 46 | 1 J | 400 U | G783 | 16 | 8.2 J | 50 U |
| Diethyl phthalate | µg/kg | 96 | 37 | 38.5 | 1.3 J | 15 | G023 | 3.59 | 2.4 J | 9.4 J | 1.3 J | 100 U | HC-SS02; HC-SS03; HC-SS04; HC-SS30 | 4.8 | 1.83 J | 20.5 U |
| Dimethyl phthalate | µg/kg | 96 | 9 | 9.4 | 1.7 J | 170 | G054 | 35 | 5.5 J | 130 | 1 U | 170 | G054 | 6.5 | 0.5 U | 50 U |
| Di-n-octyl phthalate | µg/kg | 96 | 4 | 4.2 | 6.2 J | 27 | G064 | 15 | 13 | 25 | 1.7 U | 100 U | HC-SS02; HC-SS03; HC-SS04; HC-SS30 | 4.6 | 0.85 U | 31 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | µg/kg | 96 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.3 U | 130 U | G783 | 3.3 | 1.3 U | 10 U |
| 1,2-Dichlorobenzene | µg/kg | 96 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 U | 150 U | G783 | 3.5 | 1.5 U | 7.5 U |
| 1,3-Dichlorobenzene | µg/kg | 96 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.5 U | 150 U | G783 | 3.5 | 1.5 U | 7.5 U |
| 1,4-Dichlorobenzene | µg/kg | 96 | 18 | 18.8 | 3 J | 190 | G002 | 24 | 11 J | 59 | 0.3 U | 190 | G002 | 7.5 | 1.5 U | 27 |
| 2,4-Dinitrotoluene | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 75 U | G783 | 2 | 0.75 U | 5.4 U |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| 2,6-Dinitrotoluene | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 U | 100 U | G783 | 2.4 | 1 U | 5 U |
| 2-Chloronaphthalene | µg/kg | 107 | 1 | 0.9 | 20 | 20 | UG07 | 20 | 20 | 20 | 0.0088 U | 80 U | G783 | 2.067 | 0.8 U | 4 U |
| 2-Nitroaniline | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.2 U | 160 U | G783 | 3.7 | 1.6 U | 8 U |
| 3,3'-Dichlorobenzidine | µg/kg | 89 | 1 | 1.1 | 5.1 J | 5.1 J | G052 | 5.1 | 5.1 J | 5.1 J | 3.7 U | 190 U | G783 | 4.8 | 1.9 U | 15 U |
| 3-Nitroaniline | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.5 U | 200 U | PA03; PA04 | 5.1 | 1.3 U | 9.2 U |
| 4-Bromophenyl phenyl ether | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.6 U | 80 U | G783 | 1.9 | 0.8 U | 4.5 U |
| 4-Chloroaniline | µg/kg | 90 | 1 | 1.1 | 15 J | 15 J | G036 | 15 | 15 J | 15 J | 1.9 U | 95 U | G783 | 2.9 | 0.95 U | 13 J |
| 4-Chlorophenyl phenyl ether | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 70 U | G783 | 1.7 | 0.7 U | 4.2 U |
| 4-Nitroaniline | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.8 U | 90 U | G783 | 2.3 | 0.9 U | 4.7 U |
| Aniline | µg/kg | 89 | 9 | 10.1 | 4.5 J | 64 | G065 | 17 | 8.6 J | 50 | 1.5 U | 200 U | PA03; PA04 | 5.3 | 0.75 U | 17 J |
| Azobenzene | µg/kg | 90 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.1 U | 55 U | G783 | 1.4 | 0.55 U | 2.8 U |
| Benzoic acid | µg/kg | 91 | 6 | 6.6 | 100 J | 3400 | G058 | 689 | 133 J | 2610 | 96 UJ | 4800 U | G783 | 162 | 48 U | 365 |
| Benzyl alcohol | µg/kg | 96 | 25 | 26 | 2.4 J | 1800 | G060 | 100 | 5.3 J | 270 | 2.1 U | 1800 | G060 | 30 | 2.1 U | 63 |
| Bis(2-chloro-1-methylethyl) ether | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | PA03; PA04 | 5 | 5 U | 5 U |
| Bis(2-chloroethoxy) methane | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 75 U | G783 | 1.8 | 0.75 U | 4.3 U |
| Bis(2-chloroethyl) ether | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 95 U | G783 | 2.3 | 0.95 U | 4.9 U |
| Bis(2-chloroisopropyl) ether | µg/kg | 90 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 130 U | G783 | 3 | 1.3 U | 6.5 U |
| Carbazole | µg/kg | 90 | 43 | 47.8 | 1.4 J | 220 | G003 | 12.7 | 4 J | 28.7 J | 1.3 U | 220 | G003 | 7.03 | 1.45 J | 22.4 J |
| Dibenzofuran | µg/kg | 110 | 70 | 63.6 | 0.52 J | 440 | WRS16 | 21.6 | 3.13 | 68.9 | 0.52 J | 440 | WRS16 | 15 | 2.5 U | 39.3 |
| Hexachlorobenzene | µg/kg | 149 | 60 | 40.3 | 0.094 J | 3.4 | G100 | 0.456 | 0.28 J | 1.42 | 0.068 U | 20 U | HC-SS02; HC-SS03; HC-SS04; HC-SS30 | 0.603 | 0.11 J | 2.56 |
| Hexachlorobutadiene | µg/kg | 149 | 7 | 4.7 | 0.065 J | 0.52 | G086 | 0.196 | 0.12 J | 0.451 J | 0.065 J | 20 U | HC-SS02; HC-SS03; HC-SS04; HC-SS30 | 0.422 | 0.0435 U | 0.508 |
| Hexachlorocyclopentadiene | µg/kg | 91 | 0 | 0 | -- | -- | -- | -- | -- | -- | 23 U | 730 U | G061 | 27 | 15 U | 75 U |
| Hexachloroethane | µg/kg | 127 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.037 UJ | 50 U | HC-SS02; HC-SS03; HC-SS04; HC-SS30 | 1.17 | 0.0395 U | 1.69 U |
| Isophorone | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 50 U | G783 | 1.3 | 0.5 U | 3.6 U |
| Nitrobenzene | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.2 U | 110 U | G783 | 2.6 | 1.1 U | 5.5 U |
| N-Nitrosodimethylamine | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.1 U | 310 U | G783 | 7.2 | 3.1 U | 16 U |
| N-Nitrosodiphenylamine | µg/kg | 96 | 3 | 3.1 | 1.8 J | 9.7 J | G019 | 6.7 | 8.5 J | 9.6 J | 1.6 U | 80 U | G783 | 2.5 | 0.8 U | 10 U |
| N-Nitrosodipropylamine | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.4 U | 120 U | G783 | 2.9 | 1.2 U | 6 U |
| Octachlorostyrene | µg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.017 UJ | 0.17 UJ | G048; G054 | 0.0504 | 0.054 UJ | 0.085 UJ |
| **Phenols** | | | | | | | | | | | | | | | | |
| 2,3,4,5-Tetrachlorophenol | µg/kg | 90 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.23 U | 20 U | G057 | 2.1 | 2.2 U | 3.2 U |
| 2,3,5,6-Tetrachlorophenol | µg/kg | 90 | 1 | 1.1 | 0.78 J | 0.78 J | GCA12E | 0.78 | 0.78 J | 0.78 J | 0.18 U | 25 U | G057 | 2.5 | 2.6 U | 3.9 U |
| 2,4,5-Trichlorophenol | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.73 U | 40 U | PA03; PA04 | 2.3 | 1.9 U | 3.5 U |
| 2,4,6-Trichlorophenol | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.12 U | 30 U | PA03; PA04 | 2.2 | 2 U | 3.4 U |
| 2,4-Dichlorophenol | µg/kg | 89 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 UJ | 100 U | PA03; PA04 | 2.4 | 0.5 U | 5 U |
| 2,4-Dimethylphenol | µg/kg | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 5.5 UJ | 280 UJ | G783 | 26 | 5.5 U | 100 UJ |
| 2,4-Dinitrophenol | µg/kg | 88 | 0 | 0 | -- | -- | -- | -- | -- | -- | 17 UJ | 430 U | G061 | 21 | 8.5 U | 70 U |
| 2-Chlorophenol | µg/kg | 89 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UJ | 100 U | G783 | 3 | 1 U | 10 U |
| 2-Methylphenol | µg/kg | 104 | 2 | 1.9 | 8.1 J | 24 J | G007 | 16 | 16 J | 23 J | 1.5 UJ | 210 UJ | PGC-10 | 4.8 | 0.75 U | 19 U |
| 2-Nitrophenol | µg/kg | 89 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 UJ | 75 U | G783 | 2.3 | 0.75 U | 7.5 U |
| 3- and 4-Methylphenol Coelution | µg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 100 U | 100 U | HC-SS02; HC-SS03; HC-SS04; HC-SS30 | 50 | 50 U | 50 U |
| 3,4-Dichlorophenol | µg/kg | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.88 U | 17 U | UG05 | 3.6 | 0.48 U | 8.4 U |
| 3,5-Dichlorophenol | µg/kg | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.8 U | 15 U | UG06 | 2.7 | 1.5 U | 6.3 U |
| 4,6-Dinitro-2-methylphenol | µg/kg | 89 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 UJ | 100 U | PA03; PA04 | 2.8 | 0.7 U | 7 U |
| 4-Chloro-3-methylphenol | µg/kg | 89 | 2 | 2.2 | 1.8 J | 2.6 J | G031 | 2.2 | 2.2 J | 2.6 J | 1.4 UJ | 70 U | G783 | 2.3 | 0.7 U | 7 U |
| 4-Methylphenol | µg/kg | 100 | 37 | 37 | 2 J | 360 | G048 | 34.1 | 15 J | 107 | 1.5 UJ | 360 | G048 | 17.3 | 3.38 UJ | 70.5 |
| 4-Nitrophenol | µg/kg | 89 | 0 | 0 | -- | -- | -- | -- | -- | -- | 18 UJ | 900 U | G783 | 24 | 9 U | 50 U |
| Pentachlorophenol | µg/kg | 107 | 12 | 11.2 | 3.2 NJ | 890 | G057 | 130 | 38 J | 510 | 0.17 U | 2100 U | PGC-10 | 38 | 2.8 U | 150 U |
| Phenol | µg/kg | 104 | 38 | 36.5 | 2.2 J | 80 | G045 | 15 | 9.9 J | 40.4 J | 2 UJ | 620 U | PGC-10 | 13.9 | 4.65 J | 50 U |
| **Petroleum** | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 61 | 22 | 36.1 | 6.4 J | 530 | PGC-10 | 142 | 79.5 J | 501 J | 0.064 U | 530 | PGC-10 | 59.9 | 14 U | 280 |
| Total Petroleum Hydrocarbons (Diesel)(silica gel treated) | mg/kg | 128 | 116 | 90.6 | 1.9 JT | 760 J | C090 | 70.1 | 33.5 J | 223 J | 1.3 U | 760 J | C090 | 63.9 | 30.5 J | 210 J |
| Total Petroleum Hydrocarbons (Gasoline) | mg/kg | 36 | 11 | 30.6 | 1.2 J | 75 | PGC-10 | 24 | 20 | 65 J | 0.91 U | 100 U | WRS11; WRS15; WRS16 | 14 | 5 U | 51 J |
| Total Petroleum Hydrocarbons (Heavy Oil) | mg/kg | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | 25 U | 250 U | WRS11; WRS15; WRS16 | 38 | 13 U | 130 U |
| Jet fuel A | mg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 100 U | WRS11; WRS15; WRS16 | 10 | 5 U | 50 U |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| JP-4 jet fuel | mg/kg | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 UJ | 100 U | WRS11; WRS15; WRS16 | 20 | 5 UJ | 50 U |
| Kerosene | mg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 100 U | WRS11; WRS15; WRS16 | 10 | 5 U | 50 U |
| Lube Oil | mg/kg | 14 | 10 | 71.4 | 78 | 8600 | WRS16 | 1940 | 567 | 6480 | 25 U | 8600 | WRS16 | 1390 | 359 | 5550 |
| Mineral spirits | mg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 100 U | WRS11; WRS15; WRS16 | 10 | 5 U | 50 U |
| Motor oil | mg/kg | 22 | 14 | 63.6 | 0.17 | 560 | WRS22 | 182 | 140 | 485 | 0.17 | 560 | WRS22 | 126 | 34 U | 443 |
| Naphtha distillate | mg/kg | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 UJ | 100 U | WRS11; WRS15; WRS16 | 20 | 5 UJ | 50 U |
| Non-petroleum hydrocarbons | mg/kg | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | 50 U | 500 U | WRS11; WRS15; WRS16 | 80 | 30 U | 300 U |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 21 | 20 | 95.2 | 10 J | 1800 J | UG07 | 405 | 300 | 822 J | 10 J | 1800 J | UG07 | 389 | 280 | 770 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 128 | 121 | 94.5 | 4.9 JT | 1500 J | C090 | 264 | 160 J | 910 | 3.1 U | 1500 J | C090 | 250 | 150 J | 875 J |
| Total Petroleum Hydrocarbons | mg/kg | 61 | 41 | 67.2 | 0.17 A | 2400 JT | UG07 | 382 | 244 A | 1130 T | 0.17 A | 2400 JT | UG07 | 270 | 125 U | 941 T |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 128 | 124 | 96.9 | 2.2 JA | 2260 JA | C090 | 324 | 187 J | 1020 J | 2.2 JA | 2260 JA | C090 | 314 | 181 J | 1010 J |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.083 U | 10 U | PA03; PA04 | 1.29 | 0.0483 UJ | 5 U |
| 1,1,1-Trichloroethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.12 U | 10 U | PA03; PA04 | 1.3 | 0.07 UJ | 5 U |
| 1,1,2,2-Tetrachloroethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.19 U | 10 U | PA03; PA04 | 1.3 | 0.11 UJ | 5 U |
| 1,1,2-Trichloroethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 10 U | PA03; PA04 | 1.3 | 0.065 UJ | 5 U |
| 1,1-Dichloroethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.094 U | 10 U | PA03; PA04 | 1.29 | 0.055 UJ | 5 U |
| 1,1-Dichloroethene | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 10 U | PA03; PA04 | 1.3 | 0.075 UJ | 5 U |
| 1,1-Dichloropropene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | PA03; PA04 | 5 | 5 U | 5 U |
| 1,2,3-Trichlorobenzene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| 1,2,3-Trichloropropane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.28 U | 10 U | PA03; PA04 | 1.4 | 0.16 UJ | 5 U |
| 1,2,4-Trimethylbenzene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| 1,2-Dibromo-3-chloropropane | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| 1,2-Dichloroethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.15 U | 10 U | PA03; PA04 | 1.3 | 0.09 UJ | 5 U |
| 1,2-Dichloropropane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 10 U | PA03; PA04 | 1.3 | 0.06 UJ | 5 U |
| 1,3,5-Trimethylbenzene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| 1,3-Dichloropropane | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | PA03; PA04 | 5 | 5 U | 5 U |
| 1,4-Dichloro-trans-2-butene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.51 U | 0.66 U | UG07 | 0.29 | 0.29 U | 0.32 UJ |
| 1-Methyl-4-isopropylbenzene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| 2,2-Dichloropropane | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | PA03; PA04 | 5 | 5 U | 5 U |
| 2-Chloroethyl vinyl ether | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.23 U | 0.3 U | UG07 | 0.13 | 0.13 U | 0.15 UJ |
| 2-Chlorotoluene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| 4-Chlorotoluene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| Acetone | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 9.1 U | 100 U | PA03; PA04 | 16 | 5.5 UJ | 50 U |
| Acrylonitrile | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.63 U | 0.82 U | UG07 | 0.36 | 0.36 U | 0.4 UJ |
| Benzene | µg/kg | 24 | 1 | 4.2 | 0.15 J | 0.15 J | UG07 | 0.15 | 0.15 J | 0.15 J | 0.068 U | 10 U | PA03; PA04 | 2.72 | 3.23 U | 4.98 U |
| Bromobenzene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | PA03; PA04 | 5 | 5 U | 5 U |
| Bromochloromethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.15 U | 10 U | PA03; PA04 | 1.3 | 0.09 UJ | 5 U |
| Bromodichloromethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.062 U | 10 U | PA03; PA04 | 1.28 | 0.0358 UJ | 5 U |
| Bromoform | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.19 U | 10 U | PA03; PA04 | 1.3 | 0.11 UJ | 5 U |
| Bromomethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.43 U | 10 U | PA03; PA04 | 1.4 | 0.25 UJ | 5 U |
| BTEX | µg/kg | 24 | 1 | 4.2 | 0.15 JT | 0.15 JT | UG07 | 0.15 | 0.15 JT | 0.15 JT | 0.15 JT | 10 UT | PA03; PA04 | 2.7 | 3.2 U | 5 U |
| Carbon disulfide | µg/kg | 8 | 1 | 12.5 | 0.16 J | 0.16 J | UG07 | 0.16 | 0.16 J | 0.16 J | 0.11 U | 10 U | PA03; PA04 | 1.3 | 0.06 UJ | 5 U |
| Carbon tetrachloride | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.077 U | 10 U | PA03; PA04 | 1.28 | 0.0448 UJ | 5 U |
| Chlorobenzene | µg/kg | 8 | 1 | 12.5 | 0.12 J | 0.12 J | UG07 | 0.12 | 0.12 J | 0.12 J | 0.092 U | 10 U | PA03; PA04 | 1.3 | 0.055 UJ | 5 U |
| Chlorodibromomethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.16 U | 10 U | PA03; PA04 | 1.3 | 0.09 UJ | 5 U |
| Chloroethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.31 U | 10 U | PA03; PA04 | 1.4 | 0.18 UJ | 5 U |
| Chloroform | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 10 U | PA03; PA04 | 1.3 | 0.075 UJ | 5 U |
| Chloromethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.12 U | 10 U | PA03; PA04 | 1.3 | 0.07 UJ | 5 U |
| cis-1,2-Dichloroethene | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.15 U | 10 U | PA03; PA04 | 1.3 | 0.09 UJ | 5 U |
| cis-1,3-Dichloropropene | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.095 U | 10 U | PA03; PA04 | 1.29 | 0.0575 UJ | 5 U |
| Dichlorodifluoromethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.091 U | 10 U | PA03; PA04 | 1.29 | 0.055 UJ | 5 U |
| Ethylbenzene | µg/kg | 24 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.078 U | 10 U | PA03; PA04 | 2.71 | 3.23 U | 4.98 U |
| Ethylene dibromide | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.094 U | 40 U | PA03; PA04 | 5.04 | 0.055 UJ | 20 U |
| Isopropylbenzene | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 40 U | PA03; PA04 | 5.1 | 0.08 UJ | 20 U |
| m,p-Xylene | µg/kg | 24 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.2 UJ | 10 U | PA03; PA04 | 2.7 | 3.2 U | 5 U |
| Methyl iodide | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.51 U | 0.66 U | UG07 | 0.29 | 0.29 U | 0.32 UJ |
| Methyl isobutyl ketone | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.77 U | 40 U | PA03; PA04 | 5.3 | 0.45 UJ | 20 U |
| Methyl n-butyl ketone | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 5.4 U | 40 U | PA03; PA04 | 7.3 | 3.2 UJ | 20 U |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Methyl tert-butyl ether | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 0.15 U | UG07 | 0.063 | 0.063 U | 0.073 UJ |
| Methylene bromide | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 10 U | PA03; PA04 | 1.3 | 0.065 UJ | 5 U |
| Methylene chloride | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.76 U | 20 U | PA03; PA04 | 3.1 | 0.83 UJ | 10 U |
| Methylethyl ketone | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| n-Butylbenzene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| n-Propylbenzene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| o-Xylene | µg/kg | 24 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.088 U | 10 U | PA03; PA04 | 2.71 | 3.23 U | 4.98 U |
| Sec-butylbenzene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| Styrene | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.15 U | 10 U | PA03; PA04 | 1.3 | 0.085 UJ | 5 U |
| tert-Butylbenzene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| Tetrachloroethene | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 10 U | PA03; PA04 | 1.3 | 0.08 UJ | 5 U |
| Toluene | µg/kg | 24 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 10 U | PA03; PA04 | 2.7 | 3.2 U | 5 U |
| trans-1,2-Dichloroethene | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.091 U | 10 U | PA03; PA04 | 1.29 | 0.055 UJ | 5 U |
| trans-1,3-Dichloropropene | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.1 U | 10 U | PA03; PA04 | 1.3 | 0.06 UJ | 5 U |
| Trichloroethene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 10 U | PA03; PA04 | 1.7 | 1.3 U | 5 U |
| Trichlorofluoromethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.54 U | 10 U | PA03; PA04 | 1.5 | 0.32 UJ | 5 U |
| Vinyl chloride | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.22 U | 10 U | PA03; PA04 | 1.3 | 0.13 UJ | 5 U |
| Xylene | µg/kg | 24 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.2 UJT | 10 UT | PA03; PA04 | 2.7 | 3.2 U | 5 U |
| **Excluding All Zidell Data** | | | | | | | | | | | | | | | | |
| **Grain Size** | | | | | | | | | | | | | | | | |
| >10 Phi clay | percent | 7 | 7 | 100 | 0.27 T | 4.8 | G102-2 | 2.02 | 0.83 T | 4.63 | 0.27 T | 4.8 | G102-2 | 2.02 | 0.83 T | 4.63 |
| >9 Phi clay | percent | 90 | 90 | 100 | 0 T | 14.6 | G015 | 1.9 | 1.04 | 5.07 | 0 T | 14.6 | G015 | 1.9 | 1.04 | 5.07 |
| 8-9 Phi clay | percent | 97 | 97 | 100 | 0 | 5.78 | G015 | 1.269 | 0.9 | 3.854 | 0 | 5.78 | G015 | 1.269 | 0.9 | 3.854 |
| 9-10 Phi clay | percent | 7 | 7 | 100 | 0.4 T | 3.19 | G102-2 | 1.65 | 1.81 | 3.03 | 0.4 T | 3.19 | G102-2 | 1.65 | 1.81 | 3.03 |
| Clay | percent | 18 | 18 | 100 | 0.23 | 15 | PGC-11 | 3.98 | 3.06 | 13.8 | 0.23 | 15 | PGC-11 | 3.98 | 3.06 | 13.8 |
| Coarse sand | percent | 111 | 111 | 100 | 0.17 JT | 46.5 | PGC-02 | 8.33 | 5.71 | 29.7 | 0.17 JT | 46.5 | PGC-02 | 8.33 | 5.71 | 29.7 |
| Coarse silt | percent | 97 | 97 | 100 | 0.07 | 43.5 | G009 | 7.4 | 3.95 | 23.2 | 0.07 | 43.5 | G009 | 7.4 | 3.95 | 23.2 |
| Fine gravel | percent | 102 | 102 | 100 | 0 | 27.9 | G064 | 5.71 | 2.7 | 22.1 | 0 | 27.9 | G064 | 5.71 | 2.7 | 22.1 |
| Fine sand | percent | 111 | 111 | 100 | 1.27 | 54.9 | UG04-2 | 18.7 | 15.3 T | 48.6 | 1.27 | 54.9 | UG04-2 | 18.7 | 15.3 T | 48.6 |
| Fine silt | percent | 97 | 97 | 100 | 0 | 16.4 | G011 | 2.66 | 1.63 T | 9.4 | 0 | 16.4 | G011 | 2.66 | 1.63 T | 9.4 |
| Fines | percent | 115 | 115 | 100 | 0.3 T | 73.5 T | G015 | 19.8 | 14.3 T | 60.9 | 0.3 T | 73.5 T | G015 | 19.8 | 14.3 T | 60.9 |
| Gravel | percent | 11 | 11 | 100 | 0 T | 52 | G101 | 10.2 | 1.06 JT | 50.5 | 0 T | 52 | G101 | 10.2 | 1.06 JT | 50.5 |
| Medium gravel | percent | 102 | 102 | 100 | 0 T | 80 | PGC-12 | 23.01 | 6.3 | 70.46 | 0 T | 80 | PGC-12 | 23.01 | 6.3 | 70.46 |
| Medium sand | percent | 111 | 111 | 100 | 0.98 | 58.7 T | C099 | 13.3 | 11.2 T | 36.7 | 0.98 | 58.7 T | C099 | 13.3 | 11.2 T | 36.7 |
| Medium silt | percent | 97 | 97 | 100 | 0 T | 15.7 | G022 | 4.06 | 2.77 | 13.2 | 0 T | 15.7 | G022 | 4.06 | 2.77 | 13.2 |
| Sand | percent | 4 | 4 | 100 | 30 | 91 | HC-SS04; HC-SS30 | 69 | 78 | 91 | 30 | 91 | HC-SS04; HC-SS30 | 69 | 78 | 91 |
| Silt | percent | 18 | 18 | 100 | 0.83 | 47.5 | PGC-08 | 19 | 20.8 | 42.6 | 0.83 | 47.5 | PGC-08 | 19 | 20.8 | 42.6 |
| Very coarse sand | percent | 111 | 111 | 100 | 0 T | 29.8 | PGC-02 | 4.27 | 2.46 | 13.8 | 0 T | 29.8 | PGC-02 | 4.27 | 2.46 | 13.8 |
| Very fine sand | percent | 111 | 111 | 100 | 0.03 | 41.9 | G051 | 11.2 | 7.52 | 32.8 | 0.03 | 41.9 | G051 | 11.2 | 7.52 | 32.8 |
| Very fine silt | percent | 97 | 97 | 100 | 0.01 | 8.61 | G013 | 1.778 | 1.19 | 5.084 | 0.01 | 8.61 | G013 | 1.778 | 1.19 | 5.084 |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Ammonia | mg/kg | 14 | 14 | 100 | 0.64 T | 179 | G102-2 | 50.8 | 45.3 | 135 | 0.64 T | 179 | G102-2 | 50.8 | 45.3 | 135 |
| Cyanide | mg/kg | 12 | 3 | 25 | 0.12 J | 0.24 J | PGC-12 | 0.17 | 0.16 J | 0.23 J | 0.12 J | 0.45 UJ | PGC-08 | 0.17 | 0.17 UJ | 0.23 J |
| Specific Gravity | NA | 10 | 10 | 100 | 1.38 | 2.43 | C782 | 1.64 | 1.59 | 2.11 | 1.38 | 2.43 | C782 | 1.64 | 1.59 | 2.11 |
| Sulfide | mg/kg | 25 | 23 | 92 | 0.55 J | 71 | G102-2 | 12.8 | 6.1 J | 55.4 J | 0.55 J | 71 | G102-2 | 11.8 | 3.86 T | 53 J |
| Total organic carbon | percent | 165 | 165 | 100 | 0.033 | 13.1 | G045 | 1.069 | 0.81 | 2.292 | 0.033 | 13.1 | G045 | 1.069 | 0.81 | 2.292 |
| Total solids | percent | 164 | 164 | 100 | 30.8 | 98.5 T | G115 | 68.5 | 68.9 | 91.9 | 30.8 | 98.5 T | G115 | 68.5 | 68.9 | 91.9 |
| **Metals** | | | | | | | | | | | | | | | | |
| Aluminum | mg/kg | 141 | 141 | 100 | 3940 | 32200 | UG07 | 13500 | 11700 | 26400 T | 3940 | 32200 | UG07 | 13500 | 11700 | 26400 T |
| Antimony | mg/kg | 147 | 142 | 96.6 | 0.05 | 11.6 J | G094 | 0.464 | 0.17 J | 1.26 J | 0.04 U | 11.6 J | G094 | 0.481 | 0.171 J | 1.26 J |
| Arsenic | mg/kg | 159 | 155 | 97.5 | 1.07 | 126 | G006 | 4.71 | 2.89 T | 8.17 J | 1.07 | 126 | G006 | 4.62 | 2.79 | 7.94 J |
| Cadmium | mg/kg | 159 | 154 | 96.9 | 0.03 J | 1.7 | G059 | 0.2316 | 0.1635 | 0.6719 | 0.03 J | 1.7 | G059 | 0.2282 | 0.156 | 0.6684 |
| Chromium | mg/kg | 155 | 155 | 100 | 4.51 | 189 | G115 | 19.4 | 17.2 | 36 | 4.51 | 189 | G115 | 19.4 | 17.2 | 36 |
| Copper | mg/kg | 159 | 157 | 98.7 | 8.39 | 366 | G094 | 32.6 | 23.9 | 71.4 J | 8.39 | 366 | G094 | 32.3 | 23.9 | 70.9 J |
| Iron | mg/kg | 12 | 12 | 100 | 20100 | 34300 | PGC-03 | 29800 | 30500 | 34100 | 20100 | 34300 | PGC-03 | 29800 | 30500 | 34100 |
| Lead | mg/kg | 159 | 159 | 100 | 1.57 J | 457 | G094 | 45.9 | 19.2 | 189 J | 1.57 J | 457 | G094 | 45.9 | 19.2 | 189 J |
| Manganese | mg/kg | 5 | 5 | 100 | 326 | 482 | GCR12W | 430 | 470 | 481 | 326 | 482 | GCR12W | 430 | 470 | 481 |
| Mercury | mg/kg | 159 | 155 | 97.5 | 0.005 J | 29.2 J | C029 | 0.3073 | 0.041 | 0.4394 | 0.005 J | 29.2 J | C029 | 0.302 | 0.042 | 0.4338 |
| Nickel | mg/kg | 134 | 134 | 100 | 8.07 | 39.6 | G093 | 17.1 | 16.8 J | 27.7 | 8.07 | 39.6 | G093 | 17.1 | 16.8 J | 27.7 |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Selenium | mg/kg | 137 | 110 | 80.3 | 0.02 J | 0.7 J | O33-S006 | 0.126 | 0.08 | 0.4 J | 0.02 J | 0.7 J | O33-S006 | 0.107 | 0.07 J | 0.4 J |
| Silver | mg/kg | 159 | 149 | 93.7 | 0.013 J | 6.34 J | PGC-06 | 0.3834 | 0.135 | 1.65 J | 0.013 J | 6.34 J | PGC-06 | 0.3613 | 0.125 | 1.65 J |
| Thallium | mg/kg | 5 | 5 | 100 | 0.04 J | 0.081 J | GCRSP12E | 0.066 | 0.07 | 0.0804 J | 0.04 J | 0.081 J | GCRSP12E | 0.066 | 0.07 | 0.0804 J |
| Zinc | mg/kg | 159 | 159 | 100 | 22.8 | 1450 | G094 | 113 | 77.7 J | 293 J | 22.8 | 1450 | G094 | 113 | 77.7 J | 293 J |
| **Butyltins** | | | | | | | | | | | | | | | | |
| Butyltin ion | µg/kg | 94 | 47 | 50 | 0.27 J | 81.1 T | G005 | 3.93 | 1.5 J | 7.91 | 0.032 U | 81.1 T | G005 | 1.99 | 0.3 J | 5.54 |
| Dibutyltin ion | µg/kg | 94 | 52 | 55.3 | 0.15 NJ | 1300 T | G005 | 28.5 | 1.2 J | 17.5 | 0.03 U | 1300 T | G005 | 15.8 | 0.508 J | 12.1 |
| Tetrabutyltin | µg/kg | 94 | 1 | 1.1 | 39 | 39 | G005 | 39 | 39 | 39 | 0.074 U | 39 | G005 | 0.546 | 0.06 U | 0.456 U |
| Tributyltin ion | µg/kg | 94 | 36 | 38.3 | 0.4 J | 1700 JT | G005 | 55 | 1.3 J | 50 | 0.06 U | 1700 JT | G005 | 21.1 | 0.29 U | 29.8 |
| **PCB Aroclors** | | | | | | | | | | | | | | | | |
| Aroclor 1016 | µg/kg | 151 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.73 U | 10 U | HC-SS02; HC-SS03; HC-SS04; HC-SS30; PA03; PA04; UG08 | 1 | 0.65 UT | 3.3 UJ |
| Aroclor 1221 | µg/kg | 151 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.73 U | 20 U | HC-SS02; HC-SS03; HC-SS04; HC-SS30; PA03; PA04 | 1.2 | 0.65 U | 3.8 U |
| Aroclor 1232 | µg/kg | 151 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.73 U | 15 U | G013 | 1.1 | 0.65 UJ | 5 U |
| Aroclor 1242 | µg/kg | 151 | 13 | 8.6 | 5.4 | 220 | G030 | 42.6 | 19 | 154 | 0.73 U | 220 | G030 | 4.8 | 0.65 U | 13.8 |
| Aroclor 1248 | µg/kg | 151 | 4 | 2.6 | 1.8 J | 130 | C090 | 61 | 57 J | 120 J | 0.73 U | 130 | C090 | 2.5 | 0.65 U | 5 U |
| Aroclor 1254 | µg/kg | 151 | 75 | 49.7 | 1.3 J | 1600 J | G048 | 57.7 | 19 | 113 | 0.73 U | 1600 J | G048 | 29.5 | 3.2 | 69 |
| Aroclor 1260 | µg/kg | 151 | 96 | 63.6 | 2.2 J | 2600 | G048 | 58.3 | 13.1 | 143 | 0.73 U | 2600 | G048 | 37.8 | 5 J | 83 |
| Aroclor 1262 | µg/kg | 145 | 1 | 0.7 | 70 | 70 | O33-S004 | 70 | 70 | 70 | 0.73 U | 70 | O33-S004 | 1.2 | 0.65 U | 1.4 U |
| Aroclor 1268 | µg/kg | 145 | 6 | 4.1 | 2.6 | 37 | UG07 | 14 | 11 | 32 | 0.73 U | 37 | UG07 | 1.3 | 0.65 U | 2.4 |
| Aroclors | µg/kg | 151 | 111 | 73.5 | 1.3 JT | 4200 JT | G048 | 98 | 21.8 JT | 305 J | 0.73 UT | 4200 JT | G048 | 72.5 | 10.9 JT | 225 |
| **PCB Congeners** | | | | | | | | | | | | | | | | |
| PCB001 | pg/g | 8 | 5 | 62.5 | 5.4 J | 633 | GCRSP12E | 217 | 9.26 | 593 | 5.01 U | 633 | GCRSP12E | 138 | 6.39 J | 563 |
| PCB002 | pg/g | 8 | 5 | 62.5 | 5.19 | 44.4 | GCRSP12E | 20.6 | 14.1 | 41.4 | 2.3 U | 44.4 | GCRSP12E | 14.5 | 7.91 | 39.2 |
| PCB003 | pg/g | 8 | 5 | 62.5 | 4.98 J | 186 T | PGC-01 | 75.3 | 10.9 | 182 | 4.98 J | 186 T | PGC-01 | 48.9 | 8.5 J | 178 |
| PCB004 | pg/g | 3 | 1 | 33.3 | 289 T | 289 T | PGC-01 | 289 | 289 T | 289 T | 115 U | 289 T | PGC-01 | 140 | 72.5 U | 267 |
| PCB004 & 010 | pg/g | 5 | 2 | 40 | 35.3 | 14500 | GCRSP12E | 7270 | 7270 | 13800 | 10 U | 14500 | GCRSP12E | 2910 | 12.5 U | 11600 |
| PCB005 | pg/g | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10.5 UT | 14.5 U | PGC-10 | 6.08 | 5.75 U | 7.1 U |
| PCB005 & 008 | pg/g | 5 | 3 | 60 | 14.6 | 3640 | GCRSP12E | 1250 | 86.7 | 3280 | 14.6 | 3640 | GCRSP12E | 753 | 14.6 | 2930 |
| PCB006 | pg/g | 8 | 3 | 37.5 | 21.5 | 799 | GCRSP12E | 299 | 75.4 T | 727 | 10 U | 799 | GCRSP12E | 117 | 12.1 U | 546 |
| PCB007 | pg/g | 3 | 1 | 33.3 | 24.3 T | 24.3 T | PGC-01 | 24.3 | 24.3 T | 24.3 T | 11.5 U | 24.3 T | PGC-01 | 12.4 | 7.25 U | 22.6 |
| PCB007 & 009 | pg/g | 5 | 2 | 40 | 10.8 | 400 | GCRSP12E | 205 | 205 | 381 | 10 U | 400 | GCRSP12E | 88 | 11.8 UT | 322 |
| PCB008 | pg/g | 3 | 1 | 33.3 | 205 T | 205 T | PGC-01 | 205 | 205 T | 205 T | 30 U | 205 T | PGC-01 | 97.5 | 72.5 U | 192 |
| PCB009 | pg/g | 3 | 1 | 33.3 | 26.5 T | 26.5 T | PGC-01 | 26.5 | 26.5 T | 26.5 T | 11.5 U | 26.5 T | PGC-01 | 13.2 | 7.25 U | 24.6 |
| PCB010 | pg/g | 3 | 1 | 33.3 | 16.6 T | 16.6 T | PGC-01 | 16.6 | 16.6 T | 16.6 T | 11.5 U | 16.6 T | PGC-01 | 9.87 | 7.25 U | 15.7 |
| PCB011 | pg/g | 8 | 4 | 50 | 35.1 T | 94.1 | GCR12W | 67 | 69.5 | 90.7 | 35.1 T | 274 UT | PGC-01 | 86 | 82.9 | 136 U |
| PCB012 & 013 | pg/g | 8 | 3 | 37.5 | 16.1 | 295 | GCRSP12E | 114 | 29.9 T | 268 | 10 U | 295 | GCRSP12E | 49.5 | 13.5 U | 202 |
| PCB014 | pg/g | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 9.44 U | 50 U | GCRSP12E | 11.9 | 11.6 U | 21.3 U |
| PCB015 | pg/g | 8 | 6 | 75 | 13.1 | 1240 | GCRSP12E | 250 | 61.5 | 954 J | 13.1 | 1240 | GCRSP12E | 198 | 61.5 | 840 J |
| PCB016 | pg/g | 3 | 1 | 33.3 | 105 T | 105 T | PGC-01 | 105 | 105 T | 105 T | 19.9 U | 105 T | PGC-01 | 44 | 17.2 U | 96.2 |
| PCB016 & 032 | pg/g | 5 | 5 | 100 | 19.9 | 14100 | GCRSP12E | 2920 | 67.7 JT | 11400 | 19.9 | 14100 | GCRSP12E | 2920 | 67.7 JT | 11400 |
| PCB017 | pg/g | 8 | 6 | 75 | 14.4 | 23300 | GCRSP12E | 3930 | 60.5 | 17500 | 10.3 U | 23300 | GCRSP12E | 2950 | 30.6 J | 15200 |
| PCB018 | pg/g | 5 | 5 | 100 | 26.9 | 4630 | GCRSP12E | 985 | 56.9 | 3740 | 26.9 | 4630 | GCRSP12E | 985 | 56.9 | 3740 |
| PCB018 & 030 | pg/g | 3 | 1 | 33.3 | 164 T | 164 T | PGC-01 | 164 | 164 T | 164 T | 20.9 U | 164 T | PGC-01 | 66.1 | 23.7 U | 150 |
| PCB019 | pg/g | 8 | 6 | 75 | 3.93 J | 30700 | GCRSP12E | 5130 | 15.4 J | 23000 | 3.93 J | 30700 | GCRSP12E | 3850 | 6.33 J | 20000 |
| PCB020 | pg/g | 3 | 3 | 100 | 7.66 J | 447 T | PGC-01 | 166 | 44 J | 407 J | 7.66 J | 447 T | PGC-01 | 166 | 44 J | 407 J |
| PCB020 & 021 & 033 | pg/g | 5 | 5 | 100 | 17.7 | 2470 | GCRSP12E | 557 | 75.7 JT | 2010 | 17.7 | 2470 | GCRSP12E | 557 | 75.7 JT | 2010 |
| PCB020 & 028 | pg/g | 3 | 1 | 33.3 | 507 T | 507 T | PGC-01 | 507 | 507 T | 507 T | 64.5 U | 507 T | PGC-01 | 210 | 90 U | 465 |
| PCB021 & 033 | pg/g | 3 | 1 | 33.3 | 210 T | 210 T | PGC-01 | 210 | 210 T | 210 T | 32.2 U | 210 T | PGC-01 | 89.5 | 42.3 U | 193 |
| PCB022 | pg/g | 8 | 6 | 75 | 12.5 | 2300 | GCRSP12E | 465 | 112 J | 1780 | 12.5 | 2300 | GCRSP12E | 354 | 63.1 J | 1570 |
| PCB023 | pg/g | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.72 U | 58.1 U | PGC-10 | 12.8 | 9.35 U | 26.9 U |
| PCB024 | pg/g | 3 | 1 | 33.3 | 1.89 JT | 1.89 JT | PGC-01 | 1.89 | 1.89 JT | 1.89 JT | 1.89 JT | 58.1 U | PGC-10 | 18 | 23 U | 28.4 U |
| PCB024 & 027 | pg/g | 5 | 2 | 40 | 19.9 | 4510 | GCRSP12E | 2260 | 2260 | 4290 | 5.01 U | 4510 | GCRSP12E | 909 | 6.2 U | 3610 |
| PCB025 | pg/g | 8 | 7 | 87.5 | 4.2 J | 1390 | GCRSP12E | 218 | 24.8 | 987 J | 4.2 J | 1390 | GCRSP12E | 192 | 21 J | 920 J |
| PCB026 | pg/g | 5 | 4 | 80 | 10.3 | 2280 | GCRSP12E | 593 | 41.7 | 1950 | 10.3 | 2280 | GCRSP12E | 476 | 32 | 1830 |
| PCB026 & 029 | pg/g | 3 | 1 | 33.3 | 57.1 JT | 57.1 JT | PGC-01 | 57.1 | 57.1 JT | 57.1 JT | 9.34 U | 57.1 JT | PGC-01 | 25.1 | 13.6 U | 52.8 J |
| PCB027 | pg/g | 3 | 2 | 66.7 | 3.35 J | 17.2 JT | PGC-01 | 10.3 | 10.3 J | 16.5 J | 3.35 J | 58.1 U | PGC-10 | 16.5 | 17.2 JT | 27.9 J |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Units | # Analyzed | # Detected | % Detected | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th[b] | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th (half DL)[b] |
| PCB028 | pg/g | 5 | 5 | 100 | 43.1 | 6770 | GCRSP12E | 1470 | 93.8 | 5490 | 43.1 | 6770 | GCRSP12E | 1470 | 93.8 | 5490 |
| PCB029 | pg/g | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.72 U | 25 U | GCRSP12E | 5.88 | 5.85 UT | 11.2 U |
| PCB030 | pg/g | 5 | 1 | 20 | 48.5 | 48.5 | GCRSP12E | 48.5 | 48.5 | 48.5 | 4.72 U | 48.5 | GCRSP12E | 13.1 | 5.85 UT | 40 |
| PCB031 | pg/g | 8 | 6 | 75 | 30.4 JT | 3870 | GCRSP12E | 773 | 158 | 3000 | 30.4 JT | 3870 | GCRSP12E | 591 | 73.3 | 2650 |
| PCB032 | pg/g | 3 | 2 | 66.7 | 58.5 | 231 T | PGC-01 | 145 | 145 | 222 | 58.1 U | 231 T | PGC-01 | 106 | 58.5 | 214 |
| PCB034 | pg/g | 8 | 3 | 37.5 | 2.54 JT | 154 | GCRSP12E | 53.9 | 5.08 | 139 | 2.54 JT | 154 | GCRSP12E | 28.5 | 6.03 U | 110 |
| PCB035 | pg/g | 8 | 3 | 37.5 | 3.66 J | 33.5 | GCRSP12E | 15 | 7.7 | 30.9 | 3.66 J | 58.1 U | PGC-10 | 11.4 | 6.03 U | 31.9 |
| PCB036 | pg/g | 8 | 1 | 12.5 | 11.5 J | 11.5 J | GCRSP12E | 11.5 | 11.5 J | 11.5 J | 4.72 U | 58.1 U | PGC-10 | 12.7 | 8.85 J | 26.9 U |
| PCB037 | pg/g | 8 | 6 | 75 | 15.6 | 356 | GCRSP12E | 99.8 | 55.1 J | 291 | 15.6 | 356 | GCRSP12E | 78.7 | 25 | 265 |
| PCB038 | pg/g | 8 | 3 | 37.5 | 99.4 JT | 1290 | GCRSP12E | 537 | 222 | 1180 | 5.01 U | 1290 | GCRSP12E | 212 | 26 U | 916 |
| PCB039 | pg/g | 8 | 1 | 12.5 | 87.5 | 87.5 | GCRSP12E | 87.5 | 87.5 | 87.5 | 4.72 U | 87.5 | GCRSP12E | 22.2 | 13.6 U | 67 |
| PCB040 | pg/g | 5 | 4 | 80 | 10.9 | 332 | GCRSP12E | 105 | 39.1 | 291 | 10.9 | 332 | GCRSP12E | 85.4 | 19.8 | 277 |
| PCB040 & 041 & 071 | pg/g | 3 | 2 | 66.7 | 167 | 600 T | PGC-01 | 384 | 384 | 578 | 30.9 U | 600 T | PGC-01 | 261 | 167 | 557 |
| PCB041 & 064 & 071 & 072 | pg/g | 5 | 5 | 100 | 54.2 | 9230 | GCRSP12E | 2040 | 146 JT | 7520 | 54.2 | 9230 | GCRSP12E | 2040 | 146 JT | 7520 |
| PCB042 | pg/g | 3 | 2 | 66.7 | 49.3 | 176 T | PGC-01 | 113 | 113 | 170 | 11.5 U | 176 T | PGC-01 | 77 | 49.3 | 163 |
| PCB042 & 059 | pg/g | 5 | 5 | 100 | 18.9 | 2110 | GCRSP12E | 471 | 64.2 JT | 1710 | 18.9 | 2110 | GCRSP12E | 471 | 64.2 JT | 1710 |
| PCB043 & 049 | pg/g | 5 | 5 | 100 | 76.5 | 52900 | GCRSP12E | 11200 | 379 JT | 42800 | 76.5 | 52900 | GCRSP12E | 11200 | 379 JT | 42800 |
| PCB043 & 073 | pg/g | 3 | 2 | 66.7 | 24.6 J | 152 T | PGC-01 | 88.3 | 88.3 J | 146 J | 24.6 J | 152 T | PGC-01 | 83 | 72.5 U | 144 |
| PCB044 | pg/g | 5 | 5 | 100 | 33.8 T | 5250 | GCRSP12E | 1180 | 131 | 4270 | 33.8 T | 5250 | GCRSP12E | 1180 | 131 | 4270 |
| PCB044 & 047 & 065 | pg/g | 3 | 2 | 66.7 | 1050 | 5710 T | PGC-01 | 3380 | 3380 | 5480 | 107 U | 5710 T | PGC-01 | 2270 | 1050 | 5240 |
| PCB045 | pg/g | 5 | 5 | 100 | 7.34 | 442 | GCRSP12E | 105 | 15.9 T | 363 | 7.34 | 442 | GCRSP12E | 105 | 15.9 T | 363 |
| PCB045 & 051 | pg/g | 3 | 3 | 100 | 20.9 J | 2260 T | PGC-01 | 910 | 450 | 2080 | 20.9 J | 2260 T | PGC-01 | 910 | 450 | 2080 |
| PCB046 | pg/g | 8 | 5 | 62.5 | 18.3 J | 2660 | GCRSP12E | 573 | 69.8 | 2150 | 5.01 U | 2660 | GCRSP12E | 363 | 31.2 | 1760 |
| PCB047 | pg/g | 5 | 5 | 100 | 43.6 | 84900 | GCRSP12E | 18400 | 637 JT | 69200 | 43.6 | 84900 | GCRSP12E | 18400 | 637 JT | 69200 |
| PCB048 | pg/g | 3 | 1 | 33.3 | 44.2 JT | 44.2 JT | PGC-01 | 44.2 | 44.2 JT | 44.2 JT | 12 U | 44.2 JT | PGC-01 | 20.7 | 12 U | 41 J |
| PCB048 & 075 | pg/g | 5 | 5 | 100 | 10.4 | 2550 | GCRSP12E | 549 | 48.2 JT | 2060 | 10.4 | 2550 | GCRSP12E | 549 | 48.2 JT | 2060 |
| PCB049 & 069 | pg/g | 3 | 2 | 66.7 | 499 | 2430 T | PGC-01 | 1460 | 1460 | 2330 | 47.5 U | 2430 T | PGC-01 | 984 | 499 | 2240 |
| PCB050 | pg/g | 5 | 1 | 20 | 1460 | 1460 | GCRSP12E | 1460 | 1460 | 1460 | 4.72 U | 1460 | GCRSP12E | 295 | 5.85 UT | 1170 |
| PCB050 & 053 | pg/g | 3 | 3 | 100 | 11 J | 1140 T | PGC-01 | 469 | 257 | 1050 | 11 J | 1140 T | PGC-01 | 469 | 257 | 1050 |
| PCB051 | pg/g | 5 | 5 | 100 | 11.8 | 57900 | GCRSP12E | 12300 | 333 JT | 46900 | 11.8 | 57900 | GCRSP12E | 12300 | 333 JT | 46900 |
| PCB052 | pg/g | 3 | 1 | 33.3 | 984 T | 984 T | PGC-01 | 984 | 984 T | 984 T | 164 U | 984 T | PGC-01 | 403 | 143 U | 900 |
| PCB052 & 069 | pg/g | 5 | 5 | 100 | 114 | 47000 | GCRSP12E | 9700 | 190 JT | 37800 | 114 | 47000 | GCRSP12E | 9700 | 190 JT | 37800 |
| PCB053 | pg/g | 5 | 5 | 100 | 17.2 | 51200 | GCRSP12E | 10500 | 205 JT | 41200 | 17.2 | 51200 | GCRSP12E | 10500 | 205 JT | 41200 |
| PCB054 | pg/g | 8 | 5 | 62.5 | 36.6 J | 10200 | GCRSP12E | 2130 | 179 T | 8200 | 5.01 U | 10200 | GCRSP12E | 1340 | 61.8 J | 6700 |
| PCB055 | pg/g | 8 | 3 | 37.5 | 18.9 T | 511 | GCRSP12E | 203 | 80.5 | 468 | 5.01 U | 511 | GCRSP12E | 100 | 55 U | 360 |
| PCB056 | pg/g | 3 | 2 | 66.7 | 70.4 | 151 T | PGC-01 | 111 | 111 | 147 | 28.2 U | 151 T | PGC-01 | 78.5 | 70.4 | 143 |
| PCB056 & 060 | pg/g | 5 | 5 | 100 | 40.2 | 785 | GCRSP12E | 246 | 76.8 JT | 684 | 40.2 | 785 | GCRSP12E | 246 | 76.8 JT | 684 |
| PCB057 | pg/g | 8 | 2 | 25 | 25.4 | 149 | GCRSP12E | 87.2 | 87.2 | 143 | 5.01 U | 149 | GCRSP12E | 46.4 | 39 | 122 |
| PCB058 | pg/g | 8 | 1 | 12.5 | 24.6 J | 24.6 J | GCRSP12E | 24.6 | 24.6 J | 24.6 J | 4.72 U | 145 U | PGC-10 | 28 | 15.4 J | 67.3 U |
| PCB059 & 062 & 075 | pg/g | 3 | 3 | 100 | 5.13 J | 106 T | PGC-01 | 44 | 21 J | 97.5 J | 5.13 J | 106 T | PGC-01 | 44 | 21 J | 97.5 J |
| PCB060 | pg/g | 3 | 2 | 66.7 | 39 J | 62.6 JT | PGC-01 | 50.8 | 50.8 J | 61.4 J | 14.9 U | 62.6 JT | PGC-01 | 36.4 | 39 J | 60.2 J |
| PCB061 & 070 | pg/g | 5 | 5 | 100 | 103 | 3470 | GCRSP12E | 884 | 136 | 2890 | 103 | 3470 | GCRSP12E | 884 | 136 | 2890 |
| PCB061 & 070 & 074 & 076 | pg/g | 3 | 2 | 66.7 | 308 | 791 T | PGC-01 | 550 | 550 | 767 | 138 U | 791 T | PGC-01 | 389 | 308 | 743 |
| PCB062 | pg/g | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.72 U | 25 U | GCRSP12E | 5.88 | 5.85 UT | 11.2 U |
| PCB063 | pg/g | 8 | 5 | 62.5 | 12.1 J | 240 | GCRSP12E | 74.2 | 43.4 | 204 J | 5.01 U | 240 | GCRSP12E | 56.6 | 28.5 | 181 |
| PCB064 | pg/g | 3 | 1 | 33.3 | 175 T | 175 T | PGC-01 | 175 | 175 T | 175 T | 30.4 U | 175 T | PGC-01 | 73.7 | 31 U | 161 |
| PCB065 | pg/g | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.72 U | 25 U | GCRSP12E | 5.88 | 5.85 UT | 11.2 U |
| PCB066 | pg/g | 3 | 2 | 66.7 | 171 | 494 T | PGC-01 | 333 | 333 | 478 | 50.8 U | 494 T | PGC-01 | 230 | 171 | 462 |
| PCB066 & 076 | pg/g | 5 | 5 | 100 | 71.1 | 3380 | GCRSP12E | 824 | 118 JT | 2800 | 71.1 | 3380 | GCRSP12E | 824 | 118 JT | 2800 |
| PCB067 | pg/g | 8 | 4 | 50 | 3.52 J | 357 | GCRSP12E | 115 | 48.9 J | 315 | 3.52 J | 357 | GCRSP12E | 68.2 | 14.9 J | 258 |
| PCB068 | pg/g | 8 | 4 | 50 | 11.1 J | 845 | GCRSP12E | 250 | 71.9 J | 731 J | 5.01 U | 845 | GCRSP12E | 136 | 34.6 J | 579 J |
| PCB072 | pg/g | 3 | 2 | 66.7 | 2.28 J | 15.9 JT | PGC-01 | 9.09 | 9.09 J | 15.2 J | 2.28 J | 145 U | PGC-10 | 30.2 | 15.9 JT | 66.8 J |
| PCB073 | pg/g | 5 | 3 | 60 | 38.9 JT | 3320 | GCRSP12E | 1170 | 162 | 3000 | 5.01 U | 3320 | GCRSP12E | 706 | 38.9 JT | 2690 |
| PCB074 | pg/g | 5 | 5 | 100 | 34 | 756 | GCRSP12E | 227 | 82.4 JT | 649 | 34 | 756 | GCRSP12E | 227 | 82.4 JT | 649 |
| PCB077 | pg/g | 8 | 8 | 100 | 6.56 J | 140 | GCRSP12E | 37.5 | 15.5 J | 113 | 6.56 J | 140 | GCRSP12E | 37.5 | 15.5 J | 113 |
| PCB078 | pg/g | 8 | 1 | 12.5 | 21.7 J | 21.7 J | GCRSP12E | 21.7 | 21.7 J | 21.7 J | 4.72 U | 145 U | PGC-10 | 27.6 | 14 J | 67.3 U |
| PCB079 | pg/g | 8 | 4 | 50 | 2.92 J | 247 | GCRSP12E | 79 | 33.1 J | 218 | 2.92 J | 247 | GCRSP12E | 50.4 | 10.9 J | 186 |
| PCB080 | pg/g | 8 | 1 | 12.5 | 19.1 JT | 19.1 JT | PGC-01 | 19.1 | 19.1 JT | 19.1 JT | 4.72 U | 145 U | PGC-10 | 22.3 | 9.35 U | 67.3 U |
| PCB081 | pg/g | 8 | 2 | 25 | 21.7 | 25.7 | GCRSP12E | 23.7 | 23.7 | 25.5 | 1.21 U | 145 U | PGC-10 | 29.1 | 23.7 | 67.3 U |
| PCB082 | pg/g | 8 | 6 | 75 | 41.1 | 558 | GCRSP12E | 168 | 93.9 | 461 | 24 U | 558 | GCRSP12E | 130 | 53.3 J | 423 |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| PCB083 | pg/g | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.72 U | 25 U | GCRSP12E | 5.88 | 5.85 UT | 11.2 U |
| PCB083 & 099 | pg/g | 3 | 2 | 66.7 | 441 | 2290 T | PGC-01 | 1370 | 1370 | 2200 | 116 U | 2290 T | PGC-01 | 930 | 441 | 2110 |
| PCB084 | pg/g | 3 | 1 | 33.3 | 430 T | 430 T | PGC-01 | 430 | 430 T | 430 T | 59.5 U | 430 T | PGC-01 | 172 | 57 U | 393 |
| PCB084 & 092 | pg/g | 5 | 5 | 100 | 121 | 7600 | GCRSP12E | 2130 | 174 JT | 6610 | 121 | 7600 | GCRSP12E | 2130 | 174 JT | 6610 |
| PCB085 & 116 | pg/g | 8 | 7 | 87.5 | 40.2 JT | 757 | GCRSP12E | 204 | 85.2 | 598 | 29.7 U | 757 | GCRSP12E | 180 | 74.1 | 572 |
| PCB086 | pg/g | 5 | 1 | 20 | 25.2 | 25.2 | GCRSP12E | 25.2 | 25.2 | 25.2 | 4.72 U | 25.2 | GCRSP12E | 8.42 | 5.85 UT | 21.4 |
| PCB086 & 087 & 097 & 109 & 119 & 125 | pg/g | 3 | 2 | 66.7 | 458 | 1830 T | PGC-01 | 1140 | 1140 | 1760 | 162 U | 1830 T | PGC-01 | 790 | 458 | 1690 |
| PCB087 & 117 & 125 | pg/g | 5 | 5 | 100 | 114 JT | 3370 | GCRSP12E | 1090 | 167 | 3030 | 114 JT | 3370 | GCRSP12E | 1090 | 167 | 3030 |
| PCB088 & 091 | pg/g | 8 | 7 | 87.5 | 49.6 | 21200 | GCRSP12E | 3680 | 357 | 15500 | 31.4 U | 21200 | GCRSP12E | 3230 | 286 J | 14500 |
| PCB089 | pg/g | 8 | 4 | 50 | 3.07 J | 45.6 | GCRSP12E | 18.6 | 12.8 J | 41.2 | 3.07 J | 145 U | PGC-10 | 20.2 | 7.85 J | 63.1 |
| PCB090 & 101 | pg/g | 5 | 5 | 100 | 344 | 20100 | GCRSP12E | 7520 | 525 JT | 19300 | 344 | 20100 | GCRSP12E | 7520 | 525 JT | 19300 |
| PCB090 & 101 & 113 | pg/g | 3 | 2 | 66.7 | 1140 | 5250 T | PGC-01 | 3200 | 3200 | 5040 | 286 U | 5250 T | PGC-01 | 2180 | 1140 | 4840 |
| PCB092 | pg/g | 3 | 2 | 66.7 | 224 | 1100 T | PGC-01 | 662 | 662 | 1060 | 43.9 U | 1100 T | PGC-01 | 449 | 224 | 1010 |
| PCB093 | pg/g | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.72 U | 25 U | GCRSP12E | 5.88 | 5.85 UT | 11.2 U |
| PCB093 & 100 | pg/g | 3 | 2 | 66.7 | 72.8 J | 774 T | PGC-01 | 423 | 423 J | 739 J | 72.8 J | 774 T | PGC-01 | 306 | 72.8 J | 704 J |
| PCB094 | pg/g | 8 | 5 | 62.5 | 53.7 J | 2210 | GCRSP12E | 637 | 389 T | 1860 | 5.01 U | 2210 | GCRSP12E | 408 | 77.8 J | 1590 |
| PCB095 | pg/g | 3 | 2 | 66.7 | 640 | 2610 T | PGC-01 | 1630 | 1630 | 2510 | 191 U | 2610 T | PGC-01 | 1120 | 640 | 2410 |
| PCB095 & 098 & 102 | pg/g | 5 | 5 | 100 | 248 | 24300 | GCRSP12E | 7230 | 427 JT | 21600 | 248 | 24300 | GCRSP12E | 7230 | 427 JT | 21600 |
| PCB096 | pg/g | 8 | 5 | 62.5 | 39.4 J | 3380 | GCRSP12E | 796 | 208 T | 2760 | 5.01 U | 3380 | GCRSP12E | 508 | 65.7 J | 2300 |
| PCB097 | pg/g | 5 | 5 | 100 | 78.9 JT | 1720 | GCRSP12E | 519 | 132 | 1490 | 78.9 JT | 1720 | GCRSP12E | 519 | 132 | 1490 |
| PCB098 & 102 | pg/g | 3 | 3 | 100 | 4.58 J | 280 T | PGC-01 | 112 | 50.6 J | 257 J | 4.58 J | 280 T | PGC-01 | 112 | 50.6 J | 257 J |
| PCB099 | pg/g | 5 | 5 | 100 | 164 | 9810 | GCRSP12E | 2450 | 324 JT | 8190 | 164 | 9810 | GCRSP12E | 2450 | 324 JT | 8190 |
| PCB100 | pg/g | 5 | 3 | 60 | 115 JT | 10700 | GCRSP12E | 4100 | 1490 | 9780 | 5.01 U | 10700 | GCRSP12E | 2460 | 115 JT | 8860 |
| PCB103 | pg/g | 8 | 6 | 75 | 2.68 J | 4170 | GCRSP12E | 859 | 215 J | 3250 | 2.68 J | 4170 | GCRSP12E | 645 | 57.7 J | 2880 |
| PCB104 | pg/g | 8 | 4 | 50 | 3.7 J | 1030 | GCRSP12E | 292 | 66.5 J | 889 | 3.7 J | 1030 | GCRSP12E | 157 | 23.6 J | 702 |
| PCB105 | pg/g | 8 | 7 | 87.5 | 82.5 JT | 1540 | GCRSP12E | 526 | 202 | 1390 | 81.1 UJ | 1540 | GCRSP12E | 465 | 194 J | 1370 |
| PCB106 | pg/g | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 105 UT | 145 U | PGC-10 | 60.8 | 57.5 U | 71 U |
| PCB106 & 118 | pg/g | 5 | 5 | 100 | 229 JT | 5720 | GCRSP12E | 2200 | 472 | 5440 | 229 JT | 5720 | GCRSP12E | 2200 | 472 | 5440 |
| PCB107 | pg/g | 3 | 2 | 66.7 | 53.5 J | 225 JT | PGC-01 | 139 | 139 J | 216 J | 17.6 U | 225 JT | PGC-01 | 95.8 | 53.5 J | 208 J |
| PCB107 & 109 | pg/g | 5 | 5 | 100 | 22.6 | 1110 | GCRSP12E | 289 | 34.1 T | 938 | 22.6 | 1110 | GCRSP12E | 289 | 34.1 T | 938 |
| PCB108 & 112 | pg/g | 5 | 5 | 100 | 14.6 | 411 | GCRSP12E | 110 | 25.3 T | 345 | 14.6 | 411 | GCRSP12E | 110 | 25.3 T | 345 |
| PCB108 & 124 | pg/g | 3 | 2 | 66.7 | 22.5 J | 66.5 JT | PGC-01 | 44.5 | 44.5 J | 64.3 J | 7.92 U | 66.5 JT | PGC-01 | 31 | 22.5 J | 62.1 J |
| PCB110 | pg/g | 5 | 5 | 100 | 411 JT | 12700 | GCRSP12E | 4180 | 592 | 11500 | 411 JT | 12700 | GCRSP12E | 4180 | 592 | 11500 |
| PCB110 & 115 | pg/g | 3 | 2 | 66.7 | 816 | 3010 T | PGC-01 | 1910 | 1910 | 2900 | 288 U | 3010 T | PGC-01 | 1320 | 816 | 2790 |
| PCB111 | pg/g | 3 | 1 | 33.3 | 14.1 JT | 14.1 JT | PGC-01 | 14.1 | 14.1 JT | 14.1 JT | 14.1 JT | 290 U | PGC-10 | 91.4 | 115 U | 142 U |
| PCB111 & 115 | pg/g | 5 | 3 | 60 | 7.86 | 165 | GCRSP12E | 70.5 | 38.7 | 152 | 7.86 | 165 | GCRSP12E | 44.7 | 7.86 | 140 |
| PCB112 | pg/g | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 211 UT | 290 U | PGC-10 | 122 | 115 U | 142 U |
| PCB113 | pg/g | 5 | 2 | 40 | 26.3 | 477 | GCRSP12E | 252 | 252 | 454 | 5.01 U | 477 | GCRSP12E | 104 | 6.2 U | 387 |
| PCB114 | pg/g | 8 | 7 | 87.5 | 3.39 J | 96.9 | GCRSP12E | 27.2 | 11.9 J | 77.4 J | 3.39 J | 96.9 | GCRSP12E | 24 | 11.4 J | 74.2 J |
| PCB117 | pg/g | 3 | 3 | 100 | 4.31 J | 266 T | PGC-01 | 99.2 | 27.4 J | 242 J | 4.31 J | 266 T | PGC-01 | 99.2 | 27.4 J | 242 J |
| PCB118 | pg/g | 3 | 2 | 66.7 | 512 J | 1760 JT | PGC-01 | 1140 | 1140 J | 1700 J | 203 UJ | 1760 JT | PGC-01 | 791 | 512 J | 1640 J |
| PCB119 | pg/g | 5 | 4 | 80 | 7.96 | 3690 | GCRSP12E | 1040 | 230 J | 3200 | 7.96 | 3690 | GCRSP12E | 833 | 48.7 JT | 3030 |
| PCB120 | pg/g | 8 | 4 | 50 | 2.76 J | 157 | GCRSP12E | 58.3 | 36.8 J | 141 | 2.76 J | 157 | GCRSP12E | 40 | 14.4 J | 127 |
| PCB121 | pg/g | 8 | 3 | 37.5 | 11.4 JT | 566 | GCRSP12E | 204 | 33.3 | 513 | 5.01 U | 566 | GCRSP12E | 94.4 | 22.4 J | 393 |
| PCB122 | pg/g | 8 | 5 | 62.5 | 6.03 J | 55 | GCRSP12E | 20 | 14.7 JT | 47.5 | 6.03 J | 145 U | PGC-10 | 23.1 | 10.9 J | 66.4 |
| PCB123 | pg/g | 8 | 7 | 87.5 | 4.09 JT | 69.2 | GCRSP12E | 19.6 | 7.35 | 55.9 | 4.09 JT | 145 U | PGC-10 | 26.2 | 13.2 J | 71.3 |
| PCB124 | pg/g | 5 | 5 | 100 | 13.9 | 166 | GCA12E | 75.9 | 26.9 T | 163 | 13.9 | 166 | GCA12E | 75.9 | 26.9 T | 163 |
| PCB126 | pg/g | 8 | 5 | 62.5 | 2.61 J | 42 | GCA12E | 16.3 | 4.54 JT | 39.3 | 2.61 J | 145 U | PGC-10 | 26.7 | 16.5 J | 67.3 U |
| PCB127 | pg/g | 8 | 1 | 12.5 | 3.99 JT | 3.99 JT | PGC-01 | 3.99 | 3.99 JT | 3.99 JT | 3.99 JT | 290 U | PGC-10 | 36.7 | 6.03 U | 135 U |
| PCB128 & 162 | pg/g | 5 | 5 | 100 | 47 JT | 2090 | GCA12E | 724 | 105 | 1930 | 47 JT | 2090 | GCA12E | 724 | 105 | 1930 |
| PCB128 & 166 | pg/g | 3 | 2 | 66.7 | 194 | 1170 T | PGC-01 | 682 | 682 | 1120 | 63.1 U | 1170 T | PGC-01 | 465 | 194 | 1070 |
| PCB129 | pg/g | 5 | 5 | 100 | 18.4 | 562 | GCA12E | 197 | 28 | 520 | 18.4 | 562 | GCA12E | 197 | 28 | 520 |
| PCB129 & 138 & 163 | pg/g | 3 | 2 | 66.7 | 2190 | 16000 JT | PGC-01 | 9100 | 9100 J | 15300 J | 486 U | 16000 JT | PGC-01 | 6140 | 2190 | 14600 J |
| PCB130 | pg/g | 8 | 7 | 87.5 | 27.4 | 1290 | GCA12E | 437 | 83.4 J | 1220 | 27.4 | 1290 | GCA12E | 384 | 67 J | 1200 |
| PCB131 | pg/g | 8 | 3 | 37.5 | 4.71 J | 68.5 JT | PGC-01 | 28.8 | 13.3 J | 63 J | 4.71 J | 68.5 JT | PGC-01 | 14.5 | 6.03 U | 49.2 J |
| PCB132 | pg/g | 3 | 2 | 66.7 | 615 | 3600 T | PGC-01 | 2110 | 2110 | 3450 | 147 U | 3600 T | PGC-01 | 1430 | 615 | 3300 |
| PCB132 & 161 | pg/g | 5 | 5 | 100 | 107 | 10800 | GCA12E | 3150 | 224 | 9530 | 107 | 10800 | GCA12E | 3150 | 224 | 9530 |
| PCB133 | pg/g | 3 | 3 | 100 | 8.56 J | 274 T | PGC-01 | 106 | 36.1 J | 250 J | 8.56 J | 274 T | PGC-01 | 106 | 36.1 J | 250 J |
| PCB133 & 142 | pg/g | 5 | 4 | 80 | 20.7 | 2130 | GCRSP12E | 783 | 491 | 1950 | 12.4 U | 2130 | GCRSP12E | 628 | 30.3 T | 1890 |
| PCB134 | pg/g | 3 | 2 | 66.7 | 99.6 J | 608 T | PGC-01 | 354 | 354 J | 583 J | 22.9 U | 608 T | PGC-01 | 240 | 99.6 J | 557 J |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Units | # Analyzed | # Detected | % Detected | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th[b] | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th (half DL)[b] |
| PCB134 & 143 | pg/g | 5 | 5 | 100 | 22.4 | 1770 | GCA12E | 629 | 66.2 JT | 1670 | 22.4 | 1770 | GCA12E | 629 | 66.2 JT | 1670 |
| PCB135 | pg/g | 5 | 5 | 100 | 53.9 | 6150 | GCA12E | 2390 | 159 | 6020 | 53.9 | 6150 | GCA12E | 2390 | 159 | 6020 |
| PCB135 & 151 | pg/g | 3 | 2 | 66.7 | 852 | 5340 T | PGC-01 | 3100 | 3100 | 5120 | 140 U | 5340 T | PGC-01 | 2090 | 852 | 4890 |
| PCB136 | pg/g | 8 | 7 | 87.5 | 49.4 | 8070 | GCRSP12E | 2490 | 273 | 7790 | 49.4 | 8070 | GCRSP12E | 2180 | 233 | 7740 |
| PCB137 | pg/g | 8 | 7 | 87.5 | 21.5 T | 632 | GCRSP12E | 158 | 44.3 J | 497 J | 14.9 U | 632 | GCRSP12E | 139 | 42.6 J | 475 J |
| PCB138 & 163 & 164 | pg/g | 5 | 5 | 100 | 407 | 43600 | GCA12E | 12900 | 1040 | 38600 | 407 | 43600 | GCA12E | 12900 | 1040 | 38600 |
| PCB139 & 140 | pg/g | 3 | 3 | 100 | 6.49 J | 80.8 JT | PGC-01 | 34 | 14.6 J | 74.2 J | 6.49 J | 80.8 JT | PGC-01 | 34 | 14.6 J | 74.2 J |
| PCB139 & 149 | pg/g | 5 | 5 | 100 | 287 | 43400 | GCA12E | 13800 | 1390 | 39300 | 287 | 43400 | GCA12E | 13800 | 1390 | 39300 |
| PCB140 | pg/g | 5 | 2 | 40 | 78.8 | 551 | GCRSP12E | 315 | 315 | 527 | 5.01 U | 551 | GCRSP12E | 129 | 6.2 U | 457 |
| PCB141 | pg/g | 8 | 7 | 87.5 | 87.5 | 13300 | GCA12E | 3060 | 469 | 10400 | 87.5 | 13300 | GCA12E | 2680 | 431 | 9920 |
| PCB142 | pg/g | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 211 UT | 290 U | PGC-10 | 122 | 115 U | 142 U |
| PCB143 | pg/g | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 105 UT | 145 U | PGC-10 | 60.8 | 57.5 U | 71 U |
| PCB144 | pg/g | 8 | 7 | 87.5 | 16.6 | 2930 | GCA12E | 647 | 99.8 J | 2260 | 16.6 | 2930 | GCA12E | 567 | 90.1 J | 2150 |
| PCB145 | pg/g | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.72 U | 290 U | PGC-10 | 49.4 | 9.35 U | 135 U |
| PCB146 | pg/g | 3 | 2 | 66.7 | 284 | 2060 T | PGC-01 | 1170 | 1170 | 1970 | 145 U | 2060 T | PGC-01 | 806 | 284 | 1880 |
| PCB146 & 165 | pg/g | 5 | 5 | 100 | 65.9 | 7290 | GCRSP12E | 2800 | 134 | 7120 | 65.9 | 7290 | GCRSP12E | 2800 | 134 | 7120 |
| PCB147 | pg/g | 5 | 4 | 80 | 15.8 | 11000 | GCRSP12E | 3240 | 970 J | 9630 | 12.4 U | 11000 | GCRSP12E | 2590 | 89.1 JT | 9170 |
| PCB147 & 149 | pg/g | 3 | 2 | 66.7 | 1890 | 12600 JT | PGC-01 | 7250 | 7250 J | 12100 J | 269 U | 12600 JT | PGC-01 | 4870 | 1890 | 11500 J |
| PCB148 | pg/g | 8 | 4 | 50 | 4.83 J | 1030 | GCRSP12E | 304 | 90.7 J | 893 | 4.83 J | 1030 | GCRSP12E | 172 | 36.8 J | 720 |
| PCB150 | pg/g | 8 | 4 | 50 | 16.7 J | 1940 | GCRSP12E | 589 | 199 J | 1680 | 5.01 U | 1940 | GCRSP12E | 314 | 80.9 J | 1340 |
| PCB151 | pg/g | 5 | 5 | 100 | 90.5 | 17000 | GCA12E | 5560 | 695 | 15600 | 90.5 | 17000 | GCA12E | 5560 | 695 | 15600 |
| PCB152 | pg/g | 8 | 4 | 50 | 12.9 J | 647 | GCRSP12E | 239 | 148 J | 579 | 5.01 U | 647 | GCRSP12E | 139 | 57.5 J | 488 |
| PCB153 | pg/g | 5 | 5 | 100 | 414 | 54300 | GCA12E | 17200 | 2270 | 49100 | 414 | 54300 | GCA12E | 17200 | 2270 | 49100 |
| PCB153 & 168 | pg/g | 3 | 2 | 66.7 | 1980 | 14700 JT | PGC-01 | 8340 | 8340 J | 14100 J | 400 U | 14700 JT | PGC-01 | 5630 | 1980 | 13400 J |
| PCB154 | pg/g | 8 | 7 | 87.5 | 5.47 J | 4740 | GCRSP12E | 816 | 37 J | 3500 | 5.47 J | 4740 | GCRSP12E | 715 | 30.3 J | 3290 |
| PCB155 | pg/g | 8 | 3 | 37.5 | 5.44 JT | 194 | GCRSP12E | 75.8 | 28 | 177 | 5.01 U | 290 U | PGC-10 | 62.7 | 17.1 | 177 |
| PCB156 | pg/g | 5 | 5 | 100 | 35.6 JT | 2640 | GCA12E | 781 | 77.3 | 2330 | 35.6 JT | 2640 | GCA12E | 781 | 77.3 | 2330 |
| PCB156 & 157 | pg/g | 3 | 2 | 66.7 | 165 | 1200 T | PGC-01 | 683 | 683 | 1150 | 38.7 U | 1200 T | PGC-01 | 461 | 165 | 1100 |
| PCB157 | pg/g | 5 | 5 | 100 | 9.11 J | 207 | GCRSP12E | 73.6 | 26.6 | 189 | 9.11 J | 207 | GCRSP12E | 73.6 | 26.6 | 189 |
| PCB158 | pg/g | 3 | 2 | 66.7 | 182 | 1260 T | PGC-01 | 721 | 721 | 1210 | 58.1 U | 1260 T | PGC-01 | 490 | 182 | 1150 |
| PCB158 & 160 | pg/g | 5 | 5 | 100 | 46.2 | 3900 | GCA12E | 1110 | 101 JT | 3400 | 46.2 | 3900 | GCA12E | 1110 | 101 JT | 3400 |
| PCB159 | pg/g | 8 | 4 | 50 | 13.8 T | 452 | GCRSP12E | 172 | 111 J | 415 | 4.72 U | 452 | GCRSP12E | 106 | 16.8 J | 365 |
| PCB160 | pg/g | 3 | 1 | 33.3 | 51.1 J | 51.1 J | PGC-10 | 51.1 | 51.1 J | 51.1 J | 51.1 J | 115 U | PGC-04 | 53.7 | 52.5 UT | 57 U |
| PCB161 | pg/g | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 211 UT | 290 U | PGC-10 | 122 | 115 U | 142 U |
| PCB162 | pg/g | 3 | 2 | 66.7 | 3.63 J | 18.3 JT | PGC-01 | 11 | 11 J | 17.6 J | 3.63 J | 290 U | PGC-10 | 55.6 | 18.3 JT | 132 J |
| PCB164 | pg/g | 3 | 2 | 66.7 | 150 | 1090 T | PGC-01 | 620 | 620 | 1040 | 32.9 U | 1090 T | PGC-01 | 419 | 150 | 996 |
| PCB165 | pg/g | 3 | 3 | 100 | 3.97 J | 67.1 J | PGC-10 | 30.9 | 21.5 JT | 62.5 J | 3.97 J | 67.1 J | PGC-10 | 30.9 | 21.5 JT | 62.5 J |
| PCB166 | pg/g | 5 | 1 | 20 | 19 J | 19 J | GCRSP12E | 19 | 19 J | 19 J | 4.72 U | 19 J | GCRSP12E | 7.18 | 5.85 UT | 16.4 J |
| PCB167 | pg/g | 8 | 7 | 87.5 | 15.3 JT | 947 | GCA12E | 284 | 57.5 J | 804 | 11.7 U | 947 | GCA12E | 249 | 41.9 J | 780 |
| PCB168 | pg/g | 5 | 2 | 40 | 75.5 | 253 | GCRSP12E | 164 | 164 | 244 | 5.01 U | 253 | GCRSP12E | 68.6 | 6.2 U | 218 |
| PCB169 | pg/g | 8 | 2 | 25 | 3.56 J | 35.5 JT | PGC-01 | 19.5 | 19.5 J | 33.9 J | 0.475 U | 145 U | PGC-10 | 14.7 | 1.65 U | 59.6 J |
| PCB170 | pg/g | 8 | 7 | 87.5 | 95.3 | 25000 | GCA12E | 6450 | 942 | 20400 J | 95.3 | 25000 | GCA12E | 5650 | 873 | 19600 J |
| PCB171 | pg/g | 5 | 4 | 80 | 78.9 JT | 6240 | GCA12E | 2210 | 1260 | 5640 | 23.9 UJ | 6240 | GCA12E | 1770 | 264 | 5440 |
| PCB171 & 173 | pg/g | 3 | 2 | 66.7 | 245 | 2740 T | PGC-01 | 1490 | 1490 | 2620 | 32.8 U | 2740 T | PGC-01 | 1000 | 245 | 2490 |
| PCB172 | pg/g | 8 | 6 | 75 | 16.2 | 4150 | GCA12E | 1270 | 857 | 3520 | 11.8 UT | 4150 | GCA12E | 956 | 167 J | 3260 |
| PCB173 | pg/g | 5 | 3 | 60 | 14.1 | 581 | GCA12E | 250 | 154 | 538 | 11.7 UT | 581 | GCA12E | 152 | 14.1 | 496 |
| PCB174 | pg/g | 8 | 7 | 87.5 | 116 | 30600 | GCA12E | 7340 | 2880 | 24200 | 105 U | 30600 | GCA12E | 6430 | 1810 | 23100 |
| PCB175 | pg/g | 8 | 7 | 87.5 | 4.49 J | 1500 | GCA12E | 350 | 98.4 | 1190 | 4.49 J | 1500 | GCA12E | 307 | 64.3 J | 1140 |
| PCB176 | pg/g | 8 | 7 | 87.5 | 17.2 | 3970 | GCA12E | 1010 | 360 | 3270 | 15.2 U | 3970 | GCA12E | 882 | 227 J | 3150 |
| PCB177 | pg/g | 8 | 7 | 87.5 | 68.2 | 16200 | GCA12E | 4210 | 1130 | 13700 | 46 U | 16200 | GCA12E | 3690 | 738 | 13300 |
| PCB178 | pg/g | 8 | 7 | 87.5 | 28.8 | 6180 | GCA12E | 1960 | 637 | 5890 | 22.8 U | 6180 | GCA12E | 1720 | 393 | 5840 |
| PCB179 | pg/g | 8 | 7 | 87.5 | 59.6 | 14100 | GCA12E | 3950 | 1870 | 12400 | 45.7 U | 14100 | GCA12E | 3460 | 1090 | 12100 |
| PCB180 | pg/g | 5 | 5 | 100 | 254 | 66600 | GCA12E | 19500 | 6880 | 58000 | 254 | 66600 | GCA12E | 19500 | 6880 | 58000 |
| PCB180 & 193 | pg/g | 3 | 3 | 100 | 229 | 19500 JT | PGC-01 | 7150 | 1720 | 17700 J | 229 | 19500 JT | PGC-01 | 7150 | 1720 | 17700 J |
| PCB181 | pg/g | 8 | 4 | 50 | 2.63 J | 135 | GCRSP12E | 62.3 | 55.7 J | 129 | 2.63 J | 290 U | PGC-10 | 51.1 | 12.7 J | 142 |
| PCB182 | pg/g | 3 | 2 | 66.7 | 1.27 J | 21.6 JT | PGC-01 | 11.4 | 11.4 J | 20.6 J | 1.27 J | 290 U | PGC-10 | 56 | 21.6 JT | 133 J |
| PCB182 & 187 | pg/g | 5 | 5 | 100 | 173 | 37400 | GCA12E | 14000 | 5780 | 35200 | 173 | 37400 | GCA12E | 14000 | 5780 | 35200 |
| PCB183 | pg/g | 8 | 7 | 87.5 | 75.6 | 16700 | GCA12E | 4520 | 2000 | 13800 | 58.4 U | 16700 | GCA12E | 3960 | 1230 | 13400 |
| PCB184 | pg/g | 8 | 2 | 25 | 6.11 | 50.4 | GCRSP12E | 28.3 | 28.3 | 48.2 | 5.01 U | 290 U | PGC-10 | 54.6 | 28.3 | 135 U |
| PCB185 | pg/g | 8 | 7 | 87.5 | 6.62 J | 3340 | GCA12E | 796 | 519 | 2620 | 6.62 J | 3340 | GCA12E | 698 | 284 J | 2500 |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| PCB186 | pg/g | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.72 U | 290 U | PGC-10 | 49.4 | 9.35 U | 135 U |
| PCB187 | pg/g | 3 | 2 | 66.7 | 859 | 8370 T | PGC-01 | 4610 | 4610 | 7990 | 135 U | 8370 T | PGC-01 | 3100 | 859 | 7620 |
| PCB188 | pg/g | 8 | 4 | 50 | 1.67 J | 642 | GCRSP12E | 185 | 49 J | 558 | 1.67 J | 642 | GCRSP12E | 104 | 12.4 J | 445 |
| PCB189 | pg/g | 8 | 8 | 100 | 3.15 J | 842 | GCA12E | 214 | 22.7 J | 691 | 3.15 J | 842 | GCA12E | 214 | 22.7 J | 691 |
| PCB190 | pg/g | 8 | 8 | 100 | 19.5 J | 5450 | GCA12E | 1260 | 238 | 4270 | 19.5 J | 5450 | GCA12E | 1260 | 238 | 4270 |
| PCB191 | pg/g | 8 | 7 | 87.5 | 3.58 J | 1040 | GCA12E | 269 | 39.9 | 842 | 3.58 J | 1040 | GCA12E | 236 | 36.2 J | 809 |
| PCB192 | pg/g | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.72 U | 290 U | PGC-10 | 49.4 | 9.35 U | 135 U |
| PCB193 | pg/g | 5 | 5 | 100 | 12.4 | 3170 | GCA12E | 1100 | 218 | 2950 | 12.4 | 3170 | GCA12E | 1100 | 218 | 2950 |
| PCB194 | pg/g | 8 | 8 | 100 | 53.3 J | 15000 | GCA12E; GCRSP12E | 4890 | 2240 | 15000 | 53.3 J | 15000 | GCA12E; GCRSP12E | 4890 | 2240 | 15000 |
| PCB195 | pg/g | 8 | 6 | 75 | 18.6 J | 7100 | GCA12E | 2880 | 1710 | 6970 | 11.8 UT | 7100 | GCA12E | 2160 | 839 J | 6910 |
| PCB196 | pg/g | 3 | 3 | 100 | 31.5 J | 2190 T | PGC-01 | 803 | 186 J | 1990 J | 31.5 J | 2190 T | PGC-01 | 803 | 186 J | 1990 J |
| PCB196 & 203 | pg/g | 5 | 5 | 100 | 82.5 | 19700 | GCA12E | 8300 | 6840 | 18700 | 82.5 | 19700 | GCA12E | 8300 | 6840 | 18700 |
| PCB197 | pg/g | 8 | 6 | 75 | 1.72 J | 598 | GCRSP12E | 251 | 162 J | 592 | 1.72 J | 598 | GCRSP12E | 190 | 83.9 J | 589 |
| PCB198 | pg/g | 5 | 3 | 60 | 265 | 1270 | GCA12E | 696 | 552 | 1200 | 11.7 UT | 1270 | GCA12E | 420 | 265 | 1130 |
| PCB198 & 199 | pg/g | 3 | 3 | 100 | 71.9 J | 3760 T | PGC-01 | 1410 | 399 | 3420 | 71.9 J | 3760 T | PGC-01 | 1410 | 399 | 3420 |
| PCB199 | pg/g | 5 | 5 | 100 | 94.2 | 17100 | GCA12E | 7600 | 7180 | 16400 | 94.2 | 17100 | GCA12E | 7600 | 7180 | 16400 |
| PCB200 | pg/g | 5 | 3 | 60 | 921 | 2240 | GCA12E | 1460 | 1230 | 2140 | 11.8 UT | 2240 | GCA12E | 881 | 921 | 2040 |
| PCB201 | pg/g | 8 | 7 | 87.5 | 6.42 J | 1870 | GCA12E | 717 | 422 T | 1830 | 6.42 J | 1870 | GCA12E | 628 | 234 J | 1830 |
| PCB202 | pg/g | 8 | 8 | 100 | 15.9 J | 2300 | GCA12E | 797 | 293 J | 2220 | 15.9 J | 2300 | GCA12E | 797 | 293 J | 2220 |
| PCB203 | pg/g | 3 | 3 | 100 | 40.4 J | 2560 T | PGC-01 | 957 | 271 | 2330 | 40.4 J | 2560 T | PGC-01 | 957 | 271 | 2330 |
| PCB204 | pg/g | 8 | 1 | 12.5 | 7.92 J | 7.92 J | GCRSP12E | 7.92 | 7.92 J | 7.92 J | 4.72 U | 290 U | PGC-10 | 48.8 | 7.06 J | 135 U |
| PCB205 | pg/g | 8 | 6 | 75 | 1.6 J | 772 | GCRSP12E | 300 | 188 J | 738 | 1.6 J | 772 | GCRSP12E | 227 | 83.9 J | 724 |
| PCB206 | pg/g | 8 | 7 | 87.5 | 27.3 JT | 4480 | GCRSP12E | 1540 | 693 T | 3960 | 27.3 JT | 4480 | GCRSP12E | 1350 | 427 J | 3870 |
| PCB207 | pg/g | 8 | 6 | 75 | 5.74 J | 552 | GCRSP12E | 230 | 223 J | 504 | 5.74 J | 552 | GCRSP12E | 174 | 57.2 J | 484 |
| PCB208 | pg/g | 8 | 7 | 87.5 | 11.1 J | 596 | GCA12W | 250 | 121 JT | 592 | 11.1 J | 596 | GCA12W | 219 | 80.9 J | 591 |
| PCB209 | pg/g | 8 | 8 | 100 | 15.2 T | 207 | GCRSP12E | 68.8 | 44.9 | 172 | 15.2 T | 207 | GCRSP12E | 68.8 | 44.9 | 172 |
| Total PCB Congeners | pg/g | 8 | 8 | 100 | 798 JT | 912000 JT | GCRSP12E | 228000 | 44500 J | 806000 J | 798 JT | 912000 JT | GCRSP12E | 228000 | 44500 J | 806000 J |
| **PCBs[c]** | | | | | | | | | | | | | | | | |
| Total PCBs | µg/kg | 154 | 114 | 74 | 0.798 JT | 4200 JT | -- | 108 | 21.9 J | 371 J | 0.73 UT | 4200 JT | -- | 80.6 | 11 J | 297 J |
| **PCB Homologs** | | | | | | | | | | | | | | | | |
| Dichlorobiphenyl homologs | pg/g | 8 | 7 | 87.5 | 26 JT | 20900 T | GCRSP12E | 3180 | 147 T | 14900 J | 26 JT | 20900 T | GCRSP12E | 2800 | 141 | 13900 J |
| Heptachlorobiphenyl homologs | pg/g | 8 | 8 | 100 | 267 JT | 243000 T | GCA12E | 56600 | 15200 J | 196000 | 267 JT | 243000 T | GCA12E | 56600 | 15200 J | 196000 |
| Hexachlorobiphenyl homologs | pg/g | 8 | 8 | 100 | 143 JT | 223000 T | GCA12E | 56600 | 8450 J | 194000 J | 143 JT | 223000 T | GCA12E | 56600 | 8450 J | 194000 J |
| Monochlorobiphenyl homologs | pg/g | 8 | 6 | 75 | 5.19 T | 841 T | GCRSP12E | 261 | 30.1 J | 793 | 5.19 T | 841 T | GCRSP12E | 197 | 20.7 J | 774 |
| Nonachlorobiphenyl homologs | pg/g | 8 | 8 | 100 | 16.8 JT | 5620 T | GCRSP12E | 1740 | 565 J | 4950 | 16.8 JT | 5620 T | GCRSP12E | 1740 | 565 J | 4950 |
| Octachlorobiphenyl homologs | pg/g | 8 | 8 | 100 | 241 JT | 67800 T | GCA12E | 20800 | 8810 J | 63900 J | 241 JT | 67800 T | GCA12E | 20800 | 8810 J | 63900 J |
| Pentachlorobiphenyl homologs | pg/g | 8 | 8 | 100 | 15 JT | 138000 T | GCRSP12E | 28400 | 4190 J | 108000 | 15 JT | 138000 T | GCRSP12E | 28400 | 4190 J | 108000 |
| Tetrachlorobiphenyl homologs | pg/g | 8 | 8 | 100 | 43.6 JT | 342000 JT | GCRSP12E | 47900 | 2920 J | 229000 J | 43.6 JT | 342000 JT | GCRSP12E | 47900 | 2920 J | 229000 J |
| Trichlorobiphenyl homologs | pg/g | 8 | 8 | 100 | 15.8 JT | 98300 JT | GCRSP12E | 13000 | 514 J | 64800 J | 15.8 JT | 98300 JT | GCRSP12E | 13000 | 514 J | 64800 J |
| **PCDD/Fs Homologs** | | | | | | | | | | | | | | | | |
| Heptachlorodibenzofuran homologs | pg/g | 57 | 54 | 94.7 | 0.484 J | 779 | G030 | 54.9 | 15.1 | 190 | 0.37 U | 779 | G030 | 52 | 14 J | 188 |
| Heptachlorodibenzo-p-dioxin homologs | pg/g | 57 | 55 | 96.5 | 1.73 J | 1830 | G030 | 157 | 58.7 J | 728 J | 1.5 U | 1830 | G030 | 152 | 49.8 | 698 J |
| Hexachlorodibenzofuran homologs | pg/g | 57 | 54 | 94.7 | 0.0977 J | 246 | G044 | 24.4 | 10.85 J | 87.92 | 0.0276 U | 246 | G044 | 23.12 | 9.41 | 85.64 |
| Hexachlorodibenzo-p-dioxin homologs | pg/g | 57 | 55 | 96.5 | 0.0828 J | 86.7 | G045 | 15.56 | 7.79 J | 59.11 | 0.0617 U | 86.7 | G045 | 15.01 | 7.6 T | 58.24 |
| Octachlorodibenzofuran | pg/g | 67 | 55 | 82.1 | 0.874 J | 2210 J | G030 | 87.1 | 20.5 JT | 215 | 0.238 U | 2210 J | G030 | 72.1 | 11.8 J | 197 |
| Octachlorodibenzo-p-dioxin | pg/g | 67 | 61 | 91 | 7.04 J | 10400 | G030 | 819 | 312 | 2710 T | 7.04 J | 10400 | G030 | 746 | 259 J | 2460 |
| Pentachlorodibenzofuran homologs | pg/g | 57 | 52 | 91.2 | 0.0356 J | 132 | G049 | 15.13 | 8.63 J | 51.01 | 0.0189 U | 132 | G049 | 13.81 | 6.65 T | 50.28 |
| Pentachlorodibenzo-p-dioxin homologs | pg/g | 57 | 41 | 71.9 | 0.0896 T | 7.64 J | G057 | 1.83 | 1.08 J | 5.51 J | 0.016 U | 7.64 J | G057 | 1.323 | 0.485 J | 5.302 J |
| Tetrachlorodibenzofuran homologs | pg/g | 57 | 46 | 80.7 | 0.103 J | 95.2 | G049 | 7.093 | 3.64 | 22.03 | 0.0178 U | 95.2 | G049 | 5.729 | 2.1 | 19 |
| Tetrachlorodibenzo-p-dioxin homologs | pg/g | 57 | 40 | 70.2 | 0.0766 J | 4.23 | G060 | 1.38 | 1.045 J | 3.96 | 0.0115 U | 4.23 | G060 | 0.9752 | 0.47 J | 3.67 J |
| Total PCDD/F | pg/g | 67 | 62 | 92.5 | 9.45 JT | 15400 JT | G030 | 1130 | 444 J | 3590 J | 9.45 JT | 15400 JT | G030 | 1040 | 387 JT | 3360 J |
| **PCDD/Fs** | | | | | | | | | | | | | | | | |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran | pg/g | 67 | 61 | 91 | 0.163 J | 121 | G030 | 13.7 | 4.72 J | 52.1 | 0.116 U | 121 | G030 | 12.6 | 4.21 J | 52.1 |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin | pg/g | 67 | 61 | 91 | 0.842 J | 1040 | G030 | 76.8 | 33.4 | 215 T | 0.842 J | 1040 | G030 | 70.1 | 25.6 | 211 |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran | pg/g | 67 | 43 | 64.2 | 0.0764 J | 9.06 J | G044 | 1.334 | 0.653 J | 3.948 J | 0.0239 U | 9.06 J | G044 | 0.9829 | 0.2875 U | 3.485 J |
| 1,2,3,4,7,8-Hexachlorodibenzofuran | pg/g | 67 | 53 | 79.1 | 0.0329 J | 13.7 | G044 | 1.938 | 0.926 J | 8.802 J | 0.0183 U | 13.7 | G044 | 1.546 | 0.617 J | 7.875 J |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 67 | 47 | 70.1 | 0.0449 J | 3.35 J | G057 | 0.6928 | 0.471 J | 2.09 J | 0.0228 U | 3.35 J | G057 | 0.4998 | 0.296 J | 1.8 J |
| 1,2,3,6,7,8-Hexachlorodibenzofuran | pg/g | 67 | 49 | 73.1 | 0.0588 J | 10.2 J | G044 | 1.006 | 0.495 J | 3.11 J | 0.0195 U | 10.2 J | G044 | 0.8227 | 0.429 JT | 3.13 J |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 67 | 56 | 83.6 | 0.109 J | 28.4 | G045 | 3.256 | 2.085 J | 10.33 J | 0.0316 U | 28.4 | G045 | 2.829 | 1.56 J | 9.623 |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| 1,2,3,7,8,9-Hexachlorodibenzofuran | pg/g | 67 | 16 | 23.9 | 0.0381 J | 0.471 J | G037 | 0.2003 | 0.1625 J | 0.4088 J | 0.0182 U | 2.03 U | O33-S010 | 0.1025 | 0.0505 U | 0.3277 J |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | pg/g | 67 | 49 | 73.1 | 0.0881 J | 6.5 J | G057 | 1.729 | 1.09 J | 5.32 J | 0.0217 U | 6.5 J | G057 | 1.282 | 0.78 J | 4.36 J |
| 1,2,3,7,8-Pentachlorodibenzofuran | pg/g | 67 | 36 | 53.7 | 0.07 T | 2.8 J | G049 | 0.44087 | 0.282 J | 0.97075 J | 0.00812 U | 2.8 J | G049 | 0.25968 | 0.141 J | 0.872 J |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | pg/g | 67 | 40 | 59.7 | 0.0367 J | 2.02 J | G057 | 0.4695 | 0.368 J | 1.073 J | 0.016 U | 2.02 J | G057 | 0.301 | 0.234 J | 0.8731 J |
| 2,3,4,6,7,8-Hexachlorodibenzofuran | pg/g | 67 | 48 | 71.6 | 0.0632 J | 35.4 | G044 | 1.9 | 0.74 J | 5.17 J | 0.0181 U | 35.4 | G044 | 1.386 | 0.474 JT | 4.546 J |
| 2,3,4,7,8-Pentachlorodibenzofuran | pg/g | 67 | 47 | 70.1 | 0.0515 J | 9.25 J | G049 | 0.7048 | 0.431 J | 1.638 J | 0.0116 U | 9.25 J | G049 | 0.5108 | 0.268 J | 1.34 J |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/g | 67 | 29 | 43.3 | 0.116 T | 8.58 | G049 | 0.82648 | 0.462 J | 1.114 J | 0.00463 U | 8.58 | G049 | 0.41246 | 0.149 T | 1.0095 J |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | pg/g | 67 | 27 | 40.3 | 0.0483 J | 0.605 J | G061 | 0.21647 | 0.168 J | 0.4599 J | 0.00896 U | 0.605 J | G061 | 0.11623 | 0.0615 U | 0.3613 J |
| TCDD TEQ (ND = 0) | pg/g | 67 | 63 | 94 | 0.0112 JT | 19.2 JT | G030 | 2.606 | 1.43 JT | 9.224 J | 0.0112 JT | 19.2 JT | G030 | 2.454 | 1.26 JT | 9.132 J |
| Total TCDD TEQ (ND = 0) | pg/g | 70 | 66 | 94.3 | 0.000879 JA | 19.2 JT | G030 | 2.64139 | 1.41 J | 9.155 J | 0.000879 JA | 19.2 JT | G030 | 2.49406 | 1.21 J | 9.063 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | pg/g | 8 | 8 | 100 | 0.000879 JT | 4.51 T | GCA12E | 1.27123 | 0.354 J | 4.034 | 0.000879 JT | 4.51 T | GCA12E | 1.27123 | 0.354 J | 4.034 |
| **PBDE Congeners** | | | | | | | | | | | | | | | | |
| PBDE028 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | G783; GCRSP12E; GSP12W-ALT | 0.5 | 0.5 U | 0.5 U |
| PBDE047 | µg/kg | 3 | 3 | 100 | 0.31 J | 1.2 | GCRSP12E | 0.61 | 0.33 J | 1.1 J | 0.31 J | 1.2 | GCRSP12E | 0.61 | 0.33 J | 1.1 J |
| PBDE099 | µg/kg | 3 | 3 | 100 | 0.3 J | 1.1 | GCRSP12E | 0.58 | 0.33 J | 1 J | 0.3 J | 1.1 | GCRSP12E | 0.58 | 0.33 J | 1 J |
| PBDE100 | µg/kg | 3 | 1 | 33.3 | 0.15 J | 0.15 J | GCRSP12E | 0.15 | 0.15 J | 0.15 J | 0.15 J | 1 U | G783; GSP12W-ALT | 0.38 | 0.5 U | 0.5 U |
| PBDE153 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | G783; GCRSP12E; GSP12W-ALT | 0.5 | 0.5 U | 0.5 U |
| PBDE154 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | G783; GCRSP12E; GSP12W-ALT | 0.5 | 0.5 U | 0.5 U |
| PBDE183 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | G783; GCRSP12E; GSP12W-ALT | 0.5 | 0.5 U | 0.5 U |
| PBDE209 | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 9.9 U | 10 U | GCRSP12E; GSP12W-ALT | 5 | 5 U | 5 U |
| **Pesticides** | | | | | | | | | | | | | | | | |
| 2,4'-DDD | µg/kg | 143 | 56 | 39.2 | 0.095 J | 14 J | G048 | 2.19 | 1.35 J | 7.33 J | 0.032 U | 14 J | G048 | 0.984 | 0.24 U | 3.75 J |
| 2,4'-DDE | µg/kg | 143 | 5 | 3.5 | 0.0094 J | 0.77 J | G059 | 0.2259 | 0.14 J | 0.652 J | 0.0094 J | 5.8 U | G030 | 0.1782 | 0.08 U | 0.595 U |
| 2,4'-DDT | µg/kg | 143 | 78 | 54.5 | 0.0069 J | 17 J | G030 | 1.677 | 0.9 J | 5.58 J | 0.0069 J | 17 J | G030 | 1.047 | 0.39 J | 4.07 J |
| 4,4'-DDD | µg/kg | 149 | 106 | 71.1 | 0.086 J | 57 J | G048 | 1.64 | 0.64 J | 4.08 | 0.047 U | 57 J | G048 | 1.23 | 0.43 | 2.8 |
| 4,4'-DDE | µg/kg | 149 | 115 | 77.2 | 0.039 J | 15 | C090 | 1.26 | 0.76 J | 4.62 J | 0.027 U | 15 | C090 | 1.03 | 0.57 J | 3.78 J |
| 4,4'-DDT | µg/kg | 149 | 77 | 51.7 | 0.044 J | 38 | C090 | 3.67 | 2 J | 12.4 | 0.044 J | 38 | C090 | 2.24 | 0.82 J | 8.46 J |
| Aldrin | µg/kg | 145 | 22 | 15.2 | 0.0735 JT | 0.7 NJ | UG08 | 0.2624 | 0.215 J | 0.615 J | 0.012 UJ | 2 U | PA03; PA04 | 0.1064 | 0.07 U | 0.381 J |
| alpha-Endosulfan | µg/kg | 145 | 24 | 16.6 | 0.04 J | 0.83 | G007 | 0.249 | 0.175 J | 0.658 J | 0.025 U | 2 U | PA03; PA04 | 0.111 | 0.0405 U | 0.414 J |
| alpha-Hexachlorocyclohexane | µg/kg | 145 | 5 | 3.4 | 0.056 J | 0.3 J | GCR12W | 0.1528 | 0.13 J | 0.28 J | 0.0069 UJ | 2 U | PA03; PA04 | 0.0609 | 0.029 U | 0.218 U |
| beta-Endosulfan | µg/kg | 145 | 20 | 13.8 | 0.083 J | 1.8 J | O33-S010 | 0.405 | 0.245 J | 1.14 J | 0.031 U | 3.6 U | G007 | 0.171 | 0.07 U | 0.792 J |
| beta-Hexachlorocyclohexane | µg/kg | 145 | 5 | 3.4 | 0.094 J | 1.2 J | O33-S006 | 0.545 | 0.41 J | 1.12 J | 0.012 UJ | 2 U | PA03; PA04 | 0.116 | 0.09 U | 0.343 U |
| Chlordane (technical) | µg/kg | 22 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 63 U | O33-S004 | 5.2 | 2.2 U | 26 U |
| Chlorpyrifos | µg/kg | 4 | 3 | 75 | 0.55 J | 0.83 J | G058 | 0.66 | 0.6 J | 0.807 J | 0.0072 UJ | 0.83 J | G058 | 0.4959 | 0.575 J | 0.7955 J |
| cis-Chlordane | µg/kg | 145 | 31 | 21.4 | 0.067 J | 5.7 J | G054 | 0.556 | 0.29 | 1.65 J | 0.031 U | 14 U | O33-S004 | 0.255 | 0.06 U | 0.964 J |
| cis-Nonachlor | µg/kg | 143 | 13 | 9.1 | 0.021 J | 2 J | O33-C009 | 0.575 | 0.54 J | 1.58 J | 0.021 J | 8.3 U | GCA12E | 0.355 | 0.155 U | 1.29 |
| delta-Hexachlorocyclohexane | µg/kg | 145 | 2 | 1.4 | 0.12 J | 2 J | C025 | 1.06 | 1.06 J | 1.91 J | 0.011 UJ | 2 J | C025; PA03; PA04 | 0.0736 | 0.035 U | 0.167 U |
| Dieldrin | µg/kg | 145 | 14 | 9.7 | 0.042 J | 1.1 | G062 | 0.266 | 0.155 J | 0.762 J | 0.03 U | 2.1 U | O33-S010 | 0.119 | 0.07 U | 0.466 |
| Endosulfan sulfate | µg/kg | 145 | 4 | 2.8 | 0.11 J | 0.33 J | G057 | 0.253 | 0.285 J | 0.326 J | 0.017 UJ | 13 U | O33-S010 | 0.165 | 0.055 UT | 0.4 U |
| Endrin | µg/kg | 145 | 5 | 3.4 | 0.051 J | 8.8 | G061 | 1.94 | 0.36 | 7.12 J | 0.045 UJ | 8.8 | G061 | 0.149 | 0.041 U | 0.358 |
| Endrin aldehyde | µg/kg | 145 | 7 | 4.8 | 0.19 J | 1.8 J | IPC-S012 | 0.706 | 0.44 NJ | 1.59 J | 0.042 U | 2.1 U | G086 | 0.146 | 0.06 U | 0.66 U |
| Endrin ketone | µg/kg | 145 | 12 | 8.3 | 0.062 J | 8.5 NJ | G783 | 1.31 | 0.685 J | 4.7 J | 0.029 U | 8.5 NJ | G783 | 0.345 | 0.1 U | 1.08 J |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 145 | 20 | 13.8 | 0.059 J | 2.3 | C090 | 0.496 | 0.315 J | 1.45 J | 0.011 UJ | 2.3 | C090 | 0.156 | 0.055 UJ | 0.63 J |
| Heptachlor | µg/kg | 145 | 7 | 4.8 | 0.06 J | 0.52 NJ | G780 | 0.2274 | 0.17 J | 0.46 J | 0.0091 UJ | 2 U | PA03; PA04 | 0.08635 | 0.035 U | 0.344 J |
| Heptachlor epoxide | µg/kg | 145 | 8 | 5.5 | 0.058 J | 0.64 J | IPC-S014 | 0.27 | 0.225 J | 0.574 J | 0.03 UJ | 2.6 U | C090 | 0.14 | 0.09 U | 0.48 U |
| Methoxychlor | µg/kg | 145 | 4 | 2.8 | 0.35 J | 11 | G086 | 3.28 | 0.89 J | 9.53 | 0.018 UJ | 11 | G086 | 0.256 | 0.095 UT | 0.574 J |
| Mirex | µg/kg | 143 | 4 | 2.8 | 0.12 J | 0.33 J | IPC-S014 | 0.23 | 0.235 J | 0.317 J | 0.029 UJ | 1.1 U | IPC-S012 | 0.0469 | 0.0245 U | 0.125 J |
| Oxychlordane | µg/kg | 143 | 9 | 6.3 | 0.11 J | 0.74 J | C090 | 0.369 | 0.33 J | 0.66 J | 0.038 UJ | 8 U | O33-S004 | 0.135 | 0.0425 U | 0.437 J |
| Total chlordanes | µg/kg | 145 | 110 | 75.9 | 0.039 JT | 23.2 JT | G054 | 1.29 | 0.55 J | 3.97 J | 0.039 JT | 23.2 JT | G054 | 1.09 | 0.4 JT | 3.76 J |
| Total Endosulfan | µg/kg | 145 | 41 | 28.3 | 0.04 JT | 1.8 JT | O33-S010 | 0.368 | 0.3 JT | 1 T | 0.04 JT | 2.8 UT | O33-S008 | 0.213 | 0.1 UT | 0.798 J |
| Total DDD | µg/kg | 149 | 113 | 75.8 | 0.086 JT | 71 JT | G048 | 2.62 | 0.88 JT | 9.42 J | 0.047 UT | 71 JT | G048 | 2.05 | 0.56 JT | 5.66 J |
| DDx | µg/kg | 149 | 130 | 87.2 | 0.047 JT | 73.3 JT | G048 | 6.59 | 3.09 J | 19.9 J | 0.047 JT | 73.3 JT | G048 | 5.85 | 2.34 T | 19 J |
| Total DDE | µg/kg | 149 | 115 | 77.2 | 0.039 JT | 15 T | C090 | 1.27 | 0.76 JT | 4.62 J | 0.034 UT | 15 T | C090 | 1.07 | 0.59 JT | 3.78 J |
| Total DDT | µg/kg | 149 | 104 | 69.8 | 0.045 JT | 46.4 JT | C090 | 3.983 | 1.66 J | 14.73 J | 0.045 JT | 46.4 JT | C090 | 3.032 | 1 JA | 10.52 J |
| Total 4,4' DDx | µg/kg | 12 | 8 | 66.7 | 0.27 JT | 8.4 JT | UG07 | 2.7 | 1.8 J | 7 J | 0.27 JT | 8.4 JT | UG07 | 2.9 | 2.8 | 6.3 J |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Toxaphene | µg/kg | 145 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.4 U | 1800 U | G048 | 24 | 11 U | 65 U |
| trans-Chlordane | µg/kg | 145 | 92 | 63.4 | 0.045 J | 14 J | G030 | 1.12 | 0.505 J | 3.85 J | 0.027 U | 14 J | G030 | 0.772 | 0.28 J | 3.46 J |
| trans-Nonachlor | µg/kg | 143 | 37 | 25.9 | 0.039 J | 4.4 J | G054 | 0.301 | 0.16 J | 0.544 J | 0.034 U | 4.4 J | G054 | 0.134 | 0.06 U | 0.34 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| 1-Methylnaphthalene | µg/kg | 112 | 88 | 78.6 | 0.39 J | 610 | G003 | 20.6 | 2.65 J | 61.3 | 0.31 U | 610 | G003 | 16.2 | 1.7 J | 42.4 |
| 2-Methylnaphthalene | µg/kg | 157 | 129 | 82.2 | 0.41 J | 990 | G003 | 23.4 | 3.5 J | 63.2 | 0.39 U | 990 | G003 | 19.9 | 2.7 | 48.8 |
| Acenaphthene | µg/kg | 157 | 118 | 75.2 | 0.27 J | 4700 | PGC-10 | 83 | 3.7 J | 192 | 0.23 U | 4700 | PGC-10 | 63.2 | 2.1 | 86.6 |
| Acenaphthylene | µg/kg | 157 | 120 | 76.4 | 0.24 J | 720 | G045 | 25.4 | 2.7 | 102 | 0.24 J | 720 | G045 | 20.2 | 2 JT | 39.6 |
| Anthracene | µg/kg | 157 | 125 | 79.6 | 0.55 J | 2700 | PGC-10 | 60.8 | 5.6 | 292 | 0.47 U | 2700 | PGC-10 | 49.1 | 4.1 J | 100 |
| Benzo(a)anthracene | µg/kg | 157 | 140 | 89.2 | 0.72 J | 3100 | C087 | 113 | 16 J | 254 | 0.48 U | 3100 | C087 | 101 | 15 | 210 |
| Benzo(a)pyrene | µg/kg | 157 | 140 | 89.2 | 0.17 J | 3800 | PGC-10 | 149 | 19 | 292 | 0.14 U | 3800 | PGC-10 | 133 | 18 | 266 |
| Benzo(b)fluoranthene | µg/kg | 157 | 139 | 88.5 | 0.33 J | 3900 | C087 | 149 | 26 | 452 | 0.25 U | 3900 | C087 | 133 | 23 | 330 |
| Benzo(b+k)fluoranthene | µg/kg | 6 | 2 | 33.3 | 13 T | 13 T | PA03; PA04 | 13 | 13 | 13 | 13 T | 50 UT | HC-SS02; HC-SS03; HC-SS04; HC-SS30 | 21 | 25 U | 25 U |
| Benzo(e)pyrene | µg/kg | 145 | 134 | 92.4 | 0.3 J | 2200 | C087 | 99.6 | 19 | 281 | 0.18 U | 2200 | C087 | 92.1 | 18 | 244 |
| Benzo(g,h,i)perylene | µg/kg | 157 | 138 | 87.9 | 0.79 J | 3300 | C087 | 139 | 25 | 365 | 0.64 U | 3300 | C087 | 123 | 21 | 224 |
| Benzo(k)fluoranthene | µg/kg | 157 | 134 | 85.4 | 0.16 J | 1200 | C087 | 51.3 | 9.53 J | 157 | 0.15 U | 1200 | C087 | 44.4 | 7.9 | 118 |
| C1-Chrysene | µg/kg | 112 | 96 | 85.7 | 0.45 J | 1900 | PGC-10 | 85.8 | 32 | 195 | 0.25 U | 1900 | PGC-10 | 73.7 | 24.5 | 179 |
| C1-Dibenzothiophene | µg/kg | 100 | 59 | 59 | 0.76 J | 870 | G003 | 38.3 | 9.2 | 118 | 0.21 U | 870 | G003 | 22.9 | 2.5 J | 74.2 |
| C1-Fluoranthene/pyrene | µg/kg | 112 | 97 | 86.6 | 1.4 J | 4400 | PGC-10 | 153 | 32 | 414 | 0.61 U | 4400 | PGC-10 | 133 | 25.3 J | 368 |
| C1-Fluorene | µg/kg | 112 | 79 | 70.5 | 0.58 J | 1100 | PGC-10 | 37.5 | 4.9 | 130 | 0.5 U | 1100 | PGC-10 | 26.8 | 2.5 U | 79 |
| C1-Phenanthrene/anthracene | µg/kg | 112 | 94 | 83.9 | 0.99 J | 4300 | PGC-10 | 146 | 19.5 | 445 | 0.75 U | 4300 | PGC-10 | 123 | 14.4 J | 367 |
| C2-Chrysene | µg/kg | 112 | 92 | 82.1 | 1.7 J | 880 | PGC-10 | 76 | 34 | 280 | 0.25 U | 880 | PGC-10 | 63 | 25 | 260 |
| C2-Dibenzothiophene | µg/kg | 100 | 63 | 63 | 1.2 J | 970 | G003 | 41.6 | 13 | 107 | 0.21 U | 970 | G003 | 26.5 | 4.63 | 65.8 |
| C2-Fluoranthene/pyrene | µg/kg | 100 | 83 | 83 | 1.6 J | 1400 | G003 | 61 | 27 | 140 | 0.61 U | 1400 | G003 | 51 | 21 | 130 |
| C2-Fluorene | µg/kg | 112 | 89 | 79.5 | 0.5 J | 1100 | G003 | 47.3 | 7.5 | 158 | 0.5 J | 1100 | G003 | 37.9 | 5.55 | 96.2 |
| C2-Naphthalene | µg/kg | 112 | 91 | 81.3 | 0.44 J | 1800 | PGC-10 | 69.8 | 6.8 | 275 | 0.37 U | 1800 | PGC-10 | 57 | 5.1 | 222 |
| C2-Phenanthrene/anthracene | µg/kg | 112 | 96 | 85.7 | 0.78 J | 2500 | G003 | 106 | 31 | 320 | 0.75 U | 2500 | G003 | 90.8 | 23 | 298 |
| C3-Chrysene | µg/kg | 112 | 91 | 81.3 | 4.9 | 540 | G003 | 72.2 | 33 | 275 | 0.25 U | 540 | G003 | 59 | 23.5 | 248 |
| C3-Dibenzothiophene | µg/kg | 100 | 58 | 58 | 1.3 J | 660 | G003 | 44.3 | 16 | 143 | 0.21 U | 660 | G003 | 25.9 | 4.8 | 120 |
| C3-Fluoranthene/pyrene | µg/kg | 100 | 73 | 73 | 1.6 J | 900 | G003 | 58 | 31 | 192 | 0.61 U | 900 | G003 | 42.6 | 16.5 | 152 |
| C3-Fluorene | µg/kg | 112 | 76 | 67.9 | 1.6 J | 1900 | G003 | 75 | 17 | 223 | 0.5 U | 1900 | G003 | 51.1 | 8.5 | 126 |
| C3-Naphthalene | µg/kg | 112 | 90 | 80.4 | 0.46 J | 1400 | G003 | 78.5 | 8 | 367 | 0.37 U | 1400 | G003 | 63.4 | 4.6 | 295 |
| C3-Phenanthrene/anthracene | µg/kg | 112 | 95 | 84.8 | 1.6 J | 1900 | G003 | 84.2 | 30 | 266 | 0.75 U | 1900 | G003 | 71.6 | 24 | 230 |
| C4-Chrysene | µg/kg | 112 | 67 | 59.8 | 4 | 320 | G019 | 49 | 31 | 178 | 0.25 U | 320 | G019 | 29.9 | 10 | 135 |
| C4-Naphthalene | µg/kg | 112 | 84 | 75 | 0.48 J | 1500 | G003 | 67.4 | 12.5 J | 258 | 0.37 U | 1500 | G003 | 50.8 | 6.1 | 190 |
| C4-Phenanthrene/anthracene | µg/kg | 112 | 82 | 73.2 | 1.4 J | 1100 | G003 | 54.8 | 20.5 | 180 | 0.75 U | 1100 | G003 | 40.6 | 13 | 154 |
| Chrysene | µg/kg | 157 | 140 | 89.2 | 0.25 J | 3100 | PGC-10 | 128 | 21 | 374 | 0.25 J | 3100 | PGC-10 | 115 | 20 | 306 |
| Dibenzo(a,h)anthracene | µg/kg | 157 | 120 | 76.4 | 0.3 J | 660 | C087 | 21.3 | 5.35 | 57.7 | 0.28 U | 660 | C087 | 17 | 3.5 | 45.2 |
| Dibenzothiophene | µg/kg | 112 | 80 | 71.4 | 0.39 J | 1100 J | PGC-10 | 35.7 | 2.7 J | 115 J | 0.21 U | 1100 J | PGC-10 | 25.6 | 1.5 J | 57.5 |
| Fluoranthene | µg/kg | 157 | 143 | 91.1 | 0.62 J | 8900 | PGC-10 | 299 | 37 | 832 | 0.61 U | 8900 | PGC-10 | 273 | 34 | 636 |
| Fluorene | µg/kg | 157 | 117 | 74.5 | 0.53 J | 2500 | PGC-10 | 47.9 | 4 J | 100 | 0.5 U | 2500 | PGC-10 | 36.4 | 3.1 J | 79.2 |
| Total HPAHs | µg/kg | 157 | 144 | 91.7 | 2.02 JT | 38700 T | PGC-10 | 1480 | 216 | 3710 | 0.64 UT | 38700 T | PGC-10 | 1360 | 200 JT | 3190 |
| Indeno(1,2,3-cd)pyrene | µg/kg | 157 | 140 | 89.2 | 0.22 J | 3500 | C087 | 124 | 18 | 303 | 0.16 U | 3500 | C087 | 112 | 16 T | 236 |
| Total LPAHs | µg/kg | 157 | 149 | 94.9 | 0.57 JT | 23800 T | PGC-10 | 520 | 47 T | 1460 J | 0.57 JT | 23800 T | PGC-10 | 494 | 41 JT | 1290 J |
| Naphthalene | µg/kg | 157 | 139 | 88.5 | 0.57 J | 5300 | G003 | 111 | 7.9 | 146 | 0.57 J | 5300 | G003 | 98.8 | 6.4 | 140 |
| Perylene | µg/kg | 145 | 138 | 95.2 | 0.34 J | 940 | C087 | 50.3 | 17.3 J | 96.5 | 0.32 U | 940 | C087 | 47.9 | 17 | 94 |
| Phenanthrene | µg/kg | 157 | 136 | 86.6 | 0.95 J | 11000 | PGC-10 | 243 | 24 | 595 | 0.75 U | 11000 | PGC-10 | 211 | 20 | 502 |
| Pyrene | µg/kg | 157 | 144 | 91.7 | 0.58 J | 10000 | PGC-10 | 339 | 39.5 | 827 | 0.37 U | 10000 | PGC-10 | 311 | 37 | 814 |
| Total BaPEq | µg/kg | 157 | 142 | 90.4 | 0.089 JT | 4970 T | PGC-10 | 203 | 28.9 | 403 | 0.089 JT | 4970 T | PGC-10 | 184 | 25.8 JT | 395 |
| Total cPAHs | µg/kg | 157 | 142 | 90.4 | 0.8 JT | 18400 T | C087 | 718 | 111 | 1810 | 0.48 UT | 18400 T | C087 | 650 | 99.6 JT | 1530 |
| Total PAHs | µg/kg | 157 | 150 | 95.5 | 0.57 JT | 62500 T | PGC-10 | 1940 | 259 J | 4910 | 0.57 JT | 62500 T | PGC-10 | 1850 | 246 JT | 4640 |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl) phthalate | µg/kg | 96 | 78 | 81.3 | 7.6 J | 18000 | GCRSP12E | 418 | 75.5 | 623 | 7 U | 18000 | GCRSP12E | 348 | 58.5 | 595 |
| Butylbenzyl phthalate | µg/kg | 96 | 29 | 30.2 | 3.6 J | 580 | G007 | 54 | 14 | 350 J | 2.6 U | 580 | G007 | 21 | 1.8 U | 50 U |
| Dibutyl phthalate | µg/kg | 96 | 42 | 43.8 | 1 J | 130 | G045 | 17 | 11 | 46 | 1 J | 400 U | G783 | 16 | 8.2 J | 50 U |
| Diethyl phthalate | µg/kg | 96 | 37 | 38.5 | 1.3 J | 15 | G023 | 3.59 | 2.4 J | 9.4 J | 1.3 J | 100 U | HC-SS02; HC-SS03; HC-SS04; HC-SS30 | 4.8 | 1.83 J | 20.5 U |
| Dimethyl phthalate | µg/kg | 96 | 9 | 9.4 | 1.7 J | 170 | G054 | 35 | 5.5 J | 130 | 1 U | 170 | G054 | 6.5 | 0.5 U | 50 U |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Di-n-octyl phthalate | µg/kg | 96 | 4 | 4.2 | 6.2 J | 27 | G064 | 15 | 13 | 25 | 1.7 U | 100 U | HC-SS02; HC-SS03; HC-SS04; HC-SS30 | 4.6 | 0.85 U | 31 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | µg/kg | 96 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.3 U | 130 U | G783 | 3.3 | 1.3 U | 10 U |
| 1,2-Dichlorobenzene | µg/kg | 96 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 U | 150 U | G783 | 3.5 | 1.5 U | 7.5 U |
| 1,3-Dichlorobenzene | µg/kg | 96 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.5 U | 150 U | G783 | 3.5 | 1.5 U | 7.5 U |
| 1,4-Dichlorobenzene | µg/kg | 96 | 18 | 18.8 | 3 J | 190 | G002 | 24 | 11 J | 59 | 0.3 U | 190 | G002 | 7.5 | 1.5 U | 27 |
| 2,4-Dinitrotoluene | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 75 U | G783 | 2 | 0.75 U | 5.4 U |
| 2,6-Dinitrotoluene | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 U | 100 U | G783 | 2.4 | 1 U | 5 U |
| 2-Chloronaphthalene | µg/kg | 92 | 1 | 1.1 | 20 | 20 | UG07 | 20 | 20 | 20 | 1.6 U | 80 U | G783 | 2.2 | 0.8 U | 4 U |
| 2-Nitroaniline | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.2 U | 160 U | G783 | 3.7 | 1.6 U | 8 U |
| 3,3'-Dichlorobenzidine | µg/kg | 89 | 1 | 1.1 | 5.1 J | 5.1 J | G052 | 5.1 | 5.1 J | 5.1 J | 3.7 U | 190 U | G783 | 4.8 | 1.9 U | 15 U |
| 3-Nitroaniline | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.5 U | 200 U | PA03; PA04 | 5.1 | 1.3 U | 9.2 U |
| 4-Bromophenyl phenyl ether | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.6 U | 80 U | G783 | 1.9 | 0.8 U | 4.5 U |
| 4-Chloroaniline | µg/kg | 90 | 1 | 1.1 | 15 J | 15 J | G036 | 15 | 15 J | 15 J | 1.9 U | 95 U | G783 | 2.9 | 0.95 U | 13 J |
| 4-Chlorophenyl phenyl ether | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 70 U | G783 | 1.7 | 0.7 U | 4.2 U |
| 4-Nitroaniline | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.8 U | 90 U | G783 | 2.3 | 0.9 U | 4.7 U |
| Aniline | µg/kg | 89 | 9 | 10.1 | 4.5 J | 64 | G065 | 17 | 8.6 J | 50 | 1.5 U | 200 U | PA03; PA04 | 5.3 | 0.75 U | 17 J |
| Azobenzene | µg/kg | 90 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.1 U | 55 U | G783 | 1.4 | 0.55 U | 2.8 U |
| Benzoic acid | µg/kg | 91 | 6 | 6.6 | 100 J | 3400 | G058 | 689 | 133 J | 2610 | 96 UJ | 4800 U | G783 | 162 | 48 U | 365 |
| Benzyl alcohol | µg/kg | 96 | 25 | 26 | 2.4 J | 1800 | G060 | 100 | 5.3 J | 270 | 2.1 U | 1800 | G060 | 30 | 2.1 U | 63 |
| Bis(2-chloro-1-methylethyl) ether | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | PA03; PA04 | 5 | 5 U | 5 U |
| Bis(2-chloroethoxy) methane | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 75 U | G783 | 1.8 | 0.75 U | 4.3 U |
| Bis(2-chloroethyl) ether | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 95 U | G783 | 2.3 | 0.95 U | 4.9 U |
| Bis(2-chloroisopropyl) ether | µg/kg | 90 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 130 U | G783 | 3 | 1.3 U | 6.5 U |
| Carbazole | µg/kg | 90 | 43 | 47.8 | 1.4 J | 220 | G003 | 12.7 | 4 J | 28.7 J | 1.3 U | 220 | G003 | 7.03 | 1.45 J | 22.4 J |
| Dibenzofuran | µg/kg | 96 | 64 | 66.7 | 0.52 J | 290 | G003 | 11.6 | 2.9 | 46.6 | 0.52 J | 290 | G003 | 8.92 | 1.75 J | 25 U |
| Hexachlorobenzene | µg/kg | 149 | 60 | 40.3 | 0.094 J | 3.4 | G100 | 0.456 | 0.28 J | 1.42 | 0.068 U | 20 U | HC-SS02; HC-SS03; HC-SS04; HC-SS30 | 0.603 | 0.11 J | 2.56 |
| Hexachlorobutadiene | µg/kg | 149 | 7 | 4.7 | 0.065 J | 0.52 | G086 | 0.196 | 0.12 J | 0.451 J | 0.065 J | 20 U | HC-SS02; HC-SS03; HC-SS04; HC-SS30 | 0.422 | 0.0435 U | 0.508 |
| Hexachlorocyclopentadiene | µg/kg | 91 | 0 | 0 | -- | -- | -- | -- | -- | -- | 23 U | 730 U | G061 | 27 | 15 U | 75 U |
| Hexachloroethane | µg/kg | 127 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.037 UJ | 50 U | HC-SS02; HC-SS03; HC-SS04; HC-SS30 | 1.17 | 0.0395 U | 1.69 U |
| Isophorone | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 50 U | G783 | 1.3 | 0.5 U | 3.6 U |
| Nitrobenzene | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.2 U | 110 U | G783 | 2.6 | 1.1 U | 5.5 U |
| N-Nitrosodimethylamine | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.1 U | 310 U | G783 | 7.2 | 3.1 U | 16 U |
| N-Nitrosodiphenylamine | µg/kg | 96 | 3 | 3.1 | 1.8 J | 9.7 J | G019 | 6.7 | 8.5 J | 9.6 J | 1.6 U | 80 U | G783 | 2.5 | 0.8 U | 10 U |
| N-Nitrosodipropylamine | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.4 U | 120 U | G783 | 2.9 | 1.2 U | 6 U |
| Octachlorostyrene | µg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.017 UJ | 0.17 UJ | G048; G054 | 0.0504 | 0.054 UJ | 0.085 UJ |
| **Phenols** | | | | | | | | | | | | | | | | |
| 2,3,4,5-Tetrachlorophenol | µg/kg | 90 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.23 U | 20 U | G057 | 2.1 | 2.2 U | 3.2 U |
| 2,3,5,6-Tetrachlorophenol | µg/kg | 90 | 1 | 1.1 | 0.78 J | 0.78 J | GCA12E | 0.78 | 0.78 J | 0.78 J | 0.18 U | 25 U | G057 | 2.5 | 2.6 U | 3.9 U |
| 2,4,5-Trichlorophenol | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.73 U | 40 U | PA03; PA04 | 2.3 | 1.9 U | 3.5 U |
| 2,4,6-Trichlorophenol | µg/kg | 92 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.12 U | 30 U | PA03; PA04 | 2.2 | 2 U | 3.4 U |
| 2,4-Dichlorophenol | µg/kg | 89 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 UJ | 100 U | PA03; PA04 | 2.4 | 0.5 U | 5 U |
| 2,4-Dimethylphenol | µg/kg | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 5.5 UJ | 280 UJ | G783 | 26 | 5.5 U | 100 UJ |
| 2,4-Dinitrophenol | µg/kg | 88 | 0 | 0 | -- | -- | -- | -- | -- | -- | 17 UJ | 430 U | G061 | 21 | 8.5 U | 70 U |
| 2-Chlorophenol | µg/kg | 89 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UJ | 100 U | G783 | 3 | 1 U | 10 U |
| 2-Methylphenol | µg/kg | 104 | 2 | 1.9 | 8.1 J | 24 J | G007 | 16 | 16 J | 23 J | 1.5 UJ | 210 UJ | PGC-10 | 4.8 | 0.75 U | 19 U |
| 2-Nitrophenol | µg/kg | 89 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 UJ | 75 U | G783 | 2.3 | 0.75 U | 7.5 U |
| 3- and 4-Methylphenol Coelution | µg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 100 U | 100 U | HC-SS02; HC-SS03; HC-SS04; HC-SS30 | 50 | 50 U | 50 U |
| 3,4-Dichlorophenol | µg/kg | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.88 U | 17 U | UG05 | 3.6 | 0.48 U | 8.4 U |
| 3,5-Dichlorophenol | µg/kg | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.8 U | 15 U | UG06 | 2.7 | 1.5 U | 6.3 U |
| 4,6-Dinitro-2-methylphenol | µg/kg | 89 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 UJ | 100 U | PA03; PA04 | 2.8 | 0.7 U | 7 U |
| 4-Chloro-3-methylphenol | µg/kg | 89 | 2 | 2.2 | 1.8 J | 2.6 J | G031 | 2.2 | 2.2 J | 2.6 J | 1.4 UJ | 70 U | G783 | 2.3 | 0.7 U | 7 U |
| 4-Methylphenol | µg/kg | 100 | 37 | 37 | 2 J | 360 | G048 | 34.1 | 15 J | 107 | 1.5 UJ | 360 | G048 | 17.3 | 3.38 UJ | 70.5 |
| 4-Nitrophenol | µg/kg | 89 | 0 | 0 | -- | -- | -- | -- | -- | -- | 18 UJ | 900 U | G783 | 24 | 9 U | 50 U |
| Pentachlorophenol | µg/kg | 107 | 12 | 11.2 | 3.2 NJ | 890 | G057 | 130 | 38 J | 510 | 0.17 U | 2100 U | PGC-10 | 38 | 2.8 U | 150 U |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Phenol | µg/kg | 104 | 38 | 36.5 | 2.2 J | 80 | G045 | 15 | 9.9 J | 40.4 J | 2 UJ | 620 U | PGC-10 | 13.9 | 4.65 J | 50 U |
| **Petroleum** | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 25 | 19 | 76 | 6.4 J | 530 | PGC-10 | 156 | 97 | 512 J | 1.3 U | 530 | PGC-10 | 119 | 61 | 474 J |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 128 | 116 | 90.6 | 1.9 JT | 760 J | C090 | 70.1 | 33.5 J | 223 J | 1.3 U | 760 J | C090 | 63.9 | 30.5 J | 210 J |
| Total Petroleum Hydrocarbons (Gasoline) | mg/kg | 22 | 11 | 50 | 1.2 J | 75 | PGC-10 | 24 | 20 | 65 J | 0.91 U | 75 | PGC-10 | 14 | 5 UJ | 54 J |
| Total Petroleum Hydrocarbons (Heavy Oil) | mg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 25 U | 50 U | HC-SS03 | 16 | 13 U | 23 U |
| Jet fuel A | mg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 20 U | HC-SS03 | 6 | 5 U | 9 U |
| JP-4 jet fuel | mg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 UJ | 20 UJ | HC-SS03 | 6 | 5 UJ | 9 UJ |
| Kerosene | mg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 20 U | HC-SS03 | 6 | 5 U | 9 U |
| Lube Oil | mg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 25 U | 50 U | HC-SS03 | 16 | 13 U | 23 U |
| Mineral spirits | mg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 20 U | HC-SS03 | 6 | 5 U | 9 U |
| Naphtha distillate | mg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 UJ | 20 UJ | HC-SS03 | 6 | 5 UJ | 9 UJ |
| Non-petroleum hydrocarbons | mg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 50 U | 100 U | HC-SS03 | 30 | 30 U | 50 U |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 21 | 20 | 95.2 | 10 J | 1800 J | UG07 | 405 | 300 | 822 J | 10 J | 1800 J | UG07 | 389 | 280 | 770 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 128 | 121 | 94.5 | 4.9 JT | 1500 J | C090 | 264 | 160 J | 910 | 3.1 U | 1500 J | C090 | 250 | 150 J | 875 J |
| Total Petroleum Hydrocarbons | mg/kg | 25 | 23 | 92 | 10 JA | 2400 JT | UG07 | 504 | 314 T | 1290 | 10 JA | 2400 JT | UG07 | 467 | 280 JT | 1270 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 128 | 124 | 96.9 | 2.2 JA | 2260 JA | C090 | 324 | 187 J | 1020 J | 2.2 JA | 2260 JA | C090 | 314 | 181 J | 1010 J |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.083 U | 10 U | PA03; PA04 | 1.29 | 0.0483 UJ | 5 U |
| 1,1,1-Trichloroethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.12 U | 10 U | PA03; PA04 | 1.3 | 0.07 UJ | 5 U |
| 1,1,2,2-Tetrachloroethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.19 U | 10 U | PA03; PA04 | 1.3 | 0.11 UJ | 5 U |
| 1,1,2-Trichloroethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 10 U | PA03; PA04 | 1.3 | 0.065 UJ | 5 U |
| 1,1-Dichloroethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.094 U | 10 U | PA03; PA04 | 1.29 | 0.055 UJ | 5 U |
| 1,1-Dichloroethene | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 10 U | PA03; PA04 | 1.3 | 0.075 UJ | 5 U |
| 1,1-Dichloropropene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | PA03; PA04 | 5 | 5 U | 5 U |
| 1,2,3-Trichlorobenzene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| 1,2,3-Trichloropropane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.28 U | 10 U | PA03; PA04 | 1.4 | 0.16 UJ | 5 U |
| 1,2,4-Trimethylbenzene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| 1,2-Dibromo-3-chloropropane | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| 1,2-Dichloroethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.15 U | 10 U | PA03; PA04 | 1.3 | 0.09 UJ | 5 U |
| 1,2-Dichloropropane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 10 U | PA03; PA04 | 1.3 | 0.06 UJ | 5 U |
| 1,3,5-Trimethylbenzene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| 1,3-Dichloropropane | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | PA03; PA04 | 5 | 5 U | 5 U |
| 1,4-Dichloro-trans-2-butene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.51 U | 0.66 U | UG07 | 0.29 | 0.29 U | 0.32 UJ |
| 1-Methyl-4-isopropylbenzene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| 2,2-Dichloropropane | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | PA03; PA04 | 5 | 5 U | 5 U |
| 2-Chloroethyl vinyl ether | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.23 U | 0.3 U | UG07 | 0.13 | 0.13 U | 0.15 UJ |
| 2-Chlorotoluene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| 4-Chlorotoluene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| Acetone | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 9.1 U | 100 U | PA03; PA04 | 16 | 5.5 UJ | 50 U |
| Acrylonitrile | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.63 U | 0.82 U | UG07 | 0.36 | 0.36 U | 0.4 UJ |
| Benzene | µg/kg | 24 | 1 | 4.2 | 0.15 J | 0.15 J | UG07 | 0.15 | 0.15 J | 0.15 J | 0.068 U | 10 U | PA03; PA04 | 2.72 | 3.23 U | 4.98 U |
| Bromobenzene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | PA03; PA04 | 5 | 5 U | 5 U |
| Bromochloromethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.15 U | 10 U | PA03; PA04 | 1.3 | 0.09 UJ | 5 U |
| Bromodichloromethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.062 U | 10 U | PA03; PA04 | 1.28 | 0.0358 UJ | 5 U |
| Bromoform | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.19 U | 10 U | PA03; PA04 | 1.3 | 0.11 UJ | 5 U |
| Bromomethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.43 U | 10 U | PA03; PA04 | 1.4 | 0.25 UJ | 5 U |
| BTEX | µg/kg | 24 | 1 | 4.2 | 0.15 JT | 0.15 JT | UG07 | 0.15 | 0.15 JT | 0.15 JT | 0.15 JT | 10 UT | PA03; PA04 | 2.7 | 3.2 U | 5 U |
| Carbon disulfide | µg/kg | 8 | 1 | 12.5 | 0.16 J | 0.16 J | UG07 | 0.16 | 0.16 J | 0.16 J | 0.11 U | 10 U | PA03; PA04 | 1.3 | 0.06 UJ | 5 U |
| Carbon tetrachloride | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.077 U | 10 U | PA03; PA04 | 1.28 | 0.0448 UJ | 5 U |
| Chlorobenzene | µg/kg | 8 | 1 | 12.5 | 0.12 J | 0.12 J | UG07 | 0.12 | 0.12 J | 0.12 J | 0.092 U | 10 U | PA03; PA04 | 1.3 | 0.055 UJ | 5 U |
| Chlorodibromomethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.16 U | 10 U | PA03; PA04 | 1.3 | 0.09 UJ | 5 U |
| Chloroethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.31 U | 10 U | PA03; PA04 | 1.4 | 0.18 UJ | 5 U |
| Chloroform | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 10 U | PA03; PA04 | 1.3 | 0.075 UJ | 5 U |
| Chloromethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.12 U | 10 U | PA03; PA04 | 1.3 | 0.07 UJ | 5 U |
| cis-1,2-Dichloroethene | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.15 U | 10 U | PA03; PA04 | 1.3 | 0.09 UJ | 5 U |
| cis-1,3-Dichloropropene | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.095 U | 10 U | PA03; PA04 | 1.29 | 0.0575 UJ | 5 U |
| Dichlorodifluoromethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.091 U | 10 U | PA03; PA04 | 1.29 | 0.055 UJ | 5 U |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Ethylbenzene | µg/kg | 24 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.078 U | 10 U | PA03; PA04 | 2.71 | 3.23 U | 4.98 U |
| Ethylene dibromide | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.094 U | 40 U | PA03; PA04 | 5.04 | 0.055 UJ | 20 U |
| Isopropylbenzene | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 40 U | PA03; PA04 | 5.1 | 0.08 UJ | 20 U |
| m,p-Xylene | µg/kg | 24 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.2 UJ | 10 U | PA03; PA04 | 2.7 | 3.2 U | 5 U |
| Methyl iodide | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.51 U | 0.66 U | UG07 | 0.29 | 0.29 U | 0.32 UJ |
| Methyl isobutyl ketone | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.77 U | 40 U | PA03; PA04 | 5.3 | 0.45 UJ | 20 U |
| Methyl n-butyl ketone | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 5.4 U | 40 U | PA03; PA04 | 7.3 | 3.2 UJ | 20 U |
| Methyl tert-butyl ether | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 0.15 U | UG07 | 0.063 | 0.063 U | 0.073 UJ |
| Methylene bromide | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 10 U | PA03; PA04 | 1.3 | 0.065 UJ | 5 U |
| Methylene chloride | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.76 U | 20 U | PA03; PA04 | 3.1 | 0.83 UJ | 10 U |
| Methylethyl ketone | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| n-Butylbenzene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| n-Propylbenzene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| o-Xylene | µg/kg | 24 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.088 U | 10 U | PA03; PA04 | 2.71 | 3.23 U | 4.98 U |
| Sec-butylbenzene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| Styrene | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.15 U | 10 U | PA03; PA04 | 1.3 | 0.085 UJ | 5 U |
| tert-Butylbenzene | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 40 U | 40 U | PA03; PA04 | 20 | 20 U | 20 U |
| Tetrachloroethene | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 10 U | PA03; PA04 | 1.3 | 0.08 UJ | 5 U |
| Toluene | µg/kg | 24 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 10 U | PA03; PA04 | 2.7 | 3.2 U | 5 U |
| trans-1,2-Dichloroethene | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.091 U | 10 U | PA03; PA04 | 1.29 | 0.055 UJ | 5 U |
| trans-1,3-Dichloropropene | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.1 U | 10 U | PA03; PA04 | 1.3 | 0.06 UJ | 5 U |
| Trichloroethene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 10 U | PA03; PA04 | 1.7 | 1.3 U | 5 U |
| Trichlorofluoromethane | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.54 U | 10 U | PA03; PA04 | 1.5 | 0.32 UJ | 5 U |
| Vinyl chloride | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.22 U | 10 U | PA03; PA04 | 1.3 | 0.13 UJ | 5 U |
| Xylene | µg/kg | 24 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.2 UJT | 10 UT | PA03; PA04 | 2.7 | 3.2 U | 5 U |
| **Zidell Data Only** | | | | | | | | | | | | | | | | |
| **Grain Size** | | | | | | | | | | | | | | | | |
| Clay | percent | 11 | 11 | 100 | 12.6 | 29.7 | WRS38 | 20.8 | 20.2 | 27.9 | 12.6 | 29.7 | WRS38 | 20.8 | 20.2 | 27.9 |
| Fines | percent | 20 | 20 | 100 | 0.5 | 89.4 T | WRS38 | 34.3 | 26.8 | 80.5 | 0.5 | 89.4 T | WRS38 | 34.3 | 26.8 | 80.5 |
| Gravel | percent | 20 | 20 | 100 | 0 | 86 | WRS30 | 30 | 0 | 84.4 | 0 | 86 | WRS30 | 30 | 0 | 84.4 |
| Sand | percent | 20 | 20 | 100 | 10.6 | 97.2 | WRS24 | 35.7 | 28 | 83.8 | 10.6 | 97.2 | WRS24 | 35.7 | 28 | 83.8 |
| Silt | percent | 11 | 11 | 100 | 1.5 | 59.7 | WRS38 | 40.2 | 45.6 | 58.7 | 1.5 | 59.7 | WRS38 | 40.2 | 45.6 | 58.7 |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Phosphorus | mg/kg | 4 | 4 | 100 | 803 | 1020 | WRS07 | 915 | 919 | 1010 | 803 | 1020 | WRS07 | 915 | 919 | 1010 |
| Total organic carbon | percent | 43 | 43 | 100 | 0.229 | 2.59 | WRS-96 | 1.053 | 0.932 | 2.504 | 0.229 | 2.59 | WRS-96 | 1.053 | 0.932 | 2.504 |
| Total solids | percent | 43 | 43 | 100 | 41.6 | 89.14 | WRS-60 | 62.04 | 56.49 | 83.44 | 41.6 | 89.14 | WRS-60 | 62.04 | 56.49 | 83.44 |
| **Metals** | | | | | | | | | | | | | | | | |
| Antimony | mg/kg | 102 | 48 | 47.1 | 0.108 J | 873 J | R12 | 49.2761 | 9.245 J | 170.6 J | 0.00913 UJ | 873 J | R12 | 25.1559 | 5 UJ | 84.09 J |
| Arsenic | mg/kg | 74 | 46 | 62.2 | 1.29 | 78 J | R47 | 11.2 | 4.98 J | 55.5 J | 1.29 | 78 J | R47 | 7.51 | 2.87 J | 34.7 J |
| Barium | mg/kg | 36 | 36 | 100 | 30.4 J | 1610 J | R31 | 229 | 160 | 432 J | 30.4 J | 1610 J | R31 | 229 | 160 | 432 J |
| Beryllium | mg/kg | 44 | 32 | 72.7 | 0.347 | 2.25 | R45 | 1.04 | 0.942 | 1.99 | 0.347 | 2.25 | R45 | 0.939 | 0.893 | 1.87 |
| Cadmium | mg/kg | 110 | 64 | 58.2 | 0.127 | 132 J | R12 | 4.47 | 1.35 J | 8.037 J | 0.0369 U | 132 J | R12 | 2.707 | 0.5 U | 6.428 J |
| Chromium | mg/kg | 110 | 110 | 100 | 1.24 J | 758 J | R50 | 55.958 | 26.6 | 167.55 J | 1.24 J | 758 J | R50 | 55.958 | 26.6 | 167.55 J |
| Copper | mg/kg | 110 | 107 | 97.3 | 5.51 | 2150 J | R38 | 195.48 | 42.9 | 1125 J | 0.184 UJ | 2150 J | R38 | 190.17 | 41 | 1117.5 J |
| Lead | mg/kg | 110 | 97 | 88.2 | 2.1 | 20800 J | R12 | 489.8 | 41 | 1438 J | 0.576 U | 20800 J | R12 | 432.3 | 31.23 J | 1378 J |
| Mercury | mg/kg | 104 | 72 | 69.2 | 0.0223 T | 20.2 J | R50 | 0.71889 | 0.171 | 2.298 J | 0.00172 U | 20.2 J | R50 | 0.50716 | 0.1 U | 1.468 J |
| Nickel | mg/kg | 109 | 108 | 99.1 | 3.89 J | 11500 J | R50 | 153 | 21.6 J | 153.9 J | 0.0508 U | 11500 J | R50 | 151.6 | 21.3 J | 153.6 J |
| Selenium | mg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | WRS05; WRS06; WRS07; WRS08; WRS11; WRS12; WRS13; WRS15; WRS18; WRS19; WRS20; WRS21 | 0.5 | 0.5 U | 0.5 U |
| Silver | mg/kg | 44 | 17 | 38.6 | 1.14 | 9.95 | R47 | 2.5 | 1.79 | 5.5 J | 0.862 U | 9.95 | R47 | 1.52 | 1 U | 3.4 J |
| Thallium | mg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | WRS05; WRS06; WRS07; WRS08; WRS11; WRS12; WRS13; WRS15; WRS18; WRS19: WRS20: WRS21 | 0.5 | 0.5 U | 0.5 U |
| Zinc | mg/kg | 110 | 110 | 100 | 3.27 J | 6480 J | R50 | 555.1 | 147.5 J | 2536 J | 3.27 J | 6480 J | R50 | 555.1 | 147.5 J | 2536 J |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Butyltins** | | | | | | | | | | | | | | | | |
| Butyltin ion | µg/kg | 68 | 18 | 26.5 | 0.64 | 1140 | WRS15 | 82.02 | 2.95 | 290 | 0.0013 U | 1140 | WRS15 | 21.85 | 0.2675 U | 19.05 |
| Dibutyltin ion | µg/kg | 68 | 24 | 35.3 | 1.5 | 368 | WRS11 | 44.86 | 4 | 252.5 | 0.0017 U | 368 | WRS11 | 15.96 | 0.4225 U | 73.3 |
| Tetrabutyltin | µg/kg | 89 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.00088 U | 150 U | WRS20 | 1.1487 | 0.065 U | 1.5 U |
| Tributyltin | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.1 U | 0.1 U | R05; R09; R12; R14; R16; R20; R22; R24; R26; R30; R34; R36; R38; R41; R43; R44; R45 | 0.05 | 0.05 U | 0.05 U |
| Tributyltin ion | µg/kg | 80 | 26 | 32.5 | 1.9 | 1990 | WRS20 | 101.8 | 8 | 187.5 | 0.0013 U | 1990 | WRS20 | 33.19 | 0.2825 U | 40.35 |
| **PCB Aroclors** | | | | | | | | | | | | | | | | |
| Aroclor 1016 | µg/kg | 111 | 5 | 4.5 | 4 | 4740 | R50 | 958 | 7.77 | 3800 | 0.24 U | 4740 | R50 | 61.3 | 2 U | 80 U |
| Aroclor 1221 | µg/kg | 111 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.24 U | 200 U | WRS34 | 17.6 | 2 U | 77.5 U |
| Aroclor 1232 | µg/kg | 111 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.24 U | 200 U | WRS34 | 17.6 | 2 U | 77.5 U |
| Aroclor 1242 | µg/kg | 111 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.24 U | 200 U | WRS34 | 17.6 | 2 U | 77.5 U |
| Aroclor 1248 | µg/kg | 111 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.24 U | 200 U | WRS34 | 17.6 | 2 U | 77.5 U |
| Aroclor 1254 | µg/kg | 111 | 54 | 48.6 | 1.27 | 12300 | R49 | 748 | 108 | 3480 | 0.24 U | 12300 | R49 | 378 | 49 U | 1700 |
| Aroclor 1260 | µg/kg | 111 | 77 | 69.4 | 2.21 | 12900 | WRS-75 | 802.2 | 97.8 | 3726 | 0.24 U | 12900 | WRS-75 | 570.9 | 59 | 2825 |
| Aroclor 1262 | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.24 U | 180 U | WRS35 | 29.5 | 2.32 U | 83 U |
| Aroclor 1268 | µg/kg | 15 | 1 | 6.7 | 101 T | 101 T | WRS-95 | 101 | 101 T | 101 T | 0.24 U | 180 U | WRS35 | 36.1 | 2.55 U | 93.3 |
| Aroclors | µg/kg | 111 | 81 | 73 | 1.27 T | 19700 T | R50 | 1320 | 133 T | 7780 T | 0.24 UT | 19700 T | R50 | 977 | 80 UT | 6220 |
| **PCBs[c]** | | | | | | | | | | | | | | | | |
| Total PCBs | µg/kg | 111 | 81 | 73 | 1.27 T | 19700 T | -- | 1320 | 133 T | 7780 T | 0.24 UT | 19700 T | -- | 977 | 80 UT | 6220 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | µg/kg | 36 | 13 | 36.1 | 5 | 200 | WRS16 | 42.62 | 8 | 146 | 0.0088 U | 200 | WRS16 | 16.63 | 2.625 U | 85.25 |
| Acenaphthene | µg/kg | 112 | 33 | 29.5 | 6 | 1230 | WRS-96 | 114.8 | 26.7 | 584 | 0.0088 U | 1230 | WRS-96 | 35.44 | 3.15 U | 121.4 |
| Acenaphthylene | µg/kg | 112 | 40 | 35.7 | 5 | 895 | R20 | 69.18 | 24 | 217.2 | 0.0088 U | 895 | R20 | 26.05 | 3.05 U | 110.2 |
| Anthracene | µg/kg | 112 | 55 | 49.1 | 5.6 | 1280 | R20 | 125.3 | 46.8 | 453 | 0.0088 U | 1280 | R20 | 62.47 | 6.7 U | 340.5 |
| Benzo(a)anthracene | µg/kg | 112 | 83 | 74.1 | 0.011 | 3830 | R20 | 271.6 | 64.3 | 960.1 | 0.011 | 3830 | R20 | 201.7 | 30.9 | 757.5 |
| Benzo(a)pyrene | µg/kg | 112 | 83 | 74.1 | 0.0097 | 3320 | R20 | 237.76 | 75.3 | 899.1 | 0.0097 | 3320 | R20 | 176.66 | 36.65 | 730.3 |
| Benzo(b)fluoranthene | µg/kg | 112 | 82 | 73.2 | 0.013 | 4330 | R20 | 297.77 | 96 | 1237.2 | 0.013 | 4330 | R20 | 218.46 | 36.3 | 987.5 |
| Benzo(g,h,i)perylene | µg/kg | 112 | 78 | 69.6 | 0.015 | 1210 | R14 | 147.3 | 72.1 | 495.5 | 0.011 UT | 1210 | R14 | 103.1 | 24.85 | 464.5 |
| Benzo(k)fluoranthene | µg/kg | 112 | 79 | 70.5 | 0.0097 | 1500 | WRS16 | 126 | 41.7 | 477.7 | 0.0097 | 1500 | WRS16 | 89.29 | 19.35 | 365.5 |
| Chrysene | µg/kg | 112 | 84 | 75 | 0.015 | 3300 | WRS16 | 247 | 63.6 | 1000 | 0.015 | 3300 | WRS16 | 185 | 36.9 | 622 |
| Dibenzo(a,h)anthracene | µg/kg | 112 | 54 | 48.2 | 2.9 T | 434 | R20 | 62.45 | 37.35 | 194.2 | 0.0088 U | 434 | R20 | 31.08 | 6.5 U | 153.3 |
| Fluoranthene | µg/kg | 112 | 91 | 81.3 | 0.31 | 6250 | R20 | 490.5 | 90 | 2140 | 0.0088 U | 6250 | R20 | 398.8 | 72.5 | 1823 |
| Fluorene | µg/kg | 112 | 43 | 38.4 | 5 | 673 | WRS-96 | 68.71 | 20 | 217.8 | 0.0088 U | 673 | WRS-96 | 27.67 | 3.335 U | 143.8 |
| Total HPAHs | µg/kg | 112 | 98 | 87.5 | 0.0734 T | 28000 T | R20 | 2124 | 500 | 7515 | 0.0734 T | 28000 T | R20 | 1858 | 357 | 6900 |
| Indeno(1,2,3-cd)pyrene | µg/kg | 112 | 73 | 65.2 | 0.12 | 1320 | R20 | 149.3 | 73.3 | 630 | 0.0088 U | 1320 | R20 | 97.84 | 21.1 | 474.4 |
| Total LPAHs | µg/kg | 112 | 78 | 69.6 | 0.11 T | 4330 T | WRS16 | 526.3 | 133 | 2626 | 0.0088 UT | 4330 T | WRS16 | 367.2 | 47.9 | 2350 |
| Naphthalene | µg/kg | 112 | 56 | 50 | 5 | 495 | R22 | 56.88 | 29.3 | 165 | 0.0088 U | 495 | R22 | 29.7 | 6.5 U | 115.4 |
| Phenanthrene | µg/kg | 112 | 78 | 69.6 | 0.11 | 2020 | R47 | 265.8 | 63.85 | 1264 | 0.0088 U | 2020 | R47 | 185.6 | 30.3 | 1112 |
| Pyrene | µg/kg | 112 | 93 | 83 | 0.31 | 6500 | WRS15 | 433.8 | 90.6 | 1884 | 0.0088 U | 6500 | WRS15 | 360.5 | 66.65 | 1308 |
| Total BaPEq | µg/kg | 112 | 90 | 80.4 | 0.004 T | 4710 T | R20 | 322 | 92 | 1270 | 0.004 T | 4710 T | R20 | 259 | 47 | 1090 |
| Total cPAHs | µg/kg | 112 | 90 | 80.4 | 0.058 T | 16000 T | R20 | 1240 | 326 | 4830 | 0.058 T | 16000 T | R20 | 1000 | 184 | 3840 |
| Total PAHs | µg/kg | 112 | 98 | 87.5 | 0.0734 T | 32000 A | R20 | 2538 | 589 | 9835 | 0.0734 T | 32000 A | R20 | 2221 | 419.5 | 8495 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.0088 U | 6.3 U | WRS35 | 1.388 | 1.8 UT | 2.8 U |
| Dibenzofuran | µg/kg | 14 | 6 | 42.9 | 6 | 440 | WRS16 | 130 | 13 | 400 | 5 U | 440 | WRS16 | 56 | 2.5 U | 340 |
| **Petroleum** | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 36 | 3 | 8.3 | 44 | 74 | WRS22 | 57 | 53 T | 71.9 | 0.064 U | 110 U | WRS28 | 18.6 | 13.5 U | 53.5 |
| Total Petroleum Hydrocarbons (Gasoline) | mg/kg | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 100 U | WRS11; WRS15; WRS16 | 10 | 5 U | 50 U |
| Total Petroleum Hydrocarbons (Heavy Oil) | mg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 25 U | 250 U | WRS11; WRS15; WRS16 | 46 | 13 U | 130 U |
| Jet fuel A | mg/kg | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 100 U | WRS11; WRS15; WRS16 | 10 | 5 U | 50 U |
| JP-4 jet fuel | mg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 100 U | WRS11; WRS15; WRS16 | 20 | 5 U | 50 U |
| Kerosene | mg/kg | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 100 U | WRS11; WRS15; WRS16 | 10 | 5 U | 50 U |
| Lube Oil | mg/kg | 10 | 10 | 100 | 78 | 8600 | WRS16 | 1940 | 567 | 6480 | 78 | 8600 | WRS16 | 1940 | 567 | 6480 |
| Mineral spirits | mg/kg | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 100 U | WRS11; WRS15; WRS16 | 10 | 5 U | 50 U |
| Motor oil | mg/kg | 22 | 14 | 63.6 | 0.17 | 560 | WRS22 | 182 | 140 | 485 | 0.17 | 560 | WRS22 | 126 | 34 U | 443 |
| Naphtha distillate | mg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 100 U | WRS11; WRS15; WRS16 | 20 | 5 U | 50 U |

Table D1.3-6. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Non-petroleum hydrocarbons | mg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | | 50 U | 500 U | WRS11; WRS15; WRS16 | 90 | 30 U | 300 U |
| Total Petroleum Hydrocarbons | mg/kg | 36 | 18 | 50 | 0.17 A | 642 | WRS07 | 226 | 172 | 635 | | 0.17 A | 642 | WRS07 | 132 | 34 U | 532 |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

-- data not available.
BaPEq - benzo(a)pyrene equivalent
BTEX - benzene, toluene, ethylbenzene, and xylene
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-7. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Grain Size** | | | | | | | | | | | | | | | | |
| < 0.075 mm | percent | 2 | 2 | 100 | 22.1 T | 62.9 T | C035 | 42.5 | 42.5 | 60.9 | 22.1 T | 62.9 T | C035 | 42.5 | 42.5 | 60.9 |
| >10 Phi clay | percent | 2 | 2 | 100 | 0.4 | 6.73 T | C100 | 3.57 | 3.57 | 6.41 | 0.4 | 6.73 T | C100 | 3.57 | 3.57 | 6.41 |
| >9 Phi clay | percent | 61 | 61 | 100 | 0 | 9.77 T | C021 | 3.66 | 2.52 | 9.28 | 0 | 9.77 T | C021 | 3.66 | 2.52 | 9.28 |
| 8-9 Phi clay | percent | 63 | 63 | 100 | 0 | 7.36 | C003 | 1.813 | 1.4 T | 4.874 | 0 | 7.36 | C003 | 1.813 | 1.4 T | 4.874 |
| 9-10 Phi clay | percent | 2 | 2 | 100 | 0.8 | 4.48 T | C100 | 2.64 | 2.64 | 4.3 | 0.8 | 4.48 T | C100 | 2.64 | 2.64 | 4.3 |
| Clay | percent | 63 | 63 | 100 | 0.26 | 30.5 | WRS37 | 7.27 | 6.45 | 20.4 | 0.26 | 30.5 | WRS37 | 7.27 | 6.45 | 20.4 |
| Coarse sand | percent | 119 | 119 | 100 | 0.08 | 41.2 | UC04 | 9.97 | 4.99 | 36 | 0.08 | 41.2 | UC04 | 9.97 | 4.99 | 36 |
| Coarse silt | percent | 63 | 63 | 100 | 0.03 T | 28.1 T | C011 | 8.56 | 5.85 | 22.8 | 0.03 T | 28.1 T | C011 | 8.56 | 5.85 | 22.8 |
| Fine gravel | percent | 117 | 117 | 100 | 0 | 21.8 | C002 | 2.75 | 1.46 T | 10.1 | 0 | 21.8 | C002 | 2.75 | 1.46 T | 10.1 |
| Fine sand | percent | 119 | 119 | 100 | 0.527 T | 50.2 | PGC-01 | 17.4 | 15.1 | 35.6 | 0.527 T | 50.2 | PGC-01 | 17.4 | 15.1 | 35.6 |
| Fine silt | percent | 63 | 63 | 100 | 0 | 12.2 T | C100 | 4.35 | 3.25 | 11.8 | 0 | 12.2 T | C100 | 4.35 | 3.25 | 11.8 |
| Fines | percent | 129 | 129 | 100 | 0.31 T | 89 T | WRS37 | 33.08 | 32.8 T | 71.36 | 0.31 T | 89 T | WRS37 | 33.08 | 32.8 T | 71.36 |
| Gravel | percent | 12 | 12 | 100 | 0 T | 64.9 | WRS46 | 5.45 | 0 | 29.5 | 0 T | 64.9 | WRS46 | 5.45 | 0 | 29.5 |
| Medium gravel | percent | 117 | 117 | 100 | 0 T | 84.2 | C023 | 7.8903 | 0.75 | 49.04 | 0 T | 84.2 | C023 | 7.8903 | 0.75 | 49.04 |
| Medium sand | percent | 119 | 119 | 100 | 0.24 | 72.5 T | UC05-2 | 17.4 | 13.5 | 53.4 | 0.24 | 72.5 T | UC05-2 | 17.4 | 13.5 | 53.4 |
| Medium silt | percent | 63 | 63 | 100 | 0 | 19.8 T | C004 | 7.26 | 5.84 | 18 | 0 | 19.8 T | C004 | 7.26 | 5.84 | 18 |
| Sand | percent | 10 | 10 | 100 | 11 | 96.9 | WRS22 | 56.2 | 61.3 | 95.3 | 11 | 96.9 | WRS22 | 56.2 | 61.3 | 95.3 |
| Sieve 10 | percent | 2 | 2 | 100 | 0.05 T | 18.3 T | C039 | 9.18 | 9.18 | 17.4 | 0.05 T | 18.3 T | C039 | 9.18 | 9.18 | 17.4 |
| Sieve 140 | percent | 2 | 2 | 100 | 6.2 T | 24.7 T | C035 | 15.5 | 15.5 | 23.8 | 6.2 T | 24.7 T | C035 | 15.5 | 15.5 | 23.8 |
| Sieve 20 | percent | 2 | 2 | 100 | 0.65 T | 8.35 T | C039 | 4.5 | 4.5 | 7.97 | 0.65 T | 8.35 T | C039 | 4.5 | 4.5 | 7.97 |
| Sieve 200 | percent | 2 | 2 | 100 | 0.95 T | 8.65 T | C035 | 4.8 | 4.8 | 8.27 | 0.95 T | 8.65 T | C035 | 4.8 | 4.8 | 8.27 |
| Sieve 4 | percent | 2 | 2 | 100 | 0.05 T | 31.5 T | C039 | 15.8 | 15.8 | 29.9 | 0.05 T | 31.5 T | C039 | 15.8 | 15.8 | 29.9 |
| Sieve 40 | percent | 2 | 2 | 100 | 0.85 T | 4.75 T | C039 | 2.8 | 2.8 | 4.56 | 0.85 T | 4.75 T | C039 | 2.8 | 2.8 | 4.56 |
| Sieve 60 | percent | 2 | 2 | 100 | 2.25 T | 8 T | C039 | 5.13 | 5.13 | 7.71 | 2.25 T | 8 T | C039 | 5.13 | 5.13 | 7.71 |
| Silt | percent | 63 | 63 | 100 | 2.42 | 66.7 | PGC-04 | 31.7 | 31 | 59 | 2.42 | 66.7 | PGC-04 | 31.7 | 31 | 59 |
| Very coarse sand | percent | 119 | 119 | 100 | 0 T | 22.6 | C046 | 3.09 | 2.16 | 10.1 | 0 T | 22.6 | C046 | 3.09 | 2.16 | 10.1 |
| Very fine sand | percent | 119 | 119 | 100 | 0.03 | 31.2 | C022 | 9.15 | 8.01 | 21.5 | 0.03 | 31.2 | C022 | 9.15 | 8.01 | 21.5 |
| Very fine silt | percent | 63 | 63 | 100 | 0 T | 8.14 T | C011 | 2.79 | 2.46 | 7.09 | 0 T | 8.14 T | C011 | 2.79 | 2.46 | 7.09 |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Ammonia | mg/kg | 14 | 14 | 100 | 2.4 | 813 T | C100 | 121 | 57.4 | 430 | 2.4 | 813 T | C100 | 121 | 57.4 | 430 |
| Cyanide | mg/kg | 57 | 32 | 56.1 | 0.07 J | 40.7 J | PGC-05 | 4.3 | 0.365 J | 21.4 J | 0.07 J | 40.7 J | PGC-05 | 2.48 | 0.18 UJ | 12.3 J |
| Phosphorus | mg/kg | 15 | 15 | 100 | 702 | 1560 | WRS06 | 1070 | 1050 | 1390 | 702 | 1560 | WRS06 | 1070 | 1050 | 1390 |
| Specific Gravity | NA | 25 | 25 | 100 | 1.5 T | 2.43 | C782 | 1.85 | 1.79 | 2.25 | 1.5 T | 2.43 | C782 | 1.85 | 1.79 | 2.25 |
| Sulfide | mg/kg | 62 | 62 | 100 | 0.84 | 2260 J | PGC-06 | 185 | 16.2 | 1220 | 0.84 | 2260 J | PGC-06 | 185 | 16.2 | 1220 |
| Total organic carbon | percent | 159 | 156 | 98.1 | 0.034 J | 22.4 J | C024 | 1.81 | 0.939 | 7.53 | 0.02 UJ | 22.4 J | C024 | 1.78 | 0.92 J | 7.44 |
| Total solids | percent | 163 | 163 | 100 | 32.9 J | 94.3 | C782; O33-C008 | 72.3 | 70.7 | 89.7 | 32.9 J | 94.3 | C782; O33-C008 | 72.3 | 70.7 | 89.7 |
| **Metals** | | | | | | | | | | | | | | | | |
| Aluminum | mg/kg | 90 | 90 | 100 | 4250 | 31800 | UC07 | 16330 | 15700 | 28460 | 4250 | 31800 | UC07 | 16330 | 15700 | 28460 |
| Antimony | mg/kg | 122 | 90 | 73.8 | 0.041 J | 1.55 | C036 | 0.355 | 0.29 J | 0.785 J | 0.041 J | 17 U | WRS34 | 1.68 | 0.429 J | 6.5 U |
| Arsenic | mg/kg | 178 | 168 | 94.4 | 0.57 | 7.5 | WRS46 | 2.96 | 2.85 | 5.05 | 0.57 | 7.5 | WRS46 | 2.86 | 2.8 | 5.01 |
| Barium | mg/kg | 15 | 15 | 100 | 113 | 509 | WRS07 | 196 | 177 | 338 | 113 | 509 | WRS07 | 196 | 177 | 338 |
| Beryllium | mg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 U | 2 U | WRS05; WRS06; WRS07; WRS08 | 1 | 1 U | 1 U |
| Cadmium | mg/kg | 178 | 159 | 89.3 | 0.03 | 3.6 | WRS46 | 0.467 | 0.211 J | 1.91 | 0.026 U | 3.6 | WRS46 | 0.464 | 0.239 | 1.82 J |
| Chromium | mg/kg | 178 | 174 | 97.8 | 4.56 | 143 | WRS06 | 22.2 | 19.9 | 41.7 | 4.56 | 143 | WRS06 | 22 | 19.6 J | 41.3 |
| Copper | mg/kg | 178 | 178 | 100 | 9.48 | 1050 | WRS07 | 46.3 | 30.9 | 101 J | 9.48 | 1050 | WRS07 | 46.3 | 30.9 | 101 J |
| Iron | mg/kg | 56 | 56 | 100 | 20000 | 38200 | PGC-05 | 30200 | 30600 | 36700 | 20000 | 38200 | PGC-05 | 30200 | 30600 | 36700 |
| Lead | mg/kg | 178 | 168 | 94.4 | 1.35 J | 1380 | PGC-07 | 65 | 30.9 | 173 J | 1.35 J | 1380 | PGC-07 | 61.8 | 25 | 171 J |
| Mercury | mg/kg | 178 | 163 | 91.6 | 0.005 J | 3.46 JT | C783 | 0.3509 | 0.116 | 1.556 | 0.005 J | 3.46 JT | C783 | 0.3283 | 0.1 U | 1.376 |
| Nickel | mg/kg | 114 | 114 | 100 | 6.77 | 151 | WRS06 | 22.2 | 19.6 | 34 J | 6.77 | 151 | WRS06 | 22.2 | 19.6 | 34 J |
| Selenium | mg/kg | 99 | 55 | 55.6 | 0.02 J | 0.6 J | IPC-C014; IPC-C018 | 0.179 | 0.11 | 0.5 J | 0.02 J | 1 U | WRS05; WRS06; WRS07; WRS08 | 0.211 | 0.123 | 0.5 U |
| Silver | mg/kg | 163 | 143 | 87.7 | 0.018 J | 22 J | PGC-01 | 1.07 | 0.252 | 5.47 J | 0.018 J | 22 J | PGC-01 | 1.12 | 0.277 | 5.15 J |
| Thallium | mg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | WRS05; WRS06; WRS07; WRS08 | 0.5 | 0.5 U | 0.5 U |
| Zinc | mg/kg | 178 | 178 | 100 | 21.4 | 11100 J | PGC-06 | 379 | 99.4 J | 1410 J | 21.4 | 11100 J | PGC-06 | 379 | 99.4 J | 1410 J |

Table D1.3-7. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Butyltins** | | | | | | | | | | | | | | | | |
| Butyltin ion | µg/kg | 50 | 9 | 18 | 0.42 J | 5.8 | C004 | 1.619 | 0.82 J | 4.96 | 0.0015 U | 5.8 | C004 | 0.3956 | 0.145 U | 1.089 J |
| Dibutyltin ion | µg/kg | 50 | 7 | 14 | 0.5 J | 9.4 | C002 | 2.02 | 0.81 J | 7 | 0.002 U | 9.4 | C002 | 0.395 | 0.115 U | 0.832 J |
| Tetrabutyltin | µg/kg | 50 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.001 U | 0.74 UT | C100 | 0.147 | 0.0625 U | 0.333 U |
| Tributyltin ion | µg/kg | 65 | 21 | 32.3 | 0.55 JT | 14000 | WRS06 | 1052 | 6 | 7300 | 0.0015 U | 14000 | WRS06 | 340.1 | 0.24 U | 72.2 |
| **PCB Aroclors** | | | | | | | | | | | | | | | | |
| Aroclor 1016 | µg/kg | 110 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.73 U | 170 U | WRS34 | 8 | 0.8 U | 65 U |
| Aroclor 1221 | µg/kg | 110 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.73 U | 170 U | WRS34 | 8 | 0.78 U | 65 U |
| Aroclor 1232 | µg/kg | 110 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.73 U | 170 U | WRS34 | 8 | 0.8 U | 65 U |
| Aroclor 1242 | µg/kg | 110 | 5 | 4.5 | 17 | 60 | IPC-C014 | 35 | 31 T | 57 | 0.73 U | 170 U | WRS34 | 9.6 | 1.1 U | 65 U |
| Aroclor 1248 | µg/kg | 110 | 9 | 8.2 | 11 | 230 J | C031 | 71.63 | 37.5 T | 184.5 J | 0.73 U | 230 J | C031 | 13.8 | 1.05 U | 75 U |
| Aroclor 1254 | µg/kg | 110 | 34 | 30.9 | 1.4 J | 220 | C022 | 43 | 29 J | 150 J | 0.73 U | 220 | C022 | 21 | 1.3 U | 75 U |
| Aroclor 1260 | µg/kg | 110 | 44 | 40 | 1.6 J | 530 | O33-C005 | 60.1 | 21 | 187 | 0.73 U | 530 | O33-C005 | 30.5 | 1.75 J | 127 J |
| Aroclor 1262 | µg/kg | 106 | 3 | 2.8 | 31 | 259.3 JT | C039 | 112.1 | 46 | 238 J | 0.73 U | 259.3 JT | C039 | 8.685 | 0.65 U | 58.75 U |
| Aroclor 1268 | µg/kg | 106 | 3 | 2.8 | 7.7 | 153 JT | C039 | 57.2 | 11 | 139 J | 0.73 U | 153 JT | C039 | 7.25 | 0.775 U | 58.8 U |
| Aroclors | µg/kg | 110 | 59 | 53.6 | 1.4 JT | 610 T | C022 | 92.1 | 41 T | 521 J | 0.73 UT | 610 T | C022 | 55.6 | 11 | 217 J |
| **PCBs[c]** | | | | | | | | | | | | | | | | |
| Total PCBs | µg/kg | 110 | 59 | 53.6 | 1.4 JT | 610 T | C022 | 92.1 | 41 T | 521 J | 0.73 UT | 610 T | C022 | 55.6 | 11 | 217 J |
| **PCDD/Fs Homologs** | | | | | | | | | | | | | | | | |
| Heptachlorodibenzofuran homologs | pg/g | 35 | 31 | 88.6 | 0.136 J | 790 | C007 | 82.69 | 45.7 J | 168.5 | 0.0523 U | 790 | C007 | 73.26 | 29.9 | 166.3 |
| Heptachlorodibenzo-p-dioxin homologs | pg/g | 35 | 33 | 94.3 | 0.499 J | 377 | C007 | 138 | 119 | 328 J | 0.367 U | 377 | C007 | 130 | 110 | 327 J |
| Hexachlorodibenzofuran homologs | pg/g | 35 | 29 | 82.9 | 0.0279 J | 166 | C007 | 48.23 | 38.8 J | 131.2 | 0.0227 U | 166 | C007 | 39.97 | 29.8 | 111.8 |
| Hexachlorodibenzo-p-dioxin homologs | pg/g | 35 | 31 | 88.6 | 0.212 J | 65.1 | C004 | 23.68 | 19.4 | 61.95 | 0.0317 U | 65.1 | C004 | 20.99 | 17 | 61.57 |
| Octachlorodibenzofuran | pg/g | 44 | 36 | 81.8 | 0.203 J | 268 | C007 | 47.38 | 28.15 | 118.8 | 0.0951 U | 268 | C007 | 39.45 | 20.85 J | 112.4 |
| Octachlorodibenzo-p-dioxin | pg/g | 44 | 38 | 86.4 | 3.87 J | 2940 | C019 | 787 | 379 J | 2260 J | 2.88 U | 2940 | C019 | 680 | 261 | 2160 J |
| Pentachlorodibenzofuran homologs | pg/g | 35 | 28 | 80 | 0.203 J | 158 | C022 | 41.64 | 25.6 J | 152.6 | 0.0167 U | 158 | C022 | 33.32 | 19.7 | 151.2 |
| Pentachlorodibenzo-p-dioxin homologs | pg/g | 35 | 24 | 68.6 | 0.661 J | 12.1 | C007 | 4.728 | 4.83 J | 9.682 | 0.0128 U | 12.1 | C007 | 3.255 | 1.74 J | 9.577 |
| Tetrachlorodibenzofuran homologs | pg/g | 35 | 30 | 85.7 | 0.108 J | 80 | C020 | 16.18 | 10.01 J | 53.25 | 0.0198 U | 80 | C020 | 13.87 | 8.94 | 51 |
| Tetrachlorodibenzo-p-dioxin homologs | pg/g | 35 | 25 | 71.4 | 0.167 J | 16.4 J | C008 | 2.83 | 1.83 | 9.118 | 0.0171 U | 16.4 J | C008 | 2.029 | 0.798 J | 8.563 |
| Total PCDD/F | pg/g | 44 | 39 | 88.6 | 4.74 T | 4590 T | C007 | 1090 | 541 JA | 3030 | 2.88 UT | 4590 T | C007 | 970 | 440 | 2920 J |
| **PCDD/Fs** | | | | | | | | | | | | | | | | |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran | pg/g | 44 | 40 | 90.9 | 0.0956 J | 396 | C007 | 25.39 | 9.05 | 57.22 | 0.0523 U | 396 | C007 | 23.11 | 7.39 | 55.26 |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin | pg/g | 44 | 37 | 84.1 | 0.342 J | 150 | C019 | 55.9 | 46.7 | 135 | 0.342 J | 150 | C019 | 47.4 | 27.3 | 134 |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran | pg/g | 44 | 26 | 59.1 | 0.175 J | 4.2 J | C007 | 1.313 | 1.03 J | 3.348 J | 0.0359 U | 4.2 J | C007 | 0.8165 | 0.666 J | 2.077 J |
| 1,2,3,4,7,8-Hexachlorodibenzofuran | pg/g | 44 | 35 | 79.5 | 0.0403 J | 6.19 J | C007 | 1.659 | 1.54 J | 5.639 J | 0.0128 U | 6.19 J | C007 | 1.331 | 0.7795 J | 5.255 J |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 44 | 28 | 63.6 | 0.0656 J | 1.39 J | C022 | 0.5413 | 0.4635 J | 1.169 J | 0.0268 U | 1.39 J | C022 | 0.3738 | 0.2935 J | 1.1 J |
| 1,2,3,6,7,8-Hexachlorodibenzofuran | pg/g | 44 | 29 | 65.9 | 0.194 J | 16.9 | C007 | 2.925 | 1.5 J | 10.52 | 0.0139 U | 16.9 | C007 | 2.089 | 0.957 J | 9.574 J |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 44 | 33 | 75 | 0.0385 J | 8.46 | C004 | 3.165 | 2.52 J | 7.878 | 0.0297 U | 8.46 | C004 | 2.471 | 1.88 J | 7.305 J |
| 1,2,3,7,8,9-Hexachlorodibenzofuran | pg/g | 44 | 9 | 20.5 | 0.071 JT | 0.261 J | C007 | 0.1405 | 0.135 J | 0.2238 J | 0.0199 U | 0.895 UJ | C024 | 0.08376 | 0.05325 U | 0.2471 J |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | pg/g | 44 | 30 | 68.2 | 0.0926 J | 4 J | C022 | 1.554 | 1.395 J | 3.602 J | 0.029 U | 4 J | C022 | 1.113 | 0.8605 J | 3.082 J |
| 1,2,3,7,8-Pentachlorodibenzofuran | pg/g | 44 | 25 | 56.8 | 0.0934 J | 1.16 J | C007 | 0.4745 | 0.436 J | 1.126 J | 0.0166 U | 1.16 J | C007 | 0.2873 | 0.1395 J | 1.03 J |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | pg/g | 44 | 26 | 59.1 | 0.0902 J | 1.5 J | C022 | 0.513 | 0.4755 J | 0.9418 J | 0.0128 U | 1.5 J | C022 | 0.3232 | 0.221 J | 0.9094 J |
| 2,3,4,6,7,8-Hexachlorodibenzofuran | pg/g | 44 | 30 | 68.2 | 0.126 J | 10.3 | C007 | 2.335 | 1.52 J | 7.379 J | 0.013 U | 10.3 | C007 | 1.682 | 0.699 J | 5.533 J |
| 2,3,4,7,8-Pentachlorodibenzofuran | pg/g | 44 | 29 | 65.9 | 0.0425 J | 2.55 J | C020 | 0.8221 | 0.668 J | 2.276 J | 0.0167 U | 2.55 J | C020 | 0.5605 | 0.206 J | 2.108 J |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/g | 44 | 22 | 50 | 0.274 J | 13.4 | C028 | 1.353 | 0.8335 J | 1.501 J | 0.0227 U | 13.4 | C028 | 0.7243 | 0.276 J | 1.299 J |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | pg/g | 44 | 22 | 50 | 0.0681 J | 0.56 J | C022 | 0.2814 | 0.238 J | 0.5294 J | 0.0171 U | 0.56 J | C022 | 0.1652 | 0.0946 J | 0.4777 J |
| TCDD TEQ (ND = 0) | pg/g | 44 | 41 | 93.2 | 0.00226 JT | 12.8 T | C007 | 2.6527 | 1.67 T | 6.02 T | 0.00226 JT | 12.8 T | C007 | 2.4736 | 1.37 J | 5.9945 |
| Total TCDD TEQ (ND = 0) | pg/g | 44 | 43 | 97.7 | 0.00226 JA | 12.8 T | C007 | 2.5312 | 1.56 JA | 6.003 | 0.00226 JA | 12.8 T | C007 | 2.4745 | 1.37 J | 5.9945 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| 2,4'-DDD | µg/kg | 94 | 36 | 38.3 | 0.14 J | 28 JT | IPC-C014 | 4.62 | 1.9 J | 17.4 J | 0.032 U | 28 JT | IPC-C014 | 1.89 | 0.185 J | 11.8 J |
| 2,4'-DDE | µg/kg | 94 | 5 | 5.3 | 0.082 J | 1.2 J | C037 | 0.51 | 0.43 J | 1.07 J | 0.03 U | 3.4 UJ | C031 | 0.198 | 0.125 U | 0.67 U |
| 2,4'-DDT | µg/kg | 94 | 39 | 41.5 | 0.049 J | 14 JT | C031 | 2.63 | 1.7 J | 6.54 J | 0.03 U | 14 JT | C031 | 1.33 | 0.293 U | 5.23 J |
| 4,4'-DDD | µg/kg | 94 | 53 | 56.4 | 0.13 J | 31 J | C031 | 3.71 | 1.6 | 21.4 | 0.047 U | 31 J | C031 | 2.17 | 0.445 J | 9.79 |
| 4,4'-DDE | µg/kg | 94 | 44 | 46.8 | 0.052 J | 11 J | C783 | 2.83 | 2.05 J | 8.08 J | 0.027 U | 11 J | C783 | 1.39 | 0.235 UJ | 6.37 J |
| 4,4'-DDT | µg/kg | 94 | 43 | 45.7 | 0.13 J | 240 JT | C031 | 10.5 | 1.4 | 38.7 J | 0.059 U | 240 JT | C031 | 4.97 | 0.403 J | 10.5 J |
| Aldrin | µg/kg | 94 | 8 | 8.5 | 0.079 J | 1.7 | C002 | 0.414 | 0.21 J | 1.3 J | 0.046 UJ | 1.7 | C002 | 0.114 | 0.08 U | 0.324 UJ |
| alpha-Endosulfan | µg/kg | 94 | 7 | 7.4 | 0.086 J | 0.72 J | C031 | 0.261 | 0.16 J | 0.6 J | 0.025 U | 2.7 U | C783 | 0.11 | 0.06 U | 0.334 U |
| alpha-Hexachlorocyclohexane | µg/kg | 94 | 3 | 3.2 | 0.055 J | 0.26 J | C031 | 0.125 | 0.059 J | 0.24 J | 0.047 U | 0.97 U | C783 | 0.076 | 0.0465 UJ | 0.197 U |
| beta-Endosulfan | µg/kg | 94 | 12 | 12.8 | 0.093 J | 3.4 JT | C039 | 0.824 | 0.46 | 2.52 J | 0.031 U | 3.4 JT | C039 | 0.226 | 0.11 UJ | 0.914 |

Table D1.3-7. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| beta-Hexachlorocyclohexane | µg/kg | 94 | 12 | 12.8 | 0.076 J | 3.1 NJ | C783 | 0.631 | 0.435 J | 1.81 J | 0.054 U | 3.1 NJ | C783 | 0.191 | 0.09 U | 0.571 |
| Chlordane (technical) | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 9.9 U | O33-C005 | 2.6 | 1.9 U | 4.7 U |
| Chlorpyrifos | µg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.072 UJ | 0.072 UJ | C031 | 0.036 | 0.036 UJ | 0.036 UJ |
| cis-Chlordane | µg/kg | 94 | 12 | 12.8 | 0.073 J | 3 J | C031 | 0.843 | 0.44 J | 2.29 J | 0.031 U | 3 J | C031 | 0.187 | 0.0825 U | 0.53 J |
| cis-Nonachlor | µg/kg | 94 | 8 | 8.5 | 0.18 J | 54 J | O33-C005 | 7.71 | 1.03 J | 36.3 J | 0.043 U | 54 J | O33-C005 | 1.01 | 0.1 U | 2.48 U |
| delta-Hexachlorocyclohexane | µg/kg | 94 | 4 | 4.3 | 0.099 J | 0.87 J | C025 | 0.39 | 0.295 J | 0.806 J | 0.037 U | 1.1 U | C783 | 0.0713 | 0.0368 U | 0.328 UJ |
| Dieldrin | µg/kg | 94 | 4 | 4.3 | 0.29 J | 16 J | C031 | 7.06 | 5.98 J | 14.7 J | 0.03 U | 16 J | C031 | 0.514 | 0.07 U | 2.55 U |
| Endosulfan sulfate | µg/kg | 94 | 4 | 4.3 | 0.18 J | 0.38 J | UC05-1 | 0.29 | 0.3 J | 0.37 J | 0.051 UJ | 4.5 U | C022 | 0.128 | 0.055 U | 0.389 J |
| Endrin | µg/kg | 94 | 10 | 10.6 | 0.18 | 2.4 | C035 | 0.909 | 0.795 J | 2 J | 0.046 U | 2.7 U | C037 | 0.204 | 0.0875 UJ | 1.05 J |
| Endrin aldehyde | µg/kg | 94 | 9 | 9.6 | 0.079 J | 0.6 J | C002; C008 | 0.381 | 0.39 J | 0.6 J | 0.042 U | 2.7 U | C783 | 0.153 | 0.06 U | 0.574 J |
| Endrin ketone | µg/kg | 94 | 10 | 10.6 | 0.19 J | 31.2 JT | C039 | 4.21 | 1.1 J | 18.5 J | 0.029 U | 62 U | O33-C005 | 0.924 | 0.0625 U | 1.69 U |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 94 | 31 | 33 | 0.12 J | 1.9 JT | IPC-C014 | 0.528 | 0.4 J | 1.35 J | 0.043 U | 2.9 U | C783 | 0.27 | 0.113 U | 1.02 J |
| Heptachlor | µg/kg | 94 | 3 | 3.2 | 0.12 NJ | 0.34 J | C008 | 0.233 | 0.24 | 0.33 J | 0.046 UJ | 0.76 U | C783 | 0.0644 | 0.0458 U | 0.204 UJ |
| Heptachlor epoxide | µg/kg | 94 | 9 | 9.6 | 0.14 J | 0.86 | IPC-C017 | 0.482 | 0.4 J | 0.856 J | 0.048 U | 2.8 U | O33-C005 | 0.152 | 0.0875 U | 0.526 J |
| Methoxychlor | µg/kg | 94 | 6 | 6.4 | 0.21 J | 21 JT | C039 | 3.98 | 0.59 J | 16 J | 0.054 U | 21 JT | C039 | 0.395 | 0.095 U | 0.624 |
| Mirex | µg/kg | 94 | 1 | 1.1 | 0.74 J | 0.74 J | UC08 | 0.74 | 0.74 J | 0.74 J | 0.041 UJ | 2.1 U | C783 | 0.0669 | 0.0375 U | 0.122 UJ |
| Oxychlordane | µg/kg | 94 | 10 | 10.6 | 0.12 J | 4.3 NJ | C783 | 0.772 | 0.365 J | 2.68 J | 0.038 U | 4.3 NJ | C783 | 0.196 | 0.11 U | 0.508 J |
| Total chlordanes | µg/kg | 94 | 51 | 54.3 | 0.094 JT | 54 JT | O33-C005 | 3.16 | 1.3 T | 8.2 J | 0.054 UT | 54 JT | O33-C005 | 1.81 | 0.33 J | 6.61 J |
| Total Endosulfan | µg/kg | 94 | 19 | 20.2 | 0.086 JT | 3.4 T | C039 | 0.678 | 0.38 JT | 2.61 | 0.053 UT | 4.5 UT | C022 | 0.311 | 0.128 J | 1.29 U |
| Total DDD | µg/kg | 94 | 54 | 57.4 | 0.15 JT | 48 JT | C031 | 6.72 | 2.2 | 35.6 J | 0.047 UT | 48 JT | C031 | 3.95 | 0.62 J | 24 |
| DDx | µg/kg | 94 | 64 | 68.1 | 0.052 T | 301 T | C031 | 16.3 | 5.71 J | 67 J | 0.052 T | 301 T | C031 | 11.2 | 2.04 J | 43.6 J |
| Total DDE | µg/kg | 94 | 46 | 48.9 | 0.052 T | 11 JT | C783 | 2.75 | 2 | 8 | 0.034 UT | 11 JT | C783 | 1.45 | 0.275 J | 6.58 J |
| Total DDT | µg/kg | 94 | 54 | 57.4 | 0.049 JT | 254 T | C031 | 10.2 | 2.55 | 30.2 | 0.049 JT | 254 T | C031 | 6.01 | 0.515 J | 13.5 J |
| Total 4,4' DDx | µg/kg | 19 | 3 | 15.8 | 0.17 JT | 0.85 JT | UC06 | 0.51 | 0.52 JT | 0.82 J | 0.13 UT | 0.85 JT | UC06; UC07 | 0.17 | 0.09 UT | 0.55 J |
| Toxaphene | µg/kg | 93 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.5 U | 660 U | O33-C005 | 21 | 8 U | 59 U |
| trans-Chlordane | µg/kg | 94 | 38 | 40.4 | 0.094 J | 14 | C022 | 2.06 | 1.3 J | 5.82 J | 0.027 U | 14 | C022 | 0.888 | 0.097 J | 3.84 J |
| trans-Nonachlor | µg/kg | 94 | 12 | 12.8 | 0.11 J | 1.3 J | C031 | 0.393 | 0.285 J | 0.91 J | 0.034 U | 1.5 U | C783 | 0.122 | 0.06 U | 0.444 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| 1-Methylnaphthalene | µg/kg | 94 | 81 | 86.2 | 1 J | 240000 | PGC-06 | 17000 | 40 | 150000 | 0.31 U | 240000 | PGC-06 | 14700 | 27.5 | 131000 |
| 2-Methylnaphthalene | µg/kg | 161 | 118 | 73.3 | 0.51 J | 400000 | PGC-06 | 17900 | 34.8 J | 153000 | 0.37 U | 400000 | PGC-06 | 13100 | 13 | 90000 |
| Acenaphthene | µg/kg | 161 | 134 | 83.2 | 0.25 J | 410000 | PGC-05 | 19200 | 44.5 | 164000 | 0.2 U | 410000 | PGC-05 | 16000 | 18 | 160000 |
| Acenaphthylene | µg/kg | 161 | 124 | 77 | 0.36 J | 130000 | PGC-05 | 2160 | 22.5 | 11000 | 0.24 U | 130000 | PGC-05 | 1670 | 11.6 T | 10000 |
| Anthracene | µg/kg | 161 | 132 | 82 | 0.4 JT | 260000 | PGC-06 | 12400 | 23 | 109000 | 0.24 U | 260000 | PGC-06 | 10200 | 12 | 97000 |
| Benzo(a)anthracene | µg/kg | 161 | 135 | 83.9 | 0.2 J | 150000 | PGC-06 | 7150 | 39.5 T | 66300 | 0.18 U | 150000 | PGC-06 | 6000 | 25 J | 54000 |
| Benzo(a)pyrene | µg/kg | 161 | 132 | 82 | 0.23 J | 170000 | PGC-06 | 8990 | 51 | 91300 | 0.14 U | 170000 | PGC-06 | 7370 | 27 | 68000 |
| Benzo(b)fluoranthene | µg/kg | 161 | 130 | 80.7 | 0.26 J | 150000 | PGC-06 | 7570 | 64.5 | 73900 | 0.25 U | 150000 | PGC-06 | 6110 | 35 | 55000 |
| Benzo(e)pyrene | µg/kg | 118 | 104 | 88.1 | 0.64 J | 93000 | PGC-06 | 6010 | 82.5 | 51900 | 0.18 U | 93000 | PGC-06 | 5290 | 54 | 51200 |
| Benzo(g,h,i)perylene | µg/kg | 161 | 124 | 77 | 0.7 J | 120000 | PGC-05; PGC-06 | 6730 | 68.5 | 54300 | 0.25 U | 120000 | PGC-05; PGC-06 | 5190 | 30 | 46000 |
| Benzo(k)fluoranthene | µg/kg | 161 | 123 | 76.4 | 0.66 J | 47000 | PGC-06 | 2660 | 31 | 25500 | 0.15 U | 47000 | PGC-06 | 2030 | 13 | 19000 |
| C1-Chrysene | µg/kg | 94 | 79 | 84 | 2.8 | 89000 | PGC-06 | 6670 | 170 | 50000 | 0.25 U | 89000 | PGC-06 | 5610 | 115 | 45500 |
| C1-Dibenzothiophene | µg/kg | 36 | 28 | 77.8 | 1.3 J | 400 | C020; C783 | 115 | 54.5 | 386 | 0.21 U | 400 | C020; C783 | 89.5 | 43.5 J | 370 |
| C1-Fluoranthene/pyrene | µg/kg | 94 | 80 | 85.1 | 1.1 J | 230000 | PGC-06 | 17900 | 265 | 140000 | 0.61 U | 230000 | PGC-06 | 15200 | 205 J | 127000 |
| C1-Fluorene | µg/kg | 94 | 74 | 78.7 | 1.4 J | 74000 | PGC-06 | 5870 | 67.5 | 43400 | 0.5 U | 74000 | PGC-06 | 4620 | 38 | 40400 |
| C1-Phenanthrene/anthracene | µg/kg | 94 | 80 | 85.1 | 0.82 J | 220000 | PGC-06 | 17300 | 288 | 140000 | 0.75 U | 220000 | PGC-06 | 14800 | 180 J | 121000 |
| C2-Chrysene | µg/kg | 94 | 77 | 81.9 | 6.7 | 34000 | PGC-06 | 2750 | 150 | 19000 | 0.25 U | 34000 | PGC-06 | 2260 | 110 | 18400 |
| C2-Dibenzothiophene | µg/kg | 36 | 27 | 75 | 5.9 | 700 | C783 | 128 | 45 | 424 | 0.21 U | 700 | C783 | 95.9 | 35 | 415 |
| C2-Fluoranthene/pyrene | µg/kg | 36 | 31 | 86.1 | 2.8 | 2900 | C783 | 230 | 75 | 820 | 0.61 U | 2900 | C783 | 200 | 54 | 720 |
| C2-Fluorene | µg/kg | 94 | 76 | 80.9 | 2.4 J | 44000 | PGC-06 | 3420 | 115 | 24300 | 0.5 U | 44000 | PGC-06 | 2770 | 82.5 J | 23000 |
| C2-Naphthalene | µg/kg | 94 | 78 | 83 | 3.3 | 220000 | PGC-06 | 16600 | 165 J | 133000 | 0.37 U | 220000 | PGC-06 | 13800 | 100 | 111000 |
| C2-Phenanthrene/anthracene | µg/kg | 94 | 80 | 85.1 | 1.1 J | 110000 | PGC-06 | 7840 | 280 | 58300 | 0.75 U | 110000 | PGC-06 | 6680 | 210 | 54100 |
| C3-Chrysene | µg/kg | 94 | 75 | 79.8 | 7.6 J | 22000 | PGC-06 | 1720 | 140 | 11300 | 0.25 U | 22000 | PGC-06 | 1380 | 110 | 9630 |
| C3-Dibenzothiophene | µg/kg | 36 | 26 | 72.2 | 9.4 | 560 | C020; C783 | 136 | 54.5 J | 538 | 0.21 U | 560 | C020; C783 | 98.5 | 35 | 493 |
| C3-Fluoranthene/pyrene | µg/kg | 36 | 28 | 77.8 | 5.3 J | 1400 | C783 | 185 | 72.5 | 582 | 0.61 U | 1400 | C783 | 144 | 58.5 | 538 |
| C3-Fluorene | µg/kg | 94 | 74 | 78.7 | 4.1 | 44000 | PGC-06 | 3060 | 218 | 20700 | 0.5 U | 44000 | PGC-06 | 2410 | 120 | 18100 |
| C3-Naphthalene | µg/kg | 94 | 75 | 79.8 | 3.2 | 88000 | PGC-06 | 6860 | 180 | 48500 | 0.37 U | 88000 | PGC-06 | 5480 | 130 | 42500 |
| C3-Phenanthrene/anthracene | µg/kg | 94 | 80 | 85.1 | 0.85 J | 43000 | PGC-06 | 3210 | 290 | 22100 | 0.75 U | 43000 | PGC-06 | 2730 | 205 | 21400 |
| C4-Chrysene | µg/kg | 94 | 64 | 68.1 | 6.6 | 7700 | PGC-06 | 685 | 72.5 | 4190 | 0.25 U | 7700 | PGC-06 | 477 | 50 | 3450 |
| C4-Naphthalene | µg/kg | 94 | 75 | 79.8 | 2.8 | 34000 | PGC-06 | 2610 | 170 | 15900 | 0.37 U | 34000 | PGC-06 | 2080 | 105 | 15000 |
| C4-Phenanthrene/anthracene | µg/kg | 94 | 74 | 78.7 | 5.9 | 14000 | PGC-06 | 1240 | 130 | 7920 | 0.75 U | 14000 | PGC-06 | 984 | 76 | 7440 |

Table D1.3-7. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Chrysene | µg/kg | 161 | 130 | 80.7 | 0.3 J | 150000 | PGC-06 | 7470 | 66 | 66000 | 0.25 U | 150000 | PGC-06 | 6030 | 32 | 52000 |
| Dibenzo(a,h)anthracene | µg/kg | 161 | 107 | 66.5 | 0.28 J | 14000 | PGC-06 | 844 | 16 | 6810 | 0.28 J | 14000 | PGC-06 | 561 | 4.9 | 5200 |
| Dibenzothiophene | µg/kg | 94 | 78 | 83 | 0.36 J | 62000 J | PGC-06 | 5520 | 39 J | 39800 J | 0.21 U | 62000 J | PGC-06 | 4580 | 22 J | 36700 J |
| Fluoranthene | µg/kg | 161 | 140 | 87 | 0.64 J | 470000 | PGC-06 | 24400 | 140 | 231000 | 0.41 U | 470000 | PGC-06 | 21200 | 83 | 190000 |
| Fluorene | µg/kg | 161 | 127 | 78.9 | 0.38 J | 260000 | PGC-06 | 11900 | 29 | 102000 | 0.21 U | 260000 | PGC-06 | 9430 | 15 | 83000 |
| Total HPAHs | µg/kg | 161 | 145 | 90.1 | 0.28 T | 1950000 T | PGC-06 | 91900 | 513 T | 850000 | 0.28 T | 1950000 T | PGC-06 | 82800 | 377 T | 748000 T |
| Indeno(1,2,3-cd)pyrene | µg/kg | 161 | 128 | 79.5 | 0.21 J | 110000 | PGC-06 | 5920 | 55 | 50500 | 0.16 U | 110000 | PGC-06 | 4700 | 24 | 42000 |
| Total LPAHs | µg/kg | 161 | 150 | 93.2 | 0.25 JT | 3030000 T | PGC-05 | 141000 | 353 | 1360000 | 0.25 JT | 3030000 T | PGC-05 | 132000 | 222 T | 1300000 T |
| Naphthalene | µg/kg | 162 | 125 | 77.2 | 0.45 J | 1600000 | PGC-05 | 63100 | 84 | 628000 | 0.44 U | 1600000 | PGC-05 | 48700 | 37.5 | 487000 |
| Perylene | µg/kg | 118 | 114 | 96.6 | 1.2 J | 35000 | PGC-06 | 2380 | 60.5 | 21000 | 0.32 U | 35000 | PGC-06 | 2300 | 58 | 21000 |
| Phenanthrene | µg/kg | 161 | 135 | 83.9 | 1.9 J | 750000 | PGC-06 | 38400 | 150 | 342000 | 0.4 U | 750000 | PGC-06 | 32200 | 81 | 300000 |
| Pyrene | µg/kg | 161 | 140 | 87 | 0.53 J | 570000 | PGC-06 | 27000 | 140 | 251000 | 0.37 U | 570000 | PGC-06 | 23500 | 96 | 220000 |
| Total BaPEq | µg/kg | 161 | 140 | 87 | 0.0003 JT | 226000 T | PGC-06 | 11080 | 59.25 | 109200 | 0.0003 JT | 226000 T | PGC-06 | 9634 | 39.3 JT | 88300 T |
| Total cPAHs | µg/kg | 161 | 140 | 87 | 0.28 JT | 788000 T | PGC-06 | 37700 | 244 | 351000 | 0.28 JT | 788000 T | PGC-06 | 32800 | 150 T | 292000 T |
| Total PAHs | µg/kg | 161 | 157 | 97.5 | 0.25 JT | 4850000 T | PGC-06 | 219700 | 680 T | 2146000 | 0.25 JT | 4850000 T | PGC-06 | 214200 | 640 JT | 2140000 T |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl) phthalate | µg/kg | 64 | 36 | 56.3 | 2.5 J | 815 T | C031 | 103 | 37.5 J | 535 | 2.3 U | 815 T | C031 | 68.8 | 17.8 J | 324 |
| Butylbenzyl phthalate | µg/kg | 64 | 6 | 9.4 | 3.3 J | 33 T | C031 | 14 | 11 J | 30 | 1.7 U | 160 U | C783 | 7.4 | 1.6 U | 31 |
| Dibutyl phthalate | µg/kg | 64 | 36 | 56.3 | 3.6 J | 28.5 T | C021 | 10.4 | 9 J | 22.1 | 3.3 U | 400 U | C783 | 18.9 | 8.4 J | 37.8 |
| Diethyl phthalate | µg/kg | 64 | 3 | 4.7 | 1.4 J | 2.8 J | C038 | 2.2 | 2.5 J | 2.8 J | 1.3 U | 65 U | C783 | 3.5 | 2.2 U | 6.4 U |
| Dimethyl phthalate | µg/kg | 64 | 9 | 14.1 | 1.8 J | 470 | C034 | 190 | 160 | 440 | 1 U | 470 | C034 | 32 | 1.2 U | 170 |
| Di-n-octyl phthalate | µg/kg | 64 | 1 | 1.6 | 18 | 18 | C006 | 18 | 18 | 18 | 1.3 U | 85 U | C783 | 3.6 | 0.85 U | 17 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.7 U | 130 U | C783 | 5 | 1.3 U | 12 U |
| 1,2-Dichlorobenzene | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 150 U | C783 | 5.6 | 1.5 U | 13 U |
| 1,3-Dichlorobenzene | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.8 U | 150 U | C783 | 5.7 | 1.5 U | 14 U |
| 1,4-Dichlorobenzene | µg/kg | 65 | 8 | 12.3 | 4.1 J | 315 T | C031 | 70.2 | 19.5 J | 250 | 0.21 U | 315 T | C031 | 13.7 | 1.45 U | 75 U |
| 2,4-Dinitrotoluene | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 75 U | C783 | 3.3 | 0.8 U | 6.9 U |
| 2,6-Dinitrotoluene | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 U | 100 U | C783 | 4.2 | 1.1 U | 9.3 U |
| 2-Chloronaphthalene | µg/kg | 64 | 1 | 1.6 | 120 J | 120 J | C783 | 120 | 120 J | 120 J | 1.6 U | 120 J | C783 | 4.8 | 0.85 U | 7.4 U |
| 2-Nitroaniline | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3 U | 160 U | C783 | 6.3 | 1.6 U | 15 U |
| 3,3'-Dichlorobenzidine | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.7 U | 190 U | C783 | 7.8 | 1.9 U | 19 U |
| 3-Nitroaniline | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.5 U | 130 U | C783 | 5.1 | 1.3 U | 12 U |
| 4-Bromophenyl phenyl ether | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.6 U | 80 U | C783 | 3.2 | 0.83 U | 7.4 U |
| 4-Chloroaniline | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 95 U | C783 | 3.8 | 1 U | 8.8 U |
| 4-Chlorophenyl phenyl ether | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 70 U | C783 | 2.9 | 0.75 U | 6.5 U |
| 4-Nitroaniline | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.8 U | 90 U | C783 | 3.9 | 0.95 U | 8.3 U |
| Aniline | µg/kg | 56 | 2 | 3.6 | 5.1 J | 16 J | C022 | 11 | 11 J | 15 J | 1.5 U | 75 U | C783 | 3.6 | 0.93 U | 21 J |
| Azobenzene | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.1 U | 55 U | C783 | 2.5 | 0.6 U | 5.1 U |
| Benzoic acid | µg/kg | 53 | 3 | 5.7 | 100 J | 110 J | C027; C036 | 110 | 110 J | 110 J | 96 U | 4800 U | C783 | 210 | 60 U | 1200 U |
| Benzyl alcohol | µg/kg | 64 | 29 | 45.3 | 2.7 J | 69 T | UC05-2 | 22 | 20 | 53 | 2.1 U | 110 U | C783 | 14 | 5.5 U | 55 U |
| Bis(2-chloroethoxy) methane | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 75 U | C783 | 3 | 0.78 U | 6.9 U |
| Bis(2-chloroethyl) ether | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 95 U | C783 | 3.9 | 1 U | 8.8 U |
| Bis(2-chloroisopropyl) ether | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.3 UJ | 130 UJ | C783 | 4.9 | 1.3 U | 12 U |
| Carbazole | µg/kg | 64 | 24 | 37.5 | 1.5 JT | 1700 | C783 | 113 | 11 | 547 | 1.3 U | 1700 | C783 | 43.9 | 1.25 J | 46.6 J |
| Dibenzofuran | µg/kg | 67 | 46 | 68.7 | 0.22 J | 2400 | C783 | 78.3 | 7.4 J | 123 | 0.21 U | 2400 | C783 | 53.9 | 2.5 J | 96.4 J |
| Hexachlorobenzene | µg/kg | 94 | 13 | 13.8 | 0.14 J | 2.8 | O33-C005 | 0.454 | 0.24 J | 1.5 J | 0.068 U | 2.8 | O33-C005 | 0.137 | 0.06 U | 0.308 J |
| Hexachlorobutadiene | µg/kg | 93 | 4 | 4.3 | 0.078 J | 0.35 JT | C039 | 0.207 | 0.2 J | 0.332 J | 0.062 U | 1.4 U | C783 | 0.138 | 0.07 U | 0.367 U |
| Hexachlorocyclopentadiene | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 17 U | 1500 U | C783 | 56 | 15 U | 130 U |
| Hexachloroethane | µg/kg | 77 | 1 | 1.3 | 0.79 J | 0.79 J | UC07 | 0.79 | 0.79 J | 0.79 J | 0.037 UJ | 2.9 U | UC06 | 0.158 | 0.0395 U | 0.58 U |
| Isophorone | µg/kg | 64 | 2 | 3.1 | 3.9 JT | 3.9 JT | UC05-2 | 3.9 | 3.9 J | 3.9 J | 1 U | 50 U | C783 | 2.2 | 0.55 U | 4.8 J |
| Nitrobenzene | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.2 U | 110 U | C783 | 4.4 | 1.1 U | 10 U |
| N-Nitrosodimethylamine | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.1 U | 310 U | C783 | 12 | 3.1 U | 28 U |
| N-Nitrosodiphenylamine | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.6 U | 80 U | C783 | 3.3 | 0.85 U | 7.4 U |
| N-Nitrosodipropylamine | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.4 U | 120 U | C783 | 5 | 1.3 U | 11 U |
| Octachlorostyrene | µg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.17 UJ | 0.17 UJ | C031 | 0.085 | 0.085 UJ | 0.085 UJ |
| **Phenols** | | | | | | | | | | | | | | | | |
| 2,3,4,5-Tetrachlorophenol | µg/kg | 52 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.23 U | 6.1 U | C019 | 1.3 | 1.4 U | 2.7 U |
| 2,3,5,6-Tetrachlorophenol | µg/kg | 52 | 1 | 1.9 | 3.2 JT | 3.2 JT | UC05-2 | 3.2 | 3.2 JT | 3.2 JT | 0.18 U | 7.5 U | C019 | 1.6 | 2.2 U | 3.3 U |

Table D1.3-7. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| 2,4,5-Trichlorophenol | µg/kg | 52 | 2 | 3.8 | 4.1 J | 5.1 J | C783 | 4.6 | 4.6 J | 5.1 J | 0.6 U | 5.3 U | C019; C782 | 1.4 | 1.7 U | 2.7 U |
| 2,4,6-Trichlorophenol | µg/kg | 52 | 1 | 1.9 | 1.3 J | 1.3 J | C783 | 1.3 | 1.3 J | 1.3 J | 0.12 U | 5.5 U | C019 | 1.2 | 1.5 J | 2.4 U |
| 2,4-Dichlorophenol | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 UJ | 50 U | C783 | 2.2 | 0.55 U | 4.6 U |
| 2,4-Dimethylphenol | µg/kg | 77 | 5 | 6.5 | 6.7 J | 2100 J | PGC-05 | 900 | 1000 J | 2000 J | 5.5 UJ | 42000 UJ | PGC-06 | 1000 | 3.7 U | 4700 UJ |
| 2,4-Dinitrophenol | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 17 UJ | 850 U | C783 | 38 | 9 U | 79 U |
| 2-Chlorophenol | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 100 U | C783 | 3.9 | 1 U | 9.3 U |
| 2-Methylphenol | µg/kg | 121 | 2 | 1.7 | 6.2 J | 6.9 J | C024 | 6.6 | 6.6 J | 6.9 J | 1.5 UJ | 8300 U | PGC-06 | 140 | 3.6 UJT | 210 U |
| 2-Nitrophenol | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 UJ | 75 U | C783 | 3.2 | 0.8 U | 6.9 U |
| 4,6-Dinitro-2-methylphenol | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 UJ | 70 U | C783 | 2.9 | 0.75 U | 6.5 U |
| 4-Chloro-3-methylphenol | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 UJ | 70 U | C783 | 2.9 | 0.75 U | 6.5 U |
| 4-Methylphenol | µg/kg | 121 | 57 | 47.1 | 3.4 J | 330 | C024 | 81.9 | 48 J | 224 J | 1.5 UJ | 8300 UJ | PGC-06 | 169 | 14 J | 330 |
| 4-Nitrophenol | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 18 UJ | 900 U | C783 | 38 | 9.5 U | 83 U |
| Pentachlorophenol | µg/kg | 109 | 3 | 2.8 | 0.24 J | 26 T | UC05-2 | 9.7 | 3 J | 24 J | 0.16 U | 83000 UJ | PGC-06 | 1500 | 30 U | 3000 UJ |
| Phenol | µg/kg | 121 | 40 | 33.1 | 2.2 J | 200 J | PGC-05 | 23.8 | 8.5 J | 152 J | 2 UJ | 25000 U | PGC-06 | 412 | 8 J | 650 U |
| **Petroleum** | | | | | | | | | | | | | | | | |
| C10-C12 Aliphatics | mg/kg | 12 | 2 | 16.7 | 2.5 | 5.4 | C037 | 4 | 4 | 5.3 | 2.4 U | 5.4 | C037 | 1.7 | 1.4 U | 3.8 |
| C10-C12 Aromatics | mg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.3 U | 2.9 U | C035; C038 | 1.3 | 1.3 U | 1.5 U |
| C12-C13 Aromatics | mg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 20 UT | 33 U | C035 | 13 | 13 U | 16 U |
| C12-C16 Aliphatics | mg/kg | 12 | 3 | 25 | 3.9 | 16 | C037 | 9.6 | 8.8 | 15 | 2.4 U | 16 | C037 | 3.4 | 1.4 U | 12 |
| C12-C16 Aromatics | mg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.3 U | 2.9 U | C035; C038 | 1.3 | 1.3 U | 1.5 U |
| C16-C21 Aliphatics | mg/kg | 12 | 6 | 50 | 2.8 | 47 | C037 | 16 | 6.6 | 43 | 2.4 U | 47 | C037 | 8.7 | 2.1 | 38 |
| C16-C21 Aromatics | mg/kg | 12 | 3 | 25 | 3.2 | 15 | C037 | 7.5 | 4.2 | 14 | 2.4 U | 15 | C037 | 2.8 | 1.4 U | 9.1 |
| C21-C34 Aliphatics | mg/kg | 12 | 12 | 100 | 15.5 T | 340 | C037 | 92 | 48.5 | 258 | 15.5 T | 340 | C037 | 92 | 48.5 | 258 |
| C21-C34 Aromatics | mg/kg | 12 | 11 | 91.7 | 3.5 | 140 | C034 | 28 | 9.4 | 110 | 2.4 U | 140 | C034 | 26 | 7.7 | 100 |
| C5-C6 Aliphatics | mg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 20 UT | 33 U | C035 | 13 | 13 U | 16 U |
| C6-C8 Aliphatics | mg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 20 UT | 33 U | C035 | 13 | 13 U | 16 U |
| C8-C10 Aliphatics | mg/kg | 12 | 2 | 16.7 | 2.6 | 6.6 | C037 | 4.6 | 4.6 | 6.4 | 2.4 U | 6.6 | C037 | 1.9 | 1.4 U | 4.4 |
| C8-C10 Aromatics | mg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.3 U | 2.9 U | C035; C038 | 1.3 | 1.3 U | 1.5 U |
| Decane | mg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UT | 3.3 U | C035 | 1.3 | 1.3 U | 1.6 U |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 107 | 65 | 60.7 | 1.9 J | 19000 | PGC-06 | 2360 | 420 | 14600 | 1.3 UT | 19000 | PGC-06 | 1430 | 38 | 11700 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 57 | 47 | 82.5 | 4.65 JT | 1200 J | C783 | 237 | 140 J | 852 J | 1.3 UT | 1200 J | C783 | 196 | 110 | 773 J |
| Dodecane | mg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UT | 3.3 U | C035 | 1.3 | 1.3 U | 1.6 U |
| Total Petroleum Hydrocarbons (Gasoline) | mg/kg | 93 | 44 | 47.3 | 0.92 JT | 4800 | PGC-06 | 617 | 62.5 J | 2890 | 0.75 UT | 4800 | PGC-06 | 294 | 5 U | 2520 |
| Jet fuel A | mg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | WRS05; WRS06; WRS07; WRS08 | 5 | 5 U | 5 U |
| Kerosene | mg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | WRS05; WRS06; WRS07; WRS08 | 5 | 5 U | 5 U |
| Mineral spirits | mg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | WRS05; WRS06; WRS07; WRS08 | 5 | 5 U | 5 U |
| Motor oil | mg/kg | 9 | 9 | 100 | 42 | 900 | WRS31 | 229 | 110 | 688 | 42 | 900 | WRS31 | 229 | 110 | 688 |
| n-Hexane | mg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UT | 3.3 U | C035 | 1.3 | 1.3 U | 1.6 U |
| Octane | mg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UT | 3.3 U | C035 | 1.3 | 1.3 U | 1.6 U |
| Pentane | mg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UT | 3.3 U | C035 | 1.3 | 1.3 U | 1.6 U |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 83 | 64 | 77.1 | 3.6 JT | 13000 | PGC-06 | 1940 | 505 | 9040 | 3.2 U | 13000 | PGC-06 | 1500 | 210 | 8690 |
| Total Petroleum Hydrocarbons (Residual) (silica gel | mg/kg | 57 | 50 | 87.7 | 5.25 JT | 2300 J | C783 | 472 | 335 | 1380 J | 3.1 UT | 2300 J | C783 | 417 | 290 J | 1330 J |
| Total Petroleum Hydrocarbons | mg/kg | 107 | 95 | 88.8 | 0.92 JT | 36800 T | PGC-06 | 3330 | 490 JT | 23800 | 0.92 JT | 36800 T | PGC-06 | 2960 | 381 | 22900 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 57 | 50 | 87.7 | 6.7 JA | 3500 JA | C783 | 694 | 495 | 2120 | 3.1 UA | 3500 JA | C783 | 611 | 410 T | 2060 |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.059 U | 0.083 U | UC07 | 0.0369 | 0.0373 U | 0.041 U |
| 1,1,1-Trichloroethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.082 U | 0.12 U | UC05-1; UC05-2; UC06; UC07 | 0.053 | 0.055 U | 0.06 U |
| 1,1,2,2-Tetrachloroethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 0.19 U | UC05-1; UC07 | 0.083 | 0.083 U | 0.095 U |
| 1,1,2-Trichloroethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.074 U | 0.11 U | UC05-1; UC05-2; UC06; UC07 | 0.0476 | 0.0468 U | 0.055 U |
| 1,1-Dichloroethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.066 U | 0.094 U | UC07 | 0.0416 | 0.0418 U | 0.0461 U |
| 1,1-Dichloroethene | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.09 U | 0.13 U | UC05-1; UC05-2; UC06; UC07 | 0.058 | 0.058 U | 0.065 U |
| 1,2,3-Trichloropropane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.2 U | 0.28 U | UC05-1; UC07 | 0.12 | 0.13 U | 0.14 U |

Table D1.3-7. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| 1,2-Dichloroethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 0.15 U | UC05-1; UC05-2; UC06; UC07 | 0.068 | 0.068 U | 0.075 U |
| 1,2-Dichloropropane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.072 U | 0.11 U | UC07 | 0.0452 | 0.0453 U | 0.0503 U |
| 1,4-Dichloro-trans-2-butene | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.36 U | 0.51 U | UC07 | 0.23 | 0.23 U | 0.25 U |
| 2-Chloroethyl vinyl ether | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.17 U | 0.23 U | UC05-1; UC05-2; UC06; UC07 | 0.1 | 0.11 U | 0.12 U |
| Acetone | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.9 U | 67 U | UC05-1 | 14 | 12 U | 31 U |
| Acrylonitrile | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.45 U | 0.63 U | UC07 | 0.28 | 0.28 U | 0.31 U |
| Benzene | µg/kg | 80 | 20 | 25 | 0.12 JT | 13000 | PGC-06 | 3030 | 268 J | 9580 | 0.048 U | 13000 | PGC-06 | 793 | 3.43 U | 7860 |
| Bromochloromethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 0.15 U | UC05-1; UC05-2; UC06; UC07; UC08 | 0.068 | 0.068 U | 0.075 U |
| Bromodichloromethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.044 U | 0.062 U | UC07 | 0.0274 | 0.0275 U | 0.0305 U |
| Bromoform | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 0.19 U | UC05-1; UC07 | 0.083 | 0.083 U | 0.095 U |
| Bromomethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.31 U | 0.43 U | UC05-1; UC07 | 0.19 | 0.2 U | 0.22 U |
| BTEX | µg/kg | 80 | 32 | 40 | 0.12 JT | 154000 JT | PGC-06 | 24400 | 4.08 J | 122000 J | 0.12 JT | 154000 JT | PGC-06 | 9840 | 3.25 U | 88600 J |
| Carbon disulfide | µg/kg | 20 | 4 | 20 | 0.084 J | 0.11 JT | UC05-2 | 0.0985 | 0.1 J | 0.109 J | 0.073 U | 0.11 JT | UC05-1; UC05-2; UC07 | 0.0571 | 0.048 U | 0.101 J |
| Carbon tetrachloride | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.054 U | 0.077 U | UC07 | 0.0342 | 0.0345 U | 0.038 U |
| Chlorobenzene | µg/kg | 20 | 1 | 5 | 0.37 J | 0.37 J | UC07 | 0.37 | 0.37 J | 0.37 J | 0.065 U | 0.37 J | UC07 | 0.0571 | 0.0413 U | 0.0617 J |
| Chlorodibromomethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 0.16 U | UC05-1; UC07 | 0.07 | 0.073 U | 0.08 U |
| Chloroethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.22 U | 0.31 U | UC05-1; UC07 | 0.14 | 0.14 U | 0.16 U |
| Chloroform | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.086 U | 0.13 U | UC07 | 0.0559 | 0.0575 U | 0.0603 U |
| Chloromethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.081 U | 0.12 U | UC05-1; UC05-2; UC06; UC07 | 0.0525 | 0.0525 U | 0.06 U |
| cis-1,2-Dichloroethene | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 0.15 U | UC05-1; UC05-2; UC06; UC07 | 0.068 | 0.068 U | 0.075 U |
| cis-1,3-Dichloropropene | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.067 U | 0.095 U | UC07 | 0.0423 | 0.0428 U | 0.047 U |
| Dichlorodifluoromethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.064 U | 0.091 U | UC07 | 0.0403 | 0.0408 U | 0.0446 U |
| Ethylbenzene | µg/kg | 80 | 20 | 25 | 0.33 J | 55000 | PGC-06 | 13000 | 1630 | 34100 | 0.055 U | 55000 | PGC-06 | 3290 | 3.5 U | 30100 |
| Ethylene dibromide | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.066 U | 0.094 U | UC07 | 0.0416 | 0.0418 U | 0.0461 U |
| Isopropylbenzene | µg/kg | 20 | 3 | 15 | 0.24 J | 0.78 | UC07 | 0.52 | 0.54 J | 0.756 J | 0.092 U | 0.78 | UC07 | 0.129 | 0.0625 U | 0.552 J |
| m,p-Xylene | µg/kg | 80 | 14 | 17.5 | 0.9 J | 60000 | PGC-06 | 19000 | 4000 | 55000 | 0.12 U | 60000 | PGC-06 | 3500 | 3.5 U | 34000 |
| Methyl iodide | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.36 U | 0.51 U | UC07 | 0.23 | 0.23 U | 0.25 U |
| Methyl isobutyl ketone | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.54 U | 0.77 U | UC07 | 0.34 | 0.35 U | 0.38 U |
| Methyl n-butyl ketone | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.8 U | 5.4 U | UC07 | 2.4 | 2.4 U | 2.7 U |
| Methyl tert-butyl ether | µg/kg | 22 | 3 | 13.6 | 0.11 J | 0.15 JT | UC05-2 | 0.133 | 0.14 J | 0.149 J | 0.077 U | 3300 U | C035 | 121 | 0.055 U | 950 J |
| Methylene bromide | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.076 U | 0.11 U | UC05-1; UC05-2; UC06; UC07; UC08 | 0.0487 | 0.048 U | 0.055 U |
| Methylene chloride | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.6 U | 5.7 U | UC06 | 1.7 | 1.7 U | 2.7 U |
| o-Xylene | µg/kg | 80 | 23 | 28.8 | 0.26 J | 39000 | PGC-06 | 7780 | 7 | 25800 | 0.062 U | 39000 | PGC-06 | 2270 | 3.25 U | 21100 |
| Styrene | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.12 U | 0.31 U | UC04 | 0.078 | 0.07 U | 0.12 U |
| Tetrachloroethene | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.092 U | 0.13 U | UC05-1; UC05-2; UC06; UC07; UC08 | 0.0601 | 0.06 U | 0.065 U |
| Toluene | µg/kg | 80 | 18 | 22.5 | 0.25 J | 3900 | PGC-05 | 640 | 94 J | 3140 | 0.076 U | 3900 | PGC-05 | 179 | 3.3 U | 1100 J |
| trans-1,2-Dichloroethene | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.064 U | 0.091 U | UC07 | 0.0403 | 0.0408 U | 0.0446 U |
| trans-1,3-Dichloropropene | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.07 U | 0.1 U | UC07 | 0.0443 | 0.0448 U | 0.0491 U |
| Trichloroethene | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.088 U | 0.13 U | UC05-1; UC05-2; UC07 | 0.0573 | 0.0575 U | 0.065 U |
| Trichlorofluoromethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.38 U | 0.54 U | UC07 | 0.24 | 0.24 U | 0.27 U |
| Vinyl chloride | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.16 U | 0.22 U | UC05-1; UC07 | 0.097 | 0.098 U | 0.11 U |
| Xylene | µg/kg | 80 | 23 | 28.8 | 0.26 JT | 86000 T | PGC-06 | 19600 | 8.5 JT | 84000 | 0.12 UT | 86000 T | PGC-06 | 5700 | 3.4 U | 53800 |
| **Excluding All Zidell Data** | | | | | | | | | | | | | | | | |
| **Grain Size** | | | | | | | | | | | | | | | | |
| < 0.075 mm | percent | 2 | 2 | 100 | 22.1 T | 62.9 T | C035 | 42.5 | 42.5 | 60.9 | 22.1 T | 62.9 T | C035 | 42.5 | 42.5 | 60.9 |
| >10 Phi clay | percent | 2 | 2 | 100 | 0.4 | 6.73 T | C100 | 3.57 | 3.57 | 6.41 | 0.4 | 6.73 T | C100 | 3.57 | 3.57 | 6.41 |
| >9 Phi clay | percent | 61 | 61 | 100 | 0 | 9.77 T | C021 | 3.66 | 2.52 | 9.28 | 0 | 9.77 T | C021 | 3.66 | 2.52 | 9.28 |
| 8-9 Phi clay | percent | 63 | 63 | 100 | 0 | 7.36 | C003 | 1.813 | 1.4 T | 4.874 | 0 | 7.36 | C003 | 1.813 | 1.4 T | 4.874 |
| 9-10 Phi clay | percent | 2 | 2 | 100 | 0.8 | 4.48 T | C100 | 2.64 | 2.64 | 4.3 | 0.8 | 4.48 T | C100 | 2.64 | 2.64 | 4.3 |

Table D1.3-7. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Clay | percent | 56 | 56 | 100 | 0.26 | 12 | PGC-01; PGC-12 | 5.57 | 5.29 | 10.5 | 0.26 | 12 | PGC-01; PGC-12 | 5.57 | 5.29 | 10.5 |
| Coarse sand | percent | 119 | 119 | 100 | 0.08 | 41.2 | UC04 | 9.97 | 4.99 | 36 | 0.08 | 41.2 | UC04 | 9.97 | 4.99 | 36 |
| Coarse silt | percent | 63 | 63 | 100 | 0.03 T | 28.1 T | C011 | 8.56 | 5.85 | 22.8 | 0.03 T | 28.1 T | C011 | 8.56 | 5.85 | 22.8 |
| Fine gravel | percent | 117 | 117 | 100 | 0 | 21.8 | C002 | 2.75 | 1.46 T | 10.1 | 0 | 21.8 | C002 | 2.75 | 1.46 T | 10.1 |
| Fine sand | percent | 119 | 119 | 100 | 0.527 T | 50.2 | PGC-01 | 17.4 | 15.1 | 35.6 | 0.527 T | 50.2 | PGC-01 | 17.4 | 15.1 | 35.6 |
| Fine silt | percent | 63 | 63 | 100 | 0 | 12.2 T | C100 | 4.35 | 3.25 | 11.8 | 0 | 12.2 T | C100 | 4.35 | 3.25 | 11.8 |
| Fines | percent | 119 | 119 | 100 | 0.31 T | 75.6 T | PGC-04 | 32.72 | 33.6 T | 71.03 | 0.31 T | 75.6 T | PGC-04 | 32.72 | 33.6 T | 71.03 |
| Gravel | percent | 2 | 2 | 100 | 0 T | 0.53 | C099 | 0.27 | 0.27 | 0.5 | 0 T | 0.53 | C099 | 0.27 | 0.27 | 0.5 |
| Medium gravel | percent | 117 | 117 | 100 | 0 T | 84.2 | C023 | 7.8903 | 0.75 | 49.04 | 0 T | 84.2 | C023 | 7.8903 | 0.75 | 49.04 |
| Medium sand | percent | 119 | 119 | 100 | 0.24 | 72.5 T | UC05-2 | 17.4 | 13.5 | 53.4 | 0.24 | 72.5 T | UC05-2 | 17.4 | 13.5 | 53.4 |
| Medium silt | percent | 63 | 63 | 100 | 0 | 19.8 T | C004 | 7.26 | 5.84 | 18 | 0 | 19.8 T | C004 | 7.26 | 5.84 | 18 |
| Sieve 10 | percent | 2 | 2 | 100 | 0.05 T | 18.3 T | C039 | 9.18 | 9.18 | 17.4 | 0.05 T | 18.3 T | C039 | 9.18 | 9.18 | 17.4 |
| Sieve 140 | percent | 2 | 2 | 100 | 6.2 T | 24.7 T | C035 | 15.5 | 15.5 | 23.8 | 6.2 T | 24.7 T | C035 | 15.5 | 15.5 | 23.8 |
| Sieve 20 | percent | 2 | 2 | 100 | 0.65 T | 8.35 T | C039 | 4.5 | 4.5 | 7.97 | 0.65 T | 8.35 T | C039 | 4.5 | 4.5 | 7.97 |
| Sieve 200 | percent | 2 | 2 | 100 | 0.95 T | 8.65 T | C035 | 4.8 | 4.8 | 8.27 | 0.95 T | 8.65 T | C035 | 4.8 | 4.8 | 8.27 |
| Sieve 4 | percent | 2 | 2 | 100 | 0.05 T | 31.5 T | C039 | 15.8 | 15.8 | 29.9 | 0.05 T | 31.5 T | C039 | 15.8 | 15.8 | 29.9 |
| Sieve 40 | percent | 2 | 2 | 100 | 0.85 T | 4.75 T | C039 | 2.8 | 2.8 | 4.56 | 0.85 T | 4.75 T | C039 | 2.8 | 2.8 | 4.56 |
| Sieve 60 | percent | 2 | 2 | 100 | 2.25 T | 8 T | C039 | 5.13 | 5.13 | 7.71 | 2.25 T | 8 T | C039 | 5.13 | 5.13 | 7.71 |
| Silt | percent | 56 | 56 | 100 | 2.42 | 66.7 | PGC-04 | 31.9 | 31.3 | 59.5 | 2.42 | 66.7 | PGC-04 | 31.9 | 31.3 | 59.5 |
| Very coarse sand | percent | 119 | 119 | 100 | 0 T | 22.6 | C046 | 3.09 | 2.16 | 10.1 | 0 T | 22.6 | C046 | 3.09 | 2.16 | 10.1 |
| Very fine sand | percent | 119 | 119 | 100 | 0.03 | 31.2 | C022 | 9.15 | 8.01 | 21.5 | 0.03 | 31.2 | C022 | 9.15 | 8.01 | 21.5 |
| Very fine silt | percent | 63 | 63 | 100 | 0 T | 8.14 T | C011 | 2.79 | 2.46 | 7.09 | 0 T | 8.14 T | C011 | 2.79 | 2.46 | 7.09 |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Ammonia | mg/kg | 14 | 14 | 100 | 2.4 | 813 T | C100 | 121 | 57.4 | 430 | 2.4 | 813 T | C100 | 121 | 57.4 | 430 |
| Cyanide | mg/kg | 57 | 32 | 56.1 | 0.07 J | 40.7 J | PGC-05 | 4.3 | 0.365 J | 21.4 J | 0.07 J | 40.7 J | PGC-05 | 2.48 | 0.18 UJ | 12.3 J |
| Specific Gravity | NA | 25 | 25 | 100 | 1.5 T | 2.43 | C782 | 1.85 | 1.79 | 2.25 | 1.5 T | 2.43 | C782 | 1.85 | 1.79 | 2.25 |
| Sulfide | mg/kg | 62 | 62 | 100 | 0.84 | 2260 J | PGC-06 | 185 | 16.2 | 1220 | 0.84 | 2260 J | PGC-06 | 185 | 16.2 | 1220 |
| Total organic carbon | percent | 159 | 156 | 98.1 | 0.034 J | 22.4 J | C024 | 1.81 | 0.939 | 7.53 | 0.02 UJ | 22.4 J | C024 | 1.78 | 0.92 J | 7.44 |
| Total solids | percent | 163 | 163 | 100 | 32.9 J | 94.3 | C782; O33-C008 | 72.3 | 70.7 | 89.7 | 32.9 J | 94.3 | C782; O33-C008 | 72.3 | 70.7 | 89.7 |
| **Metals** | | | | | | | | | | | | | | | | |
| Aluminum | mg/kg | 90 | 90 | 100 | 4250 | 31800 | UC07 | 16330 | 15700 | 28460 | 4250 | 31800 | UC07 | 16330 | 15700 | 28460 |
| Antimony | mg/kg | 92 | 90 | 97.8 | 0.041 J | 1.55 | C036 | 0.355 | 0.29 J | 0.785 J | 0.041 J | 1.55 | C036 | 0.347 | 0.273 | 0.784 J |
| Arsenic | mg/kg | 148 | 148 | 100 | 0.57 | 7.18 | C011 | 2.89 | 2.73 | 5.03 | 0.57 | 7.18 | C011 | 2.89 | 2.73 | 5.03 |
| Cadmium | mg/kg | 148 | 145 | 98 | 0.03 | 3.02 J | PGC-03 | 0.304 | 0.206 | 0.831 | 0.026 U | 3.02 J | PGC-03 | 0.299 | 0.203 | 0.816 |
| Chromium | mg/kg | 148 | 144 | 97.3 | 4.56 | 71.7 T | PGC-05 | 19.4 | 18.9 | 30.5 J | 4.56 | 71.7 T | PGC-05 | 19.1 | 18.5 | 30.4 J |
| Copper | mg/kg | 148 | 148 | 100 | 9.48 | 457 | PGC-05 | 39 | 30.7 J | 94.7 | 9.48 | 457 | PGC-05 | 39 | 30.7 J | 94.7 |
| Iron | mg/kg | 56 | 56 | 100 | 20000 | 38200 | PGC-05 | 30200 | 30600 | 36700 | 20000 | 38200 | PGC-05 | 30200 | 30600 | 36700 |
| Lead | mg/kg | 148 | 147 | 99.3 | 1.35 J | 1380 | PGC-07 | 62.6 | 31.9 | 173 J | 1.35 J | 1380 | PGC-07 | 62.3 | 31.6 | 173 J |
| Mercury | mg/kg | 148 | 148 | 100 | 0.005 J | 3.46 JT | C783 | 0.3649 | 0.124 | 1.671 | 0.005 J | 3.46 JT | C783 | 0.3649 | 0.124 | 1.671 |
| Nickel | mg/kg | 84 | 84 | 100 | 6.77 | 36.9 J | UC08 | 19 | 18.7 | 31.1 J | 6.77 | 36.9 J | UC08 | 19 | 18.7 | 31.1 J |
| Selenium | mg/kg | 84 | 55 | 65.5 | 0.02 J | 0.6 J | IPC-C014; IPC-C018 | 0.179 | 0.11 | 0.5 J | 0.02 J | 0.9 U | C038 | 0.16 | 0.1 | 0.5 J |
| Silver | mg/kg | 148 | 143 | 96.6 | 0.018 J | 22 J | PGC-01 | 1.07 | 0.252 | 5.47 J | 0.018 J | 22 J | PGC-01 | 1.03 | 0.248 | 5.43 J |
| Zinc | mg/kg | 148 | 148 | 100 | 21.4 | 11100 J | PGC-06 | 414 | 95.7 J | 2070 J | 21.4 | 11100 J | PGC-06 | 414 | 95.7 J | 2070 J |
| **Butyltins** | | | | | | | | | | | | | | | | |
| Butyltin ion | µg/kg | 42 | 7 | 16.7 | 0.42 J | 5.8 | C004 | 1.79 | 0.82 J | 5.17 | 0.036 U | 5.8 | C004 | 0.379 | 0.138 U | 0.83 J |
| Dibutyltin ion | µg/kg | 42 | 7 | 16.7 | 0.5 J | 9.4 | C002 | 2.02 | 0.81 J | 7 | 0.034 U | 9.4 | C002 | 0.392 | 0.028 U | 0.848 J |
| Tetrabutyltin | µg/kg | 42 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.083 U | 0.74 UT | C100 | 0.136 | 0.06 U | 0.335 U |
| Tributyltin ion | µg/kg | 42 | 8 | 19 | 0.55 JT | 23 | C004 | 4.48 | 1.05 J | 17.5 | 0.067 U | 23 | C004 | 0.935 | 0.0525 U | 1.39 J |
| **PCB Aroclors** | | | | | | | | | | | | | | | | |
| Aroclor 1016 | µg/kg | 98 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.73 U | 10 U | C045 | 0.88 | 0.65 UJ | 1.6 U |
| Aroclor 1221 | µg/kg | 98 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.73 U | 10 U | C045 | 0.85 | 0.65 UJ | 1.3 U |
| Aroclor 1232 | µg/kg | 98 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.73 U | 10 U | C045 | 0.89 | 0.65 UJ | 1.4 U |
| Aroclor 1242 | µg/kg | 98 | 5 | 5.1 | 17 | 60 | IPC-C014 | 35 | 31 T | 57 | 0.73 U | 60 | IPC-C014 | 2.7 | 0.83 U | 6.8 |
| Aroclor 1248 | µg/kg | 98 | 9 | 9.2 | 11 | 230 J | C031 | 71.63 | 37.5 T | 184.5 J | 0.73 U | 230 J | C031 | 7.379 | 0.975 U | 33.68 |
| Aroclor 1254 | µg/kg | 98 | 34 | 34.7 | 1.4 J | 220 | C022 | 43 | 29 J | 150 J | 0.73 U | 220 | C022 | 16 | 1.1 U | 71 J |
| Aroclor 1260 | µg/kg | 98 | 42 | 42.9 | 1.6 J | 530 | O33-C005 | 55.1 | 20.5 | 166 | 0.73 U | 530 | O33-C005 | 24.3 | 1.3 U | 110 J |
| Aroclor 1262 | µg/kg | 98 | 3 | 3.1 | 31 | 259.3 JT | C039 | 112.1 | 46 | 238 J | 0.73 U | 259.3 JT | C039 | 4.241 | 0.65 UJ | 2.06 UJ |
| Aroclor 1268 | µg/kg | 98 | 3 | 3.1 | 7.7 | 153 JT | C039 | 57.2 | 11 | 139 J | 0.73 U | 153 JT | C039 | 2.68 | 0.65 U | 3.51 UJ |
| Aroclors | µg/kg | 98 | 57 | 58.2 | 1.4 JT | 610 T | C022 | 89.6 | 41 T | 522 J | 0.73 UT | 610 T | C022 | 52.5 | 7.2 | 242 |

Table D1.3-7. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **PCBs[c]** | | | | | | | | | | | | | | | | |
| Total PCBs | µg/kg | 98 | 57 | 58.2 | 1.4 JT | 610 T | C022 | 89.6 | 41 T | 522 J | 0.73 UT | 610 T | C022 | 52.5 | 7.2 | 242 |
| **PCDD/Fs Homologs** | | | | | | | | | | | | | | | | |
| Heptachlorodibenzofuran homologs | pg/g | 35 | 31 | 88.6 | 0.136 J | 790 | C007 | 82.69 | 45.7 J | 168.5 | 0.0523 U | 790 | C007 | 73.26 | 29.9 | 166.3 |
| Heptachlorodibenzo-p-dioxin homologs | pg/g | 35 | 33 | 94.3 | 0.499 J | 377 | C007 | 138 | 119 | 328 J | 0.367 U | 377 | C007 | 130 | 110 | 327 J |
| Hexachlorodibenzofuran homologs | pg/g | 35 | 29 | 82.9 | 0.0279 J | 166 | C007 | 48.23 | 38.8 J | 131.2 | 0.0227 U | 166 | C007 | 39.97 | 29.8 | 111.8 |
| Hexachlorodibenzo-p-dioxin homologs | pg/g | 35 | 31 | 88.6 | 0.212 J | 65.1 | C004 | 23.68 | 19.4 | 61.95 | 0.0317 U | 65.1 | C004 | 20.99 | 17 | 61.57 |
| Octachlorodibenzofuran | pg/g | 44 | 36 | 81.8 | 0.203 J | 268 | C007 | 47.38 | 28.15 | 118.8 | 0.0951 U | 268 | C007 | 39.45 | 20.85 J | 112.4 |
| Octachlorodibenzo-p-dioxin | pg/g | 44 | 38 | 86.4 | 3.87 J | 2940 | C019 | 787 | 379 J | 2260 J | 2.88 U | 2940 | C019 | 680 | 261 | 2160 J |
| Pentachlorodibenzofuran homologs | pg/g | 35 | 28 | 80 | 0.203 J | 158 | C022 | 41.64 | 25.6 J | 152.6 | 0.0167 U | 158 | C022 | 33.32 | 19.7 | 151.2 |
| Pentachlorodibenzo-p-dioxin homologs | pg/g | 35 | 24 | 68.6 | 0.661 J | 12.1 | C007 | 4.728 | 4.83 J | 9.682 | 0.0128 U | 12.1 | C007 | 3.255 | 1.74 J | 9.577 |
| Tetrachlorodibenzofuran homologs | pg/g | 35 | 30 | 85.7 | 0.108 J | 80 | C020 | 16.18 | 10.01 J | 53.25 | 0.0198 U | 80 | C020 | 13.87 | 8.94 | 51 |
| Tetrachlorodibenzo-p-dioxin homologs | pg/g | 35 | 25 | 71.4 | 0.167 J | 16.4 J | C008 | 2.83 | 1.83 | 9.118 | 0.0171 U | 16.4 J | C008 | 2.029 | 0.798 J | 8.563 |
| Total PCDD/F | pg/g | 44 | 39 | 88.6 | 4.74 T | 4590 T | C007 | 1090 | 541 JA | 3030 | 2.88 UT | 4590 T | C007 | 970 | 440 | 2920 J |
| **PCDD/Fs** | | | | | | | | | | | | | | | | |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran | pg/g | 44 | 40 | 90.9 | 0.0956 J | 396 | C007 | 25.39 | 9.05 | 57.22 | 0.0523 U | 396 | C007 | 23.11 | 7.39 | 55.26 |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin | pg/g | 44 | 37 | 84.1 | 0.342 J | 150 | C019 | 55.9 | 46.7 | 135 | 0.342 J | 150 | C019 | 47.4 | 27.3 | 134 |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran | pg/g | 44 | 26 | 59.1 | 0.175 J | 4.2 J | C007 | 1.313 | 1.03 J | 3.348 J | 0.0359 U | 4.2 J | C007 | 0.8165 | 0.666 J | 2.077 J |
| 1,2,3,4,7,8-Hexachlorodibenzofuran | pg/g | 44 | 35 | 79.5 | 0.0403 J | 6.19 J | C007 | 1.659 | 1.54 J | 5.639 J | 0.0128 U | 6.19 J | C007 | 1.331 | 0.7795 J | 5.255 J |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 44 | 28 | 63.6 | 0.0656 J | 1.39 J | C022 | 0.5413 | 0.4635 J | 1.169 J | 0.0268 U | 1.39 J | C022 | 0.3738 | 0.2935 J | 1.1 J |
| 1,2,3,6,7,8-Hexachlorodibenzofuran | pg/g | 44 | 29 | 65.9 | 0.194 J | 16.9 | C007 | 2.925 | 1.5 J | 10.52 | 0.0139 U | 16.9 | C007 | 2.089 | 0.957 J | 9.574 J |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 44 | 33 | 75 | 0.0385 J | 8.46 | C004 | 3.165 | 2.52 J | 7.878 | 0.0297 U | 8.46 | C004 | 2.471 | 1.88 J | 7.305 J |
| 1,2,3,7,8,9-Hexachlorodibenzofuran | pg/g | 44 | 9 | 20.5 | 0.071 JT | 0.261 J | C007 | 0.1405 | 0.135 J | 0.2238 J | 0.0199 U | 0.895 UJ | C024 | 0.08376 | 0.05325 U | 0.2471 J |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | pg/g | 44 | 30 | 68.2 | 0.0926 J | 4 J | C022 | 1.554 | 1.395 J | 3.602 J | 0.029 U | 4 J | C022 | 1.113 | 0.8605 J | 3.082 J |
| 1,2,3,7,8-Pentachlorodibenzofuran | pg/g | 44 | 25 | 56.8 | 0.0934 J | 1.16 J | C007 | 0.4745 | 0.436 J | 1.126 J | 0.0166 U | 1.16 J | C007 | 0.2873 | 0.1395 J | 1.03 J |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | pg/g | 44 | 26 | 59.1 | 0.0902 J | 1.5 J | C022 | 0.513 | 0.4755 J | 0.9418 J | 0.0128 U | 1.5 J | C022 | 0.3232 | 0.221 J | 0.9094 J |
| 2,3,4,6,7,8-Hexachlorodibenzofuran | pg/g | 44 | 30 | 68.2 | 0.126 J | 10.3 | C007 | 2.335 | 1.52 J | 7.379 J | 0.013 U | 10.3 | C007 | 1.682 | 0.699 J | 5.533 J |
| 2,3,4,7,8-Pentachlorodibenzofuran | pg/g | 44 | 29 | 65.9 | 0.0425 J | 2.55 J | C020 | 0.8221 | 0.668 J | 2.276 J | 0.0167 U | 2.55 J | C020 | 0.5605 | 0.206 J | 2.108 J |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/g | 44 | 22 | 50 | 0.274 J | 13.4 | C028 | 1.353 | 0.8335 J | 1.501 J | 0.0227 U | 13.4 | C028 | 0.7243 | 0.276 J | 1.299 J |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | pg/g | 44 | 22 | 50 | 0.0681 J | 0.56 J | C022 | 0.2814 | 0.238 J | 0.5294 J | 0.0171 U | 0.56 J | C022 | 0.1652 | 0.0946 J | 0.4777 J |
| TCDD TEQ (ND = 0) | pg/g | 44 | 41 | 93.2 | 0.00226 JT | 12.8 T | C007 | 2.6527 | 1.67 T | 6.02 T | 0.00226 JT | 12.8 T | C007 | 2.4736 | 1.37 J | 5.9945 |
| Total TCDD TEQ (ND = 0) | pg/g | 44 | 43 | 97.7 | 0.00226 JA | 12.8 T | C007 | 2.5312 | 1.56 JA | 6.003 | 0.00226 JA | 12.8 T | C007 | 2.4745 | 1.37 J | 5.9945 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| 2,4'-DDD | µg/kg | 94 | 36 | 38.3 | 0.14 J | 28 JT | IPC-C014 | 4.62 | 1.9 J | 17.4 J | 0.032 U | 28 JT | IPC-C014 | 1.89 | 0.185 J | 11.8 J |
| 2,4'-DDE | µg/kg | 94 | 5 | 5.3 | 0.082 J | 1.2 J | C037 | 0.51 | 0.43 J | 1.07 J | 0.03 U | 3.4 UJ | C031 | 0.198 | 0.125 U | 0.67 U |
| 2,4'-DDT | µg/kg | 94 | 39 | 41.5 | 0.049 J | 14 JT | C031 | 2.63 | 1.7 J | 6.54 J | 0.03 U | 14 JT | C031 | 1.33 | 0.293 U | 5.23 J |
| 4,4'-DDD | µg/kg | 94 | 53 | 56.4 | 0.13 J | 31 J | C031 | 3.71 | 1.6 | 21.4 | 0.047 U | 31 J | C031 | 2.17 | 0.445 J | 9.79 |
| 4,4'-DDE | µg/kg | 94 | 44 | 46.8 | 0.052 J | 11 J | C783 | 2.83 | 2.05 J | 8.08 J | 0.027 U | 11 J | C783 | 1.39 | 0.235 UJ | 6.37 J |
| 4,4'-DDT | µg/kg | 94 | 43 | 45.7 | 0.13 J | 240 JT | C031 | 10.5 | 1.4 | 38.7 J | 0.059 U | 240 JT | C031 | 4.97 | 0.403 J | 10.5 J |
| Aldrin | µg/kg | 94 | 8 | 8.5 | 0.079 J | 1.7 | C002 | 0.414 | 0.21 J | 1.3 J | 0.046 UJ | 1.7 | C002 | 0.114 | 0.08 U | 0.324 UJ |
| alpha-Endosulfan | µg/kg | 94 | 7 | 7.4 | 0.086 J | 0.72 J | C031 | 0.261 | 0.16 J | 0.6 J | 0.025 U | 2.7 U | C783 | 0.11 | 0.06 U | 0.334 U |
| alpha-Hexachlorocyclohexane | µg/kg | 94 | 3 | 3.2 | 0.055 J | 0.26 J | C031 | 0.125 | 0.059 J | 0.24 J | 0.047 U | 0.97 U | C783 | 0.076 | 0.0465 UJ | 0.197 U |
| beta-Endosulfan | µg/kg | 94 | 12 | 12.8 | 0.093 J | 3.4 JT | C039 | 0.824 | 0.46 | 2.52 J | 0.031 U | 3.4 JT | C039 | 0.226 | 0.11 UJ | 0.914 |
| beta-Hexachlorocyclohexane | µg/kg | 94 | 12 | 12.8 | 0.076 J | 3.1 NJ | C783 | 0.631 | 0.435 J | 1.81 J | 0.054 U | 3.1 NJ | C783 | 0.191 | 0.09 U | 0.571 |
| Chlordane (technical) | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 9.9 U | O33-C005 | 2.6 | 1.9 U | 4.7 U |
| Chlorpyrifos | µg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.072 UJ | 0.072 UJ | C031 | 0.036 | 0.036 UJ | 0.036 UJ |
| cis-Chlordane | µg/kg | 94 | 12 | 12.8 | 0.073 J | 3 J | C031 | 0.843 | 0.44 J | 2.29 J | 0.031 U | 3 J | C031 | 0.187 | 0.0825 U | 0.53 J |
| cis-Nonachlor | µg/kg | 94 | 8 | 8.5 | 0.18 J | 54 J | O33-C005 | 7.71 | 1.03 J | 36.3 J | 0.043 U | 54 J | O33-C005 | 1.01 | 0.1 U | 2.48 U |
| delta-Hexachlorocyclohexane | µg/kg | 94 | 4 | 4.3 | 0.099 J | 0.87 J | C025 | 0.39 | 0.295 J | 0.806 J | 0.037 U | 1.1 U | C783 | 0.0713 | 0.0368 U | 0.328 UJ |
| Dieldrin | µg/kg | 94 | 4 | 4.3 | 0.29 J | 16 J | C031 | 7.06 | 5.98 J | 14.7 J | 0.03 U | 16 J | C031 | 0.514 | 0.07 U | 2.55 U |
| Endosulfan sulfate | µg/kg | 94 | 4 | 4.3 | 0.18 J | 0.38 J | UC05-1 | 0.29 | 0.3 J | 0.37 J | 0.051 UJ | 4.5 U | C022 | 0.128 | 0.055 U | 0.389 J |
| Endrin | µg/kg | 94 | 10 | 10.6 | 0.18 | 2.4 | C035 | 0.909 | 0.795 J | 2 J | 0.046 U | 2.7 U | C037 | 0.204 | 0.0875 UJ | 1.05 J |
| Endrin aldehyde | µg/kg | 94 | 9 | 9.6 | 0.079 J | 0.6 J | C002; C008 | 0.381 | 0.39 J | 0.6 J | 0.042 U | 2.7 U | C783 | 0.153 | 0.06 U | 0.574 J |
| Endrin ketone | µg/kg | 94 | 10 | 10.6 | 0.19 J | 31.2 JT | C039 | 4.21 | 1.1 J | 18.5 J | 0.029 U | 62 U | O33-C005 | 0.924 | 0.0625 U | 1.69 U |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 94 | 31 | 33 | 0.12 J | 1.9 JT | IPC-C014 | 0.528 | 0.4 J | 1.35 J | 0.043 U | 2.9 U | C783 | 0.27 | 0.113 U | 1.02 J |
| Heptachlor | µg/kg | 94 | 3 | 3.2 | 0.12 NJ | 0.34 J | C008 | 0.233 | 0.24 | 0.33 J | 0.046 UJ | 0.76 U | C783 | 0.0644 | 0.0458 U | 0.204 UJ |
| Heptachlor epoxide | µg/kg | 94 | 9 | 9.6 | 0.14 J | 0.86 | IPC-C017 | 0.482 | 0.4 J | 0.856 J | 0.048 U | 2.8 U | O33-C005 | 0.152 | 0.0875 U | 0.526 J |
| Methoxychlor | µg/kg | 94 | 6 | 6.4 | 0.21 J | 21 JT | C039 | 3.98 | 0.59 J | 16 J | 0.054 U | 21 JT | C039 | 0.395 | 0.095 U | 0.624 |
| Mirex | µg/kg | 94 | 1 | 1.1 | 0.74 J | 0.74 J | UC08 | 0.74 | 0.74 J | 0.74 J | 0.041 UJ | 2.1 U | C783 | 0.0669 | 0.0375 U | 0.122 UJ |

Table D1.3-7. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Oxychlordane | µg/kg | 94 | 10 | 10.6 | 0.12 J | 4.3 NJ | C783 | 0.772 | 0.365 J | 2.68 J | 0.038 U | 4.3 NJ | C783 | 0.196 | 0.11 U | 0.508 J |
| Total chlordanes | µg/kg | 94 | 51 | 54.3 | 0.094 JT | 54 JT | O33-C005 | 3.16 | 1.3 T | 8.2 J | 0.054 UT | 54 JT | O33-C005 | 1.81 | 0.33 J | 6.61 J |
| Total Endosulfan | µg/kg | 94 | 19 | 20.2 | 0.086 JT | 3.4 T | C039 | 0.678 | 0.38 JT | 2.61 | 0.053 UT | 4.5 UT | C022 | 0.311 | 0.128 J | 1.29 U |
| Total DDD | µg/kg | 94 | 54 | 57.4 | 0.15 JT | 48 JT | C031 | 6.72 | 2.2 | 35.6 J | 0.047 UT | 48 JT | C031 | 3.95 | 0.62 J | 24 |
| DDx | µg/kg | 94 | 64 | 68.1 | 0.052 T | 301 T | C031 | 16.3 | 5.71 J | 67 J | 0.052 T | 301 T | C031 | 11.2 | 2.04 J | 43.6 J |
| Total DDE | µg/kg | 94 | 46 | 48.9 | 0.052 T | 11 JT | C783 | 2.75 | 2 | 8 | 0.034 UT | 11 JT | C783 | 1.45 | 0.275 J | 6.58 J |
| Total DDT | µg/kg | 94 | 54 | 57.4 | 0.049 JT | 254 T | C031 | 10.2 | 2.55 | 30.2 | 0.049 JT | 254 T | C031 | 6.01 | 0.515 J | 13.5 J |
| Total 4,4' DDx | µg/kg | 19 | 3 | 15.8 | 0.17 JT | 0.85 JT | UC06 | 0.51 | 0.52 JT | 0.82 J | 0.13 UT | 0.85 JT | UC06; UC07 | 0.17 | 0.09 UT | 0.55 J |
| Toxaphene | µg/kg | 93 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.5 U | 660 U | O33-C005 | 21 | 8 U | 59 U |
| trans-Chlordane | µg/kg | 94 | 38 | 40.4 | 0.094 J | 14 | C022 | 2.06 | 1.3 J | 5.82 J | 0.027 U | 14 | C022 | 0.888 | 0.097 J | 3.84 J |
| trans-Nonachlor | µg/kg | 94 | 12 | 12.8 | 0.11 J | 1.3 J | C031 | 0.393 | 0.285 J | 0.91 J | 0.034 U | 1.5 U | C783 | 0.122 | 0.06 U | 0.444 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| 1-Methylnaphthalene | µg/kg | 94 | 81 | 86.2 | 1 J | 240000 | PGC-06 | 17000 | 40 | 150000 | 0.31 U | 240000 | PGC-06 | 14700 | 27.5 | 131000 |
| 2-Methylnaphthalene | µg/kg | 149 | 114 | 76.5 | 0.51 J | 400000 | PGC-06 | 18500 | 35 | 157000 | 0.37 U | 400000 | PGC-06 | 14200 | 18 | 108000 |
| Acenaphthene | µg/kg | 149 | 131 | 87.9 | 0.25 J | 410000 | PGC-05 | 19700 | 48 | 165000 | 0.2 U | 410000 | PGC-05 | 17300 | 26 | 160000 |
| Acenaphthylene | µg/kg | 149 | 120 | 80.5 | 0.36 J | 130000 | PGC-05 | 2240 | 23.5 J | 11200 | 0.24 U | 130000 | PGC-05 | 1800 | 13 | 10600 |
| Anthracene | µg/kg | 149 | 130 | 87.2 | 0.4 JT | 260000 | PGC-06 | 12600 | 25 | 111000 | 0.24 U | 260000 | PGC-06 | 11000 | 14 | 98800 |
| Benzo(a)anthracene | µg/kg | 149 | 129 | 86.6 | 0.2 J | 150000 | PGC-06 | 7480 | 53 | 69600 | 0.18 U | 150000 | PGC-06 | 6480 | 30 | 59400 |
| Benzo(a)pyrene | µg/kg | 149 | 124 | 83.2 | 0.23 J | 170000 | PGC-06 | 9570 | 79 | 96900 | 0.14 U | 170000 | PGC-06 | 7970 | 39 | 78200 |
| Benzo(b)fluoranthene | µg/kg | 149 | 124 | 83.2 | 0.26 J | 150000 | PGC-06 | 7930 | 81.5 | 79300 | 0.25 U | 150000 | PGC-06 | 6600 | 46 | 60400 |
| Benzo(e)pyrene | µg/kg | 118 | 104 | 88.1 | 0.64 J | 93000 | PGC-06 | 6010 | 82.5 | 51900 | 0.18 U | 93000 | PGC-06 | 5290 | 54 | 51200 |
| Benzo(g,h,i)perylene | µg/kg | 149 | 120 | 80.5 | 0.7 J | 120000 | PGC-05; PGC-06 | 6960 | 71.5 J | 55200 | 0.25 U | 120000 | PGC-05; PGC-06 | 5600 | 38 | 48400 |
| Benzo(k)fluoranthene | µg/kg | 149 | 117 | 78.5 | 0.66 J | 47000 | PGC-06 | 2790 | 33 | 26000 | 0.15 U | 47000 | PGC-06 | 2190 | 15 | 20200 |
| C1-Chrysene | µg/kg | 94 | 79 | 84 | 2.8 | 89000 | PGC-06 | 6670 | 170 | 50000 | 0.25 U | 89000 | PGC-06 | 5610 | 115 | 45500 |
| C1-Dibenzothiophene | µg/kg | 36 | 28 | 77.8 | 1.3 J | 400 | C020; C783 | 115 | 54.5 | 386 | 0.21 U | 400 | C020; C783 | 89.5 | 43.5 J | 370 |
| C1-Fluoranthene/pyrene | µg/kg | 94 | 80 | 85.1 | 1.1 J | 230000 | PGC-06 | 17900 | 265 | 140000 | 0.61 U | 230000 | PGC-06 | 15200 | 205 J | 127000 |
| C1-Fluorene | µg/kg | 94 | 74 | 78.7 | 1.4 J | 74000 | PGC-06 | 5870 | 67.5 | 43400 | 0.5 U | 74000 | PGC-06 | 4620 | 38 | 40400 |
| C1-Phenanthrene/anthracene | µg/kg | 94 | 80 | 85.1 | 0.82 J | 220000 | PGC-06 | 17300 | 288 | 140000 | 0.75 U | 220000 | PGC-06 | 14800 | 180 J | 121000 |
| C2-Chrysene | µg/kg | 94 | 77 | 81.9 | 6.7 | 34000 | PGC-06 | 2750 | 150 | 19000 | 0.25 U | 34000 | PGC-06 | 2260 | 110 | 18400 |
| C2-Dibenzothiophene | µg/kg | 36 | 27 | 75 | 5.9 | 700 | C783 | 128 | 45 | 424 | 0.21 U | 700 | C783 | 95.9 | 35 | 415 |
| C2-Fluoranthene/pyrene | µg/kg | 36 | 31 | 86.1 | 2.8 | 2900 | C783 | 230 | 75 | 820 | 0.61 U | 2900 | C783 | 200 | 54 | 720 |
| C2-Fluorene | µg/kg | 94 | 76 | 80.9 | 2.4 J | 44000 | PGC-06 | 3420 | 115 | 24300 | 0.5 U | 44000 | PGC-06 | 2770 | 82.5 J | 23000 |
| C2-Naphthalene | µg/kg | 94 | 78 | 83 | 3.3 | 220000 | PGC-06 | 16600 | 165 J | 133000 | 0.37 U | 220000 | PGC-06 | 13800 | 100 | 111000 |
| C2-Phenanthrene/anthracene | µg/kg | 94 | 80 | 85.1 | 1.1 J | 110000 | PGC-06 | 7840 | 280 | 58300 | 0.75 U | 110000 | PGC-06 | 6680 | 210 | 54100 |
| C3-Chrysene | µg/kg | 94 | 75 | 79.8 | 7.6 J | 22000 | PGC-06 | 1720 | 140 | 11300 | 0.25 U | 22000 | PGC-06 | 1380 | 110 | 9630 |
| C3-Dibenzothiophene | µg/kg | 36 | 26 | 72.2 | 9.4 | 560 | C020; C783 | 136 | 54.5 J | 538 | 0.21 U | 560 | C020; C783 | 98.5 | 35 | 493 |
| C3-Fluoranthene/pyrene | µg/kg | 36 | 28 | 77.8 | 5.3 J | 1400 | C783 | 185 | 72.5 | 582 | 0.61 U | 1400 | C783 | 144 | 58.5 | 538 |
| C3-Fluorene | µg/kg | 94 | 74 | 78.7 | 4.1 | 44000 | PGC-06 | 3060 | 218 | 20700 | 0.5 U | 44000 | PGC-06 | 2410 | 120 | 18100 |
| C3-Naphthalene | µg/kg | 94 | 75 | 79.8 | 3.2 | 88000 | PGC-06 | 6860 | 180 | 48500 | 0.37 U | 88000 | PGC-06 | 5480 | 130 | 42500 |
| C3-Phenanthrene/anthracene | µg/kg | 94 | 80 | 85.1 | 0.85 J | 43000 | PGC-06 | 3210 | 290 | 22100 | 0.75 U | 43000 | PGC-06 | 2730 | 205 | 21400 |
| C4-Chrysene | µg/kg | 94 | 64 | 68.1 | 6.6 | 7700 | PGC-06 | 685 | 72.5 | 4190 | 0.25 U | 7700 | PGC-06 | 477 | 50 | 3450 |
| C4-Naphthalene | µg/kg | 94 | 75 | 79.8 | 2.8 | 34000 | PGC-06 | 2610 | 170 | 15900 | 0.37 U | 34000 | PGC-06 | 2080 | 105 | 15000 |
| C4-Phenanthrene/anthracene | µg/kg | 94 | 74 | 78.7 | 5.9 | 14000 | PGC-06 | 1240 | 130 | 7920 | 0.75 U | 14000 | PGC-06 | 984 | 76 | 7440 |
| Chrysene | µg/kg | 149 | 126 | 84.6 | 0.3 J | 150000 | PGC-06 | 7700 | 71 | 67800 | 0.25 U | 150000 | PGC-06 | 6520 | 42 | 57400 |
| Dibenzo(a,h)anthracene | µg/kg | 149 | 106 | 71.1 | 0.28 J | 14000 | PGC-06 | 852 | 16.5 | 6830 | 0.28 J | 14000 | PGC-06 | 606 | 5.5 | 5560 |
| Dibenzothiophene | µg/kg | 94 | 78 | 83 | 0.36 J | 62000 J | PGC-06 | 5520 | 39 J | 39800 J | 0.21 U | 62000 J | PGC-06 | 4580 | 22 J | 36700 J |
| Fluoranthene | µg/kg | 149 | 132 | 88.6 | 0.64 J | 470000 | PGC-06 | 25900 | 150 | 244000 | 0.41 U | 470000 | PGC-06 | 22900 | 110 | 214000 |
| Fluorene | µg/kg | 149 | 125 | 83.9 | 0.38 J | 260000 | PGC-06 | 12100 | 30 J | 105000 | 0.21 U | 260000 | PGC-06 | 10200 | 17 | 83600 |
| Total HPAHs | µg/kg | 149 | 135 | 90.6 | 0.28 T | 1950000 T | PGC-06 | 98700 | 578 T | 928000 | 0.28 T | 1950000 T | PGC-06 | 89400 | 506 T | 825000 |
| Indeno(1,2,3-cd)pyrene | µg/kg | 149 | 123 | 82.6 | 0.21 J | 110000 | PGC-06 | 6160 | 61 | 52300 | 0.16 U | 110000 | PGC-06 | 5080 | 31 | 44400 |
| Total LPAHs | µg/kg | 149 | 145 | 97.3 | 0.25 JT | 3030000 T | PGC-05 | 146000 | 375 T | 1380000 | 0.25 JT | 3030000 T | PGC-05 | 142000 | 360 T | 1360000 |
| Naphthalene | µg/kg | 150 | 122 | 81.3 | 0.45 J | 1600000 | PGC-05 | 64700 | 87 | 652000 | 0.44 U | 1600000 | PGC-05 | 52600 | 46.3 | 496000 |
| Perylene | µg/kg | 118 | 114 | 96.6 | 1.2 J | 35000 | PGC-06 | 2380 | 60.5 | 21000 | 0.32 U | 35000 | PGC-06 | 2300 | 58 | 21000 |
| Phenanthrene | µg/kg | 149 | 131 | 87.9 | 1.9 J | 750000 | PGC-06 | 39600 | 170 | 350000 | 0.4 U | 750000 | PGC-06 | 34800 | 110 | 318000 |
| Pyrene | µg/kg | 149 | 133 | 89.3 | 0.53 J | 570000 | PGC-06 | 28400 | 180 | 262000 | 0.37 U | 570000 | PGC-06 | 25400 | 130 | 238000 |
| Total BaPEq | µg/kg | 149 | 131 | 87.9 | 0.0003 JT | 226000 T | PGC-06 | 11840 | 73.5 T | 119500 | 0.0003 JT | 226000 T | PGC-06 | 10410 | 55.3 JT | 100100 |
| Total cPAHs | µg/kg | 149 | 131 | 87.9 | 0.28 JT | 788000 T | PGC-06 | 40300 | 286 T | 395000 | 0.28 JT | 788000 T | PGC-06 | 35400 | 210 T | 324000 |
| Total PAHs | µg/kg | 149 | 147 | 98.7 | 0.25 JT | 4850000 T | PGC-06 | 235000 | 770 T | 2160000 | 0.25 JT | 4850000 T | PGC-06 | 231000 | 740 JT | 2160000 |

Table D1.3-7. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl) phthalate | µg/kg | 64 | 36 | 56.3 | 2.5 J | 815 T | C031 | 103 | 37.5 J | 535 | 2.3 U | 815 T | C031 | 68.8 | 17.8 J | 324 |
| Butylbenzyl phthalate | µg/kg | 64 | 6 | 9.4 | 3.3 J | 33 T | C031 | 14 | 11 J | 30 | 1.7 U | 160 U | C783 | 7.4 | 1.6 U | 31 |
| Dibutyl phthalate | µg/kg | 64 | 36 | 56.3 | 3.6 J | 28.5 T | C021 | 10.4 | 9 J | 22.1 | 3.3 U | 400 U | C783 | 18.9 | 8.4 J | 37.8 |
| Diethyl phthalate | µg/kg | 64 | 3 | 4.7 | 1.4 J | 2.8 J | C038 | 2.2 | 2.5 J | 2.8 J | 1.3 U | 65 U | C783 | 3.5 | 2.2 U | 6.4 U |
| Dimethyl phthalate | µg/kg | 64 | 9 | 14.1 | 1.8 J | 470 | C034 | 190 | 160 | 440 | 1 U | 470 | C034 | 32 | 1.2 U | 170 |
| Di-n-octyl phthalate | µg/kg | 64 | 1 | 1.6 | 18 | 18 | C006 | 18 | 18 | 18 | 1.3 U | 85 U | C783 | 3.6 | 0.85 U | 17 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.7 U | 130 U | C783 | 5 | 1.3 U | 12 U |
| 1,2-Dichlorobenzene | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 150 U | C783 | 5.6 | 1.5 U | 13 U |
| 1,3-Dichlorobenzene | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.8 U | 150 U | C783 | 5.7 | 1.5 U | 14 U |
| 1,4-Dichlorobenzene | µg/kg | 65 | 8 | 12.3 | 4.1 J | 315 T | C031 | 70.2 | 19.5 J | 250 | 0.21 U | 315 T | C031 | 13.7 | 1.45 U | 75 U |
| 2,4-Dinitrotoluene | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 75 U | C783 | 3.3 | 0.8 U | 6.9 U |
| 2,6-Dinitrotoluene | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 U | 100 U | C783 | 4.2 | 1.1 U | 9.3 U |
| 2-Chloronaphthalene | µg/kg | 64 | 1 | 1.6 | 120 J | 120 J | C783 | 120 | 120 J | 120 J | 1.6 U | 120 J | C783 | 4.8 | 0.85 U | 7.4 U |
| 2-Nitroaniline | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3 U | 160 U | C783 | 6.3 | 1.6 U | 15 U |
| 3,3'-Dichlorobenzidine | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.7 U | 190 U | C783 | 7.8 | 1.9 U | 19 U |
| 3-Nitroaniline | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.5 U | 130 U | C783 | 5.1 | 1.3 U | 12 U |
| 4-Bromophenyl phenyl ether | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.6 U | 80 U | C783 | 3.2 | 0.83 U | 7.4 U |
| 4-Chloroaniline | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 95 U | C783 | 3.8 | 1 U | 8.8 U |
| 4-Chlorophenyl phenyl ether | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 70 U | C783 | 2.9 | 0.75 U | 6.5 U |
| 4-Nitroaniline | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.8 U | 90 U | C783 | 3.9 | 0.95 U | 8.3 U |
| Aniline | µg/kg | 56 | 2 | 3.6 | 5.1 J | 16 J | C022 | 11 | 11 J | 15 J | 1.5 U | 75 U | C783 | 3.6 | 0.93 U | 21 J |
| Azobenzene | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.1 U | 55 U | C783 | 2.5 | 0.6 U | 5.1 U |
| Benzoic acid | µg/kg | 53 | 3 | 5.7 | 100 J | 110 J | C027; C036 | 110 | 110 J | 110 J | 96 U | 4800 U | C783 | 210 | 60 U | 1200 U |
| Benzyl alcohol | µg/kg | 64 | 29 | 45.3 | 2.7 J | 69 T | UC05-2 | 22 | 20 | 53 | 2.1 U | 110 U | C783 | 14 | 5.5 U | 55 U |
| Bis(2-chloroethoxy) methane | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 75 U | C783 | 3 | 0.78 U | 6.9 U |
| Bis(2-chloroethyl) ether | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 95 U | C783 | 3.9 | 1 U | 8.8 U |
| Bis(2-chloroisopropyl) ether | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.3 UJ | 130 UJ | C783 | 4.9 | 1.3 U | 12 U |
| Carbazole | µg/kg | 64 | 24 | 37.5 | 1.5 JT | 1700 | C783 | 113 | 11 | 547 | 1.3 U | 1700 | C783 | 43.9 | 1.25 J | 46.6 J |
| Dibenzofuran | µg/kg | 67 | 46 | 68.7 | 0.22 J | 2400 | C783 | 78.3 | 7.4 J | 123 | 0.21 U | 2400 | C783 | 53.9 | 2.5 J | 96.4 J |
| Hexachlorobenzene | µg/kg | 94 | 13 | 13.8 | 0.14 J | 2.8 | O33-C005 | 0.454 | 0.24 J | 1.5 J | 0.068 U | 2.8 | O33-C005 | 0.137 | 0.06 U | 0.308 J |
| Hexachlorobutadiene | µg/kg | 93 | 4 | 4.3 | 0.078 J | 0.35 JT | C039 | 0.207 | 0.2 J | 0.332 J | 0.062 U | 1.4 U | C783 | 0.138 | 0.07 U | 0.367 U |
| Hexachlorocyclopentadiene | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 17 U | 1500 U | C783 | 56 | 15 U | 130 U |
| Hexachloroethane | µg/kg | 77 | 1 | 1.3 | 0.79 J | 0.79 J | UC07 | 0.79 | 0.79 J | 0.79 J | 0.037 UJ | 2.9 U | UC06 | 0.158 | 0.0395 U | 0.58 U |
| Isophorone | µg/kg | 64 | 2 | 3.1 | 3.9 JT | 3.9 JT | UC05-2 | 3.9 | 3.9 J | 3.9 J | 1 U | 50 U | C783 | 2.2 | 0.55 U | 4.8 J |
| Nitrobenzene | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.2 U | 110 U | C783 | 4.4 | 1.1 U | 10 U |
| N-Nitrosodimethylamine | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.1 U | 310 U | C783 | 12 | 3.1 U | 28 U |
| N-Nitrosodiphenylamine | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.6 U | 80 U | C783 | 3.3 | 0.85 U | 7.4 U |
| N-Nitrosodipropylamine | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.4 U | 120 U | C783 | 5 | 1.3 U | 11 U |
| Octachlorostyrene | µg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.17 UJ | 0.17 UJ | C031 | 0.085 | 0.085 UJ | 0.085 UJ |
| **Phenols** | | | | | | | | | | | | | | | | |
| 2,3,4,5-Tetrachlorophenol | µg/kg | 52 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.23 U | 6.1 U | C019 | 1.3 | 1.4 U | 2.7 U |
| 2,3,5,6-Tetrachlorophenol | µg/kg | 52 | 1 | 1.9 | 3.2 JT | 3.2 JT | UC05-2 | 3.2 | 3.2 JT | 3.2 JT | 0.18 U | 7.5 U | C019 | 1.6 | 2.2 U | 3.3 U |
| 2,4,5-Trichlorophenol | µg/kg | 52 | 2 | 3.8 | 4.1 J | 5.1 J | C783 | 4.6 | 4.6 J | 5.1 J | 0.6 U | 5.3 U | C019; C782 | 1.4 | 1.7 U | 2.7 U |
| 2,4,6-Trichlorophenol | µg/kg | 52 | 1 | 1.9 | 1.3 J | 1.3 J | C783 | 1.3 | 1.3 J | 1.3 J | 0.12 U | 5.5 U | C019 | 1.2 | 1.5 J | 2.4 U |
| 2,4-Dichlorophenol | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 UJ | 50 U | C783 | 2.2 | 0.55 U | 4.6 U |
| 2,4-Dimethylphenol | µg/kg | 77 | 5 | 6.5 | 6.7 J | 2100 J | PGC-05 | 900 | 1000 J | 2000 J | 5.5 UJ | 42000 UJ | PGC-06 | 1000 | 3.7 U | 4700 UJ |
| 2,4-Dinitrophenol | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 17 UJ | 850 U | C783 | 38 | 9 U | 79 U |
| 2-Chlorophenol | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 100 U | C783 | 3.9 | 1 U | 9.3 U |
| 2-Methylphenol | µg/kg | 121 | 2 | 1.7 | 6.2 J | 6.9 J | C024 | 6.6 | 6.6 J | 6.9 J | 1.5 UJ | 8300 U | PGC-06 | 140 | 3.6 UJT | 210 U |
| 2-Nitrophenol | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 UJ | 75 U | C783 | 3.2 | 0.8 U | 6.9 U |
| 4,6-Dinitro-2-methylphenol | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 UJ | 70 U | C783 | 2.9 | 0.75 U | 6.5 U |
| 4-Chloro-3-methylphenol | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 UJ | 70 U | C783 | 2.9 | 0.75 U | 6.5 U |
| 4-Methylphenol | µg/kg | 121 | 57 | 47.1 | 3.4 J | 330 | C024 | 81.9 | 48 J | 224 J | 1.5 UJ | 8300 UJ | PGC-06 | 169 | 14 J | 330 |
| 4-Nitrophenol | µg/kg | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- | 18 UJ | 900 U | C783 | 38 | 9.5 U | 83 U |
| Pentachlorophenol | µg/kg | 109 | 3 | 2.8 | 0.24 J | 26 T | UC05-2 | 9.7 | 3 J | 24 J | 0.16 U | 83000 UJ | PGC-06 | 1500 | 30 U | 3000 UJ |
| Phenol | µg/kg | 121 | 40 | 33.1 | 2.2 J | 200 J | PGC-05 | 23.8 | 8.5 J | 152 J | 2 UJ | 25000 U | PGC-06 | 412 | 8 J | 650 U |

Table D1.3-7. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Petroleum** | | | | | | | | | | | | | | | | |
| C10-C12 Aliphatics | mg/kg | 12 | 2 | 16.7 | 2.5 | 5.4 | C037 | 4 | 4 | 5.3 | 2.4 U | 5.4 | C037 | 1.7 | 1.4 U | 3.8 |
| C10-C12 Aromatics | mg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.3 U | 2.9 U | C035; C038 | 1.3 | 1.3 U | 1.5 U |
| C12-C13 Aromatics | mg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 20 UT | 33 U | C035 | 13 | 13 U | 16 U |
| C12-C16 Aliphatics | mg/kg | 12 | 3 | 25 | 3.9 | 16 | C037 | 9.6 | 8.8 | 15 | 2.4 U | 16 | C037 | 3.4 | 1.4 U | 12 |
| C12-C16 Aromatics | mg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.3 U | 2.9 U | C035; C038 | 1.3 | 1.3 U | 1.5 U |
| C16-C21 Aliphatics | mg/kg | 12 | 6 | 50 | 2.8 | 47 | C037 | 16 | 6.6 | 43 | 2.4 U | 47 | C037 | 8.7 | 2.1 | 38 |
| C16-C21 Aromatics | mg/kg | 12 | 3 | 25 | 3.2 | 15 | C037 | 7.5 | 4.2 | 14 | 2.4 U | 15 | C037 | 2.8 | 1.4 U | 9.1 |
| C21-C34 Aliphatics | mg/kg | 12 | 12 | 100 | 15.5 T | 340 | C037 | 92 | 48.5 | 258 | 15.5 T | 340 | C037 | 92 | 48.5 | 258 |
| C21-C34 Aromatics | mg/kg | 12 | 11 | 91.7 | 3.5 | 140 | C034 | 28 | 9.4 | 110 | 2.4 U | 140 | C034 | 26 | 7.7 | 100 |
| C5-C6 Aliphatics | mg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 20 UT | 33 U | C035 | 13 | 13 U | 16 U |
| C6-C8 Aliphatics | mg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 20 UT | 33 U | C035 | 13 | 13 U | 16 U |
| C8-C10 Aliphatics | mg/kg | 12 | 2 | 16.7 | 2.6 | 6.6 | C037 | 4.6 | 4.6 | 6.4 | 2.4 U | 6.6 | C037 | 1.9 | 1.4 U | 4.4 |
| C8-C10 Aromatics | mg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.3 U | 2.9 U | C035; C038 | 1.3 | 1.3 U | 1.5 U |
| Decane | mg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UT | 3.3 U | C035 | 1.3 | 1.3 U | 1.6 U |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 83 | 63 | 75.9 | 1.9 J | 19000 | PGC-06 | 2430 | 430 | 14800 | 1.3 UT | 19000 | PGC-06 | 1840 | 130 | 12900 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 57 | 47 | 82.5 | 4.65 JT | 1200 J | C783 | 237 | 140 J | 852 J | 1.3 UT | 1200 J | C783 | 196 | 110 | 773 J |
| Dodecane | mg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UT | 3.3 U | C035 | 1.3 | 1.3 U | 1.6 U |
| Total Petroleum Hydrocarbons (Gasoline) | mg/kg | 78 | 44 | 56.4 | 0.92 JT | 4800 | PGC-06 | 617 | 62.5 J | 2890 | 0.75 UT | 4800 | PGC-06 | 349 | 7.85 J | 2720 |
| n-Hexane | mg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UT | 3.3 U | C035 | 1.3 | 1.3 U | 1.6 U |
| Octane | mg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UT | 3.3 U | C035 | 1.3 | 1.3 U | 1.6 U |
| Pentane | mg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 UT | 3.3 U | C035 | 1.3 | 1.3 U | 1.6 U |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 83 | 64 | 77.1 | 3.6 JT | 13000 | PGC-06 | 1940 | 505 | 9040 | 3.2 U | 13000 | PGC-06 | 1500 | 210 | 8690 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 57 | 50 | 87.7 | 5.25 JT | 2300 J | C783 | 472 | 335 | 1380 J | 3.1 UT | 2300 J | C783 | 417 | 290 J | 1330 J |
| Total Petroleum Hydrocarbons | mg/kg | 83 | 71 | 85.5 | 0.92 JT | 36800 T | PGC-06 | 4280 | 589 T | 25200 | 0.92 JT | 36800 T | PGC-06 | 3670 | 390 T | 24300 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 57 | 50 | 87.7 | 6.7 JA | 3500 JA | C783 | 694 | 495 | 2120 | 3.1 UA | 3500 JA | C783 | 611 | 410 T | 2060 |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.059 U | 0.083 U | UC07 | 0.0369 | 0.0373 U | 0.041 U |
| 1,1,1-Trichloroethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.082 U | 0.12 U | UC05-1; UC05-2; UC06; UC07 | 0.053 | 0.055 U | 0.06 U |
| 1,1,2,2-Tetrachloroethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 0.19 U | UC05-1; UC07 | 0.083 | 0.083 U | 0.095 U |
| 1,1,2-Trichloroethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.074 U | 0.11 U | UC05-1; UC05-2; UC06; UC07 | 0.0476 | 0.0468 U | 0.055 U |
| 1,1-Dichloroethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.066 U | 0.094 U | UC07 | 0.0416 | 0.0418 U | 0.0461 U |
| 1,1-Dichloroethene | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.09 U | 0.13 U | UC05-1; UC05-2; UC06; UC07 | 0.058 | 0.058 U | 0.065 U |
| 1,2,3-Trichloropropane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.2 U | 0.28 U | UC05-1; UC07 | 0.12 | 0.13 U | 0.14 U |
| 1,2-Dichloroethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 0.15 U | UC05-1; UC05-2; UC06; UC07 | 0.068 | 0.068 U | 0.075 U |
| 1,2-Dichloropropane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.072 U | 0.11 U | UC07 | 0.0452 | 0.0453 U | 0.0503 U |
| 1,4-Dichloro-trans-2-butene | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.36 U | 0.51 U | UC07 | 0.23 | 0.23 U | 0.25 U |
| 2-Chloroethyl vinyl ether | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.17 U | 0.23 U | UC05-1; UC05-2; UC06; UC07 | 0.1 | 0.11 U | 0.12 U |
| Acetone | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.9 U | 67 U | UC05-1 | 14 | 12 U | 31 U |
| Acrylonitrile | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.45 U | 0.63 U | UC07 | 0.28 | 0.28 U | 0.31 U |
| Benzene | µg/kg | 80 | 20 | 25 | 0.12 JT | 13000 | PGC-06 | 3030 | 268 J | 9580 | 0.048 U | 13000 | PGC-06 | 793 | 3.43 U | 7860 |
| Bromochloromethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 0.15 U | UC05-1; UC05-2; UC06; UC07; UC08 | 0.068 | 0.068 U | 0.075 U |
| Bromodichloromethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.044 U | 0.062 U | UC07 | 0.0274 | 0.0275 U | 0.0305 U |
| Bromoform | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 0.19 U | UC05-1; UC07 | 0.083 | 0.083 U | 0.095 U |
| Bromomethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.31 U | 0.43 U | UC05-1; UC07 | 0.19 | 0.2 U | 0.22 U |
| BTEX | µg/kg | 80 | 32 | 40 | 0.12 JT | 154000 JT | PGC-06 | 24400 | 4.08 J | 122000 J | 0.12 JT | 154000 JT | PGC-06 | 9840 | 3.25 U | 88600 J |
| Carbon disulfide | µg/kg | 20 | 4 | 20 | 0.084 J | 0.11 JT | UC05-2 | 0.0985 | 0.1 J | 0.109 J | 0.073 U | 0.11 JT | UC05-1; UC05-2; UC07 | 0.0571 | 0.048 U | 0.101 J |
| Carbon tetrachloride | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.054 U | 0.077 U | UC07 | 0.0342 | 0.0345 U | 0.038 U |
| Chlorobenzene | µg/kg | 20 | 1 | 5 | 0.37 J | 0.37 J | UC07 | 0.37 | 0.37 J | 0.37 J | 0.065 U | 0.37 J | UC07 | 0.0571 | 0.0413 U | 0.0617 J |
| Chlorodibromomethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 0.16 U | UC05-1; UC07 | 0.07 | 0.073 U | 0.08 U |

Table D1.3-7. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Chloroethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.22 U | 0.31 U | UC05-1; UC07 | 0.14 | 0.14 U | 0.16 U |
| Chloroform | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.086 U | 0.13 U | UC07 | 0.0559 | 0.0575 U | 0.0603 U |
| Chloromethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.081 U | 0.12 U | UC05-1; UC05-2; UC06; UC07 | 0.0525 | 0.0525 U | 0.06 U |
| cis-1,2-Dichloroethene | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 0.15 U | UC05-1; UC05-2; UC06; UC07 | 0.068 | 0.068 U | 0.075 U |
| cis-1,3-Dichloropropene | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.067 U | 0.095 U | UC07 | 0.0423 | 0.0428 U | 0.047 U |
| Dichlorodifluoromethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.064 U | 0.091 U | UC07 | 0.0403 | 0.0408 U | 0.0446 U |
| Ethylbenzene | µg/kg | 80 | 20 | 25 | 0.33 J | 55000 | PGC-06 | 13000 | 1630 | 34100 | 0.055 U | 55000 | PGC-06 | 3290 | 3.5 U | 30100 |
| Ethylene dibromide | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.066 U | 0.094 U | UC07 | 0.0416 | 0.0418 U | 0.0461 U |
| Isopropylbenzene | µg/kg | 20 | 3 | 15 | 0.24 J | 0.78 | UC07 | 0.52 | 0.54 J | 0.756 J | 0.092 U | 0.78 | UC07 | 0.129 | 0.0625 U | 0.552 J |
| m,p-Xylene | µg/kg | 80 | 14 | 17.5 | 0.9 J | 60000 | PGC-06 | 19000 | 4000 | 55000 | 0.12 U | 60000 | PGC-06 | 3500 | 3.5 U | 34000 |
| Methyl iodide | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.36 U | 0.51 U | UC07 | 0.23 | 0.23 U | 0.25 U |
| Methyl isobutyl ketone | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.54 U | 0.77 U | UC07 | 0.34 | 0.35 U | 0.38 U |
| Methyl n-butyl ketone | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.8 U | 5.4 U | UC07 | 2.4 | 2.4 U | 2.7 U |
| Methyl tert-butyl ether | µg/kg | 22 | 3 | 13.6 | 0.11 J | 0.15 JT | UC05-2 | 0.133 | 0.14 J | 0.149 J | 0.077 U | 3300 U | C035 | 121 | 0.055 U | 950 J |
| Methylene bromide | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.076 U | 0.11 U | UC05-1; UC05-2; UC06; UC07; UC08 | 0.0487 | 0.048 U | 0.055 U |
| Methylene chloride | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.6 U | 5.7 U | UC06 | 1.7 | 1.7 U | 2.7 U |
| o-Xylene | µg/kg | 80 | 23 | 28.8 | 0.26 J | 39000 | PGC-06 | 7780 | 7 | 25800 | 0.062 U | 39000 | PGC-06 | 2270 | 3.25 U | 21100 |
| Styrene | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.12 U | 0.31 U | UC04 | 0.078 | 0.07 U | 0.12 U |
| Tetrachloroethene | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.092 U | 0.13 U | UC05-1; UC05-2; UC06; UC07; UC08 | 0.0601 | 0.06 U | 0.065 U |
| Toluene | µg/kg | 80 | 18 | 22.5 | 0.25 J | 3900 | PGC-05 | 640 | 94 J | 3140 | 0.076 U | 3900 | PGC-05 | 179 | 3.3 U | 1100 J |
| trans-1,2-Dichloroethene | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.064 U | 0.091 U | UC07 | 0.0403 | 0.0408 U | 0.0446 U |
| trans-1,3-Dichloropropene | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.07 U | 0.1 U | UC07 | 0.0443 | 0.0448 U | 0.0491 U |
| Trichloroethene | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.088 U | 0.13 U | UC05-1; UC05-2; | 0.0573 | 0.0575 U | 0.065 U |
| Trichlorofluoromethane | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.38 U | 0.54 U | UC07 | 0.24 | 0.24 U | 0.27 U |
| Vinyl chloride | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.16 U | 0.22 U | UC05-1; UC07 | 0.097 | 0.098 U | 0.11 U |
| Xylene | µg/kg | 80 | 23 | 28.8 | 0.26 JT | 86000 T | PGC-06 | 19600 | 8.5 JT | 84000 | 0.12 UT | 86000 T | PGC-06 | 5700 | 3.4 U | 53800 |
| **Zidell Data Only** | | | | | | | | | | | | | | | | |
| **Grain Size** | | | | | | | | | | | | | | | | |
| Clay | percent | 7 | 7 | 100 | 11.6 | 30.5 | WRS37 | 20.8 | 20.7 | 30.4 | 11.6 | 30.5 | WRS37 | 20.8 | 20.7 | 30.4 |
| Fines | percent | 10 | 10 | 100 | 3.1 | 89 T | WRS37 | 37.4 | 25.1 | 87.7 | 3.1 | 89 T | WRS37 | 37.4 | 25.1 | 87.7 |
| Gravel | percent | 10 | 10 | 100 | 0 | 64.9 | WRS46 | 6.49 | 0 | 35.7 | 0 | 64.9 | WRS46 | 6.49 | 0 | 35.7 |
| Sand | percent | 10 | 10 | 100 | 11 | 96.9 | WRS22 | 56.2 | 61.3 | 95.3 | 11 | 96.9 | WRS22 | 56.2 | 61.3 | 95.3 |
| Silt | percent | 7 | 7 | 100 | 3.4 | 58.8 | WRS37 | 30.7 | 23.9 | 57.9 | 3.4 | 58.8 | WRS37 | 30.7 | 23.9 | 57.9 |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Phosphorus | mg/kg | 15 | 15 | 100 | 702 | 1560 | WRS06 | 1070 | 1050 | 1390 | 702 | 1560 | WRS06 | 1070 | 1050 | 1390 |
| **Metals** | | | | | | | | | | | | | | | | |
| Antimony | mg/kg | 30 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 UJ | 17 U | WRS34 | 5.8 | 5.3 UJ | 7.8 U |
| Arsenic | mg/kg | 30 | 20 | 66.7 | 2 | 7.5 | WRS46 | 3.5 | 3 | 5.1 | 2 | 7.5 | WRS46 | 2.7 | 3 | 4.6 |
| Barium | mg/kg | 15 | 15 | 100 | 113 | 509 | WRS07 | 196 | 177 | 338 | 113 | 509 | WRS07 | 196 | 177 | 338 |
| Beryllium | mg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 U | 2 U | WRS05; WRS06; WRS07; WRS08 | 1 | 1 U | 1 U |
| Cadmium | mg/kg | 30 | 14 | 46.7 | 1 | 3.6 | WRS46 | 2.15 | 1.95 | 3.54 | 1 | 3.6 | WRS46 | 1.28 | 0.7 U | 3.41 |
| Chromium | mg/kg | 30 | 30 | 100 | 14 | 143 | WRS06 | 36 | 29.5 | 75.4 | 14 | 143 | WRS06 | 36 | 29.5 | 75.4 |
| Copper | mg/kg | 30 | 30 | 100 | 14 | 1050 | WRS07 | 82.1 | 40.5 | 169 | 14 | 1050 | WRS07 | 82.1 | 40.5 | 169 |
| Lead | mg/kg | 30 | 21 | 70 | 2.9 T | 972 | WRS07 | 81.4 | 25 | 115 | 2.1 U | 972 | WRS07 | 59.4 | 15.5 | 113 |
| Mercury | mg/kg | 30 | 15 | 50 | 0.0255 T | 1.3 | WRS07 | 0.2135 | 0.093 | 0.67 | 0.016 U | 1.3 | WRS07 | 0.1479 | 0.1 U | 0.373 |
| Nickel | mg/kg | 30 | 30 | 100 | 16 | 151 | WRS06 | 31.2 | 26 | 54.6 | 16 | 151 | WRS06 | 31.2 | 26 | 54.6 |
| Selenium | mg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | WRS05; WRS06; WRS07; WRS08 | 0.5 | 0.5 U | 0.5 U |
| Silver | mg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4 U | 4 U | WRS05; WRS06; WRS07; WRS08 | 2 | 2 U | 2 U |
| Thallium | mg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | WRS05; WRS06; WRS07; WRS08 | 0.5 | 0.5 U | 0.5 U |
| Zinc | mg/kg | 30 | 30 | 100 | 41 | 2270 J | WRS07 | 207 | 120 J | 344 J | 41 | 2270 J | WRS07 | 207 | 120 J | 344 J |

Table D1.3-7. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Butyltins** | | | | | | | | | | | | | | | | |
| Butyltin ion | µg/kg | 8 | 2 | 25 | 0.72 T | 1.3 | WRS31 | 1.01 | 1.01 | 1.271 | 0.0015 U | 1.3 | WRS31 | 0.4807 | 0.3775 U | 1.097 |
| Dibutyltin ion | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.002 U | 1.2 U | WRS34 | 0.413 | 0.463 U | 0.565 U |
| Tetrabutyltin | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.001 U | 0.6 U | WRS34 | 0.207 | 0.23 U | 0.284 U |
| Tributyltin ion | µg/kg | 23 | 13 | 56.5 | 1 | 14000 | WRS06 | 1697 | 11 | 9980 | 0.0015 U | 14000 | WRS06 | 959.5 | 3 | 6625 |
| **PCB Aroclors** | | | | | | | | | | | | | | | | |
| Aroclor 1016 | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | 110 U | 170 U | WRS34 | 66 | 65 U | 80 U |
| Aroclor 1221 | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | 110 U | 170 U | WRS34 | 66 | 65 U | 80 U |
| Aroclor 1232 | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | 110 U | 170 U | WRS34 | 66 | 65 U | 80 U |
| Aroclor 1242 | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | 110 U | 170 U | WRS34 | 66 | 65 U | 80 U |
| Aroclor 1248 | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | 110 U | 170 U | WRS34 | 66 | 65 U | 80 U |
| Aroclor 1254 | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | 110 U | 170 U | WRS34 | 66 | 65 U | 80 U |
| Aroclor 1260 | µg/kg | 12 | 2 | 16.7 | 140 | 190 | WRS28 | 170 | 170 | 190 | 110 U | 190 | WRS28 | 81 | 65 U | 160 |
| Aroclor 1262 | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 110 U | 150 U | WRS25; WRS28 | 63 | 63 U | 75 U |
| Aroclor 1268 | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 110 U | 150 U | WRS25; WRS28 | 63 | 63 U | 75 U |
| Aroclors | µg/kg | 12 | 2 | 16.7 | 140 T | 190 T | WRS28 | 170 | 170 | 190 | 110 UT | 190 T | WRS28 | 81 | 65 U | 160 |
| **PCBs[c]** | | | | | | | | | | | | | | | | |
| Total PCBs | µg/kg | 12 | 2 | 16.7 | 140 T | 190 T | WRS28 | 170 | 170 | 190 | 110 UT | 190 T | WRS28 | 81 | 65 U | 160 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | µg/kg | 12 | 4 | 33.3 | 5.8 | 26 | WRS46 | 14 | 12 | 25 | 3.5 U | 26 | WRS46 | 6.1 | 2.5 U | 21 |
| Acenaphthene | µg/kg | 12 | 3 | 25 | 5.8 | 11 | WRS25 | 8.9 | 10 | 11 | 3.5 U | 11 | WRS25 | 3.9 | 2.5 U | 10 |
| Acenaphthylene | µg/kg | 12 | 4 | 33.3 | 5.9 | 28 | WRS25 | 13 | 8.7 | 25 | 3.5 U | 28 | WRS25 | 5.7 | 2.5 U | 18 |
| Anthracene | µg/kg | 12 | 2 | 16.7 | 9.7 | 12 | WRS46 | 11 | 11 | 12 | 3.5 U | 12 | WRS46 | 3.7 | 2.5 U | 11 |
| Benzo(a)anthracene | µg/kg | 12 | 6 | 50 | 6.6 T | 31 | WRS46 | 13 | 11 | 27 | 3.5 U | 31 | WRS46 | 7.7 | 4.8 | 21 |
| Benzo(a)pyrene | µg/kg | 12 | 8 | 66.7 | 4.8 | 24 | WRS46 | 12 | 10 | 20 | 3.5 U | 24 | WRS46 | 8.4 | 8.7 | 18 |
| Benzo(b)fluoranthene | µg/kg | 12 | 6 | 50 | 6 | 17 | WRS25 | 12 | 13 | 16 | 3.5 U | 17 | WRS25 | 7.2 | 4.5 | 15 |
| Benzo(g,h,i)perylene | µg/kg | 12 | 4 | 33.3 | 7.3 | 16 T | WRS22 | 11 | 11 | 15 | 3.5 U | 16 T | WRS22 | 5.2 | 2.5 U | 14 |
| Benzo(k)fluoranthene | µg/kg | 12 | 6 | 50 | 6.2 | 38 | WRS46 | 14 | 9 | 32 | 3.5 U | 38 | WRS46 | 8 | 4.4 | 25 |
| Chrysene | µg/kg | 12 | 4 | 33.3 | 6.5 | 31 | WRS46 | 15 | 10 | 28 | 3.5 U | 31 | WRS46 | 6.3 | 2.5 U | 21 |
| Dibenzo(a,h)anthracene | µg/kg | 12 | 1 | 8.3 | 14 T | 14 T | WRS22 | 14 | 14 T | 14 T | 3.5 U | 14 T | WRS22 | 3.3 | 2.4 U | 7.9 |
| Fluoranthene | µg/kg | 12 | 8 | 66.7 | 5 T | 91 | WRS46 | 27 | 16 | 76 | 3.8 UT | 91 | WRS46 | 19 | 6.4 | 67 |
| Fluorene | µg/kg | 12 | 2 | 16.7 | 8.9 | 15 | WRS25 | 12 | 12 | 15 | 3.5 U | 15 | WRS25 | 3.9 | 2.5 U | 12 |
| Total HPAHs | µg/kg | 12 | 10 | 83.3 | 4.8 T | 309 T | WRS46 | 91.3 | 80.2 | 245 | 3.9 UT | 309 T | WRS46 | 76.4 | 51.5 | 231 |
| Indeno(1,2,3-cd)pyrene | µg/kg | 12 | 5 | 41.7 | 6.8 | 15 T | WRS22 | 11 | 9.7 | 15 | 3.5 U | 15 T | WRS22 | 5.8 | 2.8 U | 14 |
| Total LPAHs | µg/kg | 12 | 5 | 41.7 | 5.9 T | 208 T | WRS25 | 90.1 | 58.8 T | 195 | 3.5 UT | 208 T | WRS25 | 38.8 | 2.75 U | 172 |
| Naphthalene | µg/kg | 12 | 3 | 25 | 15 | 70 | WRS25 | 37 | 25 | 66 | 3.5 U | 70 | WRS25 | 11 | 2.5 U | 45 |
| Phenanthrene | µg/kg | 12 | 4 | 33.3 | 19 | 60 | WRS46 | 40 | 41 | 60 | 3.5 U | 60 | WRS46 | 15 | 2.5 U | 58 |
| Pyrene | µg/kg | 12 | 7 | 58.3 | 5.4 T | 74 | WRS46 | 28 | 23 | 66 | 3.5 U | 74 | WRS46 | 17 | 6.1 | 60 |
| Total BaPEq | µg/kg | 12 | 9 | 75 | 0.091 T | 31 T | WRS22 | 14.2 | 12 T | 30.6 | 0.091 T | 31 T | WRS22 | 11.1 | 10 | 30.5 |
| Total cPAHs | µg/kg | 12 | 9 | 75 | 4.8 T | 140 T | WRS46 | 50 | 41 T | 120 | 3.5 UT | 140 T | WRS46 | 38 | 26 | 110 |
| Total PAHs | µg/kg | 12 | 10 | 83.3 | 4.8 T | 451 T | WRS46 | 136.3 | 97.8 J | 416.8 | 3.9 UT | 451 T | WRS46 | 113.9 | 54.4 | 409.2 |

Table D1.3-7. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Petroleum** | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 24 | 2 | 8.3 | 98 | 160 | WRS37 | 130 | 130 | 160 | 10 U | 210 U | WRS31 | 22 | 5 U | 100 |
| Total Petroleum Hydrocarbons (Gasoline) | mg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | WRS05; WRS06; WRS07; WRS08 | 5 | 5 U | 5 U |
| Jet fuel A | mg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | WRS05; WRS06; WRS07; WRS08 | 5 | 5 U | 5 U |
| Kerosene | mg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | WRS05; WRS06; WRS07; WRS08 | 5 | 5 U | 5 U |
| Mineral spirits | mg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 10 U | 10 U | WRS05; WRS06; WRS07; WRS08 | 5 | 5 U | 5 U |
| Motor oil | mg/kg | 9 | 9 | 100 | 42 | 900 | WRS31 | 229 | 110 | 688 | 42 | 900 | WRS31 | 229 | 110 | 688 |
| Total Petroleum Hydrocarbons | mg/kg | 24 | 24 | 100 | 42 A | 1630 | WRS06 | 493 | 314 | 1390 | 42 A | 1630 | WRS06 | 493 | 314 | 1390 |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

-- data not available.

BaPEq - benzo(a)pyrene equivalent
BTEX - benzene, toluene, ethylbenzene, and xylene
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-8. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downstream Reach (RM 0-1.9).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Grainsize** | | | | | | | | | | | | | | | | |
| >9 Phi clay | percent | 21 | 21 | 100 | 0.48 | 7.85 | DG09 | 4.61 | 5.52 T | 7.47 | 0.48 | 7.85 | DG09 | 4.61 | 5.52 T | 7.47 |
| 8-9 Phi clay | percent | 21 | 21 | 100 | 0.28 | 3.76 | GCR01E-ALT | 2.55 | 2.72 | 3.73 | 0.28 | 3.76 | GCR01E-ALT | 2.55 | 2.72 | 3.73 |
| Coarse sand | percent | 21 | 21 | 100 | 0.25 | 5.85 | DG12 | 1.39 | 0.747 T | 3.79 T | 0.25 | 5.85 | DG12 | 1.39 | 0.747 T | 3.79 T |
| Coarse silt | percent | 21 | 21 | 100 | 0.54 | 51.8 | DG06 | 24.2 | 25.5 | 50.1 | 0.54 | 51.8 | DG06 | 24.2 | 25.5 | 50.1 |
| Fine gravel | percent | 21 | 21 | 100 | 0.02 | 2.47 T | GCRSP01W | 0.497 | 0.29 | 1.14 T | 0.02 | 2.47 T | GCRSP01W | 0.497 | 0.29 | 1.14 T |
| Fine sand | percent | 21 | 21 | 100 | 0.99 | 39.4 | GCR01E-ALT | 13.2 | 9.87 | 38.9 | 0.99 | 39.4 | GCR01E-ALT | 13.2 | 9.87 | 38.9 |
| Fine silt | percent | 21 | 21 | 100 | 0.5 | 12.8 | DG07 | 6.33 | 7.36 | 11.4 | 0.5 | 12.8 | DG07 | 6.33 | 7.36 | 11.4 |
| Fines | percent | 21 | 21 | 100 | 2.13 T | 95.4 T | DG03 | 53.3 | 59.9 T | 94.5 T | 2.13 T | 95.4 T | DG03 | 53.3 | 59.9 T | 94.5 T |
| Medium gravel | percent | 21 | 21 | 100 | 0 | 3.09 | DG18 | 0.275 | 0.05 | 0.627 T | 0 | 3.09 | DG18 | 0.275 | 0.05 | 0.627 T |
| Medium sand | percent | 21 | 21 | 100 | 0.29 | 71.2 | DG12 | 10.1 | 3.53 T | 41.6 | 0.29 | 71.2 | DG12 | 10.1 | 3.53 T | 41.6 |
| Medium silt | percent | 21 | 21 | 100 | 0.11 | 23.8 | DG07 | 11.6 | 14 | 19.4 | 0.11 | 23.8 | DG07 | 11.6 | 14 | 19.4 |
| Very coarse sand | percent | 21 | 21 | 100 | 0.1 | 2.41 T | GCRSP01W | 0.634 | 0.47 | 1.81 | 0.1 | 2.41 T | GCRSP01W | 0.634 | 0.47 | 1.81 |
| Very fine sand | percent | 21 | 21 | 100 | 1 | 43.3 T | GCRSP01W | 24.5 | 24.4 | 43 | 1 | 43.3 T | GCRSP01W | 24.5 | 24.4 | 43 |
| Very fine silt | percent | 21 | 21 | 100 | 0 | 9.02 | DG07 | 3.98 | 4.5 | 6.58 | 0 | 9.02 | DG07 | 3.98 | 4.5 | 6.58 |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Acid Volatile Sulfides | mg/kg | 4 | 2 | 50 | 14.8 | 65 | WR-BC-07 | 39.9 | 39.9 | 62.5 | 0.7 U | 65 | WR-BC-07 | 20.1 | 7.58 | 57.5 |
| Specific Gravity | NA | 17 | 17 | 100 | 1.21 | 1.75 T | DG11-2 | 1.56 | 1.56 | 1.73 | 1.21 | 1.75 T | DG11-2 | 1.56 | 1.56 | 1.73 |
| Total organic carbon | percent | 25 | 25 | 100 | 0.13 | 2.63 | DG07 | 1.16 | 1.15 T | 2.44 | 0.13 | 2.63 | DG07 | 1.16 | 1.15 T | 2.44 |
| Total solids | percent | 25 | 25 | 100 | 37 | 81.4 | GCR01E-ALT | 59.6 | 59.9 | 77.2 | 37 | 81.4 | GCR01E-ALT | 59.6 | 59.9 | 77.2 |
| **Metals** | | | | | | | | | | | | | | | | |
| Aluminum | mg/kg | 21 | 21 | 100 | 10600 | 37700 | DG07 | 19600 | 19500 | 30300 | 10600 | 37700 | DG07 | 19600 | 19500 | 30300 |
| Antimony | mg/kg | 21 | 21 | 100 | 0.05 J | 0.31 J | DG08 | 0.141 | 0.14 J | 0.21 J | 0.05 J | 0.31 J | DG08 | 0.141 | 0.14 J | 0.21 J |
| Arsenic | mg/kg | 25 | 25 | 100 | 0.6 J | 6.36 | DG15 | 3.7 | 4.12 | 5.38 | 0.6 J | 6.36 | DG15 | 3.7 | 4.12 | 5.38 |
| Cadmium | mg/kg | 25 | 24 | 96 | 0.08 | 1.63 | DG08 | 0.477 | 0.305 | 0.99 | 0.08 | 1.63 | DG08 | 0.459 | 0.3 T | 0.986 |
| Chromium | mg/kg | 25 | 25 | 100 | 10.4 J | 42.2 | DG07 | 24.7 | 27 | 36.7 | 10.4 J | 42.2 | DG07 | 24.7 | 27 | 36.7 |
| Copper | mg/kg | 25 | 25 | 100 | 8 | 45.7 | DG07 | 25.5 | 27 T | 41.4 | 8 | 45.7 | DG07 | 25.5 | 27 T | 41.4 |
| Lead | mg/kg | 25 | 25 | 100 | 3.23 | 27.7 | DG15 | 11.7 | 12.1 | 21.6 | 3.23 | 27.7 | DG15 | 11.7 | 12.1 | 21.6 |
| Manganese | mg/kg | 4 | 4 | 100 | 263 | 512 | GCA01E | 343 | 299 | 481 | 263 | 512 | GCA01E | 343 | 299 | 481 |
| Mercury | mg/kg | 25 | 25 | 100 | 0.011 J | 7.11 J | DG15 | 0.3344 | 0.054 T | 0.1216 J | 0.011 J | 7.11 J | DG15 | 0.3344 | 0.054 T | 0.1216 J |
| Nickel | mg/kg | 25 | 25 | 100 | 9 | 31.7 | DG03 | 21.4 | 21.6 | 31 | 9 | 31.7 | DG03 | 21.4 | 21.6 | 31 |
| Selenium | mg/kg | 21 | 15 | 71.4 | 0.04 J | 0.25 | DG07 | 0.16 | 0.17 | 0.23 | 0.04 J | 0.25 | DG07 | 0.13 | 0.15 T | 0.22 |
| Silver | mg/kg | 25 | 25 | 100 | 0.033 | 0.21 | WR-BC-07 | 0.1265 | 0.139 | 0.2086 | 0.033 | 0.21 | WR-BC-07 | 0.1265 | 0.139 | 0.2086 |
| Thallium | mg/kg | 4 | 2 | 50 | 0.089 | 0.131 T | GCRSP01W | 0.11 | 0.11 | 0.1289 | 0.0615 U | 0.131 T | GCRSP01W | 0.07115 | 0.06143 | 0.1247 |
| Zinc | mg/kg | 25 | 25 | 100 | 47.6 | 188 | DG15 | 98.2 | 99.5 T | 160 | 47.6 | 188 | DG15 | 98.2 | 99.5 T | 160 |
| **Butyltins** | | | | | | | | | | | | | | | | |
| Butyltin ion | µg/kg | 4 | 1 | 25 | 0.63 J | 0.63 J | GSP01E | 0.63 | 0.63 J | 0.63 J | 0.037 U | 0.63 J | GSP01E | 0.195 | 0.065 U | 0.551 J |
| Dibutyltin ion | µg/kg | 4 | 4 | 100 | 0.28 J | 1.2 J | GSP01E | 0.64 | 0.54 J | 1.1 J | 0.28 J | 1.2 J | GSP01E | 0.64 | 0.54 J | 1.1 J |
| Tetrabutyltin | µg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.086 U | 0.12 UT | GCRSP01W | 0.0509 | 0.0503 U | 0.0593 U |
| Tributyltin ion | µg/kg | 4 | 4 | 100 | 0.37 J | 1.2 J | GSP01E | 0.85 | 0.92 J | 1.2 J | 0.37 J | 1.2 J | GSP01E | 0.85 | 0.92 J | 1.2 J |
| **PCB Aroclors** | | | | | | | | | | | | | | | | |
| Aroclor 1016 | µg/kg | 25 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 88 U | DG15 | 3.9 | 1.6 U | 6.2 U |
| Aroclor 1221 | µg/kg | 25 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 10 UJ | WR-BC-01; WR-BC-07; WR-BC-08 | 2.1 | 1.6 U | 5 UJ |
| Aroclor 1232 | µg/kg | 25 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 97 U | DG15 | 4.3 | 1.6 U | 9.8 U |
| Aroclor 1242 | µg/kg | 25 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 99 U | DG15 | 4.1 | 1.6 U | 5 U |
| Aroclor 1248 | µg/kg | 25 | 1 | 4 | 140 | 140 | DG15 | 140 | 140 | 140 | 1.3 U | 140 | DG15 | 7.5 | 1.5 U | 5 U |
| Aroclor 1254 | µg/kg | 25 | 11 | 44 | 2.3 J | 130 | DG15 | 18 | 5.9 J | 74 | 1.4 U | 130 | DG15 | 9.3 | 4.9 J | 15 J |
| Aroclor 1260 | µg/kg | 25 | 10 | 40 | 1.7 J | 76 | DG15 | 13 | 5.9 J | 49 | 1.4 U | 76 | DG15 | 6.5 | 2.7 U | 14 J |
| Aroclor 1262 | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.3 U | 64 U | DG15 | 2.9 | 1.5 U | 2.3 U |
| Aroclor 1268 | µg/kg | 21 | 1 | 4.8 | 66 | 66 | DG15 | 66 | 66 | 66 | 1.3 U | 66 | DG15 | 4.5 | 1.5 U | 2.3 U |
| Aroclors | µg/kg | 25 | 14 | 56 | 4 JT | 410 T | DG15 | 38 | 7.4 J | 160 | 1.4 UT | 410 T | DG15 | 22 | 5 UT | 29 J |

Table D1.3-8. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downstream Reach (RM 0-1.9).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **PCB Congeners** | | | | | | | | | | | | | | | | |
| PCB001 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.6 UT | GCRSP01W | 5.27 | 6.15 U | 6.29 U |
| PCB002 | pg/g | 4 | 1 | 25 | 16.9 T | 16.9 T | GCRSP01W | 16.9 | 16.9 T | 16.9 T | 4.94 U | 16.9 T | GCRSP01W | 7.92 | 6.15 U | 15.3 |
| PCB003 | pg/g | 4 | 1 | 25 | 14.3 T | 14.3 T | GCRSP01W | 14.3 | 14.3 T | 14.3 T | 4.94 U | 14.3 T | GCRSP01W | 7.27 | 6.15 U | 13.1 |
| PCB004 & 010 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 9.88 U | 24.8 UT | GCRSP01W | 10.5 | 12.3 U | 12.4 U |
| PCB005 & 008 | pg/g | 4 | 1 | 25 | 11.5 | 11.5 | GCA01E | 11.5 | 11.5 | 11.5 | 11.5 | 24.8 UT | GCRSP01W | 12.1 | 12.3 U | 12.4 U |
| PCB006 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 9.88 U | 24.8 UT | GCRSP01W | 10.5 | 12.3 U | 12.4 U |
| PCB007 & 009 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 9.88 U | 24.8 UT | GCRSP01W | 10.5 | 12.3 U | 12.4 U |
| PCB011 | pg/g | 4 | 2 | 50 | 28.9 | 117 T | GCRSP01W | 73 | 73 | 113 | 24.4 U | 117 T | GCRSP01W | 42.6 | 20.6 | 104 |
| PCB012 & 013 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 9.88 U | 24.8 UT | GCRSP01W | 10.5 | 12.3 U | 12.4 U |
| PCB014 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 9.88 U | 24.8 UT | GCRSP01W | 10.5 | 12.3 U | 12.4 U |
| PCB015 | pg/g | 4 | 1 | 25 | 14 | 14 | GCA01E | 14 | 14 | 14 | 14 | 24.8 UT | GCRSP01W | 12.7 | 12.4 U | 13.8 |
| PCB016 & 032 | pg/g | 4 | 4 | 100 | 14.7 | 45.4 JT | GCRSP01W | 23.3 | 16.5 | 41.1 J | 14.7 | 45.4 JT | GCRSP01W | 23.3 | 16.5 | 41.1 J |
| PCB017 | pg/g | 4 | 2 | 50 | 10.4 | 33.2 JT | GCRSP01W | 21.8 | 21.8 J | 32.1 J | 10.4 | 33.2 JT | GCRSP01W | 14 | 8.3 | 29.8 J |
| PCB018 | pg/g | 4 | 4 | 100 | 18.7 | 70.9 JT | GCRSP01W | 34.1 | 23.3 | 64.4 J | 18.7 | 70.9 JT | GCRSP01W | 34.1 | 23.3 | 64.4 J |
| PCB019 | pg/g | 4 | 1 | 25 | 23.2 T | 23.2 T | GCRSP01W | 23.2 | 23.2 T | 23.2 T | 4.94 U | 23.2 T | GCRSP01W | 9.49 | 6.15 U | 20.7 |
| PCB020 & 021 & 033 | pg/g | 4 | 3 | 75 | 16.2 | 50 T | GCRSP01W | 27.6 | 16.6 | 46.7 | 16.2 | 50 T | GCRSP01W | 23.9 | 16.4 | 45 |
| PCB022 | pg/g | 4 | 3 | 75 | 14.3 | 36.3 T | GCRSP01W | 21.8 | 14.8 | 34.2 | 12.2 U | 36.3 T | GCRSP01W | 17.9 | 14.6 | 33.1 |
| PCB023 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB024 & 027 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB025 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB026 | pg/g | 4 | 2 | 50 | 6.38 | 18.1 T | GCRSP01W | 12.2 | 12.2 | 17.5 | 6.38 | 18.1 T | GCRSP01W | 9.2 | 6.29 | 16.3 |
| PCB028 | pg/g | 4 | 4 | 100 | 39.1 | 80.3 T | GCRSP01W | 54.8 | 49.8 | 75.8 | 39.1 | 80.3 T | GCRSP01W | 54.8 | 49.8 | 75.8 |
| PCB029 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB030 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB031 | pg/g | 4 | 3 | 75 | 31.6 | 66.7 T | GCRSP01W | 43.5 | 32.2 | 63.3 | 25.7 UJ | 66.7 T | GCRSP01W | 35.8 | 31.9 | 61.5 |
| PCB034 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB035 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB036 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB037 | pg/g | 4 | 3 | 75 | 18.8 | 42.6 T | GCRSP01W | 27.7 | 21.7 | 40.5 | 12.2 U | 42.6 T | GCRSP01W | 22.3 | 20.3 | 39.5 |
| PCB038 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB039 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB040 | pg/g | 4 | 3 | 75 | 16.4 | 24.8 T | GCRSP01W | 21.9 | 24.4 | 24.8 | 12.2 U | 24.8 T | GCRSP01W | 17.9 | 20.4 | 24.7 |
| PCB041 & 064 & 071 & 072 | pg/g | 4 | 4 | 100 | 38.2 | 120 T | GCRSP01W | 84 | 88.9 | 116 | 38.2 | 120 T | GCRSP01W | 84 | 88.9 | 116 |
| PCB042 & 059 | pg/g | 4 | 4 | 100 | 17.4 | 43.4 T | GCRSP01W | 31.9 | 33.5 | 42.2 | 17.4 | 43.4 T | GCRSP01W | 31.9 | 33.5 | 42.2 |
| PCB043 & 049 | pg/g | 4 | 4 | 100 | 45.9 | 112 T | GCRSP01W | 83.3 | 87.7 | 109 | 45.9 | 112 T | GCRSP01W | 83.3 | 87.7 | 109 |
| PCB044 | pg/g | 4 | 4 | 100 | 55.2 | 164 T | GCRSP01W | 111 | 113 | 157 | 55.2 | 164 T | GCRSP01W | 111 | 113 | 157 |
| PCB045 | pg/g | 4 | 2 | 50 | 13.3 | 17.8 T | GCRSP01W | 15.6 | 15.6 | 17.6 | 12.2 U | 17.8 T | GCRSP01W | 11.2 | 10.4 J | 17.1 |
| PCB046 | pg/g | 4 | 1 | 25 | 6 | 6 | GCA01E | 6 | 6 | 6 | 6 | 12.4 U | GCRSP01W; GSP01E | 6.13 | 6.15 U | 6.2 U |
| PCB047 | pg/g | 4 | 4 | 100 | 22.1 | 58.4 T | GCRSP01W | 40.1 | 39.9 | 55.7 | 22.1 | 58.4 T | GCRSP01W | 40.1 | 39.9 | 55.7 |
| PCB048 & 075 | pg/g | 4 | 3 | 75 | 14.8 | 26.3 T | GCRSP01W | 19.5 | 17.5 | 25.4 | 12.2 U | 26.3 T | GCRSP01W | 16.2 | 16.2 | 25 |
| PCB050 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB051 | pg/g | 4 | 2 | 50 | 5.88 | 14.3 T | GCRSP01W | 10.1 | 10.1 | 13.9 | 5.88 | 14.3 T | GCRSP01W | 8.12 | 6.15 U | 13.1 |
| PCB052 & 069 | pg/g | 4 | 4 | 100 | 55.4 | 174 T | GCRSP01W | 115 | 115 | 166 | 55.4 | 174 T | GCRSP01W | 115 | 115 | 166 |
| PCB053 | pg/g | 4 | 2 | 50 | 16.1 | 25.9 T | GCRSP01W | 21 | 21 | 25.4 | 12.2 U | 25.9 T | GCRSP01W | 14 | 12.1 J | 24.4 |
| PCB054 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB055 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB056 & 060 | pg/g | 4 | 4 | 100 | 19.2 | 73 | GCA01E | 54 | 62 | 71.7 | 19.2 | 73 | GCA01E | 54 | 62 | 71.7 |
| PCB057 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB058 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB061 & 070 | pg/g | 4 | 4 | 100 | 54.7 | 119 T | GCRSP01W | 97.2 | 108 | 118 | 54.7 | 119 T | GCRSP01W | 97.2 | 108 | 118 |
| PCB062 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB063 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB065 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB066 & 076 | pg/g | 4 | 4 | 100 | 47.6 | 119 | GCA01E | 93.9 | 105 | 117 | 47.6 | 119 | GCA01E | 93.9 | 105 | 117 |

Table D1.3-8. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downstream Reach (RM 0-1.9).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Units | # Analyzed | # Detected | % Detected | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th[b] | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th (half DL)[b] |
| PCB067 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB068 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB073 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB074 | pg/g | 4 | 4 | 100 | 19.3 | 50.7 | GCA01E | 40.9 | 46.8 | 50.7 | 19.3 | 50.7 | GCA01E | 40.9 | 46.8 | 50.7 |
| PCB077 | pg/g | 4 | 4 | 100 | 5.83 J | 14.8 | GCA01E | 11.5 | 12.6 J | 14.6 | 5.83 J | 14.8 | GCA01E | 11.5 | 12.6 J | 14.6 |
| PCB078 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB079 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB080 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB081 | pg/g | 4 | 1 | 25 | 5.65 JT | 5.65 JT | GCRSP01W | 5.65 | 5.65 JT | 5.65 JT | 0.618 U | 5.65 JT | GCRSP01W | 1.92 | 0.868 U | 4.95 J |
| PCB082 | pg/g | 4 | 3 | 75 | 27.5 | 51.5 T | GCRSP01W | 35.9 | 28.7 | 49.2 | 12.2 U | 51.5 T | GCRSP01W | 28.5 | 28.1 | 48.1 |
| PCB083 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB084 & 092 | pg/g | 4 | 4 | 100 | 24.8 | 110 T | GCRSP01W | 62.2 | 57 | 102 | 24.8 | 110 T | GCRSP01W | 62.2 | 57 | 102 |
| PCB085 & 116 | pg/g | 4 | 3 | 75 | 32.9 | 42.9 T | GCRSP01W | 38.1 | 38.4 | 42.5 | 12.2 U | 42.9 T | GCRSP01W | 30.1 | 35.7 | 42.2 |
| PCB086 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB087 & 117 & 125 | pg/g | 4 | 4 | 100 | 18.6 | 95.6 T | GCRSP01W | 53.7 | 50.3 | 89.3 | 18.6 | 95.6 T | GCRSP01W | 53.7 | 50.3 | 89.3 |
| PCB088 & 091 | pg/g | 4 | 3 | 75 | 26.4 | 46.7 T | GCRSP01W | 34.3 | 29.7 | 45 | 12.2 U | 46.7 T | GCRSP01W | 27.2 | 28.1 | 44.2 |
| PCB089 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB090 & 101 | pg/g | 4 | 4 | 100 | 56 | 283 T | GCRSP01W | 151 | 132 | 261 | 56 | 283 T | GCRSP01W | 151 | 132 | 261 |
| PCB093 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB094 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB095 & 098 & 102 | pg/g | 4 | 4 | 100 | 49.3 | 223 T | GCRSP01W | 119 | 102 | 205 | 49.3 | 223 T | GCRSP01W | 119 | 102 | 205 |
| PCB096 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB097 | pg/g | 4 | 4 | 100 | 20.3 | 87.3 T | GCRSP01W | 48.9 | 44 | 81 | 20.3 | 87.3 T | GCRSP01W | 48.9 | 44 | 81 |
| PCB099 | pg/g | 4 | 4 | 100 | 34.3 | 127 T | GCRSP01W | 79.8 | 78.9 | 120 | 34.3 | 127 T | GCRSP01W | 79.8 | 78.9 | 120 |
| PCB100 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB103 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB104 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB105 | pg/g | 4 | 4 | 100 | 18.9 | 103 T | GCRSP01W | 55.5 | 50.1 | 96.1 | 18.9 | 103 T | GCRSP01W | 55.5 | 50.1 | 96.1 |
| PCB106 & 118 | pg/g | 4 | 4 | 100 | 45.3 | 247 T | GCRSP01W | 131 | 117 | 228 | 45.3 | 247 T | GCRSP01W | 131 | 117 | 228 |
| PCB107 & 109 | pg/g | 4 | 2 | 50 | 9.32 | 17.2 T | GCRSP01W | 13.3 | 13.3 | 16.8 | 9.32 | 17.2 T | GCRSP01W | 9.71 | 7.76 | 16 |
| PCB108 & 112 | pg/g | 4 | 2 | 50 | 7.99 | 15.7 T | GCRSP01W | 11.8 | 11.8 | 15.3 | 7.99 | 15.7 T | GCRSP01W | 9 | 7.1 | 14.5 |
| PCB110 | pg/g | 4 | 4 | 100 | 70.2 | 361 T | GCRSP01W | 187 | 158 | 332 | 70.2 | 361 T | GCRSP01W | 187 | 158 | 332 |
| PCB111 & 115 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB113 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB114 | pg/g | 4 | 1 | 25 | 6.99 JT | 6.99 JT | GCRSP01W | 6.99 | 6.99 JT | 6.99 JT | 3.19 U | 6.99 JT | GCRSP01W | 3.17 | 2.05 U | 6.28 J |
| PCB119 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB120 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB121 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB122 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB123 | pg/g | 4 | 3 | 75 | 3.5 J | 4.29 JT | GCRSP01W | 3.9 | 3.92 J | 4.25 J | 1.2 U | 4.29 JT | GCRSP01W | 3.08 | 3.71 J | 4.23 J |
| PCB124 | pg/g | 4 | 2 | 50 | 5.87 | 15.1 T | GCRSP01W | 10.5 | 10.5 | 14.6 | 5.87 | 15.1 T | GCRSP01W | 8.32 | 6.15 U | 13.8 |
| PCB126 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.81 U | 5.73 UT | GCRSP01W | 2.03 | 2.18 U | 2.79 U |
| PCB127 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB128 & 162 | pg/g | 4 | 3 | 75 | 21.6 | 51.5 T | GCRSP01W | 32.1 | 23.2 | 48.7 | 12.2 U | 51.5 T | GCRSP01W | 25.6 | 22.4 | 47.3 |
| PCB129 | pg/g | 4 | 1 | 25 | 6.38 | 6.38 | GCA01E | 6.38 | 6.38 | 6.38 | 6.38 | 12.4 U | GCRSP01W; GSP01E | 6.22 | 6.2 U | 6.35 |
| PCB130 | pg/g | 4 | 2 | 50 | 9.46 | 25.9 T | GCRSP01W | 17.7 | 17.7 | 25.1 | 9.46 | 25.9 T | GCRSP01W | 11.9 | 7.83 | 23.4 |
| PCB131 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB132 & 161 | pg/g | 4 | 4 | 100 | 13.6 | 94.4 T | GCRSP01W | 44.5 | 34.9 | 85.7 | 13.6 | 94.4 T | GCRSP01W | 44.5 | 34.9 | 85.7 |
| PCB133 & 142 | pg/g | 4 | 1 | 25 | 15.5 T | 15.5 T | GCRSP01W | 15.5 | 15.5 T | 15.5 T | 4.94 U | 15.5 T | GCRSP01W | 7.57 | 6.15 U | 14.1 |
| PCB134 & 143 | pg/g | 4 | 2 | 50 | 6.9 | 19.3 T | GCRSP01W | 13.1 | 13.1 | 18.7 | 6.9 | 19.3 T | GCRSP01W | 9.63 | 6.55 | 17.4 |
| PCB135 | pg/g | 4 | 3 | 75 | 16.2 | 51.5 T | GCRSP01W | 29.1 | 19.6 | 48.3 | 12.2 U | 51.5 T | GCRSP01W | 23.4 | 17.9 | 46.7 |
| PCB136 | pg/g | 4 | 3 | 75 | 16.9 | 53.7 T | GCRSP01W | 29.2 | 16.9 | 50 | 12.2 U | 53.7 T | GCRSP01W | 23.4 | 16.9 | 48.2 |
| PCB137 | pg/g | 4 | 2 | 50 | 7.5 | 20.1 T | GCRSP01W | 13.8 | 13.8 | 19.5 | 7.5 | 20.1 T | GCRSP01W | 9.98 | 6.85 | 18.2 |
| PCB138 & 163 & 164 | pg/g | 4 | 4 | 100 | 45.1 | 327 T | GCRSP01W | 160 | 134 | 298 | 45.1 | 327 T | GCRSP01W | 160 | 134 | 298 |
| PCB139 & 149 | pg/g | 4 | 4 | 100 | 42.3 | 293 T | GCRSP01W | 136 | 104 | 265 | 42.3 | 293 T | GCRSP01W | 136 | 104 | 265 |

Table D1.3-8. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downstream Reach (RM 0-1.9).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Units | # Analyzed | # Detected | % Detected | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th[b] | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th (half DL)[b] |
| PCB140 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB141 | pg/g | 4 | 3 | 75 | 28.6 | 75.2 T | GCRSP01W | 44.7 | 30.4 | 70.7 | 12.2 U | 75.2 T | GCRSP01W | 35.1 | 29.5 | 68.5 |
| PCB144 | pg/g | 4 | 2 | 50 | 6.65 | 21.3 T | GCRSP01W | 14 | 14 | 20.6 | 6.65 | 21.3 T | GCRSP01W | 10.1 | 6.43 | 19.1 |
| PCB145 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB146 & 165 | pg/g | 4 | 3 | 75 | 20.6 | 57.9 T | GCRSP01W | 33.6 | 22.2 | 54.3 | 12.2 U | 57.9 T | GCRSP01W | 26.7 | 21.4 | 52.5 |
| PCB147 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB148 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB150 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB151 | pg/g | 4 | 4 | 100 | 14.2 | 97.9 T | GCRSP01W | 44.1 | 32.2 | 88.3 | 14.2 | 97.9 T | GCRSP01W | 44.1 | 32.2 | 88.3 |
| PCB152 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB153 | pg/g | 4 | 4 | 100 | 49.9 | 356 T | GCRSP01W | 173 | 143 | 324 | 49.9 | 356 T | GCRSP01W | 173 | 143 | 324 |
| PCB154 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB155 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB156 | pg/g | 4 | 4 | 100 | 5.11 J | 31.4 T | GCRSP01W | 15.6 | 12.9 | 28.6 | 5.11 J | 31.4 T | GCRSP01W | 15.6 | 12.9 | 28.6 |
| PCB157 | pg/g | 4 | 3 | 75 | 3.64 J | 8.9 JT | GCRSP01W | 5.62 | 4.32 J | 8.44 J | 1.36 U | 8.9 JT | GCRSP01W | 4.39 | 3.98 J | 8.21 J |
| PCB158 & 160 | pg/g | 4 | 3 | 75 | 14.2 | 36.5 T | GCRSP01W | 21.8 | 14.7 | 34.3 | 12.2 U | 36.5 T | GCRSP01W | 17.9 | 14.5 | 33.2 |
| PCB159 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB166 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB167 | pg/g | 4 | 3 | 75 | 6.93 | 13.1 JT | GCRSP01W | 9.05 | 7.13 J | 12.5 J | 1.25 U | 13.1 JT | GCRSP01W | 6.95 | 7.03 J | 12.2 J |
| PCB168 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB169 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.47 U | 3.91 U | GCR01E-ALT | 0.924 | 0.753 U | 1.81 U |
| PCB170 | pg/g | 4 | 2 | 50 | 43.3 | 99 T | GCRSP01W | 71.2 | 71.2 | 96.2 | 12.2 U | 99 T | GCRSP01W | 43.1 | 33.6 J | 90.6 |
| PCB171 | pg/g | 4 | 3 | 75 | 9.96 | 26.7 T | GCRSP01W | 16.9 | 14 | 25.4 | 9.96 | 26.7 T | GCRSP01W | 14.2 | 12 | 24.8 |
| PCB172 | pg/g | 4 | 2 | 50 | 7.29 | 21 T | GCRSP01W | 14.1 | 14.1 | 20.3 | 7.29 | 21 T | GCRSP01W | 10.1 | 6.75 | 18.9 |
| PCB173 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB174 | pg/g | 4 | 3 | 75 | 49.3 | 114 T | GCRSP01W | 75.4 | 62.9 | 109 | 12.2 U | 114 T | GCRSP01W | 58.1 | 56.1 | 106 |
| PCB175 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB176 | pg/g | 4 | 2 | 50 | 5.84 | 18.9 T | GCRSP01W | 12.4 | 12.4 | 18.2 | 5.84 | 18.9 T | GCRSP01W | 9.26 | 6.15 U | 17 |
| PCB177 | pg/g | 4 | 3 | 75 | 30.4 | 71.6 T | GCRSP01W | 45.6 | 34.7 | 67.9 | 12.2 U | 71.6 T | GCRSP01W | 35.7 | 32.6 | 66.1 |
| PCB178 | pg/g | 4 | 2 | 50 | 11.5 | 28.4 T | GCRSP01W | 20 | 20 | 27.6 | 11.5 | 28.4 T | GCRSP01W | 13.1 | 8.85 | 25.9 |
| PCB179 | pg/g | 4 | 3 | 75 | 23.5 | 58.8 T | GCRSP01W | 36.9 | 28.4 | 55.8 | 12.2 U | 58.8 T | GCRSP01W | 29.2 | 26 | 54.2 |
| PCB180 | pg/g | 4 | 4 | 100 | 31.1 | 248 T | GCRSP01W | 133 | 126 | 232 | 31.1 | 248 T | GCRSP01W | 133 | 126 | 232 |
| PCB181 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB182 & 187 | pg/g | 4 | 4 | 100 | 22.7 | 164 T | GCRSP01W | 83.9 | 74.4 | 151 | 22.7 | 164 T | GCRSP01W | 83.9 | 74.4 | 151 |
| PCB183 | pg/g | 4 | 3 | 75 | 30.7 | 73.1 T | GCRSP01W | 45.6 | 33.1 | 69.1 | 12.2 U | 73.1 T | GCRSP01W | 35.8 | 31.9 | 67.1 |
| PCB184 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB185 | pg/g | 4 | 2 | 50 | 5.36 | 17.4 T | GCRSP01W | 11.4 | 11.4 | 16.8 | 5.36 | 17.4 T | GCRSP01W | 8.77 | 6.15 U | 15.7 |
| PCB186 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB188 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB189 | pg/g | 4 | 1 | 25 | 1.81 J | 1.81 J | GCA01E | 1.81 | 1.81 J | 1.81 J | 0.663 U | 2.98 UT | GCRSP01W | 1.06 | 1.06 U | 1.76 J |
| PCB190 | pg/g | 4 | 2 | 50 | 9.26 | 27.3 T | GCRSP01W | 18.3 | 18.3 | 26.4 | 9.26 | 27.3 T | GCRSP01W | 12.2 | 7.73 | 24.6 |
| PCB191 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB192 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB193 | pg/g | 4 | 2 | 50 | 5.05 | 15.1 T | GCRSP01W | 10.1 | 10.1 | 14.6 | 5.05 | 15.1 T | GCRSP01W | 8.11 | 6.15 U | 13.8 |
| PCB194 | pg/g | 4 | 3 | 75 | 30.2 | 47.6 T | GCRSP01W | 37.1 | 33.4 | 46.2 | 12.2 U | 47.6 T | GCRSP01W | 29.3 | 31.8 | 45.5 |
| PCB195 | pg/g | 4 | 2 | 50 | 12.1 | 22.1 T | GCRSP01W | 17.1 | 17.1 | 21.6 | 12.1 | 22.1 T | GCRSP01W | 11.6 | 9.15 | 20.6 |
| PCB196 & 203 | pg/g | 4 | 2 | 50 | 29.8 | 77.5 T | GCRSP01W | 53.7 | 53.7 | 75.1 | 12.2 U | 77.5 T | GCRSP01W | 33.1 | 24.3 J | 70.3 |
| PCB197 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB198 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB199 | pg/g | 4 | 3 | 75 | 36.6 | 67.1 T | GCRSP01W | 48 | 40.3 | 64.4 | 12.2 U | 67.1 T | GCRSP01W | 37.5 | 38.5 | 63.1 |
| PCB200 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB201 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB202 | pg/g | 4 | 1 | 25 | 15.2 T | 15.2 T | GCRSP01W | 15.2 | 15.2 T | 15.2 T | 5.75 UJ | 15.2 T | GCRSP01W | 7.59 | 6.15 U | 13.9 |
| PCB204 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB205 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |

Table D1.3-8. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downstream Reach (RM 0-1.9).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| PCB206 | pg/g | 4 | 3 | 75 | 13.7 | 39.7 T | GCRSP01W | 22.6 | 14.4 | 37.2 | 12.2 U | 39.7 T | GCRSP01W | 18.5 | 14.1 | 35.9 |
| PCB207 | pg/g | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.94 U | 12.4 U | GCRSP01W; GSP01E | 5.24 | 6.15 U | 6.2 U |
| PCB208 | pg/g | 4 | 1 | 25 | 15.9 T | 15.9 T | GCRSP01W | 15.9 | 15.9 T | 15.9 T | 4.94 U | 15.9 T | GCRSP01W | 7.67 | 6.15 U | 14.4 |
| PCB209 | pg/g | 4 | 2 | 50 | 18.5 | 49.7 T | GCRSP01W | 34.1 | 34.1 | 48.1 | 12.2 U | 49.7 T | GCRSP01W | 20.1 | 12.4 | 45 |
| Total PCB Congeners | pg/g | 4 | 4 | 100 | 1030 JT | 6560 JT | GCRSP01W | 3450 | 3110 J | 6070 J | 1030 JT | 6560 JT | GCRSP01W | 3450 | 3110 J | 6070 J |
| **PCBs[c]** | | | | | | | | | | | | | | | | |
| Total PCBs | µg/kg | 25 | 16 | 64 | 1.03 JT | 410 T | DG15 | 33.7 | 6.8 J | 127 | 1.03 JT | 410 T | DG15 | 22.5 | 5 UT | 29.2 J |
| **PCB Homologs** | | | | | | | | | | | | | | | | |
| Dichlorobiphenyl homologs | pg/g | 4 | 2 | 50 | 54.4 T | 117 T | GCRSP01W | 85.7 | 85.7 | 114 | 24.4 UT | 117 T | GCRSP01W | 49 | 33.4 | 108 |
| Heptachlorobiphenyl homologs | pg/g | 4 | 4 | 100 | 53.8 T | 983 T | GCRSP01W | 461 | 403 J | 898 J | 53.8 T | 983 T | GCRSP01W | 461 | 403 J | 898 J |
| Hexachlorobiphenyl homologs | pg/g | 4 | 4 | 100 | 170 JT | 1650 JT | GCRSP01W | 761 | 613 J | 1500 J | 170 JT | 1650 JT | GCRSP01W | 761 | 613 J | 1500 J |
| Monochlorobiphenyl homologs | pg/g | 4 | 1 | 25 | 31.2 T | 31.2 T | GCRSP01W | 31.2 | 31.2 T | 31.2 T | 4.94 UT | 31.2 T | GCRSP01W | 11.5 | 6.15 U | 27.5 |
| Nonachlorobiphenyl homologs | pg/g | 4 | 3 | 75 | 13.7 T | 55.6 T | GCRSP01W | 27.9 | 14.4 T | 51.5 | 12.2 UT | 55.6 T | GCRSP01W | 22.5 | 14.1 | 49.4 |
| Octachlorobiphenyl homologs | pg/g | 4 | 3 | 75 | 73.7 T | 230 T | GCRSP01W | 138 | 109 T | 218 | 12.2 UT | 230 T | GCRSP01W | 105 | 91.4 | 212 |
| Pentachlorobiphenyl homologs | pg/g | 4 | 4 | 100 | 338 T | 1840 JT | GCRSP01W | 992 | 895 J | 1700 J | 338 T | 1840 JT | GCRSP01W | 992 | 895 J | 1700 J |
| Tetrachlorobiphenyl homologs | pg/g | 4 | 4 | 100 | 381 JT | 1140 JT | GCRSP01W | 820 | 880 | 1100 J | 381 JT | 1140 JT | GCRSP01W | 820 | 880 | 1100 J |
| Trichlorobiphenyl homologs | pg/g | 4 | 4 | 100 | 83.4 T | 467 JT | GCRSP01W | 225 | 176 | 425 J | 83.4 T | 467 JT | GCRSP01W | 225 | 176 | 425 J |
| **PCDD/Fs Homologs** | | | | | | | | | | | | | | | | |
| Heptachlorodibenzofuran homologs | pg/g | 21 | 21 | 100 | 0.251 | 148 T | GCRSP01W | 14.421 | 3.199 | 46.25 | 0.251 | 148 T | GCRSP01W | 14.421 | 3.199 | 46.25 |
| Heptachlorodibenzo-p-dioxin homologs | pg/g | 21 | 21 | 100 | 0.955 | 214 T | GCRSP01W | 34.4807 | 11.763 | 189.415 | 0.955 | 214 T | GCRSP01W | 34.4807 | 11.763 | 189.415 |
| Hexachlorodibenzofuran homologs | pg/g | 21 | 20 | 95.2 | 0.124 | 28.9 T | GCRSP01W | 3.8614 | 1.597 | 12.369 | 0.011 U | 28.9 T | GCRSP01W | 3.6778 | 1.585 | 11.499 |
| Hexachlorodibenzo-p-dioxin homologs | pg/g | 21 | 20 | 95.2 | 0.258 | 21.016 | DG05 | 3.5236 | 1.8495 | 15.871 | 0.015 U | 21.016 | DG05 | 3.3562 | 1.566 | 15.6 T |
| Octachlorodibenzofuran | pg/g | 21 | 20 | 95.2 | 0.304 J | 210 T | GCRSP01W | 20.74 | 3.8755 J | 82.335 | 0.304 J | 210 T | GCRSP01W | 19.785 | 3.552 J | 75.616 |
| Octachlorodibenzo-p-dioxin | pg/g | 21 | 20 | 95.2 | 11.977 | 1160 T | GCRSP01W | 161.79 | 62.669 | 674.3 J | 3.255 U | 1160 T | GCRSP01W | 154.17 | 56.291 | 648.74 J |
| Pentachlorodibenzofuran homologs | pg/g | 21 | 19 | 90.5 | 0.066 | 7.684 | DG05 | 1.028 | 0.465 J | 3.495 | 0.007 U | 7.684 | DG05 | 0.9301 | 0.447 | 3.03 T |
| Pentachlorodibenzo-p-dioxin homologs | pg/g | 21 | 14 | 66.7 | 0.02 | 2.713 | DG05 | 0.424 | 0.1295 | 1.6711 J | 0.009 U | 2.713 | DG05 | 0.28788 | 0.086 | 1.11 JT |
| Tetrachlorodibenzofuran homologs | pg/g | 21 | 17 | 81 | 0.017 | 5.809 | DG05 | 0.5673 | 0.132 | 2.162 | 0.007 U | 5.809 | DG05 | 0.4627 | 0.098 | 1.25 T |
| Tetrachlorodibenzo-p-dioxin homologs | pg/g | 21 | 11 | 52.4 | 0.015 | 2.222 | DG05 | 0.33382 | 0.094 | 1.36 J | 0.00476 U | 2.222 | DG05 | 0.17997 | 0.021 | 0.498 JT |
| Total PCDD/F | pg/g | 21 | 21 | 100 | 1.563 JT | 1780 JT | GCRSP01W | 231.6 | 77.41 JT | 957.6 JT | 1.563 JT | 1780 JT | GCRSP01W | 231.6 | 77.41 JT | 957.6 JT |
| **PCDD/Fs** | | | | | | | | | | | | | | | | |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran | pg/g | 21 | 21 | 100 | 0.079 J | 24.5 T | GCRSP01W | 2.946 | 1.001 J | 9.373 | 0.079 J | 24.5 T | GCRSP01W | 2.946 | 1.001 J | 9.373 |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin | pg/g | 21 | 21 | 100 | 0.42 J | 112 T | GCRSP01W | 16.066 | 5.168 | 73.015 J | 0.42 J | 112 T | GCRSP01W | 16.066 | 5.168 | 73.015 J |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran | pg/g | 21 | 8 | 38.1 | 0.054 J | 1.32 JT | GCRSP01W | 0.3554 | 0.1965 J | 1.037 J | 0.019 U | 1.32 JT | GCRSP01W | 0.1579 | 0.0365 U | 0.512 J |
| 1,2,3,4,7,8-Hexachlorodibenzofuran | pg/g | 21 | 14 | 66.7 | 0.053 J | 1.1 JT | GCRSP01W | 0.281 | 0.148 J | 0.865 J | 0.011 U | 1.1 JT | GCRSP01W | 0.196 | 0.11 J | 0.739 J |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 21 | 7 | 33.3 | 0.029 J | 0.277 J | DG05 | 0.126 | 0.097 JT | 0.2518 J | 0.01 U | 0.277 J | DG05 | 0.05364 | 0.0235 U | 0.193 JT |
| 1,2,3,6,7,8-Hexachlorodibenzofuran | pg/g | 21 | 13 | 61.9 | 0.027 J | 0.346 JT | GCRSP01W | 0.1063 | 0.081 J | 0.2434 J | 0.012 U | 0.401 U | DG05 | 0.0815 | 0.0611 J | 0.2005 U |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 21 | 18 | 85.7 | 0.046 J | 3.09 JT | GCRSP01W | 0.5706 | 0.289 J | 1.814 J | 0.017 U | 3.09 JT | GCRSP01W | 0.4937 | 0.263 J | 1.589 J |
| 1,2,3,7,8,9-Hexachlorodibenzofuran | pg/g | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.011 U | 0.151 UT | GCRSP01W | 0.01795 | 0.011 UT | 0.0475 U |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | pg/g | 21 | 14 | 66.7 | 0.041 J | 0.782 JT | GCRSP01W | 0.2799 | 0.211 J | 0.7814 J | 0.0144 U | 0.782 JT | GCRSP01W | 0.202 | 0.116 U | 0.781 J |
| 1,2,3,7,8-Pentachlorodibenzofuran | pg/g | 21 | 5 | 23.8 | 0.028 J | 0.374 J | DG05 | 0.1682 | 0.123 J | 0.3506 J | 0.007 U | 0.374 J | DG05 | 0.05404 | 0.0255 U | 0.257 JT |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | pg/g | 21 | 10 | 47.6 | 0.02 J | 0.219 J | DG05 | 0.0726 | 0.0545 J | 0.1902 J | 0.009 U | 0.219 J | DG05 | 0.042189 | 0.024 J | 0.155 JT |
| 2,3,4,6,7,8-Hexachlorodibenzofuran | pg/g | 21 | 8 | 38.1 | 0.0572 J | 0.498 JT | GCRSP01W | 0.1789 | 0.156 J | 0.4 J | 0.01 U | 0.498 JT | GCRSP01W | 0.08382 | 0.0365 U | 0.218 J |
| 2,3,4,7,8-Pentachlorodibenzofuran | pg/g | 21 | 10 | 47.6 | 0.019 J | 0.322 J | DG05 | 0.1036 | 0.055 J | 0.2914 J | 0.007 U | 0.322 J | DG05 | 0.05866 | 0.0285 U | 0.254 JT |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/g | 21 | 2 | 9.5 | 0.29 JT | 0.366 J | DG05 | 0.328 | 0.328 J | 0.3622 J | 0.007 U | 0.925 U | DG03 | 0.1766 | 0.169 U | 0.3845 U |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | pg/g | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.00476 U | 0.108 U | DG05 | 0.013354 | 0.0085 U | 0.03915 U |
| TCDD TEQ (ND = 0) | pg/g | 21 | 21 | 100 | 0.0051 JT | 2.62 JT | GCRSP01W | 0.4013 | 0.164 JT | 1.74 JT | 0.0051 JT | 2.62 JT | GCRSP01W | 0.4013 | 0.164 JT | 1.74 JT |
| Total TCDD TEQ (ND = 0) | pg/g | 21 | 21 | 100 | 0.0051 JA | 2.64 JT | GCRSP01W | 0.4031 | 0.164 JA | 1.74 JA | 0.0051 JA | 2.64 JT | GCRSP01W | 0.4031 | 0.164 JA | 1.74 JA |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | pg/g | 4 | 4 | 100 | 0.00266 JT | 0.0153 JT | GCRSP01W | 0.008125 | 0.00727 J | 0.014156 J | 0.00266 JT | 0.0153 JT | GCRSP01W | 0.008125 | 0.00727 J | 0.014156 J |

Table D1.3-8. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downstream Reach (RM 0-1.9).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **PBDE Congeners** | | | | | | | | | | | | | | | | |
| PBDE028 | µg/kg | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.85 U | 1.2 U | DG17 | 0.47 | 0.45 U | 0.57 U |
| PBDE047 | µg/kg | 5 | 5 | 100 | 0.12 J | 1.4 | DG07 | 0.59 | 0.36 J | 1.3 J | 0.12 J | 1.4 | DG07 | 0.59 | 0.36 J | 1.3 J |
| PBDE099 | µg/kg | 5 | 4 | 80 | 0.26 J | 1.4 | DG07 | 0.67 | 0.5 J | 1.3 J | 0.26 J | 1.4 | DG07 | 0.62 | 0.45 U | 1.2 J |
| PBDE100 | µg/kg | 5 | 3 | 60 | 0.03 J | 0.35 J | DG07 | 0.17 | 0.14 J | 0.33 J | 0.03 J | 1.2 U | DG17 | 0.31 | 0.35 J | 0.57 U |
| PBDE153 | µg/kg | 5 | 1 | 20 | 0.18 J | 0.18 J | DG07 | 0.18 | 0.18 J | 0.18 J | 0.18 J | 1.2 U | DG17 | 0.42 | 0.45 U | 0.57 U |
| PBDE154 | µg/kg | 5 | 1 | 20 | 0.22 J | 0.22 J | DG07 | 0.22 | 0.22 J | 0.22 J | 0.22 J | 1.2 U | DG17 | 0.43 | 0.45 U | 0.57 U |
| PBDE183 | µg/kg | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.85 U | 1.2 U | DG17 | 0.47 | 0.45 U | 0.57 U |
| PBDE209 | µg/kg | 5 | 4 | 80 | 3.6 J | 4.5 J | DG07 | 4 | 3.9 J | 4.4 J | 3.6 J | 8.9 U | DG04 | 4.1 | 4 J | 4.5 J |
| **Pesticides** | | | | | | | | | | | | | | | | |
| 2,4'-DDD | µg/kg | 21 | 6 | 28.6 | 0.49 JT | 1.6 | DG08 | 0.78 | 0.66 J | 1.4 J | 0.16 U | 9.9 U | DG05 | 0.68 | 0.43 U | 1.6 |
| 2,4'-DDE | µg/kg | 21 | 1 | 4.8 | 0.64 J | 0.64 J | DG08 | 0.64 | 0.64 J | 0.64 J | 0.046 U | 4 U | DG05 | 0.333 | 0.205 U | 0.85 U |
| 2,4'-DDT | µg/kg | 21 | 12 | 57.1 | 0.089 J | 4 J | DG15 | 0.697 | 0.4 J | 2.21 J | 0.089 J | 4 J | DG15 | 0.55 | 0.35 NJ | 1.75 U |
| 4,4'-DDD | µg/kg | 25 | 20 | 80 | 0.19 J | 10 | DG05 | 1.5 | 0.71 J | 6.1 | 0.19 J | 10 | DG05 | 1.3 | 0.65 J | 5.3 |
| 4,4'-DDE | µg/kg | 25 | 20 | 80 | 0.16 J | 4.5 | DG08 | 1.5 | 1.3 | 3.8 J | 0.16 J | 4.5 | DG08 | 1.3 | 1 U | 3.4 J |
| 4,4'-DDT | µg/kg | 25 | 13 | 52 | 0.49 JT | 20 J | DG05 | 3.3 | 1.9 J | 11 J | 0.18 U | 20 J | DG05 | 2 | 1 U | 5.1 J |
| Aldrin | µg/kg | 25 | 3 | 12 | 0.37 J | 0.4 J | WR-BC-07; WR-BC-08 | 0.39 | 0.4 J | 0.4 J | 0.12 U | 5.6 U | DG05 | 0.36 | 0.15 U | 1 UJ |
| alpha-Endosulfan | µg/kg | 25 | 2 | 8 | 0.05 JT | 1.2 NJ | DG15 | 0.625 | 0.625 J | 1.14 J | 0.037 U | 3 U | DG05 | 0.388 | 0.155 U | 1.16 J |
| alpha-Hexachlorocyclohexane | µg/kg | 25 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.097 U | 4.5 U | DG05 | 0.445 | 0.24 U | 1 U |
| beta-Endosulfan | µg/kg | 25 | 2 | 8 | 0.41 JT | 4.3 NJ | DG15 | 2.36 | 2.36 J | 4.11 J | 0.031 U | 4.3 NJ | DG15 | 0.548 | 0.18 U | 1.52 U |
| beta-Hexachlorocyclohexane | µg/kg | 25 | 1 | 4 | 0.4 J | 0.4 J | WR-BC-08 | 0.4 | 0.4 J | 0.4 J | 0.14 U | 5.2 U | DG05 | 0.47 | 0.28 U | 1.1 U |
| cis-Chlordane | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.031 U | 4 U | DG05 | 0.296 | 0.21 U | 0.85 U |
| cis-Nonachlor | µg/kg | 21 | 9 | 42.9 | 0.17 NJ | 2.5 NJ | DG05 | 0.867 | 0.28 JT | 2.34 J | 0.087 U | 2.5 NJ | DG05 | 0.498 | 0.28 NJ | 2.1 J |
| delta-Hexachlorocyclohexane | µg/kg | 25 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.086 U | 2 UJ | WR-BC-01; WR-BC-07; WR-BC-08 | 0.26 | 0.055 UT | 1 UJ |
| Dieldrin | µg/kg | 25 | 1 | 4 | 0.069 J | 0.069 J | GCA01E | 0.069 | 0.069 J | 0.069 J | 0.03 U | 5 U | DG05 | 0.475 | 0.265 U | 1.08 U |
| Endosulfan sulfate | µg/kg | 25 | 1 | 4 | 2.3 | 2.3 | DG15 | 2.3 | 2.3 | 2.3 | 0.058 U | 2.3 | DG15 | 0.493 | 0.5 U | 1 U |
| Endrin | µg/kg | 25 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.071 U | 3.5 U | DG05 | 0.383 | 0.185 U | 1 U |
| Endrin aldehyde | µg/kg | 25 | 1 | 4 | 0.061 J | 0.061 J | GSP01E | 0.061 | 0.061 J | 0.061 J | 0.042 U | 2 UJ | WR-BC-01; WR-BC-07; WR-BC-08 | 0.229 | 0.05 U | 1 UJ |
| Endrin ketone | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.029 U | 2.4 U | DG05 | 0.16 | 0.075 U | 0.6 U |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 25 | 1 | 4 | 2.4 NJT | 2.4 NJT | GCRSP01W | 2.4 | 2.4 NJT | 2.4 NJT | 0.062 U | 2.6 U | DG05 | 0.435 | 0.15 U | 1.24 U |
| Heptachlor | µg/kg | 25 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.076 U | 2 UJ | WR-BC-01; WR-BC-07; WR-BC-08 | 0.301 | 0.08 U | 1 UJ |
| Heptachlor epoxide | µg/kg | 25 | 10 | 40 | 0.31 J | 2.5 J | DG15 | 0.704 | 0.45 J | 1.8 J | 0.068 U | 2.5 J | DG15 | 0.591 | 0.48 J | 1.12 U |
| Methoxychlor | µg/kg | 25 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.075 U | 9.9 U | DG05 | 0.631 | 0.12 U | 2 U |
| Mirex | µg/kg | 21 | 3 | 14.3 | 0.37 J | 0.45 J | DG03 | 0.41 | 0.4 J | 0.45 J | 0.12 U | 3.3 U | DG15 | 0.26 | 0.085 U | 0.9 U |
| Oxychlordane | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.061 U | 6.4 U | DG05 | 0.49 | 0.315 U | 1.4 U |
| Total chlordanes | µg/kg | 25 | 15 | 60 | 0.067 NJT | 4.5 JT | DG15 | 0.812 | 0.29 JT | 3.1 J | 0.067 NJT | 10 UA | WR-BC-01; WR-BC-07; WR-BC-08 | 1.41 | 0.44 JT | 5 U |
| Total Endosulfan | µg/kg | 25 | 2 | 8 | 0.46 JT | 7.8 NJT | DG15 | 4.13 | 4.13 J | 7.43 J | 0.058 UT | 7.8 NJT | DG15 | 0.807 | 0.5 UT | 1.52 U |
| Total DDD | µg/kg | 25 | 20 | 80 | 0.19 JT | 10 T | DG05 | 1.7 | 0.9 J | 7.6 | 0.19 JT | 10 T | DG05 | 1.5 | 0.8 UT | 6.5 |
| DDx | µg/kg | 25 | 22 | 88 | 0.2 A | 30 JT | DG05 | 5.2 | 3.1 J | 15 J | 0.2 A | 30 JT | DG05 | 4.7 | 3 A | 14 J |
| Total DDE | µg/kg | 25 | 20 | 80 | 0.16 JT | 5.1 JT | DG08 | 1.5 | 1.3 | 3.9 J | 0.16 JT | 5.1 JT | DG08 | 1.4 | 1.3 JT | 3.4 J |
| Total DDT | µg/kg | 25 | 17 | 68 | 0.089 JT | 20 JT | DG05 | 3.06 | 2.3 NJT | 8.56 J | 0.089 JT | 20 JT | DG05 | 2.29 | 1 UA | 5.68 J |
| Total 4,4' DDx | µg/kg | 21 | 18 | 85.7 | 0.2 T | 30 JT | DG05 | 5.3 | 3.4 J | 16 J | 0.2 T | 30 JT | DG05 | 4.7 | 3 T | 13 T |
| Toxaphene | µg/kg | 25 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.3 U | 220 U | DG05 | 17 | 9 U | 55 U |
| trans-Chlordane | µg/kg | 21 | 9 | 42.9 | 0.067 NJ | 2.4 J | DG15 | 0.475 | 0.24 J | 1.62 J | 0.027 U | 9.9 U | DG05 | 0.484 | 0.088 J | 2.4 J |
| trans-Nonachlor | µg/kg | 21 | 1 | 4.8 | 0.15 JT | 0.15 JT | GCRSP01W | 0.15 | 0.15 JT | 0.15 JT | 0.034 U | 1.6 U | DG05 | 0.124 | 0.08 U | 0.33 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| 1-Methylnaphthalene | µg/kg | 4 | 4 | 100 | 0.34 J | 4 T | GCRSP01W | 1.4 | 0.71 J | 3.5 J | 0.34 J | 4 T | GCRSP01W | 1.4 | 0.71 J | 3.5 J |
| 2-Methylnaphthalene | µg/kg | 25 | 24 | 96 | 0.57 J | 150 | DG05 | 9.6 | 2.6 J | 14 | 0.5 U | 150 | DG05 | 9.3 | 2.6 | 14 |
| Acenaphthene | µg/kg | 25 | 24 | 96 | 0.43 J | 780 J | DG05 | 36 | 3 J | 14 | 0.24 U | 780 J | DG05 | 35 | 2.6 J | 14 |
| Acenaphthylene | µg/kg | 25 | 24 | 96 | 0.43 J | 130 | DG05 | 8.5 | 3.1 J | 13 | 0.33 U | 130 | DG05 | 8.2 | 3 J | 13 |

Table D1.3-8. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downstream Reach (RM 0-1.9).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Anthracene | µg/kg | 25 | 24 | 96 | 1 J | 350 | DG05 | 21 | 6.7 | 17 | 0.33 U | 350 | DG05 | 20 | 6.4 | 17 |
| Benzo(a)anthracene | µg/kg | 25 | 24 | 96 | 3 J | 940 | DG05 | 65 | 17 | 140 | 0.24 U | 940 | DG05 | 62 | 15 | 130 |
| Benzo(a)pyrene | µg/kg | 25 | 24 | 96 | 5 | 1400 | DG05 | 98.7 | 27 | 220 J | 0.33 U | 1400 | DG05 | 94.7 | 23 | 214 J |
| Benzo(b)fluoranthene | µg/kg | 25 | 24 | 96 | 5.1 | 820 | DG05 | 71 | 28 J | 210 J | 0.71 U | 820 | DG05 | 68 | 25 J | 200 J |
| Benzo(b+k)fluoranthene | µg/kg | 4 | 4 | 100 | 13 T | 163 T | WR-BC-07 | 60 | 32 | 146 | 13 T | 163 T | WR-BC-07 | 60 | 32 | 146 |
| Benzo(e)pyrene | µg/kg | 4 | 4 | 100 | 4.8 | 160 T | GCRSP01W | 44 | 6.3 | 140 | 4.8 | 160 T | GCRSP01W | 44 | 6.3 | 140 |
| Benzo(g,h,i)perylene | µg/kg | 25 | 24 | 96 | 5.3 | 1200 | DG05 | 82 | 19 | 190 J | 0.34 U | 1200 | DG05 | 79 | 19 | 190 J |
| Benzo(k)fluoranthene | µg/kg | 25 | 24 | 96 | 2.7 | 820 | DG05 | 56 | 14 | 79 J | 0.49 U | 820 | DG05 | 54 | 13 | 79 J |
| C1-Chrysene | µg/kg | 4 | 4 | 100 | 5.4 | 120 T | GCRSP01W | 34 | 5.8 | 100 | 5.4 | 120 T | GCRSP01W | 34 | 5.8 | 100 |
| C1-Dibenzothiophene | µg/kg | 4 | 1 | 25 | 6.9 T | 6.9 T | GCRSP01W | 6.9 | 6.9 T | 6.9 T | 0.21 U | 6.9 T | GCRSP01W | 1.8 | 0.15 U | 5.9 |
| C1-Fluoranthene/pyrene | µg/kg | 4 | 4 | 100 | 6.6 | 160 T | GCRSP01W | 47 | 10 | 140 | 6.6 | 160 T | GCRSP01W | 47 | 10 | 140 |
| C1-Fluorene | µg/kg | 4 | 2 | 50 | 1.7 J | 5.6 T | GCRSP01W | 3.7 | 3.7 J | 5.4 J | 0.5 U | 5.6 T | GCRSP01W | 2 | 1 J | 5 J |
| C1-Phenanthrene/anthracene | µg/kg | 4 | 4 | 100 | 1.6 J | 52 T | GCRSP01W | 16 | 5.9 | 46 | 1.6 J | 52 T | GCRSP01W | 16 | 5.9 | 46 |
| C2-Chrysene | µg/kg | 4 | 3 | 75 | 2.6 | 86 T | GCRSP01W | 31 | 3.9 | 78 | 0.37 U | 86 T | GCRSP01W | 23 | 3.3 | 74 |
| C2-Dibenzothiophene | µg/kg | 4 | 2 | 50 | 1.3 J | 23 T | GCRSP01W | 12 | 12 J | 22 J | 0.21 U | 23 T | GCRSP01W | 6.1 | 0.72 J | 20 J |
| C2-Fluoranthene/pyrene | µg/kg | 4 | 4 | 100 | 3.5 | 110 T | GCRSP01W | 31 | 5.5 | 94 | 3.5 | 110 T | GCRSP01W | 31 | 5.5 | 94 |
| C2-Fluorene | µg/kg | 4 | 3 | 75 | 1.2 J | 19 T | GCRSP01W | 7.7 | 2.9 | 17 | 0.5 U | 19 T | GCRSP01W | 5.8 | 2.1 J | 17 |
| C2-Naphthalene | µg/kg | 4 | 4 | 100 | 0.88 J | 15 T | GCRSP01W | 4.9 | 1.8 J | 13 J | 0.88 J | 15 T | GCRSP01W | 4.9 | 1.8 J | 13 J |
| C2-Phenanthrene/anthracene | µg/kg | 4 | 4 | 100 | 2.4 J | 78 T | GCRSP01W | 23 | 6.7 | 68 | 2.4 J | 78 T | GCRSP01W | 23 | 6.7 | 68 |
| C3-Chrysene | µg/kg | 4 | 1 | 25 | 60 T | 60 T | GCRSP01W | 60 | 60 T | 60 T | 0.25 U | 60 T | GCRSP01W | 15 | 0.18 U | 51 |
| C3-Dibenzothiophene | µg/kg | 4 | 1 | 25 | 37 T | 37 T | GCRSP01W | 37 | 37 T | 37 T | 0.21 U | 37 T | GCRSP01W | 9.4 | 0.15 U | 31 |
| C3-Fluoranthene/pyrene | µg/kg | 4 | 2 | 50 | 2.6 | 70 T | GCRSP01W | 36 | 36 | 67 | 0.82 U | 70 T | GCRSP01W | 18 | 1.5 | 60 |
| C3-Fluorene | µg/kg | 4 | 3 | 75 | 0.96 J | 31 T | GCRSP01W | 11 | 2.4 J | 28 J | 0.68 U | 31 T | GCRSP01W | 8.7 | 1.7 J | 27 J |
| C3-Naphthalene | µg/kg | 4 | 4 | 100 | 0.39 J | 8.7 T | GCRSP01W | 2.9 | 1.2 J | 7.6 J | 0.39 J | 8.7 T | GCRSP01W | 2.9 | 1.2 J | 7.6 J |
| C3-Phenanthrene/anthracene | µg/kg | 4 | 4 | 100 | 3.5 | 81 T | GCRSP01W | 23 | 4.4 | 70 | 3.5 | 81 T | GCRSP01W | 23 | 4.4 | 70 |
| C4-Chrysene | µg/kg | 4 | 1 | 25 | 41 T | 41 T | GCRSP01W | 41 | 41 T | 41 T | 0.25 U | 41 T | GCRSP01W | 10 | 0.18 U | 35 |
| C4-Naphthalene | µg/kg | 4 | 2 | 50 | 1.8 J | 15 T | GCRSP01W | 8.4 | 8.4 J | 14 J | 0.37 U | 15 T | GCRSP01W | 4.3 | 1 J | 13 J |
| C4-Phenanthrene/anthracene | µg/kg | 4 | 3 | 75 | 1.3 J | 36 T | GCRSP01W | 13 | 2.5 J | 33 J | 1.1 U | 36 T | GCRSP01W | 10 | 1.9 J | 31 J |
| Chrysene | µg/kg | 25 | 24 | 96 | 3 J | 1200 | DG05 | 86 | 26 | 170 | 0.6 U | 1200 | DG05 | 82 | 23 | 170 |
| Dibenzo(a,h)anthracene | µg/kg | 25 | 24 | 96 | 0.5 J | 140 | DG05 | 11 | 3.4 | 31 J | 0.39 U | 140 | DG05 | 11 | 3 J | 30 J |
| Dibenzothiophene | µg/kg | 4 | 3 | 75 | 0.35 J | 5 T | GCRSP01W | 2.1 | 0.82 J | 4.6 J | 0.21 U | 5 T | GCRSP01W | 1.6 | 0.59 J | 4.4 J |
| Fluoranthene | µg/kg | 25 | 25 | 100 | 0.54 J | 2400 | DG05 | 150 | 37 | 260 | 0.54 J | 2400 | DG05 | 150 | 37 | 260 |
| Fluorene | µg/kg | 25 | 24 | 96 | 0.59 J | 430 | DG05 | 21 | 3 J | 13 | 0.28 U | 430 | DG05 | 21 | 3 | 13 |
| Total HPAHs | µg/kg | 25 | 25 | 100 | 0.54 JT | 13000 T | DG05 | 864 | 240 T | 1680 | 0.54 JT | 13000 T | DG05 | 864 | 240 T | 1680 |
| Indeno(1,2,3-cd)pyrene | µg/kg | 25 | 24 | 96 | 4 | 1000 | DG05 | 73 | 18 | 180 J | 0.36 U | 1000 | DG05 | 70 | 17 | 180 J |
| Total LPAHs | µg/kg | 25 | 25 | 100 | 0.84 JT | 4900 JT | DG05 | 248 | 36 JT | 160 J | 0.84 JT | 4900 JT | DG05 | 248 | 36 JT | 160 J |
| Naphthalene | µg/kg | 25 | 20 | 80 | 0.84 J | 370 | DG05 | 27 | 8.1 J | 48 | 0.63 U | 370 | DG05 | 22 | 6.5 | 29 |
| Perylene | µg/kg | 4 | 4 | 100 | 5.9 | 69 T | GCRSP01W | 24 | 10 | 61 | 5.9 | 69 T | GCRSP01W | 24 | 10 | 61 |
| Phenanthrene | µg/kg | 25 | 24 | 96 | 3.7 | 2700 | DG05 | 140 | 21 | 100 | 0.49 U | 2700 | DG05 | 130 | 20 | 100 |
| Pyrene | µg/kg | 25 | 24 | 96 | 5 J | 2900 | DG05 | 190 | 52 | 300 | 0.53 U | 2900 | DG05 | 180 | 50 | 300 |
| Total BaPEq | µg/kg | 25 | 24 | 96 | 7 JT | 1830 T | DG05 | 132 | 37.7 | 304 J | 0.39 UT | 1830 T | DG05 | 127 | 32.1 T | 296 J |
| Total cPAHs | µg/kg | 25 | 24 | 96 | 29 JT | 6300 T | DG05 | 460 | 150 J | 1000 J | 0.71 UT | 6300 T | DG05 | 440 | 130 T | 980 J |
| Total PAHs | µg/kg | 25 | 25 | 100 | 1.4 JT | 18000 JT | DG05 | 1120 | 273 T | 1870 | 1.4 JT | 18000 JT | DG05 | 1120 | 273 T | 1870 |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl) phthalate | µg/kg | 21 | 10 | 47.6 | 7.1 J | 170 | DG07 | 64 | 57 | 140 | 7.1 J | 170 | DG07 | 38 | 19 J | 110 |
| Butylbenzyl phthalate | µg/kg | 21 | 12 | 57.1 | 2.8 J | 9.6 | GCR01E-ALT | 5.6 | 6 J | 8.4 J | 2.2 U | 9.6 | GCR01E-ALT | 3.8 | 3.2 J | 7.4 JT |
| Dibutyl phthalate | µg/kg | 21 | 19 | 90.5 | 5.6 J | 36 T | GCRSP01W | 10 | 8.1 J | 16 | 4.5 U | 36 T | GCRSP01W | 9.5 | 8.1 J | 14 |
| Diethyl phthalate | µg/kg | 21 | 4 | 19 | 1.7 J | 4.8 JT | GCRSP01W | 3 | 2.8 J | 4.5 J | 1.7 J | 9.5 U | DG07 | 3.2 | 3 U | 4.8 U |
| Dimethyl phthalate | µg/kg | 21 | 2 | 9.5 | 2.8 JT | 5.6 J | GCA01E | 4.2 | 4.2 J | 5.5 J | 1 U | 5.6 J | GCA01E | 1.8 | 1.6 U | 2.8 JT |
| Di-n-octyl phthalate | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.7 U | 3.3 U | DG07 | 1.1 | 1.1 U | 1.5 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.2 U | 4.1 U | DG07 | 1.4 | 1.3 U | 1.8 U |
| 1,2-Dichlorobenzene | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 U | 3.6 U | DG07 | 1.3 | 1.2 U | 1.6 U |
| 1,3-Dichlorobenzene | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.4 U | 4.4 U | DG07 | 1.5 | 1.5 U | 2 U |
| 1,4-Dichlorobenzene | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.29 U | 5.2 U | DG07 | 1.3 | 1.5 UT | 2.3 U |

Table D1.3-8. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downstream Reach (RM 0-1.9).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| 2,4-Dinitrotoluene | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 7.6 U | DG07 | 2.2 | 2.4 U | 3.4 U |
| 2,6-Dinitrotoluene | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 U | 7.6 U | DG07 | 2.3 | 2.4 U | 3.4 U |
| 2-Chloronaphthalene | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.6 U | 9.8 U | DG07 | 2.8 | 3.1 U | 4.3 U |
| 2-Nitroaniline | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.2 U | 7.3 U | DG07 | 2.3 | 2.3 U | 3.3 U |
| 3,3'-Dichlorobenzidine | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.7 U | 10 U | DG07 | 3.1 | 3.1 U | 4.5 U |
| 3-Nitroaniline | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.5 U | 7.1 U | DG07 | 2.2 | 2.2 U | 3.2 U |
| 4-Bromophenyl phenyl ether | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.6 U | 3.8 U | DG07 | 1.2 | 1.2 U | 1.7 U |
| 4-Chloroaniline | µg/kg | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 5.7 U | DG07 | 1.8 | 1.8 U | 2.6 U |
| 4-Chlorophenyl phenyl ether | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 5.5 U | DG07 | 1.6 | 1.7 U | 2.4 U |
| 4-Nitroaniline | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.8 U | 9.2 U | DG07 | 2.7 | 2.9 U | 4.1 U |
| Aniline | µg/kg | 20 | 2 | 10 | 7.1 J | 15 JT | GCRSP01W | 11 | 11 J | 15 J | 1.5 U | 15 JT | GCRSP01W | 2.3 | 1.3 U | 7.5 J |
| Azobenzene | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.1 U | 6.5 U | DG07 | 1.9 | 2.1 U | 2.9 U |
| Benzoic acid | µg/kg | 19 | 2 | 10.5 | 180 JT | 200 J | DG04 | 190 | 190 J | 200 J | 96 U | 260 UJ | DG07 | 100 | 90 U | 180 J |
| Benzyl alcohol | µg/kg | 21 | 6 | 28.6 | 3 J | 270 | DG04 | 54 | 12 J | 210 J | 3 J | 270 | DG04 | 18 | 3.3 U | 21 J |
| Bis(2-chloroethoxy) methane | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 3.6 U | DG07 | 1.1 | 1.1 U | 1.6 U |
| Bis(2-chloroethyl) ether | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 6.5 U | DG07 | 2 | 2.1 U | 2.9 U |
| Bis(2-chloroisopropyl) ether | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.8 U | 3.3 U | DG07 | 1.2 | 1.1 U | 1.5 U |
| Carbazole | µg/kg | 21 | 9 | 42.9 | 2 J | 27 | DG05 | 6.5 | 3.8 J | 19 J | 1.3 U | 27 | DG05 | 3.4 | 1.6 U | 6.9 J |
| Dibenzofuran | µg/kg | 25 | 20 | 80 | 0.5 J | 47 | DG05 | 4.5 | 2.1 J | 7.3 | 0.25 U | 47 | DG05 | 3.8 | 2 J | 5.1 |
| Hexachlorobenzene | µg/kg | 21 | 1 | 4.8 | 0.19 JT | 0.19 JT | GCRSP01W | 0.19 | 0.19 JT | 0.19 JT | 0.068 U | 5.7 U | DG07 | 0.472 | 0.075 U | 2.55 U |
| Hexachlorobutadiene | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.14 U | 3.6 U | DG12 | 0.49 | 0.42 U | 1.2 U |
| Hexachlorocyclopentadiene | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 22 U | 41 U | DG07 | 14 | 14 U | 18 U |
| Hexachloroethane | µg/kg | 21 | 1 | 4.8 | 1.2 | 1.2 | DG07 | 1.2 | 1.2 | 1.2 | 0.16 U | 2.8 U | DG05 | 0.39 | 0.27 U | 1.2 |
| Isophorone | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 4.4 U | DG07 | 1.3 | 1.4 U | 2 U |
| Nitrobenzene | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.2 U | 5.5 U | DG07 | 1.7 | 1.7 U | 2.4 U |
| N-Nitrosodimethylamine | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.1 U | 17 U | DG07 | 5.3 | 5.5 U | 7.5 U |
| N-Nitrosodiphenylamine | µg/kg | 21 | 1 | 4.8 | 7.1 JT | 7.1 JT | GCRSP01W | 7.1 | 7.1 JT | 7.1 JT | 1.6 U | 7.1 JT | GCRSP01W | 2.1 | 1.9 U | 3 U |
| N-Nitrosodipropylamine | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.4 U | 8.7 U | DG07 | 2.6 | 2.7 U | 3.9 U |
| **Phenols** | | | | | | | | | | | | | | | | |
| 2,3,4,5-Tetrachlorophenol | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.26 U | 1.7 U | DG07 | 0.5 | 0.55 U | 0.75 U |
| 2,3,5,6-Tetrachlorophenol | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.21 U | 0.82 U | DG07 | 0.25 | 0.26 U | 0.36 U |
| 2,4,5-Trichlorophenol | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.71 U | 6.1 U | GCR01E-ALT | 0.62 | 0.47 U | 0.75 U |
| 2,4,6-Trichlorophenol | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.14 U | 1.1 U | DG07 | 0.31 | 0.33 U | 0.47 U |
| 2,4-Dichlorophenol | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 4.9 U | DG07 | 1.5 | 1.6 U | 2.2 U |
| 2,4-Dimethylphenol | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 5.5 U | 15 U | DG07 | 4.7 | 4.6 U | 7 U |
| 2,4-Dinitrophenol | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 17 U | 98 U | DG07 | 29 | 31 U | 43 U |
| 2-Chlorophenol | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 U | 4.6 U | DG07 | 1.5 | 1.5 U | 2.1 U |
| 2-Methylphenol | µg/kg | 21 | 1 | 4.8 | 35 | 35 | DG04 | 35 | 35 | 35 | 1.5 U | 35 | DG04 | 4.2 | 2.9 U | 4.6 U |
| 2-Nitrophenol | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 7.1 U | DG07 | 2.1 | 2.2 U | 3.2 U |
| 3,4-Dichlorophenol | µg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.88 U | 0.88 U | GCA01E | 0.44 | 0.44 U | 0.44 U |
| 3,5-Dichlorophenol | µg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.7 U | 2.7 U | GCA01E | 1.4 | 1.4 U | 1.4 U |
| 4,6-Dinitro-2-methylphenol | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 4.6 U | DG07 | 1.4 | 1.5 U | 2.1 U |
| 4-Chloro-3-methylphenol | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 U | 5.7 U | DG07 | 1.7 | 1.8 U | 2.6 U |
| 4-Methylphenol | µg/kg | 21 | 11 | 52.4 | 4.2 JT | 89 | DG07 | 23 | 11 | 73 | 1.5 U | 89 | DG07 | 13 | 4.2 JT | 57 |
| 4-Nitrophenol | µg/kg | 21 | 0 | 0 | -- | -- | -- | -- | -- | -- | 18 U | 82 U | DG07 | 24 | 26 U | 36 U |
| Pentachlorophenol | µg/kg | 21 | 13 | 61.9 | 0.47 NJ | 4.1 J | DG07 | 1.2 | 0.77 J | 3.1 J | 0.2 U | 4.1 J | DG07 | 0.85 | 0.71 NJ | 2.5 J |
| Phenol | µg/kg | 21 | 14 | 66.7 | 5.1 J | 73 T | GCRSP01W | 19 | 15 J | 44 J | 2.8 U | 73 T | GCRSP01W | 14 | 8.6 J | 29 J |
| **Petroleum** | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 17 | 16 | 94.1 | 5 J | 130 JT | DG05 | 36 | 34 J | 94 J | 1.9 U | 130 JT | DG05 | 34 | 33 JT | 92 J |
| Total Petroleum Hydrocarbons (Gasoline) | mg/kg | 17 | 3 | 17.6 | 1.3 J | 5.5 JT | DG05 | 3.3 | 3.2 J | 5.3 J | 0.9 U | 5.5 JT | DG05 | 1 | 0.55 U | 3.7 J |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 17 | 16 | 94.1 | 36 J | 440 J | DG03 | 220 | 230 J | 430 J | 4.3 U | 440 J | DG03 | 210 | 210 JT | 420 J |
| Total Petroleum Hydrocarbons | mg/kg | 17 | 17 | 100 | 1.3 JT | 480 JT | DG03 | 240 | 240 JT | 470 J | 1.3 JT | 480 JT | DG03 | 240 | 240 JT | 470 J |

Table D1.3-8. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downstream Reach (RM 0-1.9).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.082 U | 0.11 U | DG14; DG15 | 0.048 | 0.0473 U | 0.055 U |
| 1,1,1-Trichloroethane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.12 U | 0.16 U | DG15 | 0.068 | 0.068 U | 0.079 U |
| 1,1,2,2-Tetrachloroethane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.19 U | 0.24 U | DG15 | 0.11 | 0.11 U | 0.12 U |
| 1,1,2-Trichloroethane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 0.14 U | DG15 | 0.062 | 0.063 U | 0.069 U |
| 1,1-Dichloroethane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.093 U | 0.13 U | DG15 | 0.0558 | 0.0575 U | 0.0638 U |
| 1,1-Dichloroethene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 0.17 U | DG15 | 0.074 | 0.075 U | 0.084 U |
| 1,2,3-Trichloropropane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.28 U | 0.36 U | DG15 | 0.16 | 0.16 U | 0.18 U |
| 1,2-Dichloroethane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.15 U | 0.2 U | DG15 | 0.087 | 0.088 U | 0.099 U |
| 1,2-Dichloropropane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 0.14 U | DG15 | 0.061 | 0.06 U | 0.069 U |
| 1,4-Dichloro-trans-2-butene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.51 U | 0.66 U | DG15 | 0.29 | 0.29 U | 0.33 U |
| 2-Chloroethyl vinyl ether | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.23 U | 0.3 U | DG15 | 0.13 | 0.14 U | 0.15 U |
| Acetone | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 9 U | 12 U | DG14; DG15 | 5.3 | 5.2 U | 6 U |
| Acrylonitrile | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.63 U | 0.82 U | DG15 | 0.36 | 0.36 U | 0.4 U |
| Benzene | µg/kg | 6 | 1 | 16.7 | 0.082 J | 0.082 J | DG18 | 0.082 | 0.082 J | 0.082 J | 0.069 U | 0.088 U | DG15 | 0.0465 | 0.0408 U | 0.0725 J |
| Bromochloromethane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.15 U | 0.2 U | DG15 | 0.088 | 0.088 U | 0.099 U |
| Bromodichloromethane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.061 U | 0.08 U | DG15 | 0.035 | 0.035 U | 0.0395 U |
| Bromoform | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.19 U | 0.24 U | DG15 | 0.11 | 0.11 U | 0.12 U |
| Bromomethane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.43 U | 0.56 U | DG15 | 0.25 | 0.25 U | 0.28 U |
| BTEX | µg/kg | 6 | 1 | 16.7 | 0.082 JT | 0.082 JT | DG18 | 0.082 | 0.082 JT | 0.082 JT | 0.082 JT | 0.22 UT | DG15 | 0.097 | 0.0975 U | 0.109 U |
| Carbon disulfide | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 0.14 U | DG15 | 0.062 | 0.063 U | 0.069 U |
| Carbon tetrachloride | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.076 U | 0.1 U | DG15 | 0.0437 | 0.0438 U | 0.0493 U |
| Chlorobenzene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.092 U | 0.12 U | DG14; DG15 | 0.0538 | 0.055 U | 0.06 U |
| Chlorodibromomethane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.16 U | 0.2 U | DG15 | 0.089 | 0.09 U | 0.099 U |
| Chloroethane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.31 U | 0.4 U | DG15 | 0.18 | 0.18 U | 0.2 U |
| Chloroform | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.12 U | 0.16 U | DG15 | 0.071 | 0.073 U | 0.079 U |
| Chloromethane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.12 U | 0.15 U | DG14; DG15 | 0.068 | 0.068 U | 0.075 U |
| cis-1,2-Dichloroethene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.15 U | 0.2 U | DG15 | 0.087 | 0.088 U | 0.099 U |
| cis-1,3-Dichloropropene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.095 U | 0.13 U | DG15 | 0.056 | 0.0575 U | 0.0638 U |
| Dichlorodifluoromethane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.09 U | 0.12 U | DG14; DG15 | 0.0527 | 0.0523 U | 0.06 U |
| Ethylbenzene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.078 U | 0.11 U | DG15 | 0.0453 | 0.0448 U | 0.0533 U |
| Ethylene dibromide | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.093 U | 0.13 U | DG15 | 0.0558 | 0.0575 U | 0.0638 U |
| Isopropylbenzene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 0.17 U | DG15 | 0.076 | 0.078 U | 0.084 U |
| m,p-Xylene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.17 U | 0.22 U | DG15 | 0.098 | 0.098 U | 0.11 U |
| Methyl iodide | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.51 U | 0.66 U | DG15 | 0.29 | 0.29 U | 0.33 U |
| Methyl isobutyl ketone | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.76 U | 1 U | DG15 | 0.44 | 0.44 U | 0.49 U |
| Methyl n-butyl ketone | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 5.4 U | 7 U | DG15 | 3.1 | 3.1 U | 3.5 U |
| Methyl tert-butyl ether | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 0.15 U | DG15 | 0.064 | 0.063 U | 0.074 U |
| Methylene bromide | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 0.14 U | DG14; DG15 | 0.063 | 0.063 U | 0.07 U |
| Methylene chloride | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.91 U | 3.1 U | DG18 | 0.81 | 0.65 U | 1.4 U |
| o-Xylene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.087 U | 0.12 U | DG15 | 0.0511 | 0.0515 U | 0.0588 U |
| Styrene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.14 U | 0.19 U | DG15 | 0.083 | 0.083 U | 0.094 U |
| Tetrachloroethene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 0.17 U | DG15 | 0.076 | 0.078 U | 0.084 U |
| Toluene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 0.16 U | DG18 | 0.067 | 0.068 U | 0.078 U |
| trans-1,2-Dichloroethene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.09 U | 0.12 U | DG14; DG15 | 0.0527 | 0.0523 U | 0.06 U |
| trans-1,3-Dichloropropene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.099 U | 0.13 U | DG14; DG15 | 0.0583 | 0.0575 U | 0.065 U |
| Trichloroethene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 0.17 U | DG15 | 0.073 | 0.073 U | 0.084 U |
| Trichlorofluoromethane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.54 U | 0.7 U | DG15 | 0.31 | 0.31 U | 0.35 U |
| Vinyl chloride | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.22 U | 0.28 U | DG15 | 0.12 | 0.13 U | 0.14 U |
| Xylene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.17 UT | 0.22 UT | DG15 | 0.098 | 0.098 U | 0.11 U |

Table D1.3-8. Summary Statistics for All COIs and Physical Parameters in Surface Sediment, Downstream Reach (RM 0-1.9).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

-- data not available.

BaPEq - benzo(a)pyrene equivalent
BTEX - benzene, toluene, ethylbenzene, and xylene
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-9. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downstream Reach (RM 0-1.9).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Grainsize** | | | | | | | | | | | | | | | | |
| >9 Phi clay | percent | 17 | 17 | 100 | 0.12 | 17.7 | DC07 | 8.16 | 8.69 | 12.3 | 0.12 | 17.7 | DC07 | 8.16 | 8.69 | 12.3 |
| 8-9 Phi clay | percent | 17 | 17 | 100 | 0 | 7.53 | DC03 | 4.04 | 4.15 | 7.21 | 0 | 7.53 | DC03 | 4.04 | 4.15 | 7.21 |
| Coarse sand | percent | 17 | 17 | 100 | 0.153 T | 34.6 | DC05 | 2.77 | 0.31 | 9.26 | 0.153 T | 34.6 | DC05 | 2.77 | 0.31 | 9.26 |
| Coarse silt | percent | 17 | 17 | 100 | 0.08 | 29.1 | DC02 | 19 | 19.3 | 27.1 | 0.08 | 29.1 | DC02 | 19 | 19.3 | 27.1 |
| Fine gravel | percent | 17 | 17 | 100 | 0 | 4.61 | DC03 | 0.709 | 0.18 | 2.71 | 0 | 4.61 | DC03 | 0.709 | 0.18 | 2.71 |
| Fine sand | percent | 17 | 17 | 100 | 0.93 | 35.9 | DC04 | 6.7 | 4.03 | 18.6 | 0.93 | 35.9 | DC04 | 6.7 | 4.03 | 18.6 |
| Fine silt | percent | 17 | 17 | 100 | 0.24 | 24.5 | DC03 | 13.1 | 14.1 | 18.9 | 0.24 | 24.5 | DC03 | 13.1 | 14.1 | 18.9 |
| Fines | percent | 17 | 17 | 100 | 2.47 T | 96.4 T | DC03 | 69.6 | 79.9 T | 91.8 | 2.47 T | 96.4 T | DC03 | 69.6 | 79.9 T | 91.8 |
| Medium gravel | percent | 17 | 17 | 100 | 0 T | 0 T | DC02; DC03; DC04; DC05; DC06; DC07 | 0 | 0 | 0 | 0 T | 0 T | DC02; DC03; DC04; DC05; DC06; DC07 | 0 | 0 | 0 |
| Medium sand | percent | 17 | 17 | 100 | 0.24 | 49.4 | DC05 | 6.61 | 0.91 | 46.3 | 0.24 | 49.4 | DC05 | 6.61 | 0.91 | 46.3 |
| Medium silt | percent | 17 | 17 | 100 | 0.08 | 25.8 | DC03 | 18.6 | 20 T | 25.6 | 0.08 | 25.8 | DC03 | 18.6 | 20 T | 25.6 |
| Very coarse sand | percent | 17 | 17 | 100 | 0.13 T | 5.82 | DC05 | 0.919 | 0.51 | 3.68 | 0.13 T | 5.82 | DC05 | 0.919 | 0.51 | 3.68 |
| Very fine sand | percent | 17 | 17 | 100 | 0.45 | 25.6 | DC06 | 13.8 | 13.9 | 23.6 | 0.45 | 25.6 | DC06 | 13.8 | 13.9 | 23.6 |
| Very fine silt | percent | 17 | 17 | 100 | 0.58 | 12.1 | DC03 | 6.72 | 6.85 | 11.1 | 0.58 | 12.1 | DC03 | 6.72 | 6.85 | 11.1 |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Acid Volatile Sulfides | mg/kg | 9 | 8 | 88.9 | 0.8 | 53 | WR-GC-04 | 14 | 4.8 | 45 | 0.8 | 53 | WR-GC-04 | 13 | 4.8 | 44 |
| Specific Gravity | NA | 17 | 17 | 100 | 1.41 | 1.98 T | DC05 | 1.64 | 1.63 | 1.85 | 1.41 | 1.98 T | DC05 | 1.64 | 1.63 | 1.85 |
| Total organic carbon | percent | 26 | 26 | 100 | 0.05 | 2.78 | DC03 | 1 | 0.97 | 2.13 | 0.05 | 2.78 | DC03 | 1 | 0.97 | 2.13 |
| Total solids | percent | 27 | 27 | 100 | 53.4 | 82.7 | DC05 | 65 | 64 | 76.5 | 53.4 | 82.7 | DC05 | 65 | 64 | 76.5 |
| **Metals** | | | | | | | | | | | | | | | | |
| Aluminum | mg/kg | 17 | 17 | 100 | 9960 | 23200 | DC07 | 16600 | 16000 | 21300 | 9960 | 23200 | DC07 | 16600 | 16000 | 21300 |
| Antimony | mg/kg | 17 | 17 | 100 | 0.08 J | 2.38 J | DC02 | 0.567 | 0.37 J | 1.52 J | 0.08 J | 2.38 J | DC02 | 0.567 | 0.37 J | 1.52 J |
| Arsenic | mg/kg | 26 | 26 | 100 | 0.6 J | 13.3 | DC02 | 4.06 | 3.75 | 8.67 | 0.6 J | 13.3 | DC02 | 4.06 | 3.75 | 8.67 |
| Cadmium | mg/kg | 26 | 26 | 100 | 0.03 | 1.95 | DC02 | 0.838 | 0.77 | 1.83 | 0.03 | 1.95 | DC02 | 0.838 | 0.77 | 1.83 |
| Chromium | mg/kg | 26 | 26 | 100 | 6.6 | 33.8 | DC03 | 23.2 | 24.8 | 32 | 6.6 | 33.8 | DC03 | 23.2 | 24.8 | 32 |
| Copper | mg/kg | 26 | 26 | 100 | 8.9 | 43.6 | DC03 | 25.7 | 26.5 | 38.8 | 8.9 | 43.6 | DC03 | 25.7 | 26.5 | 38.8 |
| Lead | mg/kg | 26 | 26 | 100 | 1.2 | 37.7 | DC02 | 15.8 | 14.9 | 33.2 | 1.2 | 37.7 | DC02 | 15.8 | 14.9 | 33.2 |
| Mercury | mg/kg | 26 | 26 | 100 | 0.006 J | 0.282 J | DC03 | 0.0924 | 0.0785 J | 0.252 J | 0.006 J | 0.282 J | DC03 | 0.0924 | 0.0785 J | 0.252 J |
| Nickel | mg/kg | 26 | 26 | 100 | 4.4 | 20.4 J | DC07 | 15.9 | 16.8 J | 19.7 J | 4.4 | 20.4 J | DC07 | 15.9 | 16.8 J | 19.7 J |
| Selenium | mg/kg | 17 | 15 | 88.2 | 0.08 J | 0.24 | DC07 | 0.136 | 0.14 | 0.191 | 0.02 U | 0.24 | DC07 | 0.121 | 0.14 | 0.184 |
| Silver | mg/kg | 26 | 26 | 100 | 0.03 | 0.8 | DC03 | 0.371 | 0.453 | 0.658 | 0.03 | 0.8 | DC03 | 0.371 | 0.453 | 0.658 |
| Zinc | mg/kg | 26 | 26 | 100 | 10.8 | 242 | DC02 | 118 | 125 | 209 | 10.8 | 242 | DC02 | 118 | 125 | 209 |
| **PCB Aroclors** | | | | | | | | | | | | | | | | |
| Aroclor 1016 | µg/kg | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.1 U | 10 UJ | WR-BC-03; WR-GC-02; WR-GC-04; WR-GC-05; WR-GC-06 | 2.6 | 1.4 U | 5 U |
| Aroclor 1221 | µg/kg | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.1 U | 10 UJ | WR-BC-03; WR-GC-02; WR-GC-04; WR-GC-05; WR-GC-06 | 2.6 | 1.4 U | 5 U |
| Aroclor 1232 | µg/kg | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.1 U | 10 UJ | WR-BC-03; WR-GC-02; WR-GC-04; WR-GC-05; WR-GC-06 | 2.6 | 1.4 U | 5 U |
| Aroclor 1242 | µg/kg | 26 | 1 | 3.8 | 29 | 29 | WR-GC-04 | 29 | 29 | 29 | 2.1 U | 29 | WR-GC-04 | 3.5 | 1.4 U | 5 U |
| Aroclor 1248 | µg/kg | 26 | 2 | 7.7 | 46 J | 150 | DC03 | 98 | 98 J | 140 J | 2.1 U | 150 | DC03 | 10 | 1.5 U | 36 J |
| Aroclor 1254 | µg/kg | 26 | 11 | 42.3 | 8.4 J | 100 | DC03 | 37 | 31 J | 79 J | 2.1 U | 100 | DC03 | 18 | 5 U | 55 J |
| Aroclor 1260 | µg/kg | 26 | 11 | 42.3 | 5 | 83 J | DC03 | 22 | 17 J | 59 J | 2.1 U | 83 J | DC03 | 12 | 5 | 35 J |
| Aroclor 1262 | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.1 U | 3.1 U | DC03 | 1.3 | 1.4 U | 1.5 U |
| Aroclor 1268 | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.1 U | 3.1 U | DC03 | 1.3 | 1.4 U | 1.5 U |
| Aroclors | µg/kg | 26 | 13 | 50 | 5 T | 250 T | DC03 | 67 | 46 JT | 180 J | 2.1 UT | 250 T | DC03 | 35 | 5 U | 130 J |
| **PCBs[c]** | µg/kg | | | | | | | | | | | | | | | |
| Total PCBs | µg/kg | 26 | 13 | 50 | 5 T | 250 T | DC03 | 67 | 46 JT | 180 J | 2.1 UT | 250 T | DC03 | 35 | 5 U | 130 J |

Table D1.3-9. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downstream Reach (RM 0-1.9).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **PCDD/Fs Homologs** | | | | | | | | | | | | | | | | |
| Heptachlorodibenzofuran homologs | pg/g | 17 | 13 | 76.5 | 0.053 | 60.008 | DC06 | 9.169 | 2.939 | 35.056 | 0.011 U | 60.008 | DC06 | 7.0139 | 2.712 | 26.738 |
| Heptachlorodibenzo-p-dioxin homologs | pg/g | 17 | 14 | 82.4 | 0.921 | 125.493 | DC06 | 23.6172 | 9.831 | 77.718 | 0.289 U | 125.493 | DC06 | 19.5267 | 8.337 | 66.693 |
| Hexachlorodibenzofuran homologs | pg/g | 17 | 13 | 76.5 | 0.033 | 18.835 | DC06 | 3.5206 | 1.489 | 11.342 | 0.006 U | 18.835 | DC06 | 2.6931 | 1.315 | 8.8438 |
| Hexachlorodibenzo-p-dioxin homologs | pg/g | 17 | 16 | 94.1 | 0.217 | 14.098 | DC06 | 2.5252 | 0.887 | 7.777 | 0.01 U | 14.098 | DC06 | 2.3769 | 0.783 | 7.3556 |
| Octachlorodibenzofuran | pg/g | 17 | 10 | 58.8 | 0.86 J | 87.427 | DC06 | 15.883 | 4.5585 J | 59.86 | 0.029 U | 87.427 | DC06 | 9.4162 | 2.476 J | 38.419 |
| Octachlorodibenzo-p-dioxin | pg/g | 17 | 13 | 76.5 | 4.593 J | 646.924 | DC06 | 132.843 | 50.158 | 426.257 | 1.659 U | 646.924 | DC06 | 101.976 | 41.137 | 352.701 |
| Pentachlorodibenzofuran homologs | pg/g | 17 | 12 | 70.6 | 0.073 | 7.946 | DC06 | 2.004 | 0.8755 | 5.763 | 0.004 U | 7.946 | DC06 | 1.416 | 0.512 | 4.77 |
| Pentachlorodibenzo-p-dioxin homologs | pg/g | 17 | 12 | 70.6 | 0.02 | 1.731 | DC06 | 0.3383 | 0.112 | 1.066 | 0.006 U | 1.731 | DC06 | 0.2401 | 0.043 | 0.763 |
| Tetrachlorodibenzofuran homologs | pg/g | 17 | 16 | 94.1 | 0.05 | 4.055 | DC06 | 0.7914 | 0.251 | 2.806 | 0.005 U | 4.055 | DC06 | 0.745 | 0.249 | 2.722 |
| Tetrachlorodibenzo-p-dioxin homologs | pg/g | 17 | 8 | 47.1 | 0.042 | 0.763 | DC06 | 0.234 | 0.137 | 0.655 | 0.005 U | 0.763 | DC06 | 0.113 | 0.008 U | 0.517 |
| Total PCDD/F | pg/g | 17 | 17 | 100 | 0.093 T | 967.3 T | DC06 | 145 | 59.31 JT | 487.7 | 0.093 T | 967.3 T | DC06 | 145 | 59.31 JT | 487.7 |
| **PCDD/Fs** | | | | | | | | | | | | | | | | |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran | pg/g | 17 | 13 | 76.5 | 0.029 J | 11.676 | DC06 | 2.071 | 0.866 J | 6.7278 | 0.011 U | 11.676 | DC06 | 1.5857 | 0.717 J | 5.0784 |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin | pg/g | 17 | 12 | 70.6 | 0.327 J | 47.745 | DC06 | 10.295 | 4.3495 | 31.081 | 0.194 U | 47.745 | DC06 | 7.3411 | 2.889 J | 23.506 |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran | pg/g | 17 | 6 | 35.3 | 0.064 J | 1.024 J | DC06 | 0.3162 | 0.224 J | 0.842 J | 0.014 U | 1.024 J | DC06 | 0.1226 | 0.0195 U | 0.4416 J |
| 1,2,3,4,7,8-Hexachlorodibenzofuran | pg/g | 17 | 10 | 58.8 | 0.037 J | 1.316 J | DC06 | 0.3806 | 0.2055 J | 1.035 J | 0.006 U | 1.316 J | DC06 | 0.2269 | 0.113 J | 0.816 J |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 17 | 4 | 23.5 | 0.052 J | 0.217 J | DC06 | 0.121 | 0.107 J | 0.201 J | 0.009 U | 0.217 J | DC06 | 0.0357 | 0.0085 U | 0.134 J |
| 1,2,3,6,7,8-Hexachlorodibenzofuran | pg/g | 17 | 9 | 52.9 | 0.012 J | 1 J | DC06 | 0.244 | 0.103 J | 0.728 J | 0.007 U | 1 J | DC06 | 0.139 | 0.059 J | 0.455 J |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 17 | 10 | 58.8 | 0.048 J | 1.534 J | DC06 | 0.4398 | 0.265 J | 1.156 J | 0.011 U | 1.534 J | DC06 | 0.2635 | 0.129 J | 0.8612 J |
| 1,2,3,7,8,9-Hexachlorodibenzofuran | pg/g | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.007 U | 0.032 U | DC06 | 0.00865 | 0.007 U | 0.0156 U |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | pg/g | 17 | 9 | 52.9 | 0.063 J | 0.697 J | DC06 | 0.242 | 0.197 J | 0.563 J | 0.01 U | 0.697 J | DC06 | 0.14 | 0.063 J | 0.43 J |
| 1,2,3,7,8-Pentachlorodibenzofuran | pg/g | 17 | 7 | 41.2 | 0.065 J | 0.391 J | DC05 | 0.198 | 0.199 J | 0.382 J | 0.004 U | 0.391 J | DC05 | 0.0851 | 0.006 U | 0.368 J |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | pg/g | 17 | 3 | 17.6 | 0.025 J | 0.083 J | DC03 | 0.056 | 0.06 J | 0.0807 J | 0.006 U | 0.135 U | DC06 | 0.021 | 0.007 U | 0.0706 J |
| 2,3,4,6,7,8-Hexachlorodibenzofuran | pg/g | 17 | 5 | 29.4 | 0.075 J | 0.861 J | DC06 | 0.329 | 0.248 J | 0.74 J | 0.006 U | 0.861 J | DC06 | 0.108 | 0.0065 U | 0.377 J |
| 2,3,4,7,8-Pentachlorodibenzofuran | pg/g | 17 | 8 | 47.1 | 0.04 J | 0.296 J | DC06 | 0.121 | 0.0935 J | 0.254 J | 0.004 U | 0.296 J | DC06 | 0.0608 | 0.0365 U | 0.201 J |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/g | 17 | 2 | 11.8 | 0.459 J | 0.506 | DC05 | 0.483 | 0.483 J | 0.504 J | 0.005 U | 0.506 | DC05 | 0.121 | 0.11 U | 0.468 J |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | pg/g | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.007 U | 0.121 U | DC06 | 0.0108 | 0.0045 U | 0.0313 U |
| TCDD TEQ (ND = 0) | pg/g | 17 | 16 | 94.1 | 0.00252 T | 1.53 JT | DC06 | 0.2595 | 0.1135 J | 0.86175 J | 0.00252 T | 1.53 JT | DC06 | 0.24447 | 0.108 JT | 0.8172 J |
| Total TCDD TEQ (ND = 0) | pg/g | 17 | 16 | 94.1 | 0.00252 A | 1.53 JA | DC06 | 0.2595 | 0.1135 J | 0.86175 J | 0.00252 A | 1.53 JA | DC06 | 0.24447 | 0.108 JA | 0.8172 J |
| **Pesticides** | | | | | | | | | | | | | | | | |
| 2,4'-DDD | µg/kg | 17 | 11 | 64.7 | 0.78 J | 7.7 NJ | DC03 | 3.7 | 3.2 | 7.3 J | 0.26 U | 7.7 NJ | DC03 | 2.4 | 2.2 | 7.1 J |
| 2,4'-DDE | µg/kg | 17 | 5 | 29.4 | 0.39 J | 3.6 | DC03 | 1.6 | 1.5 | 3.2 | 0.28 U | 3.6 | DC03 | 0.67 | 0.19 U | 2.1 |
| 2,4'-DDT | µg/kg | 17 | 4 | 23.5 | 0.88 J | 2.2 J | DC05 | 1.6 | 1.6 J | 2.2 J | 0.17 U | 4.2 U | DC03 | 0.76 | 0.49 U | 2.1 J |
| 4,4'-DDD | µg/kg | 26 | 16 | 61.5 | 0.28 J | 22 | DC03 | 6.8 | 6 | 21 | 0.15 U | 22 | DC03 | 4.4 | 1.1 | 18 |
| 4,4'-DDE | µg/kg | 26 | 16 | 61.5 | 0.23 J | 11 NJ | DC03 | 4.7 | 4.1 | 10 J | 0.13 U | 11 NJ | DC03 | 3.1 | 1 U | 9.4 J |
| 4,4'-DDT | µg/kg | 26 | 11 | 42.3 | 0.28 NJ | 36 | DC03 | 7.83 | 1.5 | 31 J | 0.078 U | 36 | DC03 | 3.69 | 1 U | 22.5 J |
| Aldrin | µg/kg | 26 | 3 | 11.5 | 0.2 J | 2.8 NJ | DC03 | 1.2 | 0.49 J | 2.6 J | 0.19 U | 2.8 NJ | DC03 | 0.51 | 0.13 U | 1 UJ |
| alpha-Endosulfan | µg/kg | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.21 U | 2 UJ | WR-BC-03; WR-GC-02; WR-GC-04; WR-GC-05; WR-GC-06 | 0.45 | 0.14 U | 1 U |
| alpha-Hexachlorocyclohexane | µg/kg | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.32 U | 2 UJ | WR-BC-03; WR-GC-02; WR-GC-04; WR-GC-05; WR-GC-06 | 0.48 | 0.21 U | 1 U |
| beta-Endosulfan | µg/kg | 26 | 1 | 3.8 | 0.41 J | 0.41 J | DC06 | 0.41 | 0.41 J | 0.41 J | 0.23 U | 2 UJ | WR-BC-03; WR-GC-02; WR-GC-04; WR-GC-05; WR-GC-06 | 0.48 | 0.17 U | 1 U |
| beta-Hexachlorocyclohexane | µg/kg | 26 | 1 | 3.8 | 1.2 | 1.2 | DC03 | 1.2 | 1.2 | 1.2 | 0.37 U | 2 UJ | WR-BC-03; WR-GC-02; WR-GC-04; WR-GC-05; WR-GC-06 | 0.56 | 0.26 U | 1 UJ |
| cis-Chlordane | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.28 U | 0.55 U | DC03 | 0.18 | 0.18 U | 0.22 U |
| cis-Nonachlor | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 3.4 U | DC03 | 0.49 | 0.47 U | 1.2 U |
| delta-Hexachlorocyclohexane | µg/kg | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.067 U | 2 UJ | WR-BC-03; WR-GC-02; WR-GC-04; WR-GC-05; WR-GC-06 | 0.395 | 0.045 U | 1 U |
| Dieldrin | µg/kg | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.36 U | 5 U | WR-BC-03 | 0.55 | 0.24 U | 1 U |

Table D1.3-9. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downstream Reach (RM 0-1.9).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Endosulfan sulfate | µg/kg | 26 | 3 | 11.5 | 0.22 NJ | 1 NJ | DC03 | 0.593 | 0.56 NJ | 0.956 J | 0.096 U | 2 UJ | WR-BC-03; WR-GC-02; WR-GC-04; WR-GC-05; WR-GC-06 | 0.511 | 0.375 U | 1 J |
| Endrin | µg/kg | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.25 U | 2 UJ | WR-BC-03; WR-GC-02; WR-GC-04; WR-GC-05; WR-GC-06 | 0.5 | 0.33 U | 1 UJ |
| Endrin aldehyde | µg/kg | 26 | 3 | 11.5 | 0.65 J | 1.2 | DC03 | 0.89 | 0.82 J | 1.16 J | 0.065 U | 2 UJ | WR-BC-03; WR-GC-02; WR-GC-04; WR-GC-05; WR-GC-06 | 0.539 | 0.575 J | 1 UJ |
| Endrin ketone | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.1 U | 1.1 U | DC05 | 0.2 | 0.095 U | 0.51 U |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.19 U | 2 UJ | WR-BC-03; WR-GC-02; WR-GC-04; WR-GC-05; WR-GC-06 | 0.46 | 0.14 U | 1 U |
| Heptachlor | µg/kg | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.097 U | 2 UJ | WR-BC-03; WR-GC-02; WR-GC-04; WR-GC-05; WR-GC-06 | 0.414 | 0.0725 U | 1 U |
| Heptachlor epoxide | µg/kg | 26 | 6 | 23.1 | 0.33 J | 0.97 J | DC03 | 0.59 | 0.49 J | 0.95 J | 0.16 U | 2.5 U | DC03 | 0.57 | 0.49 J | 1 U |
| Methoxychlor | µg/kg | 26 | 2 | 7.7 | 0.34 NJ | 0.39 NJ | DC05 | 0.37 | 0.37 J | 0.39 J | 0.13 U | 4 UJ | WR-BC-03; WR-GC-02; WR-GC-04; WR-GC-05; WR-GC-06 | 0.84 | 0.45 J | 2 U |
| Mirex | µg/kg | 17 | 4 | 23.5 | 0.28 J | 0.91 J | DC03 | 0.51 | 0.43 J | 0.84 J | 0.13 U | 1.5 U | DC03 | 0.22 | 0.08 U | 0.78 J |
| Oxychlordane | µg/kg | 17 | 1 | 5.9 | 2.2 NJ | 2.2 NJ | DC03 | 2.2 | 2.2 NJ | 2.2 NJ | 0.45 U | 2.2 NJ | DC03 | 0.4 | 0.29 U | 0.7 J |
| Total chlordanes | µg/kg | 26 | 5 | 19.2 | 0.75 NJT | 2.2 NJT | DC03 | 1.5 | 1.6 JT | 2.1 J | 0.45 UT | 10 UA | WR-BC-03; WR-GC-02; WR-GC-04; WR-GC-05; WR-GC-06 | 2.3 | 1.3 J | 5 U |
| Total Endosulfan | µg/kg | 26 | 4 | 15.4 | 0.22 NJT | 1 NJT | DC03 | 0.55 | 0.49 J | 0.93 J | 0.22 NJT | 2 UT | WR-BC-03; WR-GC-02; WR-GC-04; WR-GC-05; WR-GC-06 | 0.54 | 0.46 J | 1 J |
| Total DDD | µg/kg | 26 | 16 | 61.5 | 0.28 JT | 29 T | DC03 | 9.4 | 7.1 J | 26 | 0.26 UT | 29 T | DC03 | 6 | 1.5 J | 23 J |
| DDx | µg/kg | 26 | 17 | 65.4 | 0.28 NJT | 80 NJT | DC03 | 19 | 12 A | 67 J | 0.28 NJT | 80 NJT | DC03 | 13 | 2.3 J | 57 J |
| Total DDE | µg/kg | 26 | 16 | 61.5 | 0.23 JT | 15 NJT | DC03 | 5.2 | 4.1 | 12 J | 0.23 JT | 15 NJT | DC03 | 3.4 | 1 U | 11 J |
| Total DDT | µg/kg | 26 | 11 | 42.3 | 0.28 NJT | 36 T | DC03 | 8.4 | 2.7 T | 32 J | 0.17 UT | 36 T | DC03 | 4 | 1 U | 24 J |
| Total 4,4'-DDx | µg/kg | 26 | 17 | 65.4 | 0.28 JT | 69 JT | DC03 | 16 | 11 T | 59 J | 0.15 UT | 69 JT | DC03 | 11 | 1.9 J | 49 J |
| Toxaphene | µg/kg | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 11 U | 110 U | DC03 | 16 | 15 U | 36 U |
| trans-Chlordane | µg/kg | 17 | 4 | 23.5 | 0.75 NJ | 1.9 J | DC03 | 1.31 | 1.3 J | 1.86 J | 0.078 U | 1.9 J | DC03 | 0.451 | 0.105 U | 1.66 J |
| trans-Nonachlor | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 1 U | DC03 | 0.14 | 0.07 U | 0.45 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | µg/kg | 26 | 19 | 73.1 | 2 J | 250 | DC03 | 24 | 6.1 | 95 | 0.44 U | 250 | DC03 | 17 | 3.5 J | 65 J |
| Acenaphthene | µg/kg | 26 | 20 | 76.9 | 0.48 J | 1400 | DC03 | 84 | 6.9 J | 170 | 0.2 U | 1400 | DC03 | 65 | 2.8 J | 91 |
| Acenaphthylene | µg/kg | 26 | 21 | 80.8 | 0.3 J | 160 | DC03 | 13 | 4 J | 19 | 0.27 U | 160 | DC03 | 10 | 3 | 18 |
| Anthracene | µg/kg | 26 | 21 | 80.8 | 0.52 J | 1300 | DC03 | 74 | 7.3 | 72 | 0.27 U | 1300 | DC03 | 60 | 4 | 62 |
| Benzo(a)anthracene | µg/kg | 26 | 22 | 84.6 | 1 J | 840 | DC03 | 66 | 28 | 87 J | 0.24 U | 840 | DC03 | 56 | 15 | 87 J |
| Benzo(a)pyrene | µg/kg | 26 | 23 | 88.5 | 0.9 J | 770 | DC03 | 73.2 | 39 | 123 J | 0.32 U | 770 | DC03 | 64.8 | 23.5 | 122 J |
| Benzo(b)fluoranthene | µg/kg | 26 | 22 | 84.6 | 0.67 J | 460 | DC03 | 51 | 29 | 81 J | 0.67 J | 460 | DC03 | 43 | 18 J | 80 J |
| Benzo(b+k)fluoranthene | µg/kg | 9 | 9 | 100 | 3 T | 160 T | WR-GC-04 | 42.3 | 10 T | 145 | 3 T | 160 T | WR-GC-04 | 42.3 | 10 T | 145 |
| Benzo(g,h,i)perylene | µg/kg | 26 | 23 | 88.5 | 0.64 J | 530 | DC03 | 58.4 | 35 | 120 J | 0.34 U | 530 | DC03 | 51.7 | 21.5 | 119 J |
| Benzo(k)fluoranthene | µg/kg | 26 | 22 | 84.6 | 0.66 J | 440 | DC03 | 45 | 25 | 79 J | 0.48 U | 440 | DC03 | 38 | 17 | 79 J |
| Chrysene | µg/kg | 26 | 23 | 88.5 | 0.7 J | 1100 | DC03 | 84.2 | 33 | 119 J | 0.6 U | 1100 | DC03 | 74.6 | 21.5 | 118 J |
| Dibenzo(a,h)anthracene | µg/kg | 26 | 21 | 80.8 | 0.8 J | 79 | DC03 | 9.2 | 5 J | 19 J | 0.32 U | 79 | DC03 | 7.5 | 3.9 | 18 J |
| Fluoranthene | µg/kg | 26 | 23 | 88.5 | 0.7 J | 2800 | DC03 | 186 | 55 | 277 J | 0.5 U | 2800 | DC03 | 164 | 41.5 | 257 J |
| Fluorene | µg/kg | 26 | 22 | 84.6 | 0.28 J | 1000 | DC03 | 55 | 4.1 | 72 | 0.23 U | 1000 | DC03 | 47 | 3 J | 64 |
| Total HPAHs | µg/kg | 26 | 24 | 92.3 | 0.64 JT | 11000 T | DC03 | 824 | 350 | 1350 | 0.64 JT | 11000 T | DC03 | 761 | 240 J | 1320 |
| Indeno(1,2,3-cd)pyrene | µg/kg | 26 | 23 | 88.5 | 0.55 J | 480 | DC03 | 51.8 | 30 | 107 J | 0.35 U | 480 | DC03 | 45.8 | 17.5 | 105 J |
| Total LPAHs | µg/kg | 26 | 26 | 100 | 0.49 JT | 12000 T | DC03 | 576 | 43 J | 853 | 0.49 JT | 12000 T | DC03 | 576 | 43 J | 853 |
| Naphthalene | µg/kg | 27 | 20 | 74.1 | 0.6 J | 330 | DC03 | 43 | 12 | 270 | 0.49 U | 330 | DC03 | 32 | 4 J | 200 |
| Phenanthrene | µg/kg | 26 | 26 | 100 | 0.49 J | 7200 | DC03 | 330 | 20 J | 360 | 0.49 J | 7200 | DC03 | 330 | 20 J | 360 |

Table D1.3-9. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downstream Reach (RM 0-1.9).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| Pyrene | µg/kg | 26 | 24 | 92.3 | 0.64 J | 3900 | DC03 | 252 | 82 | 420 | 0.53 U | 3900 | DC03 | 233 | 60 | 400 |
| Total BaPEq | µg/kg | 26 | 23 | 88.5 | 1.15 JT | 1030 T | DC03 | 98.4 | 54.5 T | 169 J | 0.38 UT | 1030 T | DC03 | 87 | 31.5 J | 167 J |
| Total cPAHs | µg/kg | 26 | 23 | 88.5 | 4.9 JT | 4200 T | DC03 | 370 | 190 T | 610 J | 0.7 UT | 4200 T | DC03 | 330 | 120 J | 610 J |
| Total PAHs | µg/kg | 26 | 26 | 100 | 0.49 JT | 23000 T | DC03 | 1339 | 310 J | 2202 | 0.49 JT | 23000 T | DC03 | 1339 | 310 J | 2202 |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl) phthalate | µg/kg | 17 | 16 | 94.1 | 3.1 J | 39 | DC04 | 11 | 8.2 J | 23 J | 2.5 U | 39 | DC04 | 10 | 8.1 J | 22 J |
| Butylbenzyl phthalate | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 6.2 U | DC04 | 1.4 | 1.2 U | 2.5 U |
| Dibutyl phthalate | µg/kg | 17 | 14 | 82.4 | 3.8 J | 11 | DC03 | 6.5 | 6.1 J | 10 | 3.8 J | 11 | DC03 | 5.7 | 5.9 J | 10 |
| Diethyl phthalate | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.4 U | 6 U | DC03 | 2.7 | 2.8 U | 3 U |
| Dimethyl phthalate | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.3 U | 3.1 U | DC03 | 1.4 | 1.5 U | 1.6 U |
| Di-n-octyl phthalate | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 2.1 U | DC03 | 0.95 | 0.95 U | 1.1 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 2.6 U | DC03 | 1.2 | 1.2 U | 1.3 U |
| 1,2-Dichlorobenzene | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.7 U | 2.3 U | DC03 | 1 | 1.1 U | 1.2 U |
| 1,3-Dichlorobenzene | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 U | 2.8 U | DC03 | 1.3 | 1.3 U | 1.4 U |
| 1,4-Dichlorobenzene | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.23 U | 0.34 U | DC03 | 0.15 | 0.15 U | 0.17 U |
| 2,4-Dinitrotoluene | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.5 U | 4.8 U | DC03 | 2.2 | 2.3 U | 2.4 U |
| 2,6-Dinitrotoluene | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.5 U | 4.8 U | DC03 | 2.2 | 2.3 U | 2.4 U |
| 2-Chloronaphthalene | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.5 U | 6.2 U | DC03 | 2.8 | 2.9 U | 3.1 U |
| 2-Nitroaniline | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.4 U | 4.6 U | DC03 | 2.1 | 2.2 U | 2.3 U |
| 3,3'-Dichlorobenzidine | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.7 U | 6.4 U | DC03 | 2.9 | 3 U | 3.2 U |
| 3-Nitroaniline | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.3 U | 4.5 U | DC03 | 2 | 2.1 U | 2.3 U |
| 4-Bromophenyl phenyl ether | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.8 U | 2.4 U | DC03; DC04 | 1.1 | 1.2 U | 1.2 U |
| 4-Chloroaniline | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.7 U | 3.6 U | DC03 | 1.6 | 1.7 U | 1.8 U |
| 4-Chlorophenyl phenyl ether | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.5 U | 3.5 U | DC03 | 1.6 | 1.6 U | 1.8 U |
| 4-Nitroaniline | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.3 U | 5.8 U | DC03 | 2.6 | 2.7 U | 2.9 U |
| Aniline | µg/kg | 17 | 4 | 23.5 | 2.7 J | 130 | DC03 | 35 | 3.6 J | 110 J | 1.9 U | 130 | DC03 | 9.1 | 1.2 U | 29 J |
| Azobenzene | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3 U | 4.1 U | DC03 | 1.9 | 1.9 U | 2.1 U |
| Benzoic acid | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 120 U | 170 U | DC03 | 76 | 80 U | 85 U |
| Benzyl alcohol | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.7 U | 6.4 U | DC03 | 2.9 | 3 U | 3.2 U |
| Bis(2-chloroethoxy) methane | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.7 U | 2.3 U | DC03 | 1 | 1.1 U | 1.2 U |
| Bis(2-chloroethyl) ether | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3 U | 4.1 U | DC03 | 1.9 | 1.9 U | 2.1 U |
| Bis(2-chloroisopropyl) ether | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.5 U | 2.1 U | DC03 | 0.95 | 0.95 U | 1.1 U |
| Carbazole | µg/kg | 17 | 6 | 35.3 | 2.5 J | 110 | DC03 | 21 | 2.9 J | 84 J | 1.7 U | 110 | DC03 | 8 | 1.1 U | 25 J |
| Dibenzofuran | µg/kg | 26 | 19 | 73.1 | 0.32 J | 140 | DC03 | 12 | 2.5 | 40 | 0.21 U | 140 | DC03 | 8.7 | 2.3 J | 24 J |
| Hexachlorobenzene | µg/kg | 17 | 1 | 5.9 | 0.42 J | 0.42 J | DC06 | 0.42 | 0.42 J | 0.42 J | 0.096 U | 3.3 U | DC05 | 0.207 | 0.065 U | 0.73 U |
| Hexachlorobutadiene | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.6 U | 0.88 U | DC03 | 0.38 | 0.39 U | 0.43 U |
| Hexachlorocyclopentadiene | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 19 U | 26 U | DC03 | 12 | 12 U | 13 U |
| Hexachloroethane | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.38 U | 1.7 U | DC03 | 0.38 | 0.35 U | 0.61 U |
| Isophorone | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2 U | 2.8 U | DC03 | 1.3 | 1.3 U | 1.4 U |
| Nitrobenzene | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.5 U | 3.5 U | DC03 | 1.6 | 1.6 U | 1.8 U |
| N-Nitrosodimethylamine | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.6 U | 11 U | DC03; DC04 | 4.8 | 4.9 U | 5.5 U |
| N-Nitrosodiphenylamine | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.8 U | 3.8 U | DC03 | 1.7 | 1.8 U | 1.9 U |
| N-Nitrosodipropylamine | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4 U | 5.5 U | DC03 | 2.5 | 2.6 U | 2.8 U |
| **Phenols** | | | | | | | | | | | | | | | | |
| 2,3,4,5-Tetrachlorophenol | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.75 U | 1.2 U | DC03 | 0.49 | 0.49 U | 0.56 U |
| 2,3,5,6-Tetrachlorophenol | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.37 U | 3.3 U | DC03 | 0.32 | 0.24 U | 0.55 U |
| 2,4,5-Trichlorophenol | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.67 U | 0.99 U | DC03 | 0.43 | 0.43 U | 0.48 U |
| 2,4,6-Trichlorophenol | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.48 U | 0.7 U | DC03 | 0.3 | 0.31 U | 0.35 U |
| 2,4-Dichlorophenol | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.3 U | 3.1 U | DC03 | 1.4 | 1.5 U | 1.6 U |
| 2,4-Dimethylphenol | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 6.9 U | 9.4 U | DC03 | 4.3 | 4.4 U | 4.7 U |
| 2,4-Dinitrophenol | µg/kg | 17 | 1 | 5.9 | 60 J | 60 J | DC06 | 60 | 60 J | 60 J | 45 U | 62 U | DC03 | 30 | 29 U | 37 J |
| 2-Chlorophenol | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.2 U | 2.9 U | DC03; DC04 | 1.3 | 1.4 U | 1.5 U |
| 2-Methylphenol | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.3 U | 5.8 U | DC03 | 2.6 | 2.7 U | 2.9 U |
| 2-Nitrophenol | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.3 U | 4.5 U | DC03 | 2 | 2.1 U | 2.3 U |
| 4,6-Dinitro-2-methylphenol | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.2 U | 2.9 U | DC03; DC04 | 1.3 | 1.4 U | 1.5 U |

Table D1.3-9. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downstream Reach (RM 0-1.9).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| 4-Chloro-3-methylphenol | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.7 U | 3.6 U | DC03 | 1.6 | 1.7 U | 1.8 U |
| 4-Methylphenol | µg/kg | 17 | 5 | 29.4 | 9.2 J | 24 | DC06 | 13 | 11 | 22 | 3.7 U | 24 | DC06 | 5.4 | 2.3 U | 14 |
| 4-Nitrophenol | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 38 U | 52 U | DC03 | 23 | 24 U | 26 U |
| Pentachlorophenol | µg/kg | 17 | 8 | 47.1 | 0.5 J | 6 J | DC02 | 1.4 | 0.54 J | 4.6 J | 0.17 U | 6 J | DC02 | 0.73 | 0.12 U | 2.8 J |
| Phenol | µg/kg | 17 | 17 | 100 | 2.8 J | 12 J | DC03; DC06 | 7.1 | 7.4 J | 12 J | 2.8 J | 12 J | DC03; DC06 | 7.1 | 7.4 J | 12 J |
| **Petroleum** | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 17 | 17 | 100 | 2 JT | 370 J | DC03 | 62 | 35 J | 270 J | 2 JT | 370 J | DC03 | 62 | 35 J | 270 J |
| Total Petroleum Hydrocarbons (Gasoline) | mg/kg | 18 | 7 | 38.9 | 1.4 J | 37 J | DC03 | 8.8 | 1.9 J | 30 J | 0.72 U | 37 J | DC03 | 3.9 | 0.85 U | 18 J |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 17 | 14 | 82.4 | 7.4 JT | 680 J | DC03 | 220 | 150 J | 670 J | 7.4 JT | 680 J | DC03 | 180 | 130 J | 660 J |
| Total Petroleum Hydrocarbons | mg/kg | 17 | 17 | 100 | 2.4 JT | 1100 JT | DC03 | 250 | 170 JT | 970 J | 2.4 JT | 1100 JT | DC03 | 250 | 170 JT | 970 J |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.066 U | 0.097 U | DC03 | 0.042 | 0.0425 U | 0.0477 U |
| 1,1,1-Trichloroethane | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.092 U | 0.14 U | DC03 | 0.0609 | 0.06 U | 0.07 U |
| 1,1,2,2-Tetrachloroethane | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.15 U | 0.22 U | DC03 | 0.094 | 0.095 U | 0.11 U |
| 1,1,2-Trichloroethane | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.083 U | 0.13 U | DC03 | 0.0542 | 0.055 U | 0.0608 U |
| 1,1-Dichloroethane | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.074 U | 0.11 U | DC03; DC04 | 0.048 | 0.048 U | 0.055 U |
| 1,1-Dichloroethene | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 0.15 U | DC03 | 0.067 | 0.065 U | 0.075 U |
| 1,2,3-Trichloropropane | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.22 U | 0.33 U | DC03 | 0.14 | 0.15 U | 0.16 U |
| 1,2-Dichloroethane | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.12 U | 0.18 U | DC03 | 0.076 | 0.078 U | 0.086 U |
| 1,2-Dichloropropane | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.08 U | 0.12 U | DC03 | 0.0527 | 0.055 U | 0.06 U |
| 1,4-Dichloro-trans-2-butene | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.4 U | 0.59 U | DC03 | 0.26 | 0.26 U | 0.29 U |
| 2-Chloroethyl vinyl ether | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.19 U | 0.27 U | DC03 | 0.12 | 0.12 U | 0.14 U |
| Acetone | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 11 U | 120 U | DC07 | 16 | 10 U | 41 U |
| Acrylonitrile | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.5 U | 0.74 U | DC03 | 0.32 | 0.33 U | 0.36 U |
| Benzene | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.054 U | 0.079 U | DC03 | 0.0343 | 0.0345 U | 0.0387 U |
| Bromochloromethane | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.12 U | 0.18 U | DC03 | 0.079 | 0.08 U | 0.09 U |
| Bromodichloromethane | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.049 U | 0.072 U | DC03 | 0.0312 | 0.0315 U | 0.0352 U |
| Bromoform | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.15 U | 0.22 U | DC03 | 0.094 | 0.095 U | 0.11 U |
| Bromomethane | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.34 U | 0.5 U | DC03 | 0.22 | 0.22 U | 0.25 U |
| BTEX | µg/kg | 18 | 2 | 11.1 | 0.18 JT | 1.8 JT | DC03 | 0.99 | 0.99 J | 1.7 J | 0.14 UT | 1.8 JT | DC03 | 0.19 | 0.09 U | 0.42 J |
| Carbon disulfide | µg/kg | 18 | 6 | 33.3 | 0.11 J | 0.43 J | DC07 | 0.203 | 0.165 J | 0.378 J | 0.082 U | 0.43 J | DC07 | 0.103 | 0.055 U | 0.252 J |
| Carbon tetrachloride | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.061 U | 0.09 U | DC03 | 0.0389 | 0.0395 U | 0.0442 U |
| Chlorobenzene | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.073 U | 0.11 U | DC03 | 0.0468 | 0.047 U | 0.055 U |
| Chlorodibromomethane | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 0.18 U | DC03 | 0.08 | 0.08 U | 0.09 U |
| Chloroethane | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.25 U | 0.36 U | DC03 | 0.16 | 0.16 U | 0.18 U |
| Chloroform | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.096 U | 0.15 U | DC03 | 0.0638 | 0.065 U | 0.0708 U |
| Chloromethane | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.091 U | 0.14 U | DC03 | 0.06 | 0.06 U | 0.07 U |
| cis-1,2-Dichloroethene | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.12 U | 0.18 U | DC03 | 0.076 | 0.078 U | 0.086 U |
| cis-1,3-Dichloropropene | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.075 U | 0.12 U | DC03 | 0.0488 | 0.0488 U | 0.0558 U |
| Dichlorodifluoromethane | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.072 U | 0.11 U | DC03 | 0.0462 | 0.0465 U | 0.055 U |
| Ethylbenzene | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.062 U | 0.091 U | DC03 | 0.0397 | 0.04 U | 0.0451 U |
| Ethylene dibromide | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.074 U | 0.11 U | DC03; DC04 | 0.048 | 0.048 U | 0.055 U |
| Isopropylbenzene | µg/kg | 18 | 2 | 11.1 | 0.28 J | 2.6 | DC03 | 1.4 | 1.4 J | 2.5 J | 0.11 U | 2.6 | DC03 | 0.22 | 0.07 U | 0.63 J |
| m,p-Xylene | µg/kg | 18 | 2 | 11.1 | 0.18 J | 0.21 J | DC03 | 0.2 | 0.2 J | 0.21 J | 0.14 U | 0.21 J | DC03 | 0.099 | 0.09 U | 0.18 J |
| Methyl iodide | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.4 U | 0.59 U | DC03 | 0.26 | 0.26 U | 0.29 U |
| Methyl isobutyl ketone | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.61 U | 0.9 U | DC03 | 0.39 | 0.4 U | 0.44 U |
| Methyl n-butyl ketone | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4.3 U | 6.3 U | DC03 | 2.7 | 2.8 U | 3.1 U |
| Methyl tert-butyl ether | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.086 U | 0.13 U | DC03 | 0.0575 | 0.06 U | 0.065 U |
| Methylene bromide | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.085 U | 0.13 U | DC03 | 0.0566 | 0.055 U | 0.065 U |
| Methylene chloride | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.7 U | 4.7 U | DC07 | 0.94 | 0.6 U | 2.3 U |
| Methylethyl ketone | µg/kg | 16 | 16 | 100 | 2.1 J | 24 J | DC07 | 5.9 | 3.6 J | 18 J | 2.1 J | 24 J | DC07 | 5.9 | 3.6 J | 18 J |
| o-Xylene | µg/kg | 18 | 1 | 5.6 | 1.6 | 1.6 | DC03 | 1.6 | 1.6 | 1.6 | 0.069 U | 1.6 | DC03 | 0.13 | 0.045 U | 0.282 |
| Styrene | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.12 U | 0.17 U | DC03 | 0.074 | 0.075 U | 0.085 U |
| Tetrachloroethene | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.11 U | 0.16 U | DC03 | 0.069 | 0.07 U | 0.076 U |
| Toluene | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.085 U | 0.17 U | DC07 | 0.0589 | 0.0575 U | 0.0765 U |
| trans-1,2-Dichloroethene | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.072 U | 0.11 U | DC03 | 0.0462 | 0.0465 U | 0.055 U |

Table D1.3-9. Summary Statistics for All COIs and Physical Parameters in Subsurface Sediment, Downstream Reach (RM 0-1.9).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| trans-1,3-Dichloropropene | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.079 U | 0.12 U | DC03 | 0.0522 | 0.055 U | 0.06 U |
| Trichloroethene | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.098 U | 0.15 U | DC03 | 0.0647 | 0.065 U | 0.075 U |
| Trichlorofluoromethane | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.43 U | 0.63 U | DC03 | 0.27 | 0.28 U | 0.31 U |
| Vinyl chloride | µg/kg | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.17 U | 0.25 U | DC03 | 0.11 | 0.11 U | 0.13 U |
| Xylene | µg/kg | 18 | 2 | 11.1 | 0.18 JT | 1.8 JT | DC03 | 0.99 | 0.99 J | 1.7 J | 0.14 UT | 1.8 JT | DC03 | 0.19 | 0.09 U | 0.42 J |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

-- data not available.
BaPEq - benzo(a)pyrene equivalent
BTEX - benzene, toluene, ethylbenzene, and xylene
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-10. Summary Statistics for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location** | **Mean** | **Median[b]** | **Standard Deviation** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th (full DL)[b]** |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 1551 | 1403 | 90 | 0.0156 J | 10.1 | T4-UP13 | 0.413 | 0.25 | 0.72 | 1.26 | 0.00159 U | 10.1 | T4-UP13 | 0.413 | 0.25 | 0.699 | 1.23 |
| Lead | mg/kg | 1575 | 1560 | 99 | 1.1 J | 13400 T | GWC1 | 49.2 | 16 J | 357 | 122 | 1.1 J | 13400 T | GWC1 | 48.9 | 16 | 356 | 122 |
| Mercury | mg/kg | 1527 | 1398 | 92 | 0.005 | 65.2 T | GWC1 | 0.145 | 0.068 | 1.75 | 0.268 | 0.00189 U | 65.2 T | GWC1 | 0.138 | 0.066 | 1.67 | 0.251 |
| Nickel | mg/kg | 1511 | 1494 | 99 | 6.22 J | 594 | PSY27 | 25.7 | 23.3 | 21.8 | 37 J | 6.22 J | 594 | PSY27 | 25.7 | 23.3 T | 21.7 | 37 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 264 | 264 | 100 | 0.00000104 JT | 0.239 T | G453 | 0.00526 | 0.00068 J | 0.0204 | 0.0225 J | 0.00000104 JT | 0.239 T | G453 | 0.00526 | 0.00068 J | 0.0204 | 0.0225 J |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| Gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 1195 | 206 | 17 | 0.0031 J | 430 | 07R006 | 4.42 | 1.2 J | 29.9 | 7.91 J | 0.0031 J | 430 | 07R006 | 2.31 | 0.386 U | 14.3 | 6.59 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 1661 | 1581 | 95 | 0.86 J | 340000 | G225 | 1930 | 93 | 12600 | 5000 | 0.24 U | 340000 | G225 | 1840 | 85.3 | 12300 | 4900 |
| Total HPAHs | µg/kg | 1661 | 1640 | 99 | 2.16 JT | 4350000 T | G225 | 19400 | 985 | 143000 | 49600 J | 2.16 JT | 4350000 T | G225 | 19100 | 948 JT | 142000 | 48400 T |
| Total LPAHs | µg/kg | 1661 | 1582 | 95 | 0.65 JT | 2910000 T | G225 | 8060 | 190 | 86200 | 11100 | 0.65 JT | 2910000 T | G225 | 7690 | 175 T | 84100 | 10300 JA |
| Naphthalene | µg/kg | 1666 | 1125 | 68 | 0.27 J | 73000 J | AN-1-3; G225; G294-1 | 484 | 27 | 4390 | 587 | 0.27 J | 73000 J | AN-1-3; G225; G294-1 | 341 | 19 U | 3630 | 375 |
| Phenanthrene | µg/kg | 1661 | 1576 | 95 | 0.53 J | 1700000 | G225 | 4420 | 96 | 48700 | 6250 | 0.53 J | 1700000 | G225 | 4190 | 84 | 47400 | 5600 |
| Total cPAHs | µg/kg | 1661 | 1613 | 97 | 0.00314 JT | 449000 T | G225 | 2570 | 130 T | 16600 | 7070 | 0.00314 JT | 449000 T | G225 | 2500 | 122 T | 16400 | 6740 T |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 1504 | 470 | 31 | 2.2 J | 2800 | G111 | 60.1 | 18 | 192 | 200 | 1.6 U | 10000 U | GRAB-05 | 73.7 | 15.6 UJ | 411 | 239 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 1387 | 432 | 31 | 0.0122 J | 340 | OSS004 | 4.14 | 0.66 J | 25.7 | 6.5 J | 0.0122 J | 10000 U | GRAB-05 | 36.7 | 1.42 UJ | 367 | 22 U |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 1454 | 266 | 18 | 0.27 J | 8410 J | 52C01 | 59.2 | 5.91 J | 520 | 140 J | 0.167 U | 30500 U | GRAB-05 | 133 | 4.7 J | 1190 | 247 J |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 825 | 767 | 93 | 0.046 J | 20000 J | G294-1 | 271 | 84 J | 1150 | 667 J | 0.046 J | 20000 J | G294-1 | 255 | 83 J | 1110 | 630 J |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 221 | 186 | 84 | 6.2 JT | 8100 J | SL004 | 144 | 46 J | 632 | 292 J | 3.3 U | 8100 J | SL004 | 125 | 43 J | 581 | 260 J |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 661 | 638 | 97 | 0.29 | 18000 J | G453 | 672 | 410 J | 1450 | 1560 J | 0.29 | 18000 J | G453 | 653 | 402 JT | 1420 | 1500 J |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 221 | 205 | 93 | 7.1 J | 9400 J | SL015 | 291 | 160 J | 924 | 514 J | 7.1 J | 9400 J | SL015 | 273 | 160 J | 892 | 490 J |
| Total Petroleum Hydrocarbons | mg/kg | 825 | 789 | 96 | 0.34 JT | 33100 JT | G294-1 | 819 | 455 JA | 2390 | 1890 J | 0.34 JT | 33100 JT | G294-1 | 787 | 442 JA | 2340 | 1850 J |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 221 | 211 | 95 | 7.1 JA | 17400 JA | SL004 | 410 | 205 JA | 1430 | 785 J | 7.1 JA | 17400 JA | SL004 | 393 | 199 JA | 1400 | 740 JT |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.

cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit

HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TEQ - toxic equivalent concentration

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-11. Summary Statistics for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th (full DL)[b]** |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 1530 | 1435 | 94 | 0.011 J | 43.7 | C752 | 0.415 | 0.27 | 1.49 | 0.863 | 0.008 UJ | 43.7 | C752 | 0.409 | 0.264 J | 1.45 | 0.892 J |
| Lead | mg/kg | 1597 | 1589 | 99 | 1.54 | 3330 J | C326 | 46.6 | 20 | 172 | 131 J | 1.54 | 3330 J | C326 | 46.5 | 20 | 172 | 131 J |
| Mercury | mg/kg | 1454 | 1373 | 94 | 0.004 J | 16.8 | C708 | 0.19 | 0.089 T | 0.625 | 0.55 | 0.004 J | 16.8 | C708 | 0.182 | 0.084 | 0.608 | 0.519 J |
| Nickel | mg/kg | 1521 | 1521 | 100 | 5.99 J | 716 | C356 | 25.5 | 23.5 | 29.7 | 33.3 | 5.99 J | 716 | C356 | 25.5 | 23.5 | 29.7 | 33.3 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 161 | 155 | 96 | 0.0000000696 JT | 0.365 JT | C384 | 0.0105 | 0.00186 T | 0.0399 | 0.0211 J | 0.0000000696 JT | 0.365 JT | C384 | 0.0101 | 0.00172 T | 0.0392 | 0.0204 JT |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| Gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 1220 | 121 | 10 | 0.052 J | 172 NJ | C356 | 5.27 | 1.3 NJ | 17.7 | 12 J | 0.051 U | 9900 U | WB-36 | 27 | 0.44 U | 337 | 25 J |
| **PAH** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 1715 | 1508 | 88 | 0.16 J | 1010000 | GP26 | 6860 | 104 | 49200 | 19000 | 0.14 U | 1010000 | GP26 | 6040 | 78 | 46200 | 17000 |
| Total HPAHs | µg/kg | 1715 | 1615 | 94 | 0.15 JT | 13400000 T | C302 | 80600 | 1090 JT | 618000 | 199000 | 0.15 JT | 13400000 T | C302 | 75900 | 879 T | 600000 | 183000 |
| Total LPAHs | µg/kg | 1715 | 1594 | 93 | 0.22 JT | 39900000 T | C302 | 172000 | 330 | 1770000 | 110000 | 0.22 JT | 39900000 T | C302 | 160000 | 270 T | 1700000 | 92400 |
| Naphthalene | µg/kg | 1758 | 1285 | 73 | 0.27 J | 20000000 | C302 | 102000 | 55 | 1060000 | 11000 | 0.17 U | 20000000 | C302 | 74800 | 27 | 906000 | 3110 |
| Phenanthrene | µg/kg | 1715 | 1538 | 90 | 0.24 J | 8500000 | C302 | 44800 | 170 | 390000 | 64000 | 0.24 J | 8500000 | C302 | 40200 | 130 | 369000 | 52300 |
| Total cPAHs | µg/kg | 1715 | 1572 | 92 | 0.00017 JT | 1310000 T | GP26 | 8700 | 131 | 63100 | 24800 | 0.00017 JT | 1310000 T | GP26 | 7980 | 110 T | 60500 | 22800 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 1589 | 264 | 17 | 2 J | 11800 | HA-42 | 74.6 | 11 | 727 | 160 | 1.7 U | 11800 | HA-42 | 83.5 | 10 U | 465 | 220 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 1367 | 236 | 17 | 0.066 J | 14000 | OSS004 | 71.9 | 0.945 J | 916 | 50.7 J | 0.0162 U | 14000 | OSS004 | 77.6 | 1.5 U | 531 | 220 U |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 1379 | 390 | 28 | 0.32 J | 5600 | C301 | 36.3 | 3.85 J | 305 | 65.6 | 0.16 UT | 36000 U | LWMTCLP11C | 248 | 2.6 J | 1520 | 532 U |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 1109 | 904 | 82 | 0.045 J | 190000 J | C301 | 1290 | 200 J | 9400 | 2900 J | 0.045 J | 190000 J | C301 | 1050 | 130 | 8500 | 2100 J |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 250 | 205 | 82 | 1.8 J | 88000 J | C662 | 807 | 170 J | 6170 | 1720 J | 1.3 U | 88000 J | C662 | 663 | 120 J | 5600 | 1310 J |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 1020 | 854 | 84 | 0.24 | 110000 J | C301 | 1170 | 550 J | 5100 | 2920 J | 0.1 U | 110000 J | C301 | 991 | 420 J | 4680 | 2400 J |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 250 | 205 | 82 | 3.6 J | 15000 J | C662 | 632 | 370 J | 1390 | 1560 J | 3 U | 15000 J | C662 | 520 | 275 J | 1280 | 1360 J |
| Total Petroleum Hydrocarbons | mg/kg | 1109 | 969 | 87 | 0.32 JT | 321000 JT | C301 | 2360 | 680 JA | 14500 | 5240 J | 0.1 UT | 321000 JT | C301 | 2070 | 558 JA | 13600 | 4520 J |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 250 | 214 | 86 | 2.6 JA | 103000 JA | C662 | 1380 | 518 J | 7160 | 3540 J | 2.6 JA | 103000 JA | C662 | 1180 | 405 J | 6640 | 2460 J |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TEQ - toxic equivalent concentration

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-12. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Eastern Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| ***Study Area*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 645 | 576 | 89 | 0.03 | 10.1 | T4-UP13 | 0.509 | 0.295 | 0.85 | 1.63 | 0.00159 U | 10.1 | T4-UP13 | 0.489 | 0.288 | 0.815 | 1.6 |
| Lead | mg/kg | 661 | 647 | 98 | 1.1 J | 13400 T | GWC1 | 71.2 | 18 | 544 | 151 | 1.1 J | 13400 T | GWC1 | 70.1 | 18.6 | 538 | 147 |
| Mercury | mg/kg | 641 | 585 | 91 | 0.005 | 65.2 T | GWC1 | 0.223 | 0.073 | 2.7 | 0.297 | 0.005 | 65.2 T | GWC1 | 0.207 | 0.07 | 2.58 | 0.279 |
| Nickel | mg/kg | 630 | 621 | 99 | 9.2 | 594 | PSY27 | 25.8 | 23.3 | 26.2 | 34.9 | 9.2 | 594 | PSY27 | 25.8 | 23.3 | 26 | 34.5 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 134 | 134 | 100 | 0.00000104 JT | 0.122 JT | G092 | 0.00639 | 0.000731 | 0.0191 | 0.031 | 0.00000104 JT | 0.122 JT | G092 | 0.00639 | 0.000731 | 0.0191 | 0.031 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 462 | 84 | 18 | 0.0031 J | 10.9 JT | G372-1 | 2.15 | 0.898 | 2.7 | 7.33 | 0.0031 J | 20 UJ | HC-S-16; HC-S-28; HC-S-36; HC-S-39; HC-S-43 | 1.15 | 0.26 | 2.68 | 6 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 714 | 670 | 94 | 1.3 J | 48000 | T4-UP13 | 872 | 86.4 | 3560 | 3960 | 0.24 U | 48000 | T4-UP13 | 819 | 80.9 | 3460 | 3800 |
| Total HPAHs | µg/kg | 714 | 703 | 98 | 3.3 JT | 420000 T | T4-UP13 | 7710 | 916 | 29700 | 35700 | 3.3 JT | 420000 T | T4-UP13 | 7590 | 885 | 29500 | 34800 |
| Total LPAHs | µg/kg | 714 | 666 | 93 | 1.35 JT | 130000 T | G609 | 1320 | 179 | 6390 | 4720 | 1.35 JT | 130000 T | G609 | 1230 | 140 | 6180 | 4630 |
| Naphthalene | µg/kg | 714 | 466 | 65 | 0.27 J | 3100 | RB04 | 84.7 | 23 | 263 | 320 | 0.27 J | 3100 | RB04 | 61.3 | 19 | 216 | 217 |
| Phenanthrene | µg/kg | 714 | 663 | 93 | 0.53 J | 87000 | G609 | 764 | 92.5 | 4010 | 2690 | 0.53 J | 87000 | G609 | 710 | 77 | 3870 | 2460 |
| Total cPAHs | µg/kg | 714 | 692 | 97 | 0.00314 JT | 66600 T | T4-UP13 | 1220 | 122 | 5070 | 5580 | 0.00314 JT | 66600 T | T4-UP13 | 1180 | 115 | 4990 | 5480 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 653 | 262 | 40 | 3 J | 2800 | G111 | 78.8 | 23.1 | 242 | 240 | 1.6 U | 2800 | G111 | 59.7 | 19 | 190 | 230 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 552 | 152 | 28 | 0.0122 J | 6.18 J | G416 | 0.938 | 0.431 | 1.23 | 4.12 | 0.0122 J | 400 UJ | HC-S-04; HC-S-05; HC-S-07 | 8.22 | 1.28 | 32.5 | 20 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 613 | 120 | 20 | 0.53 NJ | 8410 J | 52C01 | 105 | 8.15 | 770 | 180 | 0.174 U | 8410 J | 52C01 | 73.5 | 8.2 | 367 | 287 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 363 | 330 | 91 | 0.046 J | 2600 J | G609 | 140 | 73.1 | 272 | 462 | 0.046 J | 2600 J | G609 | 134 | 76 | 260 | 428 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 62 | 59 | 95 | 6.2 JT | 8100 J | SL004 | 271 | 46 | 1090 | 1320 | 6.2 JT | 8100 J | SL004 | 260 | 45 | 1060 | 1260 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 260 | 246 | 95 | 0.29 | 6700 J | C092 | 535 | 395 | 720 | 1500 | 0.29 | 6700 J | C092 | 511 | 380 | 708 | 1500 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 62 | 62 | 100 | 20 JT | 9400 J | SL015 | 545 | 180 | 1650 | 918 | 20 JT | 9400 J | SL015 | 545 | 180 | 1650 | 918 |
| Total Petroleum Hydrocarbons | mg/kg | 363 | 335 | 92 | 0.34 JT | 8400 JT | C533 | 535 | 366 | 877 | 1570 | 0.34 JT | 8400 JT | C533 | 501 | 342 | 851 | 1500 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 62 | 62 | 100 | 26 JA | 17400 JA | SL004 | 803 | 225 | 2570 | 2290 | 26 JA | 17400 JA | SL004 | 803 | 225 | 2570 | 2290 |
| ***RM 01.9-03*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 72 | 60 | 83 | 0.103 | 2.1 | RB08 | 0.55 | 0.377 | 0.464 | 1.6 | 0.103 | 2.1 | RB08 | 0.636 | 0.407 | 0.466 | 1.55 |
| Lead | mg/kg | 72 | 66 | 92 | 5.1 | 166 | RB09 | 31.5 | 16 | 33.4 | 109 | 5.1 | 166 | RB09 | 30.6 | 16.2 | 32.2 | 108 |
| Mercury | mg/kg | 72 | 64 | 89 | 0.005 | 0.249 | G609 | 0.0713 | 0.0715 | 0.0377 | 0.119 | 0.005 | 0.249 | G609 | 0.0669 | 0.07 | 0.0384 | 0.118 |
| Nickel | mg/kg | 72 | 67 | 93 | 12.4 | 60.8 | RB09 | 25.1 | 23.5 | 8.29 | 37.3 | 12.4 | 60.8 | RB09 | 25.3 | 24.6 | 8.02 | 36.1 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 26 | 26 | 100 | 0.0000254 JT | 0.118 JT | G025 | 0.0105 | 0.00107 | 0.0247 | 0.0429 | 0.0000254 JT | 0.118 JT | G025 | 0.0105 | 0.00107 | 0.0247 | 0.0429 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 57 | 3 | 5 | 0.697 J | 9.9 NJ | G609 | 4.69 | 3.48 | 4.72 | 9.26 | 0.0161 U | 9.9 NJ | G609 | 0.5 | 0.146 | 1.39 | 1.62 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 72 | 65 | 90 | 1.3 J | 7800 | G609 | 253 | 42 | 1090 | 270 | 1.3 J | 7800 | G609 | 230 | 39 | 1040 | 253 |
| Total HPAHs | µg/kg | 72 | 67 | 93 | 19.7 JT | 110000 T | G609 | 2890 | 400 | 14100 | 2670 | 19 UT | 110000 T | G609 | 2690 | 378 | 13600 | 2460 |
| Total LPAHs | µg/kg | 72 | 60 | 83 | 4.63 JT | 130000 T | G609 | 2540 | 69.2 | 16800 | 746 | 4.63 JT | 130000 T | G609 | 2120 | 54.3 | 15400 | 731 |
| Naphthalene | µg/kg | 72 | 40 | 56 | 3.2 | 3100 | RB04 | 111 | 13.5 | 497 | 117 | 0.62 U | 3100 | RB04 | 65.8 | 10 | 371 | 48.1 |
| Phenanthrene | µg/kg | 72 | 60 | 83 | 1.7 J | 87000 | G609 | 1650 | 33 | 11200 | 573 | 1.7 J | 87000 | G609 | 1370 | 23.5 | 10300 | 455 |
| Total cPAHs | µg/kg | 72 | 66 | 92 | 1.11 T | 10700 T | G609 | 338 | 58.5 | 1460 | 368 | 1.11 T | 10700 T | G609 | 311 | 56.3 | 1400 | 356 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 72 | 23 | 32 | 4.7 J | 110 | 02R015 | 18 | 8.2 | 23 | 44.9 | 1.8 U | 110 | 02R015 | 13.1 | 7.3 | 16.1 | 34.5 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 72 | 10 | 14 | 0.0404 J | 3.3 | DG13 | 0.951 | 0.427 | 1.09 | 2.87 | 0.0171 U | 10 U | RB06; RB08 | 4.18 | 3.35 | 3.84 | 9.9 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 72 | 3 | 4 | 1.8 J | 57 | G608 | 20.3 | 2.2 | 31.8 | 51.5 | 0.37 U | 300 U | RB01; RB03; RB06; RB07; RB08; RB10; RB11; RB12 | 64.8 | 3.6 | 119 | 300 |

Table D1.3-12. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Eastern Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 41 | 40 | 98 | 0.046 J | 2600 J | G609 | 136 | 82.5 | 401 | 140 | 0.046 J | 2600 J | G609 | 133 | 82 | 397 | 140 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 8 | 8 | 100 | 39 J | 1500 J | G609 | 228 | 47.5 | 514 | 993 | 39 J | 1500 J | G609 | 228 | 47.5 | 514 | 993 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 40 | 35 | 88 | 0.29 | 1800 J | G609 | 449 | 460 | 292 | 626 | 0.29 | 1800 J | G609 | 415 | 445 | 289 | 621 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 8 | 8 | 100 | 160 J | 850 J | G609 | 268 | 185 | 236 | 626 | 160 J | 850 J | G609 | 268 | 185 | 236 | 626 |
| Total Petroleum Hydrocarbons | mg/kg | 41 | 40 | 98 | 0.34 JT | 4400 JA | G609 | 529 | 526 | 672 | 713 | 0.34 JT | 4400 JA | G609 | 517 | 525 | 668 | 710 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 8 | 8 | 100 | 199 JA | 2350 JA | G609 | 495 | 233 | 750 | 1620 | 199 JA | 2350 JA | G609 | 495 | 233 | 750 | 1620 |
| ***RM 03-04*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 66 | 65 | 98 | 0.06 | 2.86 | G092 | 0.352 | 0.286 | 0.389 | 0.894 | 0.06 | 2.86 | G092 | 0.35 | 0.284 | 0.387 | 0.892 |
| Lead | mg/kg | 66 | 65 | 98 | 5 | 204 | G094 | 21.6 | 14.7 | 28.4 | 57.7 | 5 | 204 | G094 | 21.3 | 14.5 | 28.3 | 57.3 |
| Mercury | mg/kg | 80 | 73 | 91 | 0.009 J | 0.338 | G094 | 0.0812 | 0.067 | 0.0679 | 0.258 | 0.009 J | 0.338 | G094 | 0.0792 | 0.064 | 0.0655 | 0.253 |
| Nickel | mg/kg | 66 | 65 | 98 | 12.4 J | 41.3 | G092 | 23.9 | 23.8 | 5.44 | 32.6 | 12.4 J | 41.3 | G092 | 23.8 | 23.7 | 5.48 | 32.5 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 16 | 16 | 100 | 0.00000316 JT | 0.122 JT | G092 | 0.0141 | 0.00144 | 0.0322 | 0.0708 | 0.00000316 JT | 0.122 JT | G092 | 0.0141 | 0.00144 | 0.0322 | 0.0708 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 60 | 13 | 22 | 0.0031 J | 2.61 NJ | G080 | 1.09 | 0.593 | 1.04 | 2.6 | 0.0031 J | 3 U | SD11; SD12 | 0.507 | 0.178 | 0.797 | 2.6 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 81 | 80 | 99 | 1.7 J | 3800 T | 03R005 | 254 | 88.5 | 614 | 1110 | 1.7 J | 3800 T | 03R005 | 252 | 87 | 611 | 1100 |
| Total HPAHs | µg/kg | 81 | 81 | 100 | 17.9 JT | 54900 JT | 03R005 | 3120 | 889 | 8490 | 15000 | 17.9 JT | 54900 JT | 03R005 | 3120 | 889 | 8490 | 15000 |
| Total LPAHs | µg/kg | 81 | 79 | 98 | 2.87 JT | 15000 JT | SED01 | 749 | 100 | 2370 | 2780 | 2.87 JT | 15000 JT | SED01 | 731 | 96.9 | 2340 | 2740 |
| Naphthalene | µg/kg | 81 | 49 | 60 | 1.4 J | 1500 J | SED01 | 50.3 | 19 | 212 | 65.2 | 0.47 U | 1500 J | SED01 | 36.2 | 15 | 166 | 64 |
| Phenanthrene | µg/kg | 81 | 79 | 98 | 1.4 J | 7900 | SED01 | 416 | 60 | 1300 | 1430 | 1.4 J | 7900 | SED01 | 406 | 54 | 1290 | 1400 |
| Total cPAHs | µg/kg | 81 | 80 | 99 | 2.83 JT | 5540 T | 03R005 | 378 | 132 | 913 | 1660 | 2.83 JT | 5540 T | 03R005 | 374 | 128 | 908 | 1640 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 66 | 30 | 45 | 5.5 J | 1200 | G106 | 99 | 25 | 224 | 290 | 1.7 U | 1200 | G106 | 52.3 | 14.5 | 157 | 213 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 69 | 26 | 38 | 0.0122 J | 4.89 J | G106 | 0.511 | 0.283 | 0.942 | 1.19 | 0.0122 J | 21 UJ | G094 | 4.2 | 0.49 | 6.72 | 19.6 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 66 | 10 | 15 | 1.1 J | 13 J | G094 | 3.93 | 3.25 | 3.66 | 10 | 0.53 U | 99 UJ | SD006; SD010 | 20.8 | 3.9 | 34.1 | 97.8 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 32 | 31 | 97 | 8 J | 1300 J | C089 | 152 | 76 | 299 | 770 | 8 J | 1300 J | C089 | 148 | 74 | 296 | 727 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 7 | 7 | 100 | 45 J | 86 J | C099 | 60.1 | 56 | 13.9 | 81.5 | 45 J | 86 J | C099 | 60.1 | 56 | 13.9 | 81.5 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 32 | 29 | 91 | 34 J | 6700 J | C092 | 694 | 340 | 1330 | 2760 | 25 UT | 6700 J | C092 | 631 | 320 | 1280 | 2450 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 7 | 7 | 100 | 130 J | 220 J | C099 | 181 | 180 | 31.3 | 217 | 130 J | 220 J | C099 | 181 | 180 | 31.3 | 217 |
| Total Petroleum Hydrocarbons | mg/kg | 32 | 31 | 97 | 9.3 JT | 7910 JT | C092 | 803 | 407 | 1580 | 3380 | 9.3 JT | 7910 JT | C092 | 779 | 397 | 1560 | 3220 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 7 | 7 | 100 | 190 JT | 310 JT | C099 | 242 | 240 | 39.6 | 297 | 190 JT | 310 JT | C099 | 242 | 240 | 39.6 | 297 |
| ***RM 04-05*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 108 | 104 | 96 | 0.084 | 10.1 | T4-UP13 | 1.12 | 0.493 | 1.71 | 4.88 | 0.00167 U | 10.1 | T4-UP13 | 1.08 | 0.455 | 1.69 | 4.56 |
| Lead | mg/kg | 116 | 116 | 100 | 1.1 J | 1950 | T4-UP07 | 133 | 33.9 | 311 | 517 | 1.1 J | 1950 | T4-UP07 | 133 | 33.9 | 311 | 517 |
| Mercury | mg/kg | 93 | 88 | 95 | 0.009 J | 0.34 J | HC-S-25 | 0.0768 | 0.0735 | 0.0546 | 0.15 | 0.00894 U | 0.34 J | HC-S-25 | 0.0747 | 0.0702 | 0.0541 | 0.143 |
| Nickel | mg/kg | 93 | 93 | 100 | 9.21 J | 78.1 | G111 | 22.6 | 21.4 | 8.52 | 30.2 | 9.21 J | 78.1 | G111 | 22.6 | 21.4 | 8.52 | 30.2 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 7 | 7 | 100 | 0.00012 JT | 0.00338 NT | 03R004 | 0.00145 | 0.000628 | 0.00146 | 0.00338 | 0.00012 JT | 0.00338 NT | 03R004 | 0.00145 | 0.000628 | 0.00146 | 0.00338 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 29 | 4 | 14 | 0.0138 J | 0.986 NJ | G111 | 0.269 | 0.0391 | 0.478 | 0.847 | 0.0138 J | 20 UJ | HC-S-16; HC-S-28; HC-S-36; HC-S-39; HC-S-43 | 4.43 | 0.922 | 7.56 | 20 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 121 | 120 | 99 | 1.6 J | 48000 | T4-UP13 | 3730 | 769 | 7670 | 15200 | 0.24 U | 48000 | T4-UP13 | 3700 | 740 | 7650 | 15000 |
| Total HPAHs | µg/kg | 121 | 121 | 100 | 3.3 JT | 420000 T | T4-UP13 | 31900 | 7290 | 64200 | 124000 | 3.3 JT | 420000 T | T4-UP13 | 31900 | 7290 | 64200 | 124000 |
| Total LPAHs | µg/kg | 121 | 120 | 99 | 1.35 JT | 57800 T | T4-UP13 | 3210 | 884 | 7210 | 10400 | 1.35 JT | 57800 T | T4-UP13 | 3180 | 867 | 7190 | 10300 |
| Naphthalene | µg/kg | 121 | 99 | 82 | 0.27 J | 1700 | T4-UP13 | 117 | 48 | 205 | 441 | 0.27 J | 1700 | T4-UP13 | 106 | 34 | 191 | 400 |
| Phenanthrene | µg/kg | 121 | 119 | 98 | 0.53 J | 32000 | T4-UP13 | 1930 | 540 | 4190 | 6520 | 0.53 J | 32000 | T4-UP13 | 1900 | 540 | 4170 | 6400 |
| Total cPAHs | µg/kg | 121 | 121 | 100 | 0.143 JT | 66600 T | T4-UP13 | 5340 | 1110 | 11100 | 20800 | 0.143 JT | 66600 T | T4-UP13 | 5340 | 1110 | 11100 | 20800 |

Table D1.3-12. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Eastern Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 122 | 43 | 35 | 3.8 J | 2800 | G111 | 115 | 22 | 424 | 239 | 1.7 U | 2800 | G111 | 124 | 20 | 339 | 400 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 57 | 7 | 12 | 0.0563 J | 0.742 J | G112 | 0.23 | 0.134 | 0.241 | 0.611 | 0.0563 J | 400 UJ | HC-S-04; HC-S-05; HC-S-07 | 41.9 | 19 | 93.5 | 240 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 57 | 11 | 19 | 2 NJ | 8410 J | 52C01 | 782 | 18 | 2530 | 4240 | 0.43 U | 8410 J | 52C01 | 317 | 60 | 1140 | 1200 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 111 | 81 | 73 | 1.96 J | 960 | HC-S-25 | 141 | 68.8 | 174 | 480 | 1.96 J | 960 | HC-S-25 | 124 | 87.2 | 153 | 435 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 66 | 60 | 91 | 7.7 J | 2260 | T4-IM-09 | 367 | 247 | 403 | 1200 | 3.99 U | 2260 | T4-IM-09 | 341 | 225 | 393 | 1180 |
| Total Petroleum Hydrocarbons | mg/kg | 111 | 85 | 77 | 6.55 A | 2830 A | T4-IM-09 | 411 | 289 | 456 | 1280 | 3.99 UA | 2830 A | T4-IM-09 | 336 | 172 | 421 | 1120 |
| ***RM 05-06*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 72 | 52 | 72 | 0.03 | 0.539 J | G203-2 | 0.26 | 0.249 | 0.112 | 0.5 | 0.00777 U | 0.725 U | 5203 | 0.277 | 0.268 | 0.154 | 0.508 |
| Lead | mg/kg | 72 | 72 | 100 | 4.7 | 577 | SED01 | 58.6 | 26.7 | 93.8 | 150 | 4.7 | 577 | SED01 | 58.6 | 26.7 | 93.8 | 150 |
| Mercury | mg/kg | 72 | 66 | 92 | 0.0085 J | 4.84 | WR-PG-27 | 0.182 | 0.0974 | 0.589 | 0.29 | 0.0085 J | 4.84 | WR-PG-27 | 0.172 | 0.0925 | 0.564 | 0.255 |
| Nickel | mg/kg | 72 | 70 | 97 | 12.3 J | 167 | SED02 | 32.9 | 23.8 | 29.9 | 107 | 12.3 J | 167 | SED02 | 32.5 | 23.6 | 29.6 | 107 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 8 | 8 | 100 | 0.000309 JT | 0.00736 T | G218 | 0.00202 | 0.000959 | 0.00246 | 0.00618 | 0.000309 JT | 0.00736 T | G218 | 0.00202 | 0.000959 | 0.00246 | 0.00618 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 65 | 14 | 22 | 0.15 | 8.52 NJ | G209 | 3.02 | 2.04 | 2.52 | 6.98 | 0.0166 U | 8.52 NJ | G209 | 1.12 | 0.58 | 1.58 | 5 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 72 | 72 | 100 | 4.2 T | 2520 | 52A05 | 473 | 310 | 498 | 1550 | 4.2 T | 2520 | 52A05 | 473 | 310 | 498 | 1550 |
| Total HPAHs | µg/kg | 72 | 72 | 100 | 45.1 T | 23900 T | 52A05 | 4330 | 3270 | 4270 | 12500 | 45.1 T | 23900 T | 52A05 | 4330 | 3270 | 4270 | 12500 |
| Total LPAHs | µg/kg | 72 | 70 | 97 | 26.2 JT | 4660 T | SD056 | 866 | 599 | 958 | 2990 | 19 UT | 4660 T | SD056 | 842 | 548 | 955 | 2910 |
| Naphthalene | µg/kg | 72 | 62 | 86 | 3.26 J | 2300 | G199 | 120 | 54 | 301 | 314 | 3.26 J | 2300 | G199 | 106 | 42.2 | 281 | 270 |
| Phenanthrene | µg/kg | 72 | 70 | 97 | 9.67 J | 2200 | SD056 | 432 | 293 | 443 | 1260 | 9.67 J | 2200 | SD056 | 420 | 275 | 442 | 1250 |
| Total cPAHs | µg/kg | 72 | 72 | 100 | 6.17 T | 3860 T | 52A05 | 678 | 454 | 705 | 2080 | 6.17 T | 3860 T | 52A05 | 678 | 454 | 705 | 2080 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 69 | 21 | 30 | 4.4 J | 430 | G206 | 49 | 16 | 92.6 | 130 | 2.1 U | 430 | G206 | 39.9 | 16.7 | 71.5 | 190 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 69 | 25 | 36 | 0.119 | 3.62 J | G209 | 0.921 | 0.682 | 0.819 | 2.07 | 0.069 UT | 20 U | G203-2; SD042; SD053; SD058 | 3.77 | 1.14 | 6.34 | 19.6 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 69 | 24 | 35 | 1.8 J | 88 J | SD056 | 18.2 | 10.4 | 20.2 | 47.5 | 0.57 U | 223 U | 5003 | 35 | 10 | 55.9 | 185 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 43 | 43 | 100 | 4.92 | 360 J | G215 | 99.8 | 76 | 87.9 | 284 | 4.92 | 360 J | G215 | 99.8 | 76 | 87.9 | 284 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 4 | 4 | 100 | 43 J | 76 J | G643 | 54.8 | 50 | 14.5 | 72.1 | 43 J | 76 J | G643 | 54.8 | 50 | 14.5 | 72.1 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 26 | 26 | 100 | 100 J | 920 J | G215 | 504 | 455 | 200 | 803 | 100 J | 920 J | G215 | 504 | 455 | 200 | 803 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 4 | 4 | 100 | 180 J | 240 J | G643 | 205 | 200 | 26.5 | 236 | 180 J | 240 J | G643 | 205 | 200 | 26.5 | 236 |
| Total Petroleum Hydrocarbons | mg/kg | 43 | 43 | 100 | 4.92 A | 1280 JT | G215 | 405 | 430 | 369 | 1010 | 4.92 A | 1280 JT | G215 | 405 | 430 | 369 | 1010 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 4 | 4 | 100 | 230 JA | 316 JA | G643 | 260 | 247 | 38.7 | 307 | 230 JA | 316 JA | G643 | 260 | 247 | 38.7 | 307 |
| ***RM 06-07*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 59 | 52 | 88 | 0.053 | 2.01 T | GWC1 | 0.302 | 0.228 | 0.348 | 0.635 | 0.053 | 2.01 T | GWC1 | 0.296 | 0.243 | 0.327 | 0.573 |
| Lead | mg/kg | 59 | 59 | 100 | 4 J | 13400 T | GWC1 | 249 | 17.5 | 1740 | 59.8 | 4 J | 13400 T | GWC1 | 249 | 17.5 | 1740 | 59.8 |
| Mercury | mg/kg | 58 | 55 | 95 | 0.017 J | 65.2 T | GWC1 | 1.42 | 0.143 | 8.76 | 0.901 | 0.017 J | 65.2 T | GWC1 | 1.35 | 0.139 | 8.53 | 0.897 |
| Nickel | mg/kg | 59 | 59 | 100 | 10.2 | 41 | 06B030 | 22.5 | 22.4 | 5.44 | 29.9 | 10.2 | 41 | 06B030 | 22.5 | 22.4 | 5.44 | 29.9 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 26 | 26 | 100 | 0.00000104 JT | 0.0341 JT | BT016 | 0.00264 | 0.000472 | 0.00716 | 0.0131 | 0.00000104 JT | 0.0341 JT | BT016 | 0.00264 | 0.000472 | 0.00716 | 0.0131 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 50 | 5 | 10 | 0.0124 J | 6.22 NJ | G255 | 2.62 | 0.486 | 3.17 | 6.17 | 0.0124 J | 6.22 NJ | G255 | 0.562 | 0.2 | 1.18 | 0.99 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 79 | 70 | 89 | 1.7 J | 9500 T | 06R040 | 294 | 79.5 | 1140 | 569 | 1.7 J | 9500 T | 06R040 | 262 | 58.3 | 1070 | 521 |
| Total HPAHs | µg/kg | 79 | 75 | 95 | 27 JT | 80700 T | 06R040 | 2740 | 914 | 9440 | 6520 | 13.4 UT | 80700 T | 06R040 | 2600 | 810 | 9220 | 5790 |
| Total LPAHs | µg/kg | 79 | 68 | 86 | 4.83 JT | 28900 T | C293-2 | 1250 | 276 | 4370 | 2220 | 4.83 JT | 28900 T | C293-2 | 1080 | 220 | 4080 | 2100 |
| Naphthalene | µg/kg | 79 | 56 | 71 | 1.9 J | 3000 | 06R040 | 144 | 40.5 | 405 | 369 | 0.75 U | 3000 | 06R040 | 107 | 30 | 345 | 323 |
| Phenanthrene | µg/kg | 79 | 67 | 85 | 1.73 J | 14000 | C293-2 | 604 | 110 | 2300 | 976 | 1.73 J | 14000 | C293-2 | 515 | 70 | 2120 | 928 |
| Total cPAHs | µg/kg | 79 | 73 | 92 | 1.53 T | 12400 T | 06R040 | 388 | 112 | 1460 | 773 | 1.53 T | 12400 T | 06R040 | 360 | 89 | 1400 | 731 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 59 | 11 | 19 | 3.4 J | 18 J | G280; G293 | 8.51 | 6 | 5.87 | 18 | 1.6 U | 260 U | DM-L | 21.7 | 8.2 | 43.9 | 60.1 |

Table D1.3-12. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Eastern Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 60 | 18 | 30 | 0.1 J | 4.12 J | G282 | 1.06 | 0.523 | 1.01 | 2.7 | 0.068 U | 20 U | 06R040; SD060; SD071; SD073; SD074 | 3.52 | 1.08 | 5.9 | 20 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 76 | 17 | 22 | 0.53 NJ | 44 | G247 | 10.7 | 7.1 | 12.6 | 41.6 | 0.2 U | 289 U | SED01-18 | 39.2 | 9.2 | 58.1 | 143 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 27 | 27 | 100 | 3.07 | 2400 J | C533 | 278 | 63 | 604 | 1720 | 3.07 | 2400 J | C533 | 278 | 63 | 604 | 1720 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 7 | 7 | 100 | 6.2 JT | 190 J | G671 | 53.2 | 39 | 62 | 147 | 6.2 JT | 190 J | G671 | 53.2 | 39 | 62 | 147 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 21 | 21 | 100 | 54.9 JT | 6000 J | C533 | 902 | 320 | 1540 | 4500 | 54.9 JT | 6000 J | C533 | 902 | 320 | 1540 | 4500 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 7 | 7 | 100 | 20 JT | 440 J | G671 | 131 | 93 | 142 | 350 | 20 JT | 440 J | G671 | 131 | 93 | 142 | 350 |
| Total Petroleum Hydrocarbons | mg/kg | 27 | 27 | 100 | 3.07 A | 8400 JT | C533 | 979 | 315 | 2000 | 5470 | 3.07 A | 8400 JT | C533 | 979 | 315 | 2000 | 5470 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 7 | 7 | 100 | 26.2 JA | 630 JA | G671 | 184 | 129 | 203 | 496 | 26.2 JA | 630 JA | G671 | 184 | 129 | 203 | 496 |
| ***RM 07-08*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 46 | 43 | 93 | 0.06 | 1.89 J | DM-J | 0.36 | 0.25 | 0.395 | 1.32 | 0.00803 U | 1.89 J | DM-J | 0.337 | 0.244 | 0.391 | 1.18 |
| Lead | mg/kg | 54 | 47 | 87 | 3.67 J | 104 J | 4806 | 18.5 | 14 | 16.6 | 33.5 | 3.67 J | 104 J | 4806 | 18.3 | 14 | 15.6 | 31.8 |
| Mercury | mg/kg | 46 | 41 | 89 | 0.018 | 0.263 | DM-I | 0.0664 | 0.06 | 0.0368 | 0.106 | 0.007 UJ | 0.263 | DM-I | 0.063 | 0.0595 | 0.0369 | 0.103 |
| Nickel | mg/kg | 46 | 46 | 100 | 13.6 J | 98.2 J | 4806 | 27.7 | 25 | 13 | 41.7 | 13.6 J | 98.2 J | 4806 | 27.7 | 25 | 13 | 41.7 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 10 | 10 | 100 | 0.00000342 T | 0.00119 T | G347 | 0.000455 | 0.000436 | 0.000357 | 0.00101 | 0.00000342 T | 0.00119 T | G347 | 0.000455 | 0.000436 | 0.000357 | 0.00101 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 29 | 4 | 14 | 0.0171 JT | 1.05 NJ | G347 | 0.467 | 0.401 | 0.43 | 0.959 | 0.0171 JT | 1.7 U | GRAB-07 | 0.436 | 0.24 | 0.462 | 1.42 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 62 | 53 | 85 | 3.4 | 3900 T | 07R004 | 128 | 32 | 532 | 200 | 3.4 | 3900 T | 07R004 | 112 | 26 | 493 | 179 |
| Total HPAHs | µg/kg | 62 | 61 | 98 | 49 T | 33700 JT | 07R004 | 1190 | 322 | 4310 | 2390 | 10 UT | 33700 JT | 07R004 | 1170 | 296 | 4280 | 2380 |
| Total LPAHs | µg/kg | 62 | 56 | 90 | 5.61 JT | 5220 JT | 07R004 | 250 | 63.4 | 732 | 558 | 5.61 JT | 5220 JT | 07R004 | 227 | 50.1 | 698 | 553 |
| Naphthalene | µg/kg | 62 | 31 | 50 | 1.68 J | 150 | 07R004 | 22.6 | 13 | 28.3 | 63.5 | 1.68 J | 150 | 07R004 | 19.4 | 17 | 21.1 | 44.6 |
| Phenanthrene | µg/kg | 62 | 56 | 90 | 1.1 J | 2400 | 07R004 | 139 | 32.5 | 388 | 377 | 1.1 J | 2400 | 07R004 | 127 | 28.5 | 370 | 372 |
| Total cPAHs | µg/kg | 62 | 58 | 94 | 0.019 T | 5730 T | 07R004 | 173 | 38 | 749 | 314 | 0.019 T | 5730 T | 07R004 | 163 | 35.6 | 725 | 310 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 46 | 13 | 28 | 3.6 J | 48 | G347 | 17.7 | 17 | 11.9 | 36 | 1.9 U | 65 U | DM-J | 15.9 | 19 | 11.9 | 28 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 43 | 15 | 35 | 0.1 J | 2.22 J | G340 | 0.669 | 0.329 | 0.704 | 2.01 | 0.0169 UJT | 20 UJ | GRAB-07; SD095; SD096; SD103; SD106; SD108; SD111 | 7.72 | 1.32 | 9.17 | 20 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 57 | 7 | 12 | 1.2 J | 798 | 4803 | 207 | 36.1 | 303 | 688 | 0.22 U | 1340 U | SED01-22 | 95.5 | 60 | 207 | 302 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 19 | 18 | 95 | 11.9 | 140 J | G676 | 62.1 | 56 | 32.2 | 115 | 8.3 U | 140 J | G676 | 59.3 | 55 | 33.6 | 113 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 10 | 9 | 90 | 21 J | 120 J | G676 | 41.1 | 32 | 30 | 87.6 | 6.4 U | 120 J | G676 | 37.6 | 31.5 | 30.4 | 83.5 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 16 | 16 | 100 | 51 J | 520 J | WR-PG-29 | 318 | 295 | 120 | 490 | 51 J | 520 J | WR-PG-29 | 318 | 295 | 120 | 490 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 10 | 10 | 100 | 26 J | 300 J | G676 | 126 | 125 | 71.9 | 233 | 26 J | 300 J | G676 | 126 | 125 | 71.9 | 233 |
| Total Petroleum Hydrocarbons | mg/kg | 19 | 19 | 100 | 11.9 A | 597 JT | WR-PG-29 | 327 | 345 | 188 | 591 | 11.9 A | 597 JT | WR-PG-29 | 327 | 345 | 188 | 591 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 10 | 10 | 100 | 26 JA | 420 JA | G676 | 163 | 157 | 102 | 316 | 26 JA | 420 JA | G676 | 163 | 157 | 102 | 316 |
| ***RM 08-09*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 17 | 16 | 94 | 0.098 | 0.4 | SD138; SD145 | 0.227 | 0.212 | 0.0769 | 0.4 | 0.00245 U | 0.4 | SD138; SD145 | 0.214 | 0.207 | 0.0923 | 0.4 |
| Lead | mg/kg | 17 | 17 | 100 | 10.6 J | 17.7 | S0601 | 14.5 | 14.4 | 1.91 | 17.3 | 10.6 J | 17.7 | S0601 | 14.5 | 14.4 | 1.91 | 17.3 |
| Mercury | mg/kg | 17 | 17 | 100 | 0.015 | 0.54 | PSY49 | 0.0969 | 0.06 | 0.118 | 0.236 | 0.015 | 0.54 | PSY49 | 0.0969 | 0.06 | 0.118 | 0.236 |
| Nickel | mg/kg | 17 | 17 | 100 | 19.8 | 30.7 | G419 | 25.8 | 26.5 | 3.48 | 30.1 | 19.8 | 30.7 | G419 | 25.8 | 26.5 | 3.48 | 30.1 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 5 | 5 | 100 | 0.000195 T | 0.00058 JT | BT0271 | 0.000368 | 0.000381 | 0.000144 | 0.000544 | 0.000195 T | 0.00058 JT | BT0271 | 0.000368 | 0.000381 | 0.000144 | 0.000544 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 14 | 3 | 21 | 0.0107 JT | 2.03 NJ | G438 | 1.07 | 1.17 | 1.01 | 1.94 | 0.009 U | 2.03 NJ | G438 | 0.652 | 0.308 | 0.729 | 2.01 |

Table D1.3-12. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Eastern Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 17 | 16 | 94 | 6.3 | 62 | G433-2 | 27.5 | 24.8 | 15.8 | 55.3 | 6.3 | 62 | G433-2 | 26.5 | 23.5 | 15.9 | 54.8 |
| Total HPAHs | µg/kg | 17 | 17 | 100 | 62.7 JT | 584 T | G433-2 | 277 | 266 | 152 | 521 | 62.7 JT | 584 T | G433-2 | 277 | 266 | 152 | 521 |
| Total LPAHs | µg/kg | 17 | 15 | 88 | 7.04 JT | 206 T | G438 | 46.4 | 27.5 | 50.8 | 137 | 7.04 JT | 206 T | G438 | 43.5 | 26 | 48.3 | 127 |
| Naphthalene | µg/kg | 17 | 4 | 24 | 9.84 | 46 | G438 | 20.7 | 13.5 | 17.1 | 41.5 | 0.67 UJ | 46 | G438 | 11.5 | 10 | 10.8 | 28.4 |
| Phenanthrene | µg/kg | 17 | 15 | 88 | 2.9 | 91 | G438 | 26.2 | 20 | 23.7 | 74.2 | 2.9 | 91 | G438 | 25.7 | 20 | 22.2 | 71.8 |
| Total cPAHs | µg/kg | 17 | 17 | 100 | 9.79 JT | 96.7 T | G433-2 | 36.9 | 32.6 | 23.9 | 82.5 | 9.79 JT | 96.7 T | G433-2 | 36.9 | 32.6 | 23.9 | 82.5 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 17 | 6 | 35 | 5.8 J | 34 T | BT0272 | 15.3 | 8.35 | 12.5 | 32.6 | 1.8 U | 34 T | BT0272 | 10.9 | 7.7 | 9.65 | 29.5 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 14 | 8 | 57 | 0.184 JT | 0.858 J | G419 | 0.445 | 0.417 | 0.221 | 0.767 | 0.126 U | 24 U | SD145 | 4.23 | 0.566 | 7.68 | 20.8 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 17 | 2 | 12 | 0.78 J | 35.3 J | S0601 | 18 | 18 | 24.4 | 33.6 | 0.66 U | 120 U | SD145 | 34.2 | 4.2 | 46.7 | 104 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 4 | 4 | 100 | 35.8 | 78 JT | BT0272 | 63 | 69 | 19.4 | 77.7 | 35.8 | 78 JT | BT0272 | 63 | 69 | 19.4 | 77.7 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 3 | 3 | 100 | 330 J | 490 JT | BT0272 | 403 | 390 | 80.8 | 480 | 330 J | 490 JT | BT0272 | 403 | 390 | 80.8 | 480 |
| Total Petroleum Hydrocarbons | mg/kg | 4 | 4 | 100 | 35.8 A | 568 JT | BT0272 | 369 | 436 | 233 | 555 | 35.8 A | 568 JT | BT0272 | 369 | 436 | 233 | 555 |
| ***Swan Island Lagoon*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 124 | 109 | 88 | 0.03 | 2.8 | PSY08 | 0.514 | 0.4 | 0.452 | 1.42 | 0.00161 U | 2.8 | PSY08 | 0.458 | 0.353 | 0.453 | 1.3 |
| Lead | mg/kg | 124 | 124 | 100 | 4.59 | 110 | SD128 | 33.2 | 26.4 | 23.5 | 80.8 | 4.59 | 110 | SD128 | 33.2 | 26.4 | 23.5 | 80.8 |
| Mercury | mg/kg | 122 | 106 | 87 | 0.0162 J | 0.86 | SD128 | 0.125 | 0.116 | 0.106 | 0.294 | 0.00943 U | 0.86 | SD128 | 0.112 | 0.1 | 0.104 | 0.273 |
| Nickel | mg/kg | 124 | 124 | 100 | 9.2 | 594 | PSY27 | 28 | 24 | 51.6 | 33 | 9.2 | 594 | PSY27 | 28 | 24 | 51.6 | 33 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 20 | 20 | 100 | 0.00000778 JT | 0.117 JT | G393 | 0.0101 | 0.00276 | 0.0256 | 0.0223 | 0.00000778 JT | 0.117 JT | G393 | 0.0101 | 0.00276 | 0.0256 | 0.0223 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 78 | 13 | 17 | 0.00995 J | 10.9 JT | G372-1 | 3.98 | 4.62 | 3.4 | 8.76 | 0.00735 U | 13.4 U | G393 | 1.66 | 0.863 | 2.68 | 7.19 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 124 | 112 | 90 | 2.2 J | 2600 | M0304 | 206 | 93.9 | 354 | 798 | 2.08 U | 2600 | M0304 | 191 | 88.5 | 340 | 776 |
| Total HPAHs | µg/kg | 124 | 123 | 99 | 6.73 JT | 93000 T | M0304 | 3050 | 1230 | 8810 | 10200 | 6.73 JT | 93000 T | M0304 | 3020 | 1220 | 8780 | 10200 |
| Total LPAHs | µg/kg | 124 | 118 | 95 | 5.8 T | 13400 JT | M0304 | 556 | 201 | 1350 | 1910 | 2.08 UT | 13400 JT | M0304 | 530 | 192 | 1330 | 1870 |
| Naphthalene | µg/kg | 124 | 77 | 62 | 1.73 J | 230 | 09R001 | 29.5 | 22 | 33 | 65.2 | 0.99 U | 230 | 09R001 | 25.7 | 18.1 | 30.4 | 79.5 |
| Phenanthrene | µg/kg | 124 | 118 | 95 | 4.9 | 11300 | M0304 | 362 | 108 | 1090 | 1220 | 2.08 U | 11300 | M0304 | 345 | 100 | 1060 | 1190 |
| Total cPAHs | µg/kg | 124 | 120 | 97 | 0.00314 JT | 4360 T | M0304 | 290 | 131 | 535 | 1200 | 0.00314 JT | 4360 T | M0304 | 282 | 124 | 528 | 1200 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 121 | 88 | 73 | 6.6 J | 2010 J | PP01M103 | 120 | 55 | 252 | 394 | 1.9 U | 2010 J | PP01M103 | 104 | 44 | 223 | 339 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 86 | 19 | 22 | 0.1 J | 6.18 J | G416 | 1.9 | 1.11 | 1.92 | 4.8 | 0.068 U | 34 UJ | G367 | 6.13 | 2.57 | 8.4 | 20 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 118 | 29 | 25 | 0.81 J | 250 JT | 09R001 | 56.8 | 17 | 74.1 | 206 | 0.174 U | 250 JT | 09R001 | 59.5 | 52 | 58.5 | 178 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 54 | 54 | 100 | 3.92 | 966 JT | PP01M101 | 176 | 103 | 195 | 511 | 3.92 | 966 JT | PP01M101 | 176 | 103 | 195 | 511 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 2 | 2 | 100 | 45 J | 59 J | G696 | 52 | 52 | 9.9 | 58.3 | 45 J | 59 J | G696 | 52 | 52 | 9.9 | 58.3 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 30 | 30 | 100 | 86 JT | 1700 J | G415 | 814 | 705 | 434 | 1500 | 86 JT | 1700 J | G415 | 814 | 705 | 434 | 1500 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 2 | 2 | 100 | 190 J | 240 J | G696 | 215 | 215 | 35.4 | 238 | 190 J | 240 J | G696 | 215 | 215 | 35.4 | 238 |
| Total Petroleum Hydrocarbons | mg/kg | 54 | 54 | 100 | 3.92 A | 2180 JA | G415 | 628 | 540 | 632 | 1880 | 3.92 A | 2180 JA | G415 | 628 | 540 | 632 | 1880 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 2 | 2 | 100 | 235 JA | 299 JA | G696 | 267 | 267 | 45.3 | 296 | 235 JA | 299 JA | G696 | 267 | 267 | 45.3 | 296 |
| ***RM 09-10*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 39 | 33 | 85 | 0.05 | 0.344 | G487 | 0.18 | 0.188 | 0.0635 | 0.26 | 0.00159 U | 0.344 | G487 | 0.153 | 0.179 | 0.0875 | 0.247 |
| Lead | mg/kg | 39 | 39 | 100 | 7.23 J | 55 | G487 | 17.3 | 12.7 | 11.3 | 41.3 | 7.23 J | 55 | G487 | 17.3 | 12.7 | 11.3 | 41.3 |
| Mercury | mg/kg | 39 | 33 | 85 | 0.0146 J | 0.311 | WR-PG-39 | 0.0582 | 0.047 | 0.0494 | 0.0891 | 0.0146 J | 0.311 | WR-PG-39 | 0.0577 | 0.05 | 0.0455 | 0.0882 |
| Nickel | mg/kg | 39 | 38 | 97 | 11.6 JT | 28.6 | G442 | 21 | 21.9 | 4.84 | 28 | 11.6 JT | 28.6 | G442 | 20.9 | 21.8 | 4.82 | 28 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 6 | 6 | 100 | 0.0000176 JT | 0.000621 JT | G463 | 0.000344 | 0.000288 | 0.000236 | 0.000621 | 0.0000176 JT | 0.000621 JT | G463 | 0.000344 | 0.000288 | 0.000236 | 0.000621 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 39 | 8 | 21 | 0.17 NJ | 7.31 NJ | G470 | 1.54 | 0.695 | 2.38 | 5.32 | 0.0047 U | 7.31 NJ | G470 | 0.99 | 0.41 | 1.65 | 6 |

Table D1.3-12. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Eastern Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 39 | 35 | 90 | 4.2 | 110 | WR-PG-37 | 19.7 | 15 | 20.2 | 47.3 | 1.59 UJ | 110 | WR-PG-37 | 18.3 | 15 | 19.7 | 41.1 |
| Total HPAHs | µg/kg | 39 | 39 | 100 | 9.21 JT | 1040 T | WR-PG-37 | 194 | 148 | 189 | 447 | 9.21 JT | 1040 T | WR-PG-37 | 194 | 148 | 189 | 447 |
| Total LPAHs | µg/kg | 39 | 33 | 85 | 2.79 JT | 139 T | WR-PG-37 | 29.3 | 22.2 | 26.2 | 67.6 | 1.55 UJT | 139 T | WR-PG-37 | 26.9 | 20 | 24.9 | 62.3 |
| Naphthalene | µg/kg | 39 | 10 | 26 | 2.4 | 12 | WR-PG-37 | 6.27 | 6.4 | 2.93 | 10.6 | 1.47 UJ | 20 U | 09B027 | 6.53 | 3.6 | 5.88 | 19 |
| Phenanthrene | µg/kg | 39 | 32 | 82 | 2.6 | 77 | WR-PG-37 | 16.5 | 13.5 | 13.6 | 32.2 | 1.55 UJT | 77 | WR-PG-37 | 15.6 | 14 | 12.9 | 31 |
| Total cPAHs | µg/kg | 39 | 38 | 97 | 0.241 T | 162 T | WR-PG-37 | 26.3 | 21.7 | 29.5 | 63 | 0.241 T | 162 T | WR-PG-37 | 26.1 | 21.6 | 29.2 | 60.7 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 39 | 17 | 44 | 4.2 J | 71 | GSP10E | 13.5 | 7.1 | 16.2 | 36.6 | 2 UJ | 168 UJ | S0506 | 16.1 | 7.7 | 27.8 | 32.3 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 37 | 7 | 19 | 0.074 J | 5.7 | WR-PG-39 | 1.78 | 0.15 | 2.35 | 5.3 | 0.074 J | 5.7 | WR-PG-39 | 1.67 | 0.45 | 1.77 | 4.56 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 39 | 4 | 10 | 1 J | 3.4 NJ | G741 | 1.83 | 1.45 | 1.11 | 3.16 | 0.22 U | 168 UJ | S0506 | 14.5 | 3.6 | 33.4 | 100 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 21 | 21 | 100 | 4.45 JT | 320 J | G731 | 56.6 | 41 | 66.2 | 130 | 4.45 JT | 320 J | G731 | 56.6 | 41 | 66.2 | 130 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 4 | 4 | 100 | 26 J | 170 J | G731 | 65.3 | 32.5 | 70 | 150 | 26 J | 170 J | G731 | 65.3 | 32.5 | 70 | 150 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 15 | 15 | 100 | 115 JT | 810 J | G731 | 353 | 340 | 165 | 600 | 115 JT | 810 J | G731 | 353 | 340 | 165 | 600 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 4 | 4 | 100 | 120 J | 360 J | G731 | 201 | 163 | 113 | 337 | 120 J | 360 J | G731 | 201 | 163 | 113 | 337 |
| Total Petroleum Hydrocarbons | mg/kg | 21 | 21 | 100 | 4.45 JA | 1130 JA | G731 | 309 | 311 | 270 | 640 | 4.45 JA | 1130 JA | G731 | 309 | 311 | 270 | 640 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 4 | 4 | 100 | 146 JA | 530 JA | G731 | 267 | 195 | 181 | 487 | 146 JA | 530 JA | G731 | 267 | 195 | 181 | 487 |
| ***RM 10-11*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 18 | 18 | 100 | 0.088 | 0.67 | SD04 | 0.237 | 0.221 | 0.125 | 0.419 | 0.088 | 0.67 | SD04 | 0.237 | 0.221 | 0.125 | 0.419 |
| Lead | mg/kg | 18 | 18 | 100 | 9.73 | 61.3 | SD04 | 18.2 | 14.5 | 12 | 35 | 9.73 | 61.3 | SD04 | 18.2 | 14.5 | 12 | 35 |
| Mercury | mg/kg | 18 | 18 | 100 | 0.01 J | 0.144 | G505 | 0.0653 | 0.0605 | 0.027 | 0.0981 | 0.01 J | 0.144 | G505 | 0.0653 | 0.0605 | 0.027 | 0.0981 |
| Nickel | mg/kg | 18 | 18 | 100 | 10.4 | 31.2 | G495 | 22.1 | 22.5 | 6.03 | 31 | 10.4 | 31.2 | G495 | 22.1 | 22.5 | 6.03 | 31 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 6 | 6 | 100 | 0.000312 JT | 0.000763 JT | G502 | 0.000553 | 0.000582 | 0.000188 | 0.000755 | 0.000312 JT | 0.000763 JT | G502 | 0.000553 | 0.000582 | 0.000188 | 0.000755 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 15 | 4 | 27 | 0.0067 J | 9.48 NJ | G495 | 4.14 | 3.55 | 4.39 | 8.95 | 0.0067 J | 9.48 NJ | G495 | 1.73 | 0.48 | 2.84 | 7.01 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 22 | 22 | 100 | 7.2 | 5000 | GA-PD02 | 455 | 52.5 | 1210 | 2980 | 7.2 | 5000 | GA-PD02 | 455 | 52.5 | 1210 | 2980 |
| Total HPAHs | µg/kg | 22 | 22 | 100 | 72.6 JT | 40300 T | GA-PD02 | 3960 | 677 | 9950 | 26300 | 72.6 JT | 40300 T | GA-PD02 | 3960 | 677 | 9950 | 26300 |
| Total LPAHs | µg/kg | 22 | 22 | 100 | 7.68 JT | 5700 T | GA-PD02 | 614 | 110 | 1460 | 4220 | 7.68 JT | 5700 T | GA-PD02 | 614 | 110 | 1460 | 4220 |
| Naphthalene | µg/kg | 22 | 14 | 64 | 4 J | 330 | GA-PD02 | 54.5 | 12.5 | 105 | 291 | 0.83 U | 330 | GA-PD02 | 37.6 | 10.4 | 85.9 | 259 |
| Phenanthrene | µg/kg | 22 | 22 | 100 | 2.9 | 3400 | GA-PD02 | 338 | 64.5 | 807 | 1930 | 2.9 | 3400 | GA-PD02 | 338 | 64.5 | 807 | 1930 |
| Total cPAHs | µg/kg | 22 | 22 | 100 | 11.9 JT | 7050 T | GA-PD02 | 651 | 85.8 | 1710 | 4320 | 11.9 JT | 7050 T | GA-PD02 | 651 | 85.8 | 1710 | 4320 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 18 | 7 | 39 | 3 J | 38 | WR-PG-61 | 14.8 | 11 | 12.1 | 33.8 | 2 UJ | 38 | WR-PG-61 | 9.07 | 3.45 | 10.4 | 29.5 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 18 | 5 | 28 | 0.315 | 1.7 | G750 | 0.667 | 0.398 | 0.585 | 1.47 | 0.315 | 15 U | SD02 | 4.08 | 2.2 | 5.03 | 14.2 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 18 | 3 | 17 | 3.3 NJ | 11 | WR-PG-63 | 5.87 | 3.3 | 4.45 | 10.2 | 1 U | 440 U | SD02 | 75.5 | 4.4 | 163 | 432 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 8 | 8 | 100 | 59 J | 100 J | BT033 | 76 | 78 | 15.5 | 96.2 | 59 J | 100 J | BT033 | 76 | 78 | 15.5 | 96.2 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 1 | 1 | 100 | 38 J | 38 J | G750 | 38 | 38 | -- | 38 | 38 J | 38 J | G750 | 38 | 38 | -- | 38 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 8 | 8 | 100 | 200 J | 650 J | BT033 | 444 | 450 | 154 | 629 | 200 J | 650 J | BT033 | 444 | 450 | 154 | 629 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 1 | 1 | 100 | 170 J | 170 J | G750 | 170 | 170 | -- | 170 | 170 J | 170 J | G750 | 170 | 170 | -- | 170 |
| Total Petroleum Hydrocarbons | mg/kg | 8 | 8 | 100 | 272 JT | 750 JT | BT033 | 520 | 510 | 163 | 723 | 272 JT | 750 JT | BT033 | 520 | 510 | 163 | 723 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 1 | 1 | 100 | 208 JA | 208 JA | G750 | 208 | 208 | -- | 208 | 208 JA | 208 JA | G750 | 208 | 208 | -- | 208 |
| ***RM 11-11.8*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 24 | 24 | 100 | 0.126 | 0.678 | SL017 | 0.254 | 0.218 | 0.121 | 0.405 | 0.126 | 0.678 | SL017 | 0.254 | 0.218 | 0.121 | 0.405 |
| Lead | mg/kg | 24 | 24 | 100 | 10.8 | 466 | G005 | 86.1 | 48 | 105 | 255 | 10.8 | 466 | G005 | 86.1 | 48 | 105 | 255 |
| Mercury | mg/kg | 24 | 24 | 100 | 0.024 | 0.725 | SL017 | 0.0927 | 0.058 | 0.14 | 0.179 | 0.024 | 0.725 | SL017 | 0.0927 | 0.058 | 0.14 | 0.179 |
| Nickel | mg/kg | 24 | 24 | 100 | 13 | 73.6 | G026 | 29.2 | 23.9 | 14.1 | 56.9 | 13 | 73.6 | G026 | 29.2 | 23.9 | 14.1 | 56.9 |

Table D1.3-12. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Eastern Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 4 | 4 | 100 | 0.000286 JT | 0.0308 T | GCA11E | 0.0123 | 0.00901 | 0.0148 | 0.0288 | 0.000286 JT | 0.0308 T | GCA11E | 0.0123 | 0.00901 | 0.0148 | 0.0288 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 26 | 13 | 50 | 0.085 J | 5.3 NJ | GCRSP11E | 0.779 | 0.48 | 1.38 | 2.61 | 0.051 U | 11 U | SL004 | 1.1 | 0.295 | 2.33 | 4.75 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 25 | 25 | 100 | 12 | 2400 J | SL004 | 152 | 43 | 471 | 172 | 12 | 2400 J | SL004 | 152 | 43 | 471 | 172 |
| Total HPAHs | µg/kg | 25 | 25 | 100 | 140 JT | 29100 JT | SL004 | 1890 | 600 | 5700 | 2100 | 140 JT | 29100 JT | SL004 | 1890 | 600 | 5700 | 2100 |
| Total LPAHs | µg/kg | 25 | 25 | 100 | 22.6 JT | 38100 JT | SL004 | 1750 | 153 | 7580 | 745 | 22.6 JT | 38100 JT | SL004 | 1750 | 153 | 7580 | 745 |
| Naphthalene | µg/kg | 25 | 24 | 96 | 2.9 | 670 J | SL004 | 66.2 | 10.5 | 151 | 339 | 2.9 | 670 J | SL004 | 63.7 | 9 | 148 | 326 |
| Phenanthrene | µg/kg | 25 | 25 | 100 | 10 | 13000 J | SL004 | 632 | 61 | 2580 | 412 | 10 | 13000 J | SL004 | 632 | 61 | 2580 | 412 |
| Total cPAHs | µg/kg | 25 | 25 | 100 | 19 JT | 3360 JT | SL004 | 219 | 64.8 | 658 | 257 | 19 JT | 3360 JT | SL004 | 219 | 64.8 | 658 | 257 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 24 | 3 | 12 | 5 J | 15 | G033 | 11 | 13 | 5.29 | 14.8 | 2.1 U | 320 U | SL015 | 46.6 | 9 | 84.6 | 227 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 27 | 12 | 44 | 0.16 J | 4.84 | G516 | 0.883 | 0.31 | 1.32 | 2.95 | 0.093 U | 15 U | SD01 | 1.29 | 0.27 | 3.01 | 4.83 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 24 | 10 | 42 | 1.1 J | 51 | G012 | 12.9 | 6.15 | 17.1 | 44.7 | 0.25 U | 440 U | SD01 | 25 | 3.05 | 89.2 | 48.9 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Diesel Range Hydrocarbons | mg/kg | 3 | 3 | 100 | 45 J | 98 J | UG01 | 74.3 | 80 | 27 | 96.2 | 45 J | 98 J | UG01 | 74.3 | 80 | 27 | 96.2 |
| Diesel Range Hydrocarbons (silica gel treated) | mg/kg | 19 | 17 | 89 | 14 J | 8100 J | SL004 | 730 | 78.5 | 1960 | 2980 | 14 J | 8100 J | SL004 | 657 | 50 | 1860 | 2340 |
| Residual Range Hydrocarbons | mg/kg | 3 | 3 | 100 | 280 J | 1500 J | UG01 | 693 | 300 | 699 | 1380 | 280 J | 1500 J | UG01 | 693 | 300 | 699 | 1380 |
| Residual Range Hydrocarbons (silica gel treated) | mg/kg | 19 | 19 | 100 | 56 J | 9400 J | SL015 | 1370 | 320 | 2850 | 9310 | 56 J | 9400 J | SL015 | 1370 | 320 | 2850 | 9310 |
| Total Petroleum Hydrocarbons | mg/kg | 3 | 3 | 100 | 325 JA | 1600 JT | UG01 | 768 | 380 | 721 | 1480 | 325 JA | 1600 JT | UG01 | 768 | 380 | 721 | 1480 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 19 | 19 | 100 | 70 JT | 17400 JA | SL004 | 2020 | 366 | 4460 | 11400 | 70 JT | 17400 JA | SL004 | 2020 | 366 | 4460 | 11400 |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TEQ - toxic equivalent concentration

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-13. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Eastern Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| ***Study Area*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 646 | 600 | 93 | 0.029 | 4.2 | T4-B411-06 | 0.4 | 0.278 | 0.48 | 1.04 | 0.017 U | 4.2 | T4-B411-06 | 0.382 | 0.248 | 0.469 | 1.03 |
| Lead | mg/kg | 701 | 693 | 99 | 1.95 | 3130 J | T4-PS21 | 56.4 | 20.6 | 161 | 238 | 1.95 | 3130 J | T4-PS21 | 56 | 20.4 | 160 | 238 |
| Mercury | mg/kg | 619 | 568 | 92 | 0.007 J | 16.8 | C708 | 0.237 | 0.088 | 0.817 | 0.705 | 0.006 UJ | 16.8 | C708 | 0.22 | 0.078 | 0.784 | 0.651 |
| Nickel | mg/kg | 641 | 641 | 100 | 6.14 | 127 | C215 | 23.5 | 23.5 | 7.26 | 32 | 6.14 | 127 | C215 | 23.5 | 23.5 | 7.26 | 32 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 86 | 86 | 100 | 0.0000000755 JT | 0.365 JT | C384 | 0.0128 | 0.00209 | 0.0468 | 0.0494 | 0.0000000755 JT | 0.365 JT | C384 | 0.0128 | 0.00209 | 0.0468 | 0.0494 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 376 | 48 | 13 | 0.052 J | 75 J | C022 | 4.22 | 1.73 | 10.8 | 9.23 | 0.051 U | 75 J | C022 | 1.1 | 0.17 | 5.16 | 3.94 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 672 | 568 | 85 | 0.16 J | 57000 | T4-S3-01 | 1220 | 110 | 4800 | 4660 | 0.14 U | 57000 | T4-S3-01 | 1030 | 77 | 4430 | 3900 |
| Total HPAHs | µg/kg | 672 | 622 | 93 | 0.15 JT | 440000 T | T4-S3-01 | 10500 | 1080 | 38500 | 43000 | 0.15 JT | 440000 T | T4-S3-01 | 9690 | 839 | 37100 | 42000 |
| Total LPAHs | µg/kg | 672 | 598 | 89 | 0.22 JT | 333000 T | SED01 | 3180 | 320 | 16700 | 13000 | 0.22 JT | 333000 T | SED01 | 2830 | 219 | 15800 | 11600 |
| Naphthalene | µg/kg | 685 | 486 | 71 | 0.27 J | 10000 | C048-R1 | 171 | 48 | 533 | 648 | 0.27 J | 10000 | C048-R1 | 157 | 22 | 565 | 620 |
| Phenanthrene | µg/kg | 672 | 569 | 85 | 0.24 J | 200000 | SED01 | 1870 | 170 | 10100 | 7700 | 0.24 J | 200000 | SED01 | 1590 | 120 | 9360 | 7240 |
| Total cPAHs | µg/kg | 672 | 608 | 90 | 0.00017 JT | 79500 T | T4-S3-01 | 1600 | 133 | 6490 | 5840 | 0.00017 JT | 79500 T | T4-S3-01 | 1450 | 110 | 6190 | 5530 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 654 | 101 | 15 | 2 J | 430 | C092 | 43.1 | 17 | 72.2 | 215 | 1.7 U | 4000 U | HC-S-07; HC-S-11; HC-S-42 | 55.8 | 10 | 355 | 100 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 425 | 65 | 15 | 0.12 J | 5.04 J | C062 | 0.9 | 0.64 | 0.886 | 2.38 | 0.0162 U | 4000 U | HC-S-07; HC-S-11; HC-S-42 | 59.7 | 1 | 439 | 36 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 447 | 135 | 30 | 0.32 J | 190 | C708 | 8.91 | 4.1 | 20.4 | 24.9 | 0.16 UT | 12000 U | HC-S-07; HC-S-11; HC-S-42 | 181 | 2.2 | 1280 | 175 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 500 | 363 | 73 | 0.049 J | 6800 J | C708 | 355 | 175 | 642 | 1200 | 0.049 J | 6800 J | C708 | 263 | 81 | 568 | 952 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 83 | 73 | 88 | 2.3 JT | 3300 J | C651 | 339 | 170 | 579 | 1300 | 1.4 U | 3300 J | C651 | 299 | 150 | 554 | 940 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 450 | 343 | 76 | 0.28 | 17000 J | C708 | 649 | 410 | 1260 | 1690 | 0.28 | 17000 J | C708 | 508 | 210 | 1130 | 1500 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 83 | 75 | 90 | 4.15 JT | 11000 J | C708 | 674 | 380 | 1390 | 1750 | 3.4 U | 11000 J | C708 | 610 | 350 | 1330 | 1570 |
| Total Petroleum Hydrocarbons | mg/kg | 500 | 407 | 81 | 0.33 JT | 23800 JA | C708 | 938 | 525 | 1780 | 2970 | 0.33 JT | 23800 JA | C708 | 774 | 307 | 1640 | 2600 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 83 | 77 | 93 | 2.7 JA | 14000 JA | C708 | 978 | 540 | 1860 | 2730 | 2.7 JA | 14000 JA | C708 | 908 | 490 | 1810 | 2060 |
| ***RM 01.9-03*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 65 | 64 | 98 | 0.081 | 1.65 | DC01-2 | 0.47 | 0.393 | 0.337 | 1.3 | 0.081 | 1.65 | DC01-2 | 0.479 | 0.4 | 0.342 | 1.29 |
| Lead | mg/kg | 65 | 65 | 100 | 2.89 | 117 | C019-1 | 20.6 | 16.5 | 16.5 | 41.2 | 2.89 | 117 | C019-1 | 20.6 | 16.5 | 16.5 | 41.2 |
| Mercury | mg/kg | 62 | 61 | 98 | 0.012 JT | 0.331 | DC01-1 | 0.0923 | 0.0755 | 0.0734 | 0.261 | 0.012 JT | 0.331 | DC01-1 | 0.0919 | 0.0753 | 0.0729 | 0.261 |
| Nickel | mg/kg | 64 | 64 | 100 | 6.14 | 46.5 | C015 | 24 | 24.3 | 5.71 | 31.3 | 6.14 | 46.5 | C015 | 24 | 24.3 | 5.71 | 31.3 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 27 | 27 | 100 | 0.000000859 JT | 0.0141 T | C019-2 | 0.00337 | 0.00173 | 0.00436 | 0.0137 | 0.000000859 JT | 0.0141 T | C019-2 | 0.00337 | 0.00173 | 0.00436 | 0.0137 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 68 | 6 | 9 | 0.25 J | 5.31 NJ | C038 | 1.7 | 0.665 | 2.04 | 4.72 | 0.062 U | 5.31 NJ | C038 | 0.547 | 0.18 | 0.834 | 1.83 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 67 | 64 | 96 | 2.4 JT | 820 | C609 | 131 | 71 | 174 | 566 | 0.29 U | 820 | C609 | 126 | 58 | 172 | 542 |
| Total HPAHs | µg/kg | 67 | 66 | 99 | 0.71 JT | 8900 T | C609 | 1350 | 599 | 1890 | 5670 | 0.71 JT | 8900 T | C609 | 1330 | 590 | 1880 | 5610 |
| Total LPAHs | µg/kg | 67 | 65 | 97 | 0.47 JT | 6400 T | C609 | 611 | 151 | 1270 | 2880 | 0.47 JT | 6400 T | C609 | 593 | 150 | 1250 | 2880 |
| Naphthalene | µg/kg | 67 | 54 | 81 | 2.7 | 510 | DC01-1 | 56 | 20 | 95.6 | 255 | 0.47 U | 510 | DC01-1 | 48 | 15 | 88.5 | 221 |
| Phenanthrene | µg/kg | 67 | 65 | 97 | 0.47 J | 3900 | C609 | 325 | 72 | 712 | 1600 | 0.47 J | 3900 | C609 | 316 | 71 | 703 | 1580 |
| Total cPAHs | µg/kg | 67 | 66 | 99 | 0.00071 JT | 1100 T | C609 | 174 | 89 | 233 | 742 | 0.00071 JT | 1100 T | C609 | 172 | 82.1 | 232 | 731 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 68 | 6 | 9 | 2.4 J | 23 J | C019-1 | 9 | 7.05 | 7.23 | 19.5 | 1.7 UT | 33 U | C600 | 8.9 | 3.95 | 9.25 | 32 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 71 | 10 | 14 | 0.13 J | 3.79 J | C022 | 1.34 | 0.52 | 1.37 | 3.57 | 0.0183 U | 63 U | LWMTCLP1 | 3.09 | 1 | 7.95 | 11.9 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 69 | 19 | 28 | 1 JT | 19 | WR-VC-02 | 3.72 | 2.6 | 4.39 | 10.3 | 0.16 UT | 320 U | LWMTCLP1 | 11.4 | 1.1 | 51.3 | 16.2 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 58 | 52 | 90 | 0.049 J | 1700 J | C015 | 178 | 97.5 | 286 | 483 | 0.049 J | 1700 J | C015 | 161 | 82 | 275 | 468 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 16 | 15 | 94 | 11 J | 390 J | C609 | 171 | 150 | 101 | 362 | 7.4 U | 390 J | C609 | 161 | 145 | 106 | 360 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 56 | 46 | 82 | 0.28 | 2300 J | C015 | 483 | 393 | 448 | 1290 | 0.28 | 2300 J | C015 | 405 | 320 | 439 | 1160 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 16 | 15 | 94 | 23 J | 690 J | C609 | 367 | 380 | 155 | 613 | 17 U | 690 J | C609 | 345 | 365 | 173 | 608 |
| Total Petroleum Hydrocarbons | mg/kg | 58 | 53 | 91 | 0.33 JT | 3640 JT | C015 | 599 | 452 | 689 | 1950 | 0.33 JT | 3640 JT | C015 | 550 | 420 | 677 | 1740 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 16 | 15 | 94 | 34 JA | 1080 JA | C609 | 538 | 530 | 252 | 975 | 17 UA | 1080 JA | C609 | 505 | 510 | 276 | 968 |

Table D1.3-13. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Eastern Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| ***RM 03-04*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 74 | 71 | 96 | 0.057 | 1.95 | C092 | 0.356 | 0.225 | 0.332 | 0.899 | 0.049 UJ | 1.95 | C092 | 0.345 | 0.225 | 0.331 | 0.898 |
| Lead | mg/kg | 74 | 74 | 100 | 2.4 T | 184 | C091 | 24.8 | 17.4 | 31.3 | 58.7 | 2.4 T | 184 | C091 | 24.8 | 17.4 | 31.3 | 58.7 |
| Mercury | mg/kg | 83 | 82 | 99 | 0.01 J | 1.35 | SED11 | 0.19 | 0.0955 | 0.26 | 0.656 | 0.009 U | 1.35 | SED11 | 0.188 | 0.095 | 0.259 | 0.652 |
| Nickel | mg/kg | 74 | 74 | 100 | 15.6 T | 40.5 J | C109 | 24.9 | 24.6 | 5.25 | 32.7 | 15.6 T | 40.5 J | C109 | 24.9 | 24.6 | 5.25 | 32.7 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 2 | 2 | 100 | 0.0124 JT | 0.125 T | LWMC3 | 0.0689 | 0.0689 | 0.0799 | 0.12 | 0.0124 JT | 0.125 T | LWMC3 | 0.0689 | 0.0689 | 0.0799 | 0.12 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 72 | 9 | 12 | 0.62 NJ | 9.89 NJ | C067 | 3.87 | 3.78 | 3.03 | 8.69 | 0.062 U | 13 U | C109 | 1 | 0.15 | 2.25 | 4.87 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 84 | 71 | 85 | 0.57 J | 5400 | SED01 | 647 | 180 | 1070 | 2850 | 0.25 U | 5400 | SED01 | 547 | 135 | 1010 | 2700 |
| Total HPAHs | µg/kg | 84 | 79 | 94 | 1.03 JT | 283000 T | SED01 | 12100 | 1620 | 37300 | 47100 | 0.64 UT | 283000 T | SED01 | 11400 | 1500 | 36300 | 46000 |
| Total LPAHs | µg/kg | 84 | 78 | 93 | 0.36 JT | 333000 T | SED01 | 10500 | 383 | 43400 | 38000 | 0.36 JT | 333000 T | SED01 | 9760 | 238 | 41900 | 34900 |
| Naphthalene | µg/kg | 95 | 57 | 60 | 0.66 J | 3500 | C613 | 239 | 75 | 501 | 904 | 0.4 U | 3500 | C613 | 144 | 14 | 404 | 614 |
| Phenanthrene | µg/kg | 84 | 74 | 88 | 0.42 J | 200000 | SED01 | 6590 | 260 | 26700 | 25100 | 0.38 U | 200000 | SED01 | 5810 | 130 | 25100 | 22600 |
| Total cPAHs | µg/kg | 84 | 77 | 92 | 0.032 JT | 8520 T | SED01 | 870 | 218 | 1570 | 4230 | 0.032 JT | 8520 T | SED01 | 797 | 187 | 1520 | 4140 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 72 | 12 | 17 | 8.8 J | 430 | C092 | 96 | 52.5 | 123 | 315 | 1.7 U | 430 | C092 | 23 | 3.8 | 59.4 | 98.6 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 75 | 7 | 9 | 0.15 J | 5.04 J | C062 | 1.05 | 0.36 | 1.77 | 3.73 | 0.058 UJ | 36 U | C067 | 2.21 | 0.19 | 5.52 | 9.61 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 72 | 14 | 19 | 1.6 J | 10 NJ | C610 | 4.64 | 3.7 | 2.95 | 9.16 | 0.49 U | 98 UJ | SD007; SD013 | 4.98 | 0.715 | 16.1 | 9.78 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 75 | 60 | 80 | 3.3 J | 3500 J | C092 | 350 | 170 | 625 | 849 | 3.3 J | 3500 J | C092 | 282 | 81 | 575 | 806 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 10 | 9 | 90 | 7.1 J | 650 J | C109 | 296 | 340 | 206 | 574 | 3.2 U | 650 J | C109 | 267 | 280 | 215 | 565 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 74 | 62 | 84 | 6.1 JT | 11000 J | C092 | 770 | 415 | 1640 | 2170 | 4.4 UT | 11000 J | C092 | 649 | 192 | 1520 | 1750 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 10 | 9 | 90 | 11 J | 830 J | C091 | 433 | 430 | 302 | 814 | 5.4 U | 830 J | C091 | 390 | 400 | 315 | 812 |
| Total Petroleum Hydrocarbons | mg/kg | 75 | 69 | 92 | 3.3 JT | 14700 JT | C092 | 1010 | 440 | 2170 | 2700 | 3.3 JT | 14700 JT | C092 | 933 | 315 | 2100 | 2550 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 10 | 9 | 90 | 18 JT | 1400 JT | C109 | 730 | 650 | 493 | 1360 | 5.4 UT | 1400 JT | C109 | 657 | 615 | 518 | 1360 |
| ***RM 04-05*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 189 | 188 | 99 | 0.037 J | 4.2 | T4-B411-06 | 0.465 | 0.191 | 0.709 | 1.74 | 0.037 J | 4.2 | T4-B411-06 | 0.463 | 0.19 | 0.708 | 1.73 |
| Lead | mg/kg | 232 | 232 | 100 | 1.95 | 3130 J | T4-PS21 | 91 | 14.2 | 254 | 508 | 1.95 | 3130 J | T4-PS21 | 91 | 14.2 | 254 | 508 |
| Mercury | mg/kg | 188 | 168 | 89 | 0.008 J | 2.15 | T4-VC22 | 0.113 | 0.063 | 0.226 | 0.315 | 0.008 J | 2.15 | T4-VC22 | 0.103 | 0.0415 | 0.216 | 0.309 |
| Nickel | mg/kg | 188 | 188 | 100 | 12.2 J | 37.4 | SD031 | 20 | 19.2 | 4.65 | 28.7 | 12.2 J | 37.4 | SD031 | 20 | 19.2 | 4.65 | 28.7 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 1 | 1 | 100 | 0.00454 T | 0.00454 T | C111-2 | 0.00454 | 0.00454 | -- | 0.00454 | 0.00454 T | 0.00454 T | C111-2 | 0.00454 | 0.00454 | -- | 0.00454 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 9 | 2 | 22 | 5.78 NJ | 10.3 NJ | C112 | 8.04 | 8.04 | 3.2 | 10.1 | 0.104 UJ | 10.3 NJ | C112 | 2.05 | 0.506 | 3.58 | 8.49 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 240 | 190 | 79 | 0.16 J | 57000 | T4-S3-01 | 3060 | 250 | 7950 | 17600 | 0.16 J | 57000 | T4-S3-01 | 2420 | 140 | 7180 | 16100 |
| Total HPAHs | µg/kg | 240 | 223 | 93 | 0.15 JT | 440000 T | T4-S3-01 | 21100 | 1700 | 58300 | 130000 | 0.15 JT | 440000 T | T4-S3-01 | 19600 | 1410 | 56400 | 128000 |
| Total LPAHs | µg/kg | 240 | 197 | 82 | 0.22 JT | 51000 T | T4-S3-01 | 2770 | 540 | 6720 | 13200 | 0.22 JT | 51000 T | T4-S3-01 | 2290 | 278 | 6170 | 13000 |
| Naphthalene | µg/kg | 240 | 170 | 71 | 0.27 J | 1700 | T4-S3-01 | 138 | 54.5 | 218 | 557 | 0.27 J | 4000 U | HC-S-07; HC-S-11; HC-S-42 | 196 | 24 | 597 | 663 |
| Phenanthrene | µg/kg | 240 | 178 | 74 | 0.24 J | 29000 | T4-S3-01 | 1850 | 375 | 4210 | 8750 | 0.24 J | 29000 | T4-S3-01 | 1390 | 140 | 3720 | 7730 |
| Total cPAHs | µg/kg | 240 | 214 | 89 | 0.00017 JT | 79500 T | T4-S3-01 | 3780 | 264 | 10500 | 23400 | 0.00017 JT | 79500 T | T4-S3-01 | 3370 | 196 | 10000 | 22200 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 239 | 29 | 12 | 2.5 J | 310 | C111-2 | 42 | 14 | 74.5 | 200 | 2.5 J | 4000 U | HC-S-07; HC-S-11; HC-S-42 | 123 | 20 | 579 | 131 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 30 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 6 U | 4000 U | HC-S-07; HC-S-11; HC-S-42 | 791 | 33.5 | 1490 | 4000 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 30 | 9 | 30 | 1.2 J | 8.6 | C112 | 4.75 | 4.1 | 2.59 | 8.56 | 1.2 J | 12000 U | HC-S-07; HC-S-11; HC-S-42 | 2370 | 119 | 4470 | 12000 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 211 | 117 | 55 | 7.6 | 1200 | T4-B411-06 | 221 | 150 | 227 | 638 | 0.5 U | 1200 | T4-B411-06 | 132 | 31 | 196 | 540 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 168 | 105 | 62 | 5.9 J | 1400 J | C111-2 | 289 | 180 | 302 | 832 | 5.9 J | 1400 J | C111-2 | 209 | 84.5 | 260 | 667 |
| Total Petroleum Hydrocarbons | mg/kg | 211 | 145 | 69 | 5.9 JT | 5400 A | T4-B411-06 | 575 | 360 | 758 | 1980 | 5.9 JT | 5400 A | T4-B411-06 | 419 | 98 | 669 | 1430 |

Table D1.3-13. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Eastern Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| ***RM 05-06*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 34 | 32 | 94 | 0.06 J | 1.03 | C202 | 0.364 | 0.368 | 0.249 | 0.661 | 0.06 J | 1.03 | C202 | 0.352 | 0.333 | 0.246 | 0.655 |
| Lead | mg/kg | 34 | 34 | 100 | 2.26 J | 426 J | C203 | 68.6 | 44.1 | 96.2 | 300 | 2.26 J | 426 J | C203 | 68.6 | 44.1 | 96.2 | 300 |
| Mercury | mg/kg | 34 | 30 | 88 | 0.02 | 0.81 | C197 | 0.312 | 0.233 | 0.245 | 0.643 | 0.008 U | 0.81 | C197 | 0.276 | 0.185 | 0.25 | 0.64 |
| Nickel | mg/kg | 33 | 33 | 100 | 13.9 T | 127 | C215 | 27.2 | 23.7 | 19.2 | 37.4 | 13.9 T | 127 | C215 | 27.2 | 23.7 | 19.2 | 37.4 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 3 | 3 | 100 | 0.000593 JT | 0.059 JT | C203 | 0.0211 | 0.00383 | 0.0328 | 0.0535 | 0.000593 JT | 0.059 JT | C203 | 0.0211 | 0.00383 | 0.0328 | 0.0535 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 33 | 3 | 9 | 1.75 NJ | 3.35 NJ | C199 | 2.32 | 1.87 | 0.891 | 3.2 | 0.062 U | 8.2 U | LWMTCLP7 | 0.925 | 0.504 | 1.62 | 3.77 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 33 | 32 | 97 | 0.78 J | 3800 | C192 | 664 | 370 | 881 | 2320 | 0.41 U | 3800 | C192 | 644 | 360 | 875 | 2320 |
| Total HPAHs | µg/kg | 33 | 32 | 97 | 12.4 JT | 41300 T | C192 | 7490 | 4260 | 9820 | 26600 | 1.5 UT | 41300 T | C192 | 7260 | 3650 | 9760 | 26500 |
| Total LPAHs | µg/kg | 33 | 33 | 100 | 9.47 JT | 25400 T | C192 | 4370 | 1510 | 6290 | 16800 | 9.47 JT | 25400 T | C192 | 4370 | 1510 | 6290 | 16800 |
| Naphthalene | µg/kg | 35 | 31 | 89 | 3.8 | 1500 | C651 | 375 | 195 | 420 | 1250 | 0.42 U | 1500 | C651 | 333 | 190 | 412 | 1230 |
| Phenanthrene | µg/kg | 33 | 32 | 97 | 4.6 | 15000 | C192 | 2230 | 780 | 3330 | 8400 | 2.2 U | 15000 | C192 | 2160 | 730 | 3300 | 8300 |
| Total cPAHs | µg/kg | 33 | 32 | 97 | 1.04 JT | 5040 T | C192 | 910 | 516 | 1180 | 3110 | 0.41 UT | 5040 T | C192 | 882 | 494 | 1170 | 3100 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 33 | 6 | 18 | 2.4 J | 35 | C199 | 20.7 | 24 | 12 | 33.3 | 1.9 U | 47 U | C203 | 13.7 | 11 | 12.7 | 35 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 34 | 10 | 29 | 0.28 J | 1.47 J | C203 | 1.04 | 1.09 | 0.384 | 1.44 | 0.0166 U | 180 U | LWMTCLP7 | 8.8 | 1.01 | 31.1 | 25.3 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 34 | 10 | 29 | 1.92 | 16 J | C651 | 8.92 | 8.95 | 4.26 | 15.1 | 0.24 U | 880 U | LWMTCLP7 | 34.9 | 0.705 | 151 | 98.4 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 31 | 23 | 74 | 28 J | 3700 J | C651 | 1250 | 820 | 1250 | 3490 | 11 U | 3700 J | C651 | 930 | 430 | 1200 | 3450 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 2 | 2 | 100 | 42 J | 3300 J | C651 | 1670 | 1670 | 2300 | 3140 | 42 J | 3300 J | C651 | 1670 | 1670 | 2300 | 3140 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 30 | 23 | 77 | 9.25 JT | 4500 J | C203 | 1500 | 1100 | 1280 | 3570 | 7 U | 4500 J | C203 | 1160 | 905 | 1280 | 3470 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 2 | 2 | 100 | 92 J | 2100 J | C651 | 1100 | 1100 | 1420 | 2000 | 92 J | 2100 J | C651 | 1100 | 1100 | 1420 | 2000 |
| Total Petroleum Hydrocarbons | mg/kg | 31 | 25 | 81 | 9.25 JT | 7920 JT | C203 | 2540 | 1770 | 2520 | 6880 | 9.25 JT | 7920 JT | C203 | 2060 | 1250 | 2470 | 6860 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 2 | 2 | 100 | 134 JA | 5400 JA | C651 | 2770 | 2770 | 3720 | 5140 | 134 JA | 5400 JA | C651 | 2770 | 2770 | 3720 | 5140 |
| ***RM 06-07*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 64 | 64 | 100 | 0.055 | 1.01 | C665 | 0.294 | 0.254 | 0.194 | 0.629 | 0.055 | 1.01 | C665 | 0.294 | 0.254 | 0.194 | 0.629 |
| Lead | mg/kg | 64 | 64 | 100 | 2.22 J | 238 | C280 | 34.8 | 26.3 | 42.3 | 87 | 2.22 J | 238 | C280 | 34.8 | 26.3 | 42.3 | 87 |
| Mercury | mg/kg | 52 | 49 | 94 | 0.007 J | 4.14 | C295 | 0.575 | 0.2 | 0.973 | 3.02 | 0.006 U | 4.14 | C295 | 0.542 | 0.162 | 0.953 | 3.01 |
| Nickel | mg/kg | 64 | 64 | 100 | 11 | 36.2 | SD071 | 24.1 | 25 | 5.59 | 31.1 | 11 | 36.2 | SD071 | 24.1 | 25 | 5.59 | 31.1 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 14 | 14 | 100 | 0.0000000755 JT | 0.0204 JT | C291 | 0.00323 | 0.00209 | 0.00512 | 0.00984 | 0.0000000755 JT | 0.0204 JT | C291 | 0.00323 | 0.00209 | 0.00512 | 0.00984 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 52 | 2 | 4 | 0.548 NJ | 7.99 J | C260 | 4.27 | 4.27 | 5.26 | 7.62 | 0.0657 U | 7.99 J | C260 | 0.588 | 0.245 | 1.25 | 1.2 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 54 | 49 | 91 | 0.34 J | 1500 | C295 | 198 | 90 | 281 | 632 | 0.25 U | 1500 | C295 | 179 | 76 | 273 | 602 |
| Total HPAHs | µg/kg | 54 | 51 | 94 | 0.48 JT | 23100 T | C295 | 2960 | 1360 | 4610 | 12100 | 0.48 JT | 23100 T | C295 | 2800 | 1180 | 4530 | 12000 |
| Total LPAHs | µg/kg | 54 | 52 | 96 | 0.5 JT | 42500 T | C293-2 | 3650 | 563 | 8920 | 28000 | 0.5 JT | 42500 T | C293-2 | 3520 | 538 | 8780 | 27500 |
| Naphthalene | µg/kg | 54 | 41 | 76 | 6.4 | 1900 | C293-1 | 292 | 120 | 419 | 980 | 0.65 U | 1900 | C293-1 | 223 | 65 | 385 | 889 |
| Phenanthrene | µg/kg | 54 | 50 | 93 | 0.41 J | 16000 | C293-2 | 1370 | 280 | 3200 | 8630 | 0.37 U | 16000 | C293-2 | 1270 | 185 | 3100 | 8290 |
| Total cPAHs | µg/kg | 54 | 50 | 93 | 0.045 JT | 2200 T | C295 | 279 | 126 | 402 | 866 | 0.045 JT | 2200 T | C295 | 258 | 121 | 393 | 836 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 53 | 5 | 9 | 2.5 J | 18 J | C291 | 9.14 | 8.5 | 5.68 | 16.4 | 1.7 U | 160 U | C665 | 14.9 | 5 | 34.7 | 68 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 55 | 14 | 25 | 0.12 J | 1.77 J | C260 | 0.885 | 0.779 | 0.449 | 1.59 | 0.0162 U | 22 U | C293-2 | 2.5 | 0.64 | 5 | 15.8 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 54 | 21 | 39 | 2.8 J | 20 | C244 | 7.58 | 5.9 | 4.77 | 17 | 0.27 U | 98 UJ | SD071; SD074 | 7.33 | 1.55 | 18.5 | 18.1 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 32 | 27 | 84 | 5.85 JT | 1600 J | C293-1; C293-2 | 514 | 400 | 498 | 1600 | 4.4 UT | 1600 J | C293-1; C293-2 | 435 | 285 | 493 | 1600 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 3 | 3 | 100 | 200 J | 650 J | C665 | 400 | 350 | 229 | 620 | 200 J | 650 J | C665 | 400 | 350 | 229 | 620 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 31 | 25 | 81 | 26 J | 1900 J | C293-1 | 867 | 910 | 517 | 1580 | 4.1 UT | 1900 J | C293-1 | 700 | 880 | 577 | 1550 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 3 | 3 | 100 | 450 J | 710 J | C665 | 607 | 660 | 138 | 705 | 450 J | 710 J | C665 | 607 | 660 | 138 | 705 |
| Total Petroleum Hydrocarbons | mg/kg | 32 | 27 | 84 | 5.85 JT | 3600 JT | C293-1 | 1340 | 1320 | 1020 | 3200 | 4.4 UA | 3600 JT | C293-1 | 1140 | 1140 | 1050 | 3130 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 3 | 3 | 100 | 650 JA | 1360 JA | C665 | 1010 | 1010 | 355 | 1330 | 650 JA | 1360 JA | C665 | 1010 | 1010 | 355 | 1330 |

Table D1.3-13. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Eastern Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| ***RM 07-08*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 25 | 24 | 96 | 0.029 | 0.5 | SD096; SD102 | 0.263 | 0.304 | 0.145 | 0.492 | 0.029 | 0.5 | SD096; SD102 | 0.258 | 0.3 | 0.144 | 0.489 |
| Lead | mg/kg | 37 | 31 | 84 | 1.96 | 204 | SED15 | 32.1 | 25 | 36.4 | 66.7 | 1.96 | 204 | SED15 | 30.2 | 21.5 | 33.6 | 66.4 |
| Mercury | mg/kg | 26 | 25 | 96 | 0.014 J | 0.851 | C347 | 0.163 | 0.108 | 0.177 | 0.42 | 0.006 UJ | 0.851 | C347 | 0.157 | 0.097 | 0.176 | 0.414 |
| Nickel | mg/kg | 24 | 24 | 100 | 12.4 | 30.3 J | C352; SD106 | 24.3 | 24.5 | 5.09 | 30.2 | 12.4 | 30.3 J | C352; SD106 | 24.3 | 24.5 | 5.09 | 30.2 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 11 | 11 | 100 | 0.000000138 JT | 0.00306 JT | C342 | 0.00108 | 0.000674 | 0.00115 | 0.00295 | 0.000000138 JT | 0.00306 JT | C342 | 0.00108 | 0.000674 | 0.00115 | 0.00295 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 24 | 1 | 4 | 0.66 NJ | 0.66 NJ | C678 | 0.66 | 0.66 | -- | 0.66 | 0.062 U | 1.6 U | LWMTCLP15 | 0.452 | 0.28 | 0.433 | 1.17 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 33 | 28 | 85 | 0.37 J | 920 | C676 | 114 | 64.5 | 179 | 328 | 0.14 U | 920 | C676 | 96.7 | 53 | 170 | 282 |
| Total HPAHs | µg/kg | 33 | 31 | 94 | 0.95 JT | 13000 T | C676; C678 | 1810 | 796 | 3280 | 9840 | 0.64 UT | 13000 T | C676; C678 | 1700 | 713 | 3200 | 9200 |
| Total LPAHs | µg/kg | 33 | 31 | 94 | 0.75 JT | 18000 T | C678 | 1350 | 307 | 3430 | 5430 | 0.75 JT | 18000 T | C678 | 1270 | 269 | 3330 | 5000 |
| Naphthalene | µg/kg | 33 | 23 | 70 | 3.2 | 640 | C678 | 123 | 66 | 144 | 381 | 0.67 U | 640 | C678 | 86.6 | 41.4 | 132 | 286 |
| Phenanthrene | µg/kg | 33 | 30 | 91 | 0.75 J | 10000 | C678 | 801 | 145 | 2060 | 4290 | 0.75 J | 10000 | C678 | 729 | 120 | 1970 | 3860 |
| Total cPAHs | µg/kg | 33 | 29 | 88 | 0.00029 JT | 1240 T | C676 | 160 | 85.6 | 245 | 499 | 0.00029 JT | 1240 T | C676 | 141 | 77.7 | 235 | 453 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 25 | 2 | 8 | 2.7 J | 32 J | C347 | 17.4 | 17.4 | 20.7 | 30.5 | 1.8 U | 64 U | C678 | 17.9 | 13 | 19 | 61 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 26 | 4 | 15 | 0.317 J | 0.836 J | C342 | 0.573 | 0.57 | 0.245 | 0.819 | 0.067 UJ | 65 U | LWMTCLP15 | 7.5 | 0.659 | 14.3 | 23.5 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 26 | 11 | 42 | 0.32 J | 110 | C678 | 16.7 | 2.9 | 32.5 | 70 | 0.18 U | 330 U | LWMTCLP15 | 31.2 | 2.2 | 70.7 | 107 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 20 | 19 | 95 | 1.9 J | 2700 J | C347 | 428 | 220 | 623 | 1260 | 1.9 J | 2700 J | C347 | 407 | 205 | 613 | 1180 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 9 | 7 | 78 | 6.6 JT | 960 J | C678 | 408 | 370 | 320 | 864 | 1.4 U | 960 J | C678 | 318 | 230 | 330 | 832 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 20 | 18 | 90 | 17 J | 1800 J | C347 | 691 | 625 | 503 | 1460 | 17 J | 1800 J | C347 | 623 | 580 | 519 | 1420 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 9 | 7 | 78 | 21.5 JT | 1100 J | C678 | 646 | 660 | 393 | 1100 | 3.4 U | 1100 J | C678 | 504 | 480 | 442 | 1100 |
| Total Petroleum Hydrocarbons | mg/kg | 20 | 20 | 100 | 1.9 JA | 4540 JT | C347 | 1030 | 790 | 1100 | 2600 | 1.9 JA | 4540 JT | C347 | 1030 | 790 | 1100 | 2600 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 9 | 7 | 78 | 28.1 JA | 2060 JA | C678 | 1050 | 1140 | 698 | 1960 | 3.4 UA | 2060 JA | C678 | 821 | 650 | 761 | 1930 |
| ***RM 08-09*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 6 | 5 | 83 | 0.22 T | 0.688 | C420 | 0.388 | 0.284 | 0.201 | 0.65 | 0.146 U | 0.688 | C420 | 0.348 | 0.266 | 0.205 | 0.641 |
| Lead | mg/kg | 6 | 6 | 100 | 19.5 JT | 70 | C420 | 35.4 | 30.5 | 17.9 | 61.5 | 19.5 JT | 70 | C420 | 35.4 | 30.5 | 17.9 | 61.5 |
| Mercury | mg/kg | 5 | 5 | 100 | 0.05 | 0.173 T | C420 | 0.12 | 0.134 | 0.0566 | 0.173 | 0.05 | 0.173 T | C420 | 0.12 | 0.134 | 0.0566 | 0.173 |
| Nickel | mg/kg | 6 | 6 | 100 | 21.4 JT | 32 | SD138 | 26.1 | 24.6 | 4.28 | 31.6 | 21.4 JT | 32 | SD138 | 26.1 | 24.6 | 4.28 | 31.6 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 1 | 1 | 100 | 0.00741 JT | 0.00741 JT | C420 | 0.00741 | 0.00741 | -- | 0.00741 | 0.00741 JT | 0.00741 JT | C420 | 0.00741 | 0.00741 | -- | 0.00741 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.109 U | 0.96 UJ | SD138 | 0.427 | 0.372 | 0.319 | 0.868 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 5 | 5 | 100 | 27 J | 87 | C420 | 63.4 | 70 | 26.4 | 87 | 27 J | 87 | C420 | 63.4 | 70 | 26.4 | 87 |
| Total HPAHs | µg/kg | 5 | 5 | 100 | 300 JT | 972 T | C420 | 718 | 780 | 282 | 969 | 300 JT | 972 T | C420 | 718 | 780 | 282 | 969 |
| Total LPAHs | µg/kg | 5 | 5 | 100 | 84 JT | 360 T | C420 | 211 | 148 | 126 | 354 | 84 JT | 360 T | C420 | 211 | 148 | 126 | 354 |
| Naphthalene | µg/kg | 5 | 4 | 80 | 8.6 J | 35 | SD138 | 24.2 | 26.5 | 11.1 | 33.8 | 0.37 U | 35 | SD138 | 19.4 | 26 | 14.3 | 33.4 |
| Phenanthrene | µg/kg | 5 | 5 | 100 | 47 J | 190 | C420 | 119 | 94 | 59.5 | 186 | 47 J | 190 | C420 | 119 | 94 | 59.5 | 186 |
| Total cPAHs | µg/kg | 5 | 5 | 100 | 40.5 JT | 130 T | C420 | 95 | 110 | 40.5 | 130 | 40.5 JT | 130 T | C420 | 95 | 110 | 40.5 | 130 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 6 | 4 | 67 | 13 J | 37 | SD138 | 26.5 | 28 | 10.8 | 36.4 | 1.9 U | 37 | SD138 | 19.1 | 18 | 14.3 | 36 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 6 | 1 | 17 | 0.24 J | 0.24 J | C714 | 0.24 | 0.24 | -- | 0.24 | 0.24 J | 38 U | C420 | 11.1 | 4.6 | 14.9 | 33.3 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 6 | 4 | 67 | 1.1 NJ | 6.52 | C420 | 2.78 | 1.75 | 2.54 | 5.87 | 0.7 U | 96 UJ | SD138 | 18 | 1.75 | 38.3 | 73.6 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 4 | 4 | 100 | 105 JT | 290 J | C420 | 184 | 170 | 77.6 | 274 | 105 JT | 290 J | C420 | 184 | 170 | 77.6 | 274 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 2 | 2 | 100 | 104 JT | 160 J | C727 | 132 | 132 | 39.6 | 157 | 104 JT | 160 J | C727 | 132 | 132 | 39.6 | 157 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 4 | 4 | 100 | 360 JT | 700 J | C420 | 505 | 480 | 144 | 672 | 360 JT | 700 J | C420 | 505 | 480 | 144 | 672 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 2 | 2 | 100 | 255 JT | 380 J | C727 | 318 | 318 | 88.4 | 374 | 255 JT | 380 J | C727 | 318 | 318 | 88.4 | 374 |
| Total Petroleum Hydrocarbons | mg/kg | 4 | 4 | 100 | 465 JA | 990 JT | C420 | 689 | 650 | 221 | 945 | 465 JA | 990 JT | C420 | 689 | 650 | 221 | 945 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 2 | 2 | 100 | 359 JA | 540 JA | C727 | 450 | 450 | 128 | 531 | 359 JA | 540 JA | C727 | 450 | 450 | 128 | 531 |

Table D1.3-13. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Eastern Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| ***Swan Island Lagoon*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 156 | 119 | 76 | 0.048 | 3.25 J | C384 | 0.405 | 0.351 | 0.4 | 0.845 | 0.017 U | 3.25 J | C384 | 0.337 | 0.23 | 0.371 | 0.773 |
| Lead | mg/kg | 156 | 154 | 99 | 2.1 | 711 | C708 | 41.2 | 23.4 | 83.1 | 117 | 2.1 | 711 | C708 | 40.8 | 21.9 | 82.7 | 117 |
| Mercury | mg/kg | 136 | 115 | 85 | 0.009 J | 16.8 | C708 | 0.386 | 0.111 | 1.62 | 0.723 | 0.009 J | 16.8 | C708 | 0.334 | 0.0855 | 1.49 | 0.659 |
| Nickel | mg/kg | 155 | 155 | 100 | 10.9 | 57.3 | C708 | 25.3 | 24.6 | 6 | 35.9 | 10.9 | 57.3 | C708 | 25.3 | 24.6 | 6 | 35.9 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 27 | 27 | 100 | 0.000000112 JT | 0.365 JT | C384 | 0.0274 | 0.00248 | 0.0783 | 0.157 | 0.000000112 JT | 0.365 JT | C384 | 0.0274 | 0.00248 | 0.0783 | 0.157 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 81 | 16 | 20 | 0.13 JT | 7.2 J | C708 | 2.53 | 1.12 | 2.58 | 6.83 | 0.062 U | 7.2 J | C708 | 0.721 | 0.14 | 1.46 | 3.27 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 123 | 98 | 80 | 0.34 J | 3300 | C708 | 223 | 70.5 | 545 | 658 | 0.14 U | 3300 | C708 | 179 | 51 | 494 | 536 |
| Total HPAHs | µg/kg | 123 | 103 | 84 | 0.79 JT | 43000 T | C708 | 2610 | 709 | 6780 | 12400 | 0.64 UT | 43000 T | C708 | 2190 | 611 | 6270 | 5520 |
| Total LPAHs | µg/kg | 123 | 104 | 85 | 0.45 JT | 12000 T | C708; DMMU1 | 815 | 209 | 2190 | 2790 | 0.45 JT | 12000 T | C708; DMMU1 | 691 | 162 | 2040 | 2080 |
| Naphthalene | µg/kg | 123 | 75 | 61 | 0.77 J | 590 | C384 | 53.7 | 29 | 84 | 136 | 0.51 U | 590 | C384 | 36 | 16 | 69.2 | 120 |
| Phenanthrene | µg/kg | 123 | 103 | 84 | 0.45 J | 8700 | C708 | 502 | 120 | 1460 | 1770 | 0.45 J | 8700 | C708 | 422 | 77 | 1350 | 1450 |
| Total cPAHs | µg/kg | 123 | 103 | 84 | 0.03 JT | 4990 T | C708 | 315 | 95.6 | 810 | 976 | 0.03 JT | 4990 T | C708 | 265 | 72 | 750 | 775 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 124 | 33 | 27 | 7.4 J | 260 | DM-24 | 48 | 20 | 65.9 | 194 | 1.9 U | 320 U | C708 | 23.2 | 10 | 48.6 | 121 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 93 | 12 | 13 | 0.21 J | 2.13 J | C415 | 0.908 | 0.648 | 0.6 | 2.06 | 0.0171 UJ | 64 U | LWMTCLP23 | 5.24 | 2.8 | 9.52 | 19 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 122 | 35 | 29 | 0.92 NJ | 190 | C708 | 15.6 | 5.1 | 34.5 | 57.2 | 0.2 U | 320 U | LWMTCLP23 | 39.5 | 8.65 | 54 | 100 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 54 | 46 | 85 | 1.6 JT | 6800 J | C708 | 419 | 225 | 990 | 850 | 1.6 JT | 6800 J | C708 | 358 | 192 | 924 | 802 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 16 | 12 | 75 | 48 J | 3000 J | C708 | 467 | 240 | 821 | 1770 | 1.6 UT | 3000 J | C708 | 351 | 131 | 733 | 1320 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 52 | 47 | 90 | 5.6 JT | 17000 J | C708 | 973 | 570 | 2440 | 1600 | 3.9 U | 17000 J | C708 | 881 | 498 | 2330 | 1600 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 16 | 14 | 88 | 4.15 JT | 11000 J | C708 | 1160 | 375 | 2850 | 4700 | 3.9 U | 11000 J | C708 | 1020 | 240 | 2690 | 3730 |
| Total Petroleum Hydrocarbons | mg/kg | 54 | 49 | 91 | 7.2 JA | 23800 JA | C708 | 1340 | 780 | 3360 | 2460 | 3.9 UA | 23800 JA | C708 | 1210 | 620 | 3220 | 2430 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 16 | 14 | 88 | 4.15 JA | 14000 JA | C708 | 1560 | 590 | 3620 | 6240 | 3.9 UA | 14000 JA | C708 | 1370 | 371 | 3410 | 5050 |
| ***RM 09-10*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 9 | 9 | 100 | 0.098 | 0.588 JT | C454 | 0.207 | 0.162 | 0.151 | 0.451 | 0.098 | 0.588 JT | C454 | 0.207 | 0.162 | 0.151 | 0.451 |
| Lead | mg/kg | 9 | 9 | 100 | 6.52 | 39.5 T | C454 | 18.8 | 18 | 9.58 | 33 | 6.52 | 39.5 T | C454 | 18.8 | 18 | 9.58 | 33 |
| Mercury | mg/kg | 9 | 9 | 100 | 0.036 | 0.324 | C454 | 0.102 | 0.07 | 0.0887 | 0.246 | 0.036 | 0.324 | C454 | 0.102 | 0.07 | 0.0887 | 0.246 |
| Nickel | mg/kg | 9 | 9 | 100 | 18.7 | 24.7 T | C454 | 21.2 | 21.2 | 2.04 | 24.3 | 18.7 | 24.7 T | C454 | 21.2 | 21.2 | 2.04 | 24.3 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 9 | 3 | 33 | 0.075 J | 2.43 NJ | C454 | 0.965 | 0.39 | 1.28 | 2.23 | 0.062 U | 2.43 NJ | C454 | 0.388 | 0.0805 | 0.773 | 1.61 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 9 | 9 | 100 | 0.6 J | 200 | C743 | 57.8 | 42 | 59.7 | 156 | 0.6 J | 200 | C743 | 57.8 | 42 | 59.7 | 156 |
| Total HPAHs | µg/kg | 9 | 9 | 100 | 8.5 JT | 1900 T | C743 | 602 | 361 | 558 | 1500 | 8.5 JT | 1900 T | C743 | 602 | 361 | 558 | 1500 |
| Total LPAHs | µg/kg | 9 | 9 | 100 | 3.7 JT | 700 T | C743 | 212 | 100 | 223 | 565 | 3.7 JT | 700 T | C743 | 212 | 100 | 223 | 565 |
| Naphthalene | µg/kg | 9 | 8 | 89 | 7.7 | 110 | C454 | 50.1 | 26.5 | 47.5 | 110 | 1.3 U | 110 | C454 | 44.7 | 23 | 47.3 | 110 |
| Phenanthrene | µg/kg | 9 | 9 | 100 | 2.2 | 340 | C743 | 91.7 | 57 | 102 | 256 | 2.2 | 340 | C743 | 91.7 | 57 | 102 | 256 |
| Total cPAHs | µg/kg | 9 | 9 | 100 | 0.807 JT | 269 T | C743 | 79.8 | 56.6 | 80.1 | 211 | 0.807 JT | 269 T | C743 | 79.8 | 56.6 | 80.1 | 211 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 10 | 0 | 0 | -- | -- | | -- | -- | -- | -- | 2.1 U | 5.1 U | C454 | 3.43 | 3.2 | 0.96 | 4.97 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 10 | 3 | 30 | 0.13 J | 0.427 J | C454 | 0.232 | 0.14 | 0.169 | 0.398 | 0.0257 U | 5.5 U | C454 | 1.26 | 0.135 | 1.92 | 4.47 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 10 | 9 | 90 | 0.98 NJ | 9 | C742 | 3.16 | 2.2 | 2.77 | 8.08 | 0.23 U | 9 | C742 | 2.87 | 2.1 | 2.77 | 7.97 |

Table D1.3-13. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Eastern Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 9 | 9 | 100 | 7.4 J | 510 J | C454 | 125 | 86 | 154 | 382 | 7.4 J | 510 J | C454 | 125 | 86 | 154 | 382 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 5 | 5 | 100 | 2.8 J | 93 J | C742 | 57.4 | 60 | 35.1 | 90.8 | 2.8 J | 93 J | C742 | 57.4 | 60 | 35.1 | 90.8 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 9 | 7 | 78 | 43 J | 1200 J | C454 | 376 | 260 | 391 | 993 | 43 J | 1200 J | C454 | 324 | 220 | 356 | 924 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 5 | 4 | 80 | 100 J | 220 J | C742 | 165 | 170 | 59.2 | 219 | 17 U | 220 J | C742 | 135 | 130 | 83.7 | 218 |
| Total Petroleum Hydrocarbons | mg/kg | 9 | 9 | 100 | 17 JT | 1740 JT | C454 | 422 | 296 | 536 | 1320 | 17 JT | 1740 JT | C454 | 422 | 296 | 536 | 1320 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 5 | 5 | 100 | 2.8 JA | 313 JA | C742 | 189 | 190 | 125 | 309 | 2.8 JA | 313 JA | C742 | 189 | 190 | 125 | 309 |
| ***RM 10-11*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 4 | 4 | 100 | 0.108 | 0.38 | SD04 | 0.233 | 0.222 | 0.112 | 0.358 | 0.108 | 0.38 | SD04 | 0.233 | 0.222 | 0.112 | 0.358 |
| Lead | mg/kg | 4 | 4 | 100 | 4.49 | 29.1 | C749 | 21.9 | 27.1 | 11.7 | 29 | 4.49 | 29.1 | C749 | 21.9 | 27.1 | 11.7 | 29 |
| Mercury | mg/kg | 4 | 4 | 100 | 0.028 | 0.13 | SD02 | 0.0753 | 0.0715 | 0.0424 | 0.123 | 0.028 | 0.13 | SD02 | 0.0753 | 0.0715 | 0.0424 | 0.123 |
| Nickel | mg/kg | 4 | 4 | 100 | 18.5 | 22.5 | C749 | 20.6 | 20.7 | 2.02 | 22.4 | 18.5 | 22.5 | C749 | 20.6 | 20.7 | 2.02 | 22.4 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.064 U | 0.25 U | C749 | 0.157 | 0.157 | 0.132 | 0.241 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 4 | 4 | 100 | 0.55 J | 150 | C749 | 58.9 | 42.5 | 64.8 | 136 | 0.55 J | 150 | C749 | 58.9 | 42.5 | 64.8 | 136 |
| Total HPAHs | µg/kg | 4 | 4 | 100 | 9.7 JT | 1600 T | C749 | 674 | 544 | 673 | 1460 | 9.7 JT | 1600 T | C749 | 674 | 544 | 673 | 1460 |
| Total LPAHs | µg/kg | 4 | 4 | 100 | 8.7 JT | 660 T | C749 | 220 | 105 | 297 | 578 | 8.7 JT | 660 T | C749 | 220 | 105 | 297 | 578 |
| Naphthalene | µg/kg | 4 | 3 | 75 | 6 J | 93 | C749 | 36.3 | 10 | 49.1 | 84.7 | 1.3 U | 93 | C749 | 27.6 | 8 | 43.8 | 80.6 |
| Phenanthrene | µg/kg | 4 | 4 | 100 | 3.5 | 320 | C749 | 111 | 60.5 | 142 | 281 | 3.5 | 320 | C749 | 111 | 60.5 | 142 | 281 |
| Total cPAHs | µg/kg | 4 | 4 | 100 | 1.08 JT | 214 T | C749 | 85 | 62.5 | 92 | 194 | 1.08 JT | 214 T | C749 | 85 | 62.5 | 92 | 194 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 4 | 2 | 50 | 8 J | 9 J | SD04 | 8.5 | 8.5 | 0.707 | 8.95 | 3.2 U | 9 J | SD04 | 5.85 | 5.6 | 3.09 | 8.85 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.068 U | 15 U | SD02; SD04 | 7.56 | 7.58 | 8.59 | 15 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 4 | 1 | 25 | 2 J | 2 J | C749 | 2 | 2 | -- | 2 | 0.23 U | 450 U | SD02; SD04 | 226 | 226 | 259 | 450 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 4 | 4 | 100 | 4.4 J | 300 | SD02 | 151 | 150 | 122 | 281 | 4.4 J | 300 | SD02 | 151 | 150 | 122 | 281 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 2 | 2 | 100 | 2.7 J | 110 J | C749 | 56.4 | 56.4 | 75.9 | 105 | 2.7 J | 110 J | C749 | 56.4 | 56.4 | 75.9 | 105 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 4 | 4 | 100 | 48 J | 730 | SD02 | 425 | 460 | 282 | 694 | 48 J | 730 | SD02 | 425 | 460 | 282 | 694 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 2 | 1 | 50 | 260 J | 260 J | C749 | 260 | 260 | -- | 260 | 19 U | 260 J | C749 | 140 | 140 | 170 | 248 |
| Total Petroleum Hydrocarbons | mg/kg | 4 | 4 | 100 | 52.4 JA | 1030 T | SD02 | 576 | 610 | 403 | 975 | 52.4 JA | 1030 T | SD02 | 576 | 610 | 403 | 975 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 2 | 2 | 100 | 2.7 JA | 370 JA | C749 | 186 | 186 | 260 | 352 | 2.7 JA | 370 JA | C749 | 186 | 186 | 260 | 352 |
| ***RM 11-11.8*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 20 | 20 | 100 | 0.091 T | 1.05 JT | C019 | 0.381 | 0.24 | 0.33 | 0.999 | 0.091 T | 1.05 JT | C019 | 0.381 | 0.24 | 0.33 | 0.999 |
| Lead | mg/kg | 20 | 20 | 100 | 4.76 T | 904 | C047 | 123 | 47 | 218 | 552 | 4.76 T | 904 | C047 | 123 | 47 | 218 | 552 |
| Mercury | mg/kg | 20 | 20 | 100 | 0.013 | 1.47 | C048-R1 | 0.338 | 0.127 | 0.458 | 1.28 | 0.013 | 1.47 | C048-R1 | 0.338 | 0.127 | 0.458 | 1.28 |
| Nickel | mg/kg | 20 | 20 | 100 | 15.7 | 58 | C047 | 26.3 | 25.1 | 10.1 | 42.7 | 15.7 | 58 | C047 | 26.3 | 25.1 | 10.1 | 42.7 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 20 | 6 | 30 | 0.052 J | 75 J | C022 | 13.7 | 1.7 | 30.1 | 57 | 0.051 U | 75 J | C022 | 7.4 | 0.415 | 20.9 | 61.7 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 20 | 18 | 90 | 5.4 | 230 | C048-R1 | 96.7 | 91 | 61.9 | 196 | 0.14 UT | 230 | C048-R1 | 87.8 | 87 | 64.7 | 192 |
| Total HPAHs | µg/kg | 20 | 19 | 95 | 17 JT | 5320 T | C048-R1 | 1350 | 1150 | 1290 | 3300 | 0.64 UT | 5320 T | C048-R1 | 1280 | 1100 | 1290 | 3190 |
| Total LPAHs | µg/kg | 20 | 20 | 100 | 1.3 JT | 21500 T | C048-R1 | 1510 | 280 | 4730 | 2590 | 1.3 JT | 21500 T | C048-R1 | 1510 | 280 | 4730 | 2590 |
| Naphthalene | µg/kg | 20 | 20 | 100 | 0.89 JT | 10000 | C048-R1 | 597 | 42.5 | 2220 | 1380 | 0.89 JT | 10000 | C048-R1 | 597 | 42.5 | 2220 | 1380 |
| Phenanthrene | µg/kg | 20 | 19 | 95 | 5 J | 3100 | C048-R1 | 364 | 150 | 704 | 1080 | 0.75 UT | 3100 | C048-R1 | 346 | 135 | 690 | 972 |
| Total cPAHs | µg/kg | 20 | 19 | 95 | 0.502 JT | 350 T | C048-R1 | 140 | 130 | 98.4 | 287 | 0.28 UT | 350 T | C048-R1 | 133 | 130 | 101 | 284 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 20 | 2 | 10 | 2 J | 18 | C022 | 10 | 10 | 11.3 | 17.2 | 2 J | 32 U | C003; C009; C012 | 10.3 | 3.2 | 11.9 | 32 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 21 | 4 | 19 | 0.18 | 0.29 | C009 | 0.218 | 0.2 | 0.0499 | 0.278 | 0.093 U | 15 U | SD01 | 1.05 | 0.093 | 3.3 | 3.7 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 20 | 2 | 10 | 1.2 J | 3.2 J | C023 | 2.2 | 2.2 | 1.41 | 3.1 | 0.85 U | 450 U | SD01 | 25.9 | 4.15 | 99.9 | 33 |

Table D1.3-13. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Eastern Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 2 | 2 | 100 | 40 J | 330 J | UC01 | 185 | 185 | 205 | 316 | 40 J | 330 J | UC01 | 185 | 185 | 205 | 316 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 18 | 16 | 89 | 2.3 JT | 1900 J | C003 | 367 | 145 | 596 | 1830 | 2.3 JT | 1900 J | C003 | 328 | 103 | 571 | 1820 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 2 | 2 | 100 | 100 J | 1500 J | UC01 | 800 | 800 | 990 | 1430 | 100 J | 1500 J | UC01 | 800 | 800 | 990 | 1430 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 18 | 18 | 100 | 10 JT | 3900 J | C003 | 822 | 330 | 1200 | 3900 | 10 JT | 3900 J | C003 | 822 | 330 | 1200 | 3900 |
| Total Petroleum Hydrocarbons | mg/kg | 2 | 2 | 100 | 140 JT | 1800 JT | UC01 | 970 | 970 | 1170 | 1720 | 140 JT | 1800 JT | UC01 | 970 | 970 | 1170 | 1720 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 18 | 18 | 100 | 12.3 JT | 5800 JT | C003 | 1150 | 398 | 1760 | 5720 | 12.3 JT | 5800 JT | C003 | 1150 | 398 | 1760 | 5720 |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TEQ - toxic equivalent concentration

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-14. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Navigation Channel.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| ***Study Area*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 332 | 321 | 97 | 0.05 | 2.13 J | DM-B | 0.249 | 0.213 | 0.227 | 0.45 | 0.036 U | 2.13 J | DM-B | 0.243 | 0.21 | 0.227 | 0.468 |
| Lead | mg/kg | 334 | 334 | 100 | 2.4 T | 62.7 J | G252 | 13.5 | 12.4 | 7.61 | 28.1 | 2.4 T | 62.7 J | G252 | 13.5 | 12.4 | 7.61 | 28.1 |
| Mercury | mg/kg | 332 | 317 | 95 | 0.006 J | 1.06 | DM-C | 0.0711 | 0.059 | 0.079 | 0.176 | 0.006 J | 1.06 | DM-C | 0.0704 | 0.059 | 0.0775 | 0.171 |
| Nickel | mg/kg | 334 | 330 | 99 | 10.4 T | 35.5 J | RC483-2 | 22.4 | 22.7 | 4.83 | 30 | 10.4 T | 35.5 J | RC483-2 | 22.4 | 22.7 | 4.86 | 29.9 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 53 | 53 | 100 | 0.00000197 JT | 0.003 T | G664 | 0.000709 | 0.000364 | 0.000802 | 0.0026 | 0.00000197 JT | 0.003 T | G664 | 0.000709 | 0.000364 | 0.000802 | 0.0026 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 276 | 42 | 15 | 0.2 J | 8.3 NJ | G253 | 2.17 | 1.8 | 1.97 | 5.9 | 0.051 U | 20 U | WR-BC-21; WR-BC-22 | 0.985 | 0.24 | 2.1 | 3.56 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 335 | 329 | 98 | 1.3 J | 340000 | G225 | 2500 | 35 | 20400 | 3080 | 1.3 J | 340000 | G225 | 2450 | 34 | 20200 | 2990 |
| Total HPAHs | µg/kg | 335 | 335 | 100 | 2.2 T | 4350000 T | G225 | 28200 | 344 | 252000 | 26400 | 2.2 T | 4350000 T | G225 | 28200 | 344 | 252000 | 26400 |
| Total LPAHs | µg/kg | 335 | 331 | 99 | 1.7 JT | 2910000 T | G225 | 14600 | 56 | 164000 | 7850 | 1.7 JT | 2910000 T | G225 | 14400 | 54 | 163000 | 7750 |
| Naphthalene | µg/kg | 336 | 225 | 67 | 0.5 J | 73000 | G225 | 436 | 16 | 4880 | 520 | 0.5 J | 73000 | G225 | 326 | 12 | 4030 | 313 |
| Phenanthrene | µg/kg | 335 | 329 | 98 | 1 J | 1700000 | G225 | 8170 | 33 | 95300 | 3960 | 1 J | 1700000 | G225 | 8020 | 32 | 94400 | 3930 |
| Total cPAHs | µg/kg | 335 | 330 | 99 | 1.91 JT | 449000 T | G225 | 3280 | 48.9 | 26900 | 4060 | 1.8 UT | 449000 T | G225 | 3230 | 45.9 | 26700 | 3940 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 312 | 108 | 35 | 3.3 J | 110 | G222 | 19.8 | 13.5 | 18.9 | 54 | 1.9 UJ | 10000 U | GRAB-05 | 51.1 | 8.35 | 567 | 55.9 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 293 | 90 | 31 | 0.056 J | 11 | WR-PG-86 | 1.25 | 0.631 | 1.66 | 4.09 | 0.016 U | 10000 U | GRAB-05 | 41 | 0.768 | 584 | 21.8 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 309 | 40 | 13 | 0.27 J | 59 | G756 | 6.59 | 4.4 | 10.4 | 18.8 | 0.2 U | 30500 U | GRAB-05 | 117 | 3.8 | 1730 | 100 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 163 | 156 | 96 | 8.2 J | 3500 J | G639 | 142 | 77 | 318 | 485 | 2.7 U | 3500 J | G639 | 137 | 75 | 312 | 469 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 105 | 94 | 90 | 7.85 JT | 1900 J | G639 | 79.7 | 45.5 | 201 | 181 | 3.3 U | 1900 J | G639 | 72.1 | 43 | 191 | 154 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 163 | 161 | 99 | 9.2 J | 3400 J | G639 | 435 | 400 | 320 | 800 | 9.2 J | 3400 J | G639 | 430 | 400 | 321 | 796 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 105 | 103 | 98 | 7.1 J | 1400 J | G639 | 185 | 165 | 158 | 347 | 7.1 J | 1400 J | G639 | 182 | 165 | 157 | 344 |
| Total Petroleum Hydrocarbons | mg/kg | 163 | 161 | 99 | 9.2 JA | 6900 JA | G639 | 574 | 470 | 612 | 1200 | 9.2 JA | 6900 JA | G639 | 567 | 468 | 612 | 1190 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 105 | 103 | 98 | 7.1 JA | 3300 JA | G639 | 257 | 209 | 340 | 503 | 7.1 JA | 3300 JA | G639 | 253 | 204 | 338 | 496 |
| ***RM 01.9-03*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 10 | 10 | 100 | 0.247 J | 0.71 | WR-BC-10 | 0.439 | 0.358 | 0.161 | 0.692 | 0.247 J | 0.71 | WR-BC-10 | 0.439 | 0.358 | 0.161 | 0.692 |
| Lead | mg/kg | 10 | 10 | 100 | 9.1 | 20.7 | WR-BC-10 | 13.9 | 12.6 | 3.62 | 20.3 | 9.1 | 20.7 | WR-BC-10 | 13.9 | 12.6 | 3.62 | 20.3 |
| Mercury | mg/kg | 10 | 10 | 100 | 0.055 | 0.09 | WR-BC-10 | 0.0676 | 0.0645 | 0.0109 | 0.0855 | 0.055 | 0.09 | WR-BC-10 | 0.0676 | 0.0645 | 0.0109 | 0.0855 |
| Nickel | mg/kg | 10 | 9 | 90 | 19.7 | 30 | G005 | 23.6 | 22.5 | 3.44 | 28.8 | 19.7 | 30 | G005 | 23.9 | 23.7 | 3.37 | 28.7 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 3 | 3 | 100 | 0.000276 JT | 0.00047 JT | G036 | 0.000342 | 0.000281 | 0.000111 | 0.000451 | 0.000276 JT | 0.00047 JT | G036 | 0.000342 | 0.000281 | 0.000111 | 0.000451 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 10 | 3 | 30 | 0.3 J | 6.18 NJ | G002 | 3.22 | 3.19 | 2.94 | 5.88 | 0.145 U | 6.18 NJ | G002 | 1.64 | 1.15 | 1.94 | 4.83 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 10 | 10 | 100 | 31 | 459 J | WR-BC-10 | 133 | 80 | 133 | 365 | 31 | 459 J | WR-BC-10 | 133 | 80 | 133 | 365 |
| Total HPAHs | µg/kg | 10 | 10 | 100 | 258 T | 2640 T | WR-BC-10 | 898 | 649 | 712 | 2150 | 258 T | 2640 T | WR-BC-10 | 898 | 649 | 712 | 2150 |
| Total LPAHs | µg/kg | 10 | 10 | 100 | 37.7 JT | 256 T | WR-BC-10 | 133 | 129 | 71.1 | 237 | 37.7 JT | 256 T | WR-BC-10 | 133 | 129 | 71.1 | 237 |
| Naphthalene | µg/kg | 10 | 9 | 90 | 8.9 | 23 J | WR-BC-09; WR-BC-10 | 15.4 | 14 | 5.33 | 23 | 8.9 | 23 J | WR-BC-09; WR-BC-10 | 15.2 | 13.5 | 5.09 | 23 |
| Phenanthrene | µg/kg | 10 | 10 | 100 | 12 | 140 | G002 | 65.7 | 56 | 42.8 | 131 | 12 | 140 | G002 | 65.7 | 56 | 42.8 | 131 |
| Total cPAHs | µg/kg | 10 | 10 | 100 | 43.6 T | 609 JT | WR-BC-10 | 178 | 108 | 176 | 487 | 43.6 T | 609 JT | WR-BC-10 | 178 | 108 | 176 | 487 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 7 | 2 | 29 | 5.4 J | 17 | G606 | 11.2 | 11.2 | 8.2 | 16.4 | 3.2 U | 17 | G606 | 5.87 | 3.9 | 4.95 | 13.5 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.17 U | 5.5 U | G002; G036 | 3.35 | 5.4 | 2.63 | 5.5 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 7 | 1 | 14 | 0.83 J | 0.83 J | DG02 | 0.83 | 0.83 | -- | 0.83 | 0.32 U | 5.1 U | G002; G036 | 3.1 | 5 | 2.44 | 5.1 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 3 | 3 | 100 | 25 J | 59.2 JT | G601 | 47.7 | 59 | 19.7 | 59.2 | 25 J | 59.2 JT | G601 | 47.7 | 59 | 19.7 | 59.2 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 2 | 2 | 100 | 25 J | 39.3 JT | G601 | 32.2 | 32.2 | 10.1 | 38.6 | 25 J | 39.3 JT | G601 | 32.2 | 32.2 | 10.1 | 38.6 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 3 | 3 | 100 | 210 J | 420 J | G606 | 322 | 335 | 106 | 412 | 210 J | 420 J | G606 | 322 | 335 | 106 | 412 |

Table D1.3-14. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Navigation Channel.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 2 | 2 | 100 | 110 J | 148 JT | G601 | 129 | 129 | 26.9 | 146 | 110 J | 148 JT | G601 | 129 | 129 | 26.9 | 146 |
| Total Petroleum Hydrocarbons | mg/kg | 3 | 3 | 100 | 240 JT | 479 JA | G606 | 371 | 394 | 121 | 471 | 240 JT | 479 JA | G606 | 371 | 394 | 121 | 471 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 2 | 2 | 100 | 135 JA | 187 JA | G601 | 161 | 161 | 36.8 | 184 | 135 JA | 187 JA | G601 | 161 | 161 | 36.8 | 184 |
| ***RM 03-04*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 13 | 13 | 100 | 0.114 J | 0.41 | WR-BC-15 | 0.243 | 0.238 | 0.0732 | 0.345 | 0.114 J | 0.41 | WR-BC-15 | 0.243 | 0.238 | 0.0732 | 0.345 |
| Lead | mg/kg | 13 | 13 | 100 | 5.2 | 21.2 | WR-BC-15 | 11.8 | 12 | 3.74 | 17.2 | 5.2 | 21.2 | WR-BC-15 | 11.8 | 12 | 3.74 | 17.2 |
| Mercury | mg/kg | 13 | 13 | 100 | 0.031 J | 0.204 | G069 | 0.0737 | 0.07 | 0.0432 | 0.136 | 0.031 J | 0.204 | G069 | 0.0737 | 0.07 | 0.0432 | 0.136 |
| Nickel | mg/kg | 13 | 13 | 100 | 17.4 | 29.2 J | G081 | 22.6 | 22.4 | 3.27 | 27.4 | 17.4 | 29.2 J | G081 | 22.6 | 22.4 | 3.27 | 27.4 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 1 | 1 | 100 | 0.000528 JT | 0.000528 JT | G618 | 0.000528 | 0.000528 | -- | 0.000528 | 0.000528 JT | 0.000528 JT | G618 | 0.000528 | 0.000528 | -- | 0.000528 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 13 | 3 | 23 | 2.8 NJ | 5.95 NJ | G113 | 3.88 | 2.89 | 1.79 | 5.64 | 0.062 U | 5.95 NJ | G113 | 1.3 | 0.22 | 1.77 | 4.11 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 13 | 13 | 100 | 37 | 1100 J | WR-BC-15 | 292 | 192 | 304 | 800 | 37 | 1100 J | WR-BC-15 | 292 | 192 | 304 | 800 |
| Total HPAHs | µg/kg | 13 | 13 | 100 | 290 T | 8900 T | WR-BC-15 | 2330 | 1230 | 2450 | 6450 | 290 T | 8900 T | WR-BC-15 | 2330 | 1230 | 2450 | 6450 |
| Total LPAHs | µg/kg | 13 | 13 | 100 | 48 JT | 1100 T | WR-BC-15 | 376 | 270 | 322 | 832 | 48 JT | 1100 T | WR-BC-15 | 376 | 270 | 322 | 832 |
| Naphthalene | µg/kg | 13 | 13 | 100 | 5.9 | 310 | G056 | 54 | 32 | 80.8 | 183 | 5.9 | 310 | G056 | 54 | 32 | 80.8 | 183 |
| Phenanthrene | µg/kg | 13 | 13 | 100 | 17 | 495 J | WR-BC-15 | 174 | 136 | 156 | 402 | 17 | 495 J | WR-BC-15 | 174 | 136 | 156 | 402 |
| Total cPAHs | µg/kg | 13 | 13 | 100 | 49.3 T | 1580 JT | WR-BC-15 | 400 | 250 | 430 | 1110 | 49.3 T | 1580 JT | WR-BC-15 | 400 | 250 | 430 | 1110 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 11 | 3 | 27 | 4.8 J | 23 J | G614 | 12.4 | 9.5 | 9.45 | 21.7 | 2.2 U | 23 J | G614 | 8.1 | 3.6 | 7.44 | 20 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.0252 U | 6.8 U | G614 | 2.6 | 3 | 2.54 | 5.9 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 11 | 2 | 18 | 1 NJ | 5.7 NJ | G618 | 3.35 | 3.35 | 3.32 | 5.47 | 0.33 U | 5.7 NJ | G618 | 2.65 | 3.2 | 2.08 | 5.15 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 5 | 5 | 100 | 13 J | 79 J | G611 | 59.3 | 71 | 26.6 | 77.5 | 13 J | 79 J | G611 | 59.3 | 71 | 26.6 | 77.5 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 5 | 4 | 80 | 44 JT | 54 J | G611 | 48.8 | 48.5 | 4.11 | 53.3 | 6.9 U | 54 J | G611 | 40.4 | 48 | 19.1 | 53 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 5 | 5 | 100 | 90 J | 455 JT | G614 | 341 | 380 | 144 | 444 | 90 J | 455 JT | G614 | 341 | 380 | 144 | 444 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 5 | 5 | 100 | 28 J | 200 J | G618 | 151 | 175 | 69.5 | 196 | 28 J | 200 J | G618 | 151 | 175 | 69.5 | 196 |
| Total Petroleum Hydrocarbons | mg/kg | 5 | 5 | 100 | 103 JA | 527 JA | G614 | 400 | 459 | 169 | 516 | 103 JA | 527 JA | G614 | 400 | 459 | 169 | 516 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 5 | 5 | 100 | 28 JA | 249 JA | G618 | 190 | 219 | 91.2 | 246 | 28 JA | 249 JA | G618 | 190 | 219 | 91.2 | 246 |
| ***RM 04-05*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 36 | 36 | 100 | 0.071 J | 0.4 | SD019 | 0.228 | 0.224 | 0.0727 | 0.351 | 0.071 J | 0.4 | SD019 | 0.228 | 0.224 | 0.0727 | 0.351 |
| Lead | mg/kg | 36 | 36 | 100 | 4.38 | 30.8 | C522 | 12.9 | 12.2 | 5.12 | 22.2 | 4.38 | 30.8 | C522 | 12.9 | 12.2 | 5.12 | 22.2 |
| Mercury | mg/kg | 36 | 36 | 100 | 0.006 J | 0.17 | C16/17 | 0.0617 | 0.0575 | 0.027 | 0.102 | 0.006 J | 0.17 | C16/17 | 0.0617 | 0.0575 | 0.027 | 0.102 |
| Nickel | mg/kg | 36 | 36 | 100 | 14.9 | 31 | SD019 | 22.6 | 22.7 | 4.2 | 30 | 14.9 | 31 | SD019 | 22.6 | 22.7 | 4.2 | 30 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 8 | 8 | 100 | 0.000214 JT | 0.00221 T | G629 | 0.000553 | 0.000322 | 0.000672 | 0.00158 | 0.000214 JT | 0.00221 T | G629 | 0.000553 | 0.000322 | 0.000672 | 0.00158 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 30 | 6 | 20 | 0.2 J | 1.96 J | G146 | 0.579 | 0.326 | 0.682 | 1.58 | 0.086 U | 1.96 J | G146 | 0.395 | 0.228 | 0.489 | 1.7 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 37 | 37 | 100 | 28 | 1200 | G630 | 233 | 150 | 272 | 822 | 28 | 1200 | G630 | 233 | 150 | 272 | 822 |
| Total HPAHs | µg/kg | 37 | 37 | 100 | 196 T | 8500 T | G630 | 1840 | 1180 | 1990 | 6330 | 196 T | 8500 T | G630 | 1840 | 1180 | 1990 | 6330 |
| Total LPAHs | µg/kg | 37 | 37 | 100 | 13.4 JT | 1400 T | G629 | 262 | 180 | 279 | 794 | 13.4 JT | 1400 T | G629 | 262 | 180 | 279 | 794 |
| Naphthalene | µg/kg | 37 | 30 | 81 | 1.6 J | 150 | G629 | 29.7 | 22.5 | 28.2 | 74 | 1.6 J | 150 | G629 | 26.6 | 20 | 26.2 | 67 |
| Phenanthrene | µg/kg | 37 | 37 | 100 | 4.8 | 680 | G629 | 126 | 87 | 141 | 436 | 4.8 | 680 | G629 | 126 | 87 | 141 | 436 |
| Total cPAHs | µg/kg | 37 | 37 | 100 | 37.9 T | 1570 T | G630 | 314 | 199 | 362 | 1100 | 37.9 T | 1570 T | G630 | 314 | 199 | 362 | 1100 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 35 | 11 | 31 | 4.4 J | 25 | GRAB-02 | 12.3 | 8.9 | 7.31 | 24 | 2.2 U | 25 | GRAB-02 | 10.3 | 8.1 | 7.57 | 21.6 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 36 | 12 | 33 | 0.12 NJ | 5.87 J | G131 | 1.35 | 0.442 | 2.01 | 5.46 | 0.068 U | 20 UJ | GRAB-01; GRAB-02 | 3.08 | 0.325 | 5.5 | 19.3 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 35 | 5 | 14 | 2.1 J | 33 | G634 | 11.7 | 8.1 | 12.2 | 28.3 | 0.23 U | 97 UJ | SD019 | 9.63 | 3.7 | 21.1 | 61 |

Table D1.3-14. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Navigation Channel.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 23 | 23 | 100 | 18 J | 220 J | C522 | 95.4 | 88 | 48.1 | 206 | 18 J | 220 J | C522 | 95.4 | 88 | 48.1 | 206 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 15 | 15 | 100 | 10 J | 130 J | G629 | 55.2 | 58 | 26.6 | 96.4 | 10 J | 130 J | G629 | 55.2 | 58 | 26.6 | 96.4 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 23 | 23 | 100 | 79 J | 830 J | C167 | 450 | 460 | 165 | 775 | 79 J | 830 J | C167 | 450 | 460 | 165 | 775 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 15 | 15 | 100 | 31 J | 310 J | G629 | 192 | 190 | 61.6 | 261 | 31 J | 310 J | G629 | 192 | 190 | 61.6 | 261 |
| Total Petroleum Hydrocarbons | mg/kg | 23 | 23 | 100 | 97 JA | 1040 JT | C167 | 546 | 525 | 201 | 902 | 97 JA | 1040 JT | C167 | 546 | 525 | 201 | 902 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 15 | 15 | 100 | 41 JA | 440 JA | G629 | 248 | 268 | 85.4 | 343 | 41 JA | 440 JA | G629 | 248 | 268 | 85.4 | 343 |
| ***RM 05-06*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 41 | 36 | 88 | 0.054 | 0.421 JT | G196 | 0.174 | 0.162 | 0.0818 | 0.275 | 0.036 UT | 0.421 JT | G196 | 0.16 | 0.16 | 0.0863 | 0.266 |
| Lead | mg/kg | 41 | 41 | 100 | 2.4 T | 58.4 JT | G196 | 12.5 | 11.9 | 9.04 | 20 | 2.4 T | 58.4 JT | G196 | 12.5 | 11.9 | 9.04 | 20 |
| Mercury | mg/kg | 41 | 38 | 93 | 0.009 J | 0.288 | G639 | 0.0638 | 0.052 | 0.0526 | 0.131 | 0.009 J | 0.288 | G639 | 0.0641 | 0.053 | 0.0513 | 0.121 |
| Nickel | mg/kg | 41 | 38 | 93 | 10.4 T | 28.1 | G229 | 18.7 | 19.9 | 4.78 | 27.3 | 10.4 T | 29 UT | G196 | 18.7 | 19.7 | 4.97 | 27.4 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 7 | 7 | 100 | 0.00000197 JT | 0.00147 T | G208 | 0.000477 | 0.000426 | 0.000496 | 0.00121 | 0.00000197 JT | 0.00147 T | G208 | 0.000477 | 0.000426 | 0.000496 | 0.00121 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 39 | 9 | 23 | 0.52 J | 4.7 J | G639 | 2.57 | 2.65 | 1.47 | 4.54 | 0.062 U | 20 U | WR-BC-21 | 1.4 | 0.42 | 3.29 | 4.33 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 41 | 41 | 100 | 9.2 | 340000 | G225 | 14800 | 470 | 54300 | 46000 | 9.2 | 340000 | G225 | 14800 | 470 | 54300 | 46000 |
| Total HPAHs | µg/kg | 41 | 41 | 100 | 79 JT | 4350000 T | G225 | 177000 | 3930 | 689000 | 558000 | 79 JT | 4350000 T | G225 | 177000 | 3930 | 689000 | 558000 |
| Total LPAHs | µg/kg | 41 | 40 | 98 | 8.8 JT | 2910000 T | G225 | 100000 | 636 | 462000 | 250000 | 8.8 JT | 2910000 T | G225 | 97900 | 590 | 457000 | 242000 |
| Naphthalene | µg/kg | 41 | 37 | 90 | 1.5 J | 73000 | G225 | 2230 | 54 | 12000 | 1940 | 1.5 J | 73000 | G225 | 2020 | 40 | 11400 | 1800 |
| Phenanthrene | µg/kg | 41 | 40 | 98 | 3.3 | 1700000 | G225 | 57200 | 255 | 269000 | 142000 | 3.3 | 1700000 | G225 | 55800 | 240 | 266000 | 140000 |
| Total cPAHs | µg/kg | 41 | 41 | 100 | 12.8 JT | 449000 T | G225 | 19700 | 627 | 71700 | 62900 | 12.8 JT | 449000 T | G225 | 19700 | 627 | 71700 | 62900 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 38 | 8 | 21 | 3.7 J | 110 | G222 | 23.9 | 11.5 | 35.5 | 80.6 | 1.9 UJ | 750 UJ | G225 | 51.3 | 9.4 | 132 | 241 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 42 | 19 | 45 | 0.056 J | 4.62 J | G229 | 0.843 | 0.277 | 1.12 | 2.64 | 0.016 U | 420 U | G223 | 15 | 0.335 | 66.5 | 39 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 39 | 3 | 8 | 4.3 NJ | 5.7 J | G644 | 4.9 | 4.7 | 0.721 | 5.6 | 0.2 U | 350 UT | 05R040 | 13.5 | 2.8 | 56.3 | 32.2 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 23 | 22 | 96 | 50 J | 3500 J | G639 | 415 | 120 | 770 | 1380 | 5.5 U | 3500 J | G639 | 398 | 110 | 757 | 1350 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 13 | 12 | 92 | 13 J | 1900 J | G639 | 241 | 56.5 | 539 | 1130 | 6.7 U | 1900 J | G639 | 223 | 56 | 520 | 1060 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 23 | 23 | 100 | 21 J | 3400 J | G639 | 576 | 370 | 678 | 1190 | 21 J | 3400 J | G639 | 576 | 370 | 678 | 1190 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 13 | 13 | 100 | 19 J | 1400 J | G639 | 246 | 150 | 366 | 800 | 19 J | 1400 J | G639 | 246 | 150 | 366 | 800 |
| Total Petroleum Hydrocarbons | mg/kg | 23 | 23 | 100 | 21 JA | 6900 JA | G639 | 973 | 492 | 1430 | 2540 | 21 JA | 6900 JA | G639 | 973 | 492 | 1430 | 2540 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 13 | 13 | 100 | 19 JA | 3300 JA | G639 | 469 | 211 | 881 | 1860 | 19 JA | 3300 JA | G639 | 469 | 211 | 881 | 1860 |
| ***RM 06-07*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 46 | 41 | 89 | 0.05 | 0.406 | G326 | 0.173 | 0.135 | 0.109 | 0.373 | 0.036 U | 0.406 | G326 | 0.159 | 0.122 | 0.11 | 0.369 |
| Lead | mg/kg | 48 | 48 | 100 | 2.5 | 62.7 J | G252 | 11.7 | 6.62 | 11.2 | 30.1 | 2.5 | 62.7 J | G252 | 11.7 | 6.62 | 11.2 | 30.1 |
| Mercury | mg/kg | 46 | 44 | 96 | 0.01 J | 0.198 J | G326 | 0.0457 | 0.03 | 0.037 | 0.1 | 0.008 UJ | 0.198 J | G326 | 0.0443 | 0.03 | 0.0368 | 0.0998 |
| Nickel | mg/kg | 48 | 48 | 100 | 10.8 | 29.9 | G289 | 18.6 | 17.2 | 5.13 | 27.1 | 10.8 | 29.9 | G289 | 18.6 | 17.2 | 5.13 | 27.1 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 9 | 9 | 100 | 0.0000746 JT | 0.003 T | G664 | 0.00154 | 0.00148 | 0.00125 | 0.00298 | 0.0000746 JT | 0.003 T | G664 | 0.00154 | 0.00148 | 0.00125 | 0.00298 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 37 | 5 | 14 | 0.623 J | 8.3 NJ | G253 | 3.13 | 1.95 | 3.22 | 7.47 | 0.062 U | 20 U | WR-BC-22 | 1.45 | 0.27 | 3.5 | 4.96 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 48 | 47 | 98 | 3.3 | 99000 J | WR-BC-22 | 4120 | 220 | 15400 | 14900 | 3.3 | 99000 J | WR-BC-22 | 4030 | 210 | 15300 | 14500 |
| Total HPAHs | µg/kg | 48 | 48 | 100 | 2.2 T | 1020000 T | WR-BC-22 | 42400 | 2460 | 160000 | 145000 | 2.2 T | 1020000 T | WR-BC-22 | 42400 | 2460 | 160000 | 145000 |
| Total LPAHs | µg/kg | 48 | 48 | 100 | 1.7 JT | 396000 T | WR-BC-22 | 16300 | 1070 | 61200 | 61300 | 1.7 JT | 396000 T | WR-BC-22 | 16300 | 1070 | 61200 | 61300 |
| Naphthalene | µg/kg | 48 | 38 | 79 | 0.5 J | 5300 J | WR-BC-22 | 335 | 89.5 | 885 | 996 | 0.5 J | 10000 U | GRAB-05 | 476 | 48.5 | 1610 | 1350 |
| Phenanthrene | µg/kg | 48 | 47 | 98 | 1 J | 180000 J | WR-BC-22 | 8230 | 270 | 29300 | 39200 | 1 J | 180000 J | WR-BC-22 | 8060 | 255 | 29000 | 38900 |
| Total cPAH | µg/kg | 48 | 47 | 98 | 5 JT | 128000 JT | WR-BC-22 | 5310 | 297 | 19900 | 19900 | 5 JT | 128000 JT | WR-BC-22 | 5200 | 283 | 19700 | 19400 |

Table D1.3-14. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Navigation Channel.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 44 | 4 | 9 | 3.8 J | 55 J | GRAB-04 | 19.7 | 9.9 | 23.8 | 48.4 | 2 U | 10000 U | GRAB-05 | 242 | 4 | 1510 | 93.8 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 46 | 16 | 35 | 0.118 J | 3.45 J | G272 | 1.46 | 1.19 | 1.08 | 3.08 | 0.068 U | 10000 U | GRAB-05 | 230 | 2.54 | 1470 | 99.5 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 44 | 2 | 5 | 0.28 J | 14 J | G309 | 7.14 | 7.14 | 9.7 | 13.3 | 0.2 U | 30500 U | GRAB-05 | 703 | 0.815 | 4600 | 54 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 33 | 27 | 82 | 8.2 J | 630 J | G289; G297 | 189 | 130 | 184 | 591 | 2.7 U | 630 J | G289; G297 | 156 | 98 | 181 | 552 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 10 | 5 | 50 | 7.85 JT | 320 J | C312 | 145 | 130 | 128 | 300 | 3.3 U | 320 J | C312 | 74.6 | 6.58 | 113 | 275 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 33 | 31 | 94 | 9.2 J | 1200 J | G289 | 361 | 320 | 303 | 770 | 9.2 J | 1200 J | G289 | 341 | 270 | 304 | 762 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 10 | 10 | 100 | 7.1 J | 490 J | G664 | 124 | 21 | 182 | 459 | 7.1 J | 490 J | G664 | 124 | 21 | 182 | 459 |
| Total Petroleum Hydrocarbons | mg/kg | 33 | 31 | 94 | 9.2 JA | 1830 JT | G289 | 528 | 459 | 474 | 1320 | 9.2 JA | 1830 JT | G289 | 498 | 380 | 475 | 1290 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 10 | 10 | 100 | 7.1 JA | 740 JT | C312 | 196 | 25 | 290 | 727 | 7.1 JA | 740 JT | C312 | 196 | 25 | 290 | 727 |
| ***RM 07-08*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 44 | 44 | 100 | 0.08 | 0.5 | SD120 | 0.262 | 0.24 | 0.0967 | 0.449 | 0.08 | 0.5 | SD120 | 0.262 | 0.24 | 0.0967 | 0.449 |
| Lead | mg/kg | 44 | 44 | 100 | 5.9 | 37.6 | AN-CTPD-04 | 15.2 | 13.5 | 6.39 | 30.6 | 5.9 | 37.6 | AN-CTPD-04 | 15.2 | 13.5 | 6.39 | 30.6 |
| Mercury | mg/kg | 44 | 41 | 93 | 0.03 | 0.357 | G349 | 0.0689 | 0.06 | 0.0485 | 0.1 | 0.03 | 0.357 | G349 | 0.0687 | 0.06 | 0.0472 | 0.1 |
| Nickel | mg/kg | 44 | 44 | 100 | 16.1 | 30.5 J | G375 | 24.1 | 23.7 | 3.51 | 29.9 | 16.1 | 30.5 J | G375 | 24.1 | 23.7 | 3.51 | 29.9 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 9 | 9 | 100 | 0.00000298 JT | 0.00183 T | G381 | 0.000446 | 0.000354 | 0.000543 | 0.0013 | 0.00000298 JT | 0.00183 T | G381 | 0.000446 | 0.000354 | 0.000543 | 0.0013 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 33 | 2 | 6 | 0.578 NJ | 3.74 NJ | G386 | 2.16 | 2.16 | 2.24 | 3.58 | 0.0973 U | 9.6 U | SD093 | 1.15 | 0.24 | 1.84 | 3.24 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 44 | 43 | 98 | 3 J | 57 | G349 | 24.9 | 24 | 11.3 | 41.9 | 3 J | 57 | G349 | 24.6 | 24 | 11.4 | 41.9 |
| Total HPAHs | µg/kg | 44 | 44 | 100 | 29.7 T | 720 T | AN-CTPD-04 | 267 | 247 | 137 | 516 | 29.7 T | 720 T | AN-CTPD-04 | 267 | 247 | 137 | 516 |
| Total LPAHs | µg/kg | 44 | 44 | 100 | 8 T | 510 T | AN-CTPD-04 | 60.8 | 36.8 | 80 | 169 | 8 T | 510 T | AN-CTPD-04 | 60.8 | 36.8 | 80 | 169 |
| Naphthalene | µg/kg | 45 | 20 | 44 | 1 J | 43 | G349 | 14.4 | 9.45 | 12 | 41.1 | 1 J | 43 | G349 | 13.5 | 10 | 8.96 | 31.4 |
| Phenanthrene | µg/kg | 44 | 43 | 98 | 4 J | 280 | AN-CTPD-04 | 33.3 | 24 | 41.5 | 65.3 | 4 J | 280 | AN-CTPD-04 | 32.9 | 23 | 41.1 | 64.5 |
| Total cPAHs | µg/kg | 44 | 44 | 100 | 4.23 JT | 82.7 T | G349 | 33.3 | 31.2 | 16.1 | 55.7 | 4.23 JT | 82.7 T | G349 | 33.3 | 31.2 | 16.1 | 55.7 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 41 | 19 | 46 | 4.4 J | 82 | SD124 | 23.9 | 15 | 22.9 | 68.5 | 2.9 U | 82 | SD124 | 19.2 | 17 | 17.4 | 57 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 36 | 17 | 47 | 0.11 J | 2.82 J | G344 | 1.17 | 0.62 | 0.969 | 2.72 | 0.11 J | 29 U | AN-CTPD-05 | 8.41 | 2.76 | 9.64 | 23.3 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 41 | 2 | 5 | 5.2 NJ | 5.7 J | G349 | 5.45 | 5.45 | 0.354 | 5.68 | 0.3 U | 100 UJ | PSY36; PSY37; PSY38; PSY39; PSY40 | 32.4 | 5.1 | 42 | 100 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 8 | 8 | 100 | 55 J | 105 JT | G381 | 74.9 | 72.6 | 14.9 | 97.3 | 55 J | 105 JT | G381 | 74.9 | 72.6 | 14.9 | 97.3 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 7 | 7 | 100 | 38.5 JT | 68 J | G693 | 47.5 | 44 | 9.85 | 62.6 | 38.5 JT | 68 J | G693 | 47.5 | 44 | 9.85 | 62.6 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 8 | 8 | 100 | 280 J | 500 J | G687 | 391 | 395 | 84 | 497 | 280 J | 500 J | G687 | 391 | 395 | 84 | 497 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 7 | 7 | 100 | 150 JT | 220 J | G693 | 174 | 165 | 27.8 | 214 | 150 JT | 220 J | G693 | 174 | 165 | 27.8 | 214 |
| Total Petroleum Hydrocarbons | mg/kg | 8 | 8 | 100 | 335 JA | 578 JA | G687 | 466 | 468 | 87.1 | 576 | 335 JA | 578 JA | G687 | 466 | 468 | 87.1 | 576 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 7 | 7 | 100 | 191 JA | 288 JA | G693 | 221 | 204 | 36.7 | 277 | 191 JA | 288 JA | G693 | 221 | 204 | 36.7 | 277 |
| ***RM 08-09*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 49 | 49 | 100 | 0.1 | 1.89 | DM-H | 0.281 | 0.215 | 0.297 | 0.5 | 0.1 | 1.89 | DM-H | 0.281 | 0.215 | 0.297 | 0.5 |
| Lead | mg/kg | 49 | 49 | 100 | 7.43 | 20 | SD144 | 12.4 | 12.2 | 2.18 | 16.1 | 7.43 | 20 | SD144 | 12.4 | 12.2 | 2.18 | 16.1 |
| Mercury | mg/kg | 49 | 46 | 94 | 0.038 | 0.374 | DM-H | 0.0742 | 0.06 | 0.0597 | 0.108 | 0.038 | 0.374 | DM-H | 0.0728 | 0.06 | 0.0581 | 0.105 |
| Nickel | mg/kg | 49 | 49 | 100 | 19.4 | 34.3 | G435 | 24.8 | 24 | 3.12 | 30.1 | 19.4 | 34.3 | G435 | 24.8 | 24 | 3.12 | 30.1 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 3 | 3 | 100 | 0.000258 JT | 0.000659 T | G410-1 | 0.000491 | 0.000556 | 0.000208 | 0.000649 | 0.000258 JT | 0.000659 T | G410-1 | 0.000491 | 0.000556 | 0.000208 | 0.000649 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 34 | 4 | 12 | 0.685 J | 2.36 NJ | G435 | 1.31 | 1.1 | 0.734 | 2.19 | 0.062 U | 2.36 NJ | G435 | 0.404 | 0.23 | 0.455 | 1.06 |

Table D1.3-14. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Navigation Channel.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 49 | 49 | 100 | 4.9 | 274 | DM-H | 22.6 | 13.7 | 39 | 39 | 4.9 | 274 | DM-H | 22.6 | 13.7 | 39 | 39 |
| Total HPAHs | µg/kg | 49 | 49 | 100 | 45.9 JT | 3140 T | DM-H | 255 | 153 | 447 | 453 | 45.9 JT | 3140 T | DM-H | 255 | 153 | 447 | 453 |
| Total LPAHs | µg/kg | 49 | 49 | 100 | 9.82 JT | 340 JA | DM-H | 41.8 | 30.6 | 59.6 | 63.2 | 9.82 JT | 340 JA | DM-H | 41.8 | 30.6 | 59.6 | 63.2 |
| Naphthalene | µg/kg | 49 | 22 | 45 | 3.4 | 24 | PSY42 | 8.55 | 7.55 | 4.58 | 17 | 0.85 U | 24 | PSY42 | 8.98 | 8.1 | 4.79 | 19 |
| Phenanthrene | µg/kg | 49 | 49 | 100 | 3.4 | 241 | DM-H | 24.8 | 15 | 38.7 | 49.2 | 3.4 | 241 | DM-H | 24.8 | 15 | 38.7 | 49.2 |
| Total cPAHs | µg/kg | 49 | 49 | 100 | 7.17 JT | 382 T | DM-H | 31.6 | 19.6 | 53.8 | 51 | 7.17 JT | 382 T | DM-H | 31.6 | 19.6 | 53.8 | 51 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 49 | 21 | 43 | 5.1 J | 40 | PSY41 | 16.1 | 9.8 | 11.7 | 38 | 2.8 U | 40 | PSY41 | 11.1 | 6.2 | 9.89 | 31.5 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 42 | 13 | 31 | 0.14 J | 11 | WR-PG-86 | 1.85 | 0.71 | 2.93 | 6.43 | 0.068 UJ | 19 U | SD144; SD146; SD147 | 2.9 | 0.6 | 5.07 | 18.6 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 47 | 4 | 9 | 0.96 J | 18 J | G443 | 9.44 | 9.4 | 6.97 | 16.8 | 0.35 U | 100 U | PSY41; PSY42; PSY44; PSY46; PSY48; PSY50 | 21.7 | 4.3 | 37.9 | 100 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 24 | 24 | 100 | 33 J | 110 J | WR-PG-88; WR-PG-90 | 69.8 | 69.3 | 20.4 | 108 | 33 J | 110 J | WR-PG-88; WR-PG-90 | 69.8 | 69.3 | 20.4 | 108 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 15 | 15 | 100 | 20 J | 54 JT | G722 | 37.9 | 40 | 10.3 | 49.8 | 20 J | 54 JT | G722 | 37.9 | 40 | 10.3 | 49.8 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 24 | 24 | 100 | 180 J | 760 J | WR-PG-88 | 469 | 465 | 140 | 680 | 180 J | 760 J | WR-PG-88 | 469 | 465 | 140 | 680 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 15 | 15 | 100 | 83 J | 220 JT | G722 | 154 | 160 | 38.4 | 213 | 83 J | 220 JT | G722 | 154 | 160 | 38.4 | 213 |
| Total Petroleum Hydrocarbons | mg/kg | 24 | 24 | 100 | 213 JA | 870 JT | WR-PG-88 | 539 | 546 | 160 | 787 | 213 JA | 870 JT | WR-PG-88 | 539 | 546 | 160 | 787 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 15 | 15 | 100 | 105 JA | 274 JA | G722 | 192 | 199 | 47.9 | 261 | 105 JA | 274 JA | G722 | 192 | 199 | 47.9 | 261 |
| ***Swan Island Lagoon*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 5 | 5 | 100 | 0.1 | 1.48 | DM-22 | 0.473 | 0.2 | 0.574 | 1.26 | 0.1 | 1.48 | DM-22 | 0.473 | 0.2 | 0.574 | 1.26 |
| Lead | mg/kg | 5 | 5 | 100 | 11 | 15.2 | PSY34 | 12.8 | 12.3 | 1.6 | 14.8 | 11 | 15.2 | PSY34 | 12.8 | 12.3 | 1.6 | 14.8 |
| Mercury | mg/kg | 5 | 4 | 80 | 0.06 | 0.27 | DM-22 | 0.113 | 0.061 | 0.105 | 0.239 | 0.05 U | 0.27 | DM-22 | 0.1 | 0.06 | 0.0949 | 0.228 |
| Nickel | mg/kg | 5 | 5 | 100 | 18.8 | 28 | SD125 | 24 | 23 | 3.68 | 27.8 | 18.8 | 28 | SD125 | 24 | 23 | 3.68 | 27.8 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.24 U | 0.24 U | G700 | 0.24 | 0.24 | -- | 0.24 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 5 | 5 | 100 | 16 | 38 | PSY34 | 28.4 | 30 | 8.01 | 36.6 | 16 | 38 | PSY34 | 28.4 | 30 | 8.01 | 36.6 |
| Total HPAHs | µg/kg | 5 | 5 | 100 | 190 JT | 551 T | PSY34 | 337 | 314 | 137 | 515 | 190 JT | 551 T | PSY34 | 337 | 314 | 137 | 515 |
| Total LPAHs | µg/kg | 5 | 5 | 100 | 28 T | 42 JT | G700 | 33.3 | 29.4 | 6.32 | 41.2 | 28 T | 42 JT | G700 | 33.3 | 29.4 | 6.32 | 41.2 |
| Naphthalene | µg/kg | 5 | 1 | 20 | 8.7 | 8.7 | G700 | 8.7 | 8.7 | -- | 8.7 | 6.7 U | 19 U | SD125 | 10.9 | 10 | 4.74 | 17.2 |
| Phenanthrene | µg/kg | 5 | 5 | 100 | 18 | 38 | PSY34 | 28.5 | 29 | 7.1 | 36.3 | 18 | 38 | PSY34 | 28.5 | 29 | 7.1 | 36.3 |
| Total cPAHs | µg/kg | 5 | 5 | 100 | 23.5 JT | 50.3 T | PSY34 | 37.7 | 37.3 | 9.6 | 48.3 | 23.5 JT | 50.3 T | PSY34 | 37.7 | 37.3 | 9.6 | 48.3 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 5 | 4 | 80 | 17 | 52 | PSY35 | 35.9 | 37.3 | 15.1 | 50.7 | 17 | 52 | PSY35 | 32.5 | 31.5 | 15.1 | 50.2 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 2 | 1 | 50 | 0.13 J | 0.13 J | G700 | 0.13 | 0.13 | -- | 0.13 | 0.13 J | 19 U | SD125 | 9.57 | 9.57 | 13.3 | 18.1 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.63 U | 100 U | PSY34; PSY35 | 73.9 | 97.5 | 48.9 | 100 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 1 | 1 | 100 | 57 J | 57 J | G700 | 57 | 57 | -- | 57 | 57 J | 57 J | G700 | 57 | 57 | -- | 57 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 1 | 1 | 100 | 51 J | 51 J | G700 | 51 | 51 | -- | 51 | 51 J | 51 J | G700 | 51 | 51 | -- | 51 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 1 | 1 | 100 | 380 J | 380 J | G700 | 380 | 380 | -- | 380 | 380 J | 380 J | G700 | 380 | 380 | -- | 380 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 1 | 1 | 100 | 200 J | 200 J | G700 | 200 | 200 | -- | 200 | 200 J | 200 J | G700 | 200 | 200 | -- | 200 |
| Total Petroleum Hydrocarbons | mg/kg | 1 | 1 | 100 | 437 JA | 437 JA | G700 | 437 | 437 | -- | 437 | 437 JA | 437 JA | G700 | 437 | 437 | -- | 437 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 1 | 1 | 100 | 251 JA | 251 JA | G700 | 251 | 251 | -- | 251 | 251 JA | 251 JA | G700 | 251 | 251 | -- | 251 |
| ***RM 09-10*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 34 | 34 | 100 | 0.057 J | 1.45 | DM-D | 0.297 | 0.203 | 0.33 | 1.23 | 0.057 J | 1.45 | DM-D | 0.297 | 0.203 | 0.33 | 1.23 |
| Lead | mg/kg | 34 | 34 | 100 | 3.63 | 31.4 | DM-F | 12.6 | 12.3 | 4.72 | 18.8 | 3.63 | 31.4 | DM-F | 12.6 | 12.3 | 4.72 | 18.8 |
| Mercury | mg/kg | 34 | 32 | 94 | 0.018 | 0.276 | DM-F | 0.0704 | 0.0555 | 0.0609 | 0.233 | 0.018 | 0.276 | DM-F | 0.0707 | 0.0555 | 0.0593 | 0.226 |
| Nickel | mg/kg | 34 | 34 | 100 | 15.1 | 35.5 J | RC483-2 | 24.3 | 23.6 | 4.71 | 30 | 15.1 | 35.5 J | RC483-2 | 24.3 | 23.6 | 4.71 | 30 |

Table D1.3-14. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Navigation Channel.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 5 | 5 | 100 | 0.000221 JT | 0.00163 JT | G739 | 0.000543 | 0.000254 | 0.00061 | 0.00138 | 0.000221 JT | 0.00163 JT | G739 | 0.000543 | 0.000254 | 0.00061 | 0.00138 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 28 | 3 | 11 | 0.25 | 4.98 NJ | G465 | 2.38 | 1.9 | 2.4 | 4.67 | 0.062 U | 4.98 NJ | G465 | 0.694 | 0.198 | 1.07 | 2 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 34 | 34 | 100 | 1.3 J | 209 | DM-F | 35.4 | 13 | 53.7 | 160 | 1.3 J | 209 | DM-F | 35.4 | 13 | 53.7 | 160 |
| Total HPAHs | µg/kg | 34 | 34 | 100 | 22 JT | 2210 T | DM-F | 381 | 164 | 545 | 1550 | 22 JT | 2210 T | DM-F | 381 | 164 | 545 | 1550 |
| Total LPAHs | µg/kg | 34 | 34 | 100 | 5.5 JT | 664 T | PSY77 | 74.3 | 27.9 | 134 | 335 | 5.5 JT | 664 T | PSY77 | 74.3 | 27.9 | 134 | 335 |
| Naphthalene | µg/kg | 34 | 14 | 41 | 2 J | 32 | PSY77 | 11.1 | 7.75 | 8.32 | 28.1 | 2 J | 32 | PSY77 | 9.75 | 7.55 | 7.33 | 24.1 |
| Phenanthrene | µg/kg | 34 | 34 | 100 | 2.3 J | 393 | PSY77 | 44.3 | 14.5 | 80.9 | 195 | 2.3 J | 393 | PSY77 | 44.3 | 14.5 | 80.9 | 195 |
| Total cPAHs | µg/kg | 34 | 34 | 100 | 1.91 JT | 301 T | DM-F | 49.7 | 19.3 | 75.9 | 223 | 1.91 JT | 301 T | DM-F | 49.7 | 19.3 | 75.9 | 223 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 34 | 12 | 35 | 3.3 J | 48 J | GRAB-10 | 18.9 | 14.5 | 13.7 | 42.5 | 3.2 UJ | 130 U | DM-F | 14.7 | 4.45 | 23.3 | 41.5 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 30 | 4 | 13 | 0.17 J | 2.05 J | G469 | 0.848 | 0.586 | 0.826 | 1.84 | 0.068 U | 23 U | SD150 | 3.85 | 0.911 | 6.15 | 20 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 31 | 2 | 6 | 1.6 NJ | 4.5 NJ | G739 | 3.05 | 3.05 | 2.05 | 4.36 | 0.37 U | 120 U | SD150 | 14.9 | 4.3 | 29.6 | 80.5 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 12 | 12 | 100 | 11 J | 120 J | WR-PG-96 | 69.1 | 59 | 32.6 | 115 | 11 J | 120 J | WR-PG-96 | 69.1 | 59 | 32.6 | 115 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 7 | 6 | 86 | 34 J | 86 J | G739 | 43.7 | 35 | 20.8 | 74 | 5.7 U | 86 J | G739 | 38.2 | 35 | 23.8 | 71.6 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 12 | 12 | 100 | 58 J | 800 J | WR-PG-96 | 470 | 425 | 203 | 762 | 58 J | 800 J | WR-PG-96 | 470 | 425 | 203 | 762 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 7 | 7 | 100 | 27 J | 310 J | G739 | 159 | 160 | 83 | 268 | 27 J | 310 J | G739 | 159 | 160 | 83 | 268 |
| Total Petroleum Hydrocarbons | mg/kg | 12 | 12 | 100 | 69 JA | 920 JT | WR-PG-96 | 541 | 503 | 233 | 876 | 69 JA | 920 JT | WR-PG-96 | 541 | 503 | 233 | 876 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 7 | 7 | 100 | 27 JA | 396 JA | G739 | 196 | 195 | 108 | 338 | 27 JA | 396 JA | G739 | 196 | 195 | 108 | 338 |
| ***RM 10-11*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 42 | 41 | 98 | 0.103 | 2.13 J | DM-B | 0.271 | 0.206 | 0.331 | 0.307 | 0.103 | 2.13 J | DM-B | 0.277 | 0.211 | 0.329 | 0.49 |
| Lead | mg/kg | 42 | 42 | 100 | 8.33 | 47.6 | PSY76 | 17.3 | 14.4 | 8.74 | 35 | 8.33 | 47.6 | PSY76 | 17.3 | 14.4 | 8.74 | 35 |
| Mercury | mg/kg | 42 | 41 | 98 | 0.02 | 1.06 | DM-C | 0.104 | 0.062 | 0.16 | 0.2 | 0.02 | 1.06 | DM-C | 0.102 | 0.061 | 0.158 | 0.2 |
| Nickel | mg/kg | 42 | 42 | 100 | 16.8 J | 34.8 | DM-C | 23.9 | 23.5 | 4.04 | 32.7 | 16.8 J | 34.8 | DM-C | 23.9 | 23.5 | 4.04 | 32.7 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 5 | 5 | 100 | 0.000206 JT | 0.00159 T | G506 | 0.000687 | 0.000595 | 0.000539 | 0.00141 | 0.000206 JT | 0.00159 T | G506 | 0.000687 | 0.000595 | 0.000539 | 0.00141 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 39 | 2 | 5 | 0.813 NJ | 3.16 NJ | G496 | 1.99 | 1.99 | 1.66 | 3.04 | 0.062 U | 6 U | PSY72 | 0.935 | 0.3 | 1.41 | 3.44 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 42 | 40 | 95 | 6.3 | 944 | DM-B | 54 | 18 | 151 | 87.6 | 6.3 | 944 | DM-B | 52.3 | 19.5 | 148 | 76.6 |
| Total HPAHs | µg/kg | 42 | 42 | 100 | 44 T | 7910 T | DM-B | 517 | 205 | 1230 | 1070 | 44 T | 7910 T | DM-B | 517 | 205 | 1230 | 1070 |
| Total LPAHs | µg/kg | 42 | 40 | 95 | 20 JT | 856 JA | DM-B | 80.9 | 37 | 138 | 202 | 20 JT | 856 JA | DM-B | 78 | 36 | 135 | 197 |
| Naphthalene | µg/kg | 42 | 30 | 71 | 3.4 | 76.8 | DM-B | 13.4 | 8.5 | 14.3 | 34.3 | 0.76 U | 76.8 | DM-B | 13 | 8.6 | 12.7 | 25.8 |
| Phenanthrene | µg/kg | 42 | 40 | 95 | 8.9 | 552 | DM-B | 47 | 22.5 | 88 | 102 | 8.9 | 552 | DM-B | 45.7 | 21 | 86 | 97.1 |
| Total cPAHs | µg/kg | 42 | 40 | 95 | 9.47 JT | 1300 T | DM-B | 75.9 | 27.2 | 209 | 124 | 9.47 JT | 1300 T | DM-B | 73.2 | 26.5 | 204 | 108 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 38 | 22 | 58 | 5.1 J | 103 | PSY72 | 22.4 | 20.8 | 20.5 | 46.2 | 2.3 UJ | 130 U | DM-B | 20.4 | 16 | 25.2 | 55.3 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 31 | 7 | 23 | 0.18 J | 6.05 J | G490 | 1.22 | 0.25 | 2.18 | 4.66 | 0.068 U | 20 U | GRAB-11; GRAB-12 | 2.4 | 0.27 | 4.98 | 13 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 38 | 15 | 39 | 0.98 J | 59 | G756 | 7.4 | 3.8 | 14.4 | 24.7 | 0.26 U | 100 U | PSY72; PSY76; T1S-01; T1S-03; T1S-05 | 25.4 | 4.15 | 39.2 | 100 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 24 | 24 | 100 | 30 J | 290 J | G770 | 78.9 | 58 | 53.2 | 146 | 30 J | 290 J | G770 | 78.9 | 58 | 53.2 | 146 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 22 | 22 | 100 | 24 J | 260 J | G770 | 60.2 | 49.5 | 47.9 | 93.1 | 24 J | 260 J | G770 | 60.2 | 49.5 | 47.9 | 93.1 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 24 | 24 | 100 | 200 J | 930 J | G770 | 443 | 390 | 161 | 663 | 200 J | 930 J | G770 | 443 | 390 | 161 | 663 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 22 | 22 | 100 | 110 J | 630 J | G770 | 230 | 210 | 107 | 320 | 110 J | 630 J | G770 | 230 | 210 | 107 | 320 |
| Total Petroleum Hydrocarbons | mg/kg | 24 | 24 | 100 | 235 JA | 1220 JA | G770 | 523 | 447 | 211 | 807 | 235 JA | 1220 JA | G770 | 523 | 447 | 211 | 807 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 22 | 22 | 100 | 134 JA | 890 JA | G770 | 290 | 264 | 154 | 413 | 134 JA | 890 JA | G770 | 290 | 264 | 154 | 413 |

Table D1.3-14. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Navigation Channel.

| | | | | | Detected Concentrations | | | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| ***RM 11-11.8*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 12 | 12 | 100 | 0.075 | 0.324 T | G028 | 0.145 | 0.129 | 0.0751 | 0.272 | 0.075 | 0.324 T | G028 | 0.145 | 0.129 | 0.0751 | 0.272 |
| Lead | mg/kg | 12 | 12 | 100 | 4.12 | 50.4 T | G028 | 16.8 | 12.2 | 12.9 | 38.4 | 4.12 | 50.4 T | G028 | 16.8 | 12.2 | 12.9 | 38.4 |
| Mercury | mg/kg | 12 | 12 | 100 | 0.013 | 0.56 | T1S-09 | 0.0873 | 0.045 | 0.151 | 0.303 | 0.013 | 0.56 | T1S-09 | 0.0873 | 0.045 | 0.151 | 0.303 |
| Nickel | mg/kg | 12 | 12 | 100 | 11.9 J | 28.9 | T1S-07 | 19.3 | 18.1 | 5.53 | 27.9 | 11.9 J | 28.9 | T1S-07 | 19.3 | 18.1 | 5.53 | 27.9 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 3 | 3 | 100 | 0.000194 JT | 0.00227 T | G778 | 0.000906 | 0.000254 | 0.00118 | 0.00207 | 0.000194 JT | 0.00227 T | G778 | 0.000906 | 0.000254 | 0.00118 | 0.00207 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 12 | 5 | 42 | 0.2 J | 4.5 NJ | UG03 | 1.39 | 0.3 | 1.85 | 3.94 | 0.051 U | 4.5 NJ | UG03 | 0.865 | 0.22 | 1.32 | 3.07 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 12 | 10 | 83 | 6 | 61 | G028 | 25.5 | 17.5 | 21 | 58.3 | 1.8 U | 61 | G028 | 23.1 | 17.5 | 20.2 | 57.7 |
| Total HPAHs | µg/kg | 12 | 12 | 100 | 13 T | 820 JA | UG03 | 267 | 132 | 279 | 720 | 13 T | 820 JA | UG03 | 267 | 132 | 279 | 720 |
| Total LPAHs | µg/kg | 12 | 11 | 92 | 6.6 JT | 166 T | G028 | 65.3 | 42 | 61.7 | 162 | 6.6 JT | 166 T | G028 | 61.5 | 31.6 | 60.2 | 161 |
| Naphthalene | µg/kg | 12 | 11 | 92 | 0.81 J | 38 | T1S-09 | 11 | 8.6 | 12.2 | 32.5 | 0.81 J | 38 | T1S-09 | 11.8 | 8.95 | 11.9 | 32 |
| Phenanthrene | µg/kg | 12 | 11 | 92 | 3.3 | 96 | T1S-09 | 31.8 | 18 | 31.2 | 78 | 3.3 | 96 | T1S-09 | 30.9 | 19 | 30 | 76.2 |
| Total cPAHs | µg/kg | 12 | 10 | 83 | 8.1 T | 104 JA | UG03 | 41.9 | 25 | 37.8 | 98.6 | 1.8 UT | 104 JA | UG03 | 36.7 | 20.8 | 36.4 | 97.4 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 10 | 2 | 20 | 5 J | 9 J | G774 | 7 | 7 | 2.83 | 8.8 | 1.9 U | 32 U | G021 | 8.59 | 3.2 | 10.2 | 27.5 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 10 | 1 | 10 | 1 | 1 | G774 | 1 | 1 | -- | 1 | 0.068 U | 1.2 U | G778 | 0.4 | 0.125 | 0.465 | 1.11 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 12 | 4 | 33 | 0.27 J | 1.4 NJ | G778 | 0.685 | 0.535 | 0.515 | 1.3 | 0.27 J | 100 U | T1S-07; T1S-09 | 17.3 | 0.86 | 38.6 | 100 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 7 | 7 | 100 | 8.8 J | 83 J | UG03 | 37.7 | 23 | 27.4 | 76.4 | 8.8 J | 83 J | UG03 | 37.7 | 23 | 27.4 | 76.4 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 8 | 5 | 62 | 13 JT | 160 JT | G028 | 49.2 | 28 | 62.3 | 134 | 6.5 U | 160 JT | G028 | 35.8 | 18.5 | 50.8 | 114 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 7 | 7 | 100 | 58 J | 470 J | UG03 | 226 | 140 | 166 | 437 | 58 J | 470 J | UG03 | 226 | 140 | 166 | 437 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 8 | 6 | 75 | 40 JT | 350 JT | G028 | 131 | 100 | 114 | 298 | 33 U | 350 JT | G028 | 106 | 67 | 106 | 277 |
| Total Petroleum Hydrocarbons | mg/kg | 7 | 7 | 100 | 66.8 JA | 550 JT | UG03 | 263 | 160 | 193 | 511 | 66.8 JA | 550 JT | UG03 | 263 | 160 | 193 | 511 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 8 | 6 | 75 | 53 JA | 510 JT | G028 | 172 | 122 | 172 | 425 | 33 UA | 510 JT | G028 | 137 | 75 | 159 | 391 |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TEQ - toxic equivalent concentration

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-15. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Navigation Channel.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| ***Study Area*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 355 | 341 | 96 | 0.016 J | 43.7 | C752 | 0.379 | 0.24 | 2.36 | 0.5 | 0.016 J | 43.7 | C752 | 0.369 | 0.233 | 2.31 | 0.5 |
| Lead | mg/kg | 359 | 359 | 100 | 1.54 | 3330 J | C326 | 30.6 | 15 | 178 | 46.3 | 1.54 | 3330 J | C326 | 30.6 | 15 | 178 | 46.3 |
| Mercury | mg/kg | 352 | 344 | 98 | 0.004 J | 1.17 | C752 | 0.0877 | 0.07 | 0.106 | 0.216 | 0.004 J | 1.17 | C752 | 0.0863 | 0.07 | 0.105 | 0.215 |
| Nickel | mg/kg | 359 | 359 | 100 | 9.64 | 523 | C299 | 23.2 | 21.7 | 27.1 | 31.6 | 9.64 | 523 | C299 | 23.2 | 21.7 | 27.1 | 31.6 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 28 | 22 | 79 | 0.0000000696 JT | 0.0149 T | C752 | 0.00256 | 0.00125 | 0.00387 | 0.0113 | 0.0000000696 JT | 0.0149 T | C752 | 0.00204 | 0.000401 | 0.00356 | 0.00967 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 334 | 29 | 9 | 0.1 J | 9.6 | C521 | 1.59 | 0.96 | 1.92 | 4.13 | 0.051 U | 15 U | 021108WRPB-VC-05 | 0.96 | 0.39 | 1.94 | 2.41 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 422 | 366 | 87 | 0.25 J | 280000 J | GS-C7 | 3420 | 39.5 | 20900 | 13000 | 0.14 U | 280000 J | GS-C7 | 2970 | 26 | 19500 | 7380 |
| Total HPAHs | µg/kg | 422 | 394 | 93 | 0.37 JT | 3300000 JT | GS-C7 | 38700 | 329 | 245000 | 111000 | 0.37 JT | 3300000 JT | GS-C7 | 36200 | 289 | 237000 | 95700 |
| Total LPAHs | µg/kg | 422 | 394 | 93 | 0.35 JT | 9000000 JT | GS-C7 | 81900 | 110 | 618000 | 58100 | 0.35 JT | 9000000 JT | GS-C7 | 76500 | 93 | 598000 | 41900 |
| Naphthalene | µg/kg | 425 | 296 | 70 | 0.39 J | 4300000 J | GS-C7 | 50400 | 32 | 358000 | 47500 | 0.17 U | 4300000 J | GS-C7 | 35100 | 14 | 300000 | 1380 |
| Phenanthrene | µg/kg | 422 | 382 | 91 | 0.71 J | 1900000 | GS-C7 | 20000 | 52 | 133000 | 40200 | 0.43 U | 1900000 | GS-C7 | 18100 | 40.5 | 126000 | 22100 |
| Total cPAHs | µg/kg | 422 | 377 | 89 | 0.041 JT | 377000 JT | GS-C7 | 4420 | 46.5 | 27600 | 14500 | 0.041 JT | 377000 JT | GS-C7 | 3950 | 37.2 | 26100 | 10200 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 378 | 110 | 29 | 2.6 J | 650 | WR-VC-23 | 20.8 | 8.6 | 67.6 | 36.5 | 1.8 U | 1500 U | C521 | 32.6 | 6.15 | 105 | 111 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 369 | 35 | 9 | 0.068 JT | 9.85 J | C305-2 | 1.22 | 0.62 | 1.96 | 4.5 | 0.0253 U | 1660 U | GP31 | 22.3 | 0.49 | 99.5 | 99 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 379 | 98 | 26 | 0.36 J | 270 | C299 | 10.8 | 2.6 | 30 | 47 | 0.18 U | 8260 U | GP31 | 86 | 1.6 | 459 | 465 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 246 | 222 | 90 | 0.045 J | 23000 J | C521 | 467 | 110 | 1900 | 900 | 0.045 J | 23000 J | C521 | 421 | 96 | 1810 | 683 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 86 | 62 | 72 | 1.8 J | 570 J | C752 | 120 | 83 | 119 | 299 | 1.3 U | 570 J | C752 | 87.4 | 42.5 | 114 | 275 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 246 | 220 | 89 | 0.24 | 11000 J | C521 | 625 | 460 | 985 | 1330 | 0.1 U | 11000 J | C521 | 560 | 420 | 951 | 1280 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 86 | 59 | 69 | 3.6 J | 1100 J | C752 | 293 | 270 | 244 | 625 | 3 U | 1100 J | C752 | 204 | 100 | 241 | 615 |
| Total Petroleum Hydrocarbons | mg/kg | 246 | 229 | 93 | 0.32 JT | 37400 JT | C521 | 1080 | 570 | 3020 | 1920 | 0.1 UT | 37400 JT | C521 | 1000 | 550 | 2930 | 1900 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 86 | 65 | 76 | 2.6 JA | 1670 JA | C752 | 381 | 328 | 363 | 878 | 2.6 JA | 1670 JA | C752 | 289 | 145 | 355 | 858 |
| ***RM 01.9-03*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 13 | 13 | 100 | 0.187 | 1.49 | 021108WRPB-VC-03 | 0.471 | 0.313 | 0.359 | 1.03 | 0.187 | 1.49 | 021108WRPB-VC-03 | 0.471 | 0.313 | 0.359 | 1.03 |
| Lead | mg/kg | 13 | 13 | 100 | 10.4 | 30.5 | 021108WRPB-VC-03 | 18.7 | 17.7 | 7.36 | 29.2 | 10.4 | 30.5 | 021108WRPB-VC-03 | 18.7 | 17.7 | 7.36 | 29.2 |
| Mercury | mg/kg | 13 | 13 | 100 | 0.043 | 0.154 | 021108WRPB-VC-03 | 0.0804 | 0.075 | 0.028 | 0.123 | 0.043 | 0.154 | 021108WRPB-VC-03 | 0.0804 | 0.075 | 0.028 | 0.123 |
| Nickel | mg/kg | 13 | 13 | 100 | 20.4 J | 26 | C606 | 21.8 | 21.7 | 1.55 | 24.7 | 20.4 J | 26 | C606 | 21.8 | 21.7 | 1.55 | 24.7 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 4 | 4 | 100 | 0.000223 JT | 0.00232 T | C6011 | 0.00125 | 0.00122 | 0.001 | 0.00225 | 0.000223 JT | 0.00232 T | C6011 | 0.00125 | 0.00122 | 0.001 | 0.00225 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.062 UT | 15 U | 021108WRPB-VC-05 | 2.48 | 0.32 | 4.93 | 13.7 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 14 | 14 | 100 | 67 | 590 | 021108WRPB-VC-05 | 234 | 170 | 170 | 551 | 67 | 590 | 021108WRPB-VC-05 | 234 | 170 | 170 | 551 |
| Total HPAHs | µg/kg | 14 | 14 | 100 | 576 T | 5650 T | WR-GC-11 | 2020 | 1300 | 1620 | 4710 | 576 T | 5650 T | WR-GC-11 | 2020 | 1300 | 1620 | 4710 |
| Total LPAHs | µg/kg | 14 | 14 | 100 | 100 T | 2400 T | C6012 | 691 | 373 | 719 | 2010 | 100 T | 2400 T | C6012 | 691 | 373 | 719 | 2010 |
| Naphthalene | µg/kg | 14 | 14 | 100 | 11 J | 221 J | WR-GC-11 | 71.6 | 35 | 68.9 | 188 | 11 J | 221 J | WR-GC-11 | 71.6 | 35 | 68.9 | 188 |
| Phenanthrene | µg/kg | 14 | 14 | 100 | 47 | 1400 T | C6012 | 345 | 185 | 404 | 1120 | 47 | 1400 T | C6012 | 345 | 185 | 404 | 1120 |
| Total cPAHs | µg/kg | 14 | 14 | 100 | 94.2 T | 847 JT | WR-GC-11 | 328 | 233 | 249 | 816 | 94.2 T | 847 JT | WR-GC-11 | 328 | 233 | 249 | 816 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 13 | 4 | 31 | 3.2 J | 12 | 021108WRPB-VC-01 | 6.28 | 4.95 | 3.92 | 11 | 2.7 U | 16 U | C6011; C6012; C606 | 7.97 | 4.6 | 5.91 | 16 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 13 | 2 | 15 | 0.24 JT | 0.34 | C6011 | 0.29 | 0.29 | 0.0707 | 0.335 | 0.13 U | 15 U | WR-VC-01 | 1.84 | 1.2 | 3.98 | 6.78 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 13 | 5 | 38 | 1.7 NJ | 29 T | 021108WRPB-VC-01; C6012 | 18.3 | 21 | 11.9 | 29 | 0.92 U | 29 T | 021108WRPB-VC-01; C6012 | 8.37 | 1.7 | 10.8 | 29 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 12 | 10 | 83 | 0.045 J | 170 J | C6011 | 66.5 | 45 | 71.2 | 166 | 0.045 J | 170 J | C6011 | 55.5 | 21.1 | 69.4 | 165 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 4 | 4 | 100 | 28 J | 140 J | C6011 | 100 | 117 | 49.5 | 137 | 28 J | 140 J | C6011 | 100 | 117 | 49.5 | 137 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 12 | 10 | 83 | 0.24 | 500 J | C606 | 218 | 250 | 203 | 469 | 0.1 U | 500 J | C606 | 182 | 110 | 202 | 462 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 4 | 4 | 100 | 100 J | 290 J | C6011; C606 | 235 | 275 | 91.1 | 290 | 100 J | 290 J | C6011; C606 | 235 | 275 | 91.1 | 290 |
| Total Petroleum Hydrocarbons | mg/kg | 12 | 10 | 83 | 0.32 JT | 660 JA | C606 | 285 | 295 | 272 | 633 | 0.1 UT | 660 JA | C606 | 237 | 131 | 269 | 627 |

Table D1.3-15. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Navigation Channel.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 4 | 4 | 100 | 128 JA | 430 JA | C6011 | 335 | 392 | 140 | 427 | 128 JA | 430 JA | C6011 | 335 | 392 | 140 | 427 |
| ***RM 03-04*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 10 | 10 | 100 | 0.119 | 0.565 | C614 | 0.384 | 0.372 | 0.136 | 0.565 | 0.119 | 0.565 | C614 | 0.384 | 0.372 | 0.136 | 0.565 |
| Lead | mg/kg | 10 | 10 | 100 | 4.59 | 31.2 | C614 | 22 | 22.8 | 7.67 | 30.2 | 4.59 | 31.2 | C614 | 22 | 22.8 | 7.67 | 30.2 |
| Mercury | mg/kg | 10 | 10 | 100 | 0.026 | 0.15 | C614 | 0.0987 | 0.1 | 0.0322 | 0.14 | 0.026 | 0.15 | C614 | 0.0987 | 0.1 | 0.0322 | 0.14 |
| Nickel | mg/kg | 10 | 10 | 100 | 17.2 | 28.7 | C614 | 22.4 | 20.6 | 4.14 | 28.4 | 17.2 | 28.7 | C614 | 22.4 | 20.6 | 4.14 | 28.4 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 10 | 2 | 20 | 0.62 | 0.65 NJ | C614 | 0.635 | 0.635 | 0.0212 | 0.649 | 0.14 U | 1 U | WR-VC-10 | 0.476 | 0.455 | 0.247 | 0.843 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 10 | 10 | 100 | 120 | 410 | C617 | 240 | 200 | 104 | 397 | 120 | 410 | C617 | 240 | 200 | 104 | 397 |
| Total HPAHs | µg/kg | 10 | 10 | 100 | 1100 T | 4540 T | WR-VC-10 | 2370 | 2400 | 1110 | 4120 | 1100 T | 4540 T | WR-VC-10 | 2370 | 2400 | 1110 | 4120 |
| Total LPAHs | µg/kg | 10 | 10 | 100 | 160 T | 1800 T | C617 | 688 | 563 | 540 | 1530 | 160 T | 1800 T | C617 | 688 | 563 | 540 | 1530 |
| Naphthalene | µg/kg | 10 | 10 | 100 | 19 | 210 | C617 | 76.6 | 54.5 | 58.9 | 170 | 19 | 210 | C617 | 76.6 | 54.5 | 58.9 | 170 |
| Phenanthrene | µg/kg | 10 | 10 | 100 | 79 | 1100 | C617 | 371 | 270 | 326 | 875 | 79 | 1100 | C617 | 371 | 270 | 326 | 875 |
| Total cPAHs | µg/kg | 10 | 10 | 100 | 172 T | 553 T | C617 | 332 | 274 | 138 | 540 | 172 T | 553 T | C617 | 332 | 274 | 138 | 540 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 10 | 6 | 60 | 14 J | 31 | WR-VC-07 | 18 | 14.5 | 6.78 | 28.3 | 3.2 U | 31 | WR-VC-07 | 14.9 | 14.5 | 7.49 | 26.1 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.068 U | 6 U | C614; C617 | 1.65 | 0.43 | 2.32 | 6 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 10 | 3 | 30 | 1.1 J | 5 NJ | C614 | 2.63 | 1.8 | 2.08 | 4.68 | 0.21 U | 9 U | C617 | 2.05 | 0.945 | 2.81 | 7.2 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 10 | 10 | 100 | 30 J | 270 J | C617 | 177 | 200 | 73.5 | 257 | 30 J | 270 J | C617 | 177 | 200 | 73.5 | 257 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 5 | 5 | 100 | 23 J | 240 J | C617 | 153 | 200 | 98.8 | 238 | 23 J | 240 J | C617 | 153 | 200 | 98.8 | 238 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 10 | 10 | 100 | 64 J | 710 J | WR-VC-10 | 525 | 545 | 195 | 706 | 64 J | 710 J | WR-VC-10 | 525 | 545 | 195 | 706 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 5 | 4 | 80 | 210 J | 510 J | C617 | 403 | 445 | 139 | 509 | 41 U | 510 J | C617 | 330 | 390 | 202 | 508 |
| Total Petroleum Hydrocarbons | mg/kg | 10 | 10 | 100 | 94 JA | 940 JA | C617; WR-VC-08; WR-VC-10 | 702 | 750 | 264 | 940 | 94 JA | 940 JA | C617; WR-VC-08; WR-VC-10 | 702 | 750 | 264 | 940 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 5 | 5 | 100 | 23 JA | 750 JA | C617 | 475 | 590 | 314 | 746 | 23 JA | 750 JA | C617 | 475 | 590 | 314 | 746 |
| ***RM 04-05*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 33 | 32 | 97 | 0.048 | 0.468 | WR-VC-12 | 0.289 | 0.298 | 0.106 | 0.458 | 0.048 | 0.468 | WR-VC-12 | 0.288 | 0.295 | 0.104 | 0.457 |
| Lead | mg/kg | 33 | 33 | 100 | 2.67 | 48.6 | C167 | 19.6 | 18.5 | 9.7 | 33 | 2.67 | 48.6 | C167 | 19.6 | 18.5 | 9.7 | 33 |
| Mercury | mg/kg | 33 | 33 | 100 | 0.013 J | 0.21 | B401-C1 | 0.0765 | 0.08 | 0.0377 | 0.116 | 0.013 J | 0.21 | B401-C1 | 0.0765 | 0.08 | 0.0377 | 0.116 |
| Nickel | mg/kg | 33 | 33 | 100 | 10.4 J | 29.6 | C167 | 20.9 | 19.5 | 4.7 | 28.8 | 10.4 J | 29.6 | C167 | 20.9 | 19.5 | 4.7 | 28.8 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 30 | 3 | 10 | 0.76 NJ | 1 | C621 | 0.91 | 0.97 | 0.131 | 0.997 | 0.062 U | 2 U | WR-GC-18 | 0.646 | 0.46 | 0.491 | 1.7 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 36 | 36 | 100 | 0.36 J | 3200 | C621 | 403 | 240 | 563 | 1230 | 0.36 J | 3200 | C621 | 403 | 240 | 563 | 1230 |
| Total HPAHs | µg/kg | 36 | 36 | 100 | 4.7 JT | 33000 T | C621 | 3860 | 2310 | 5680 | 11000 | 4.7 JT | 33000 T | C621 | 3860 | 2310 | 5680 | 11000 |
| Total LPAHs | µg/kg | 36 | 36 | 100 | 0.79 JT | 18000 T | C621 | 1380 | 525 | 3000 | 3170 | 0.79 JT | 18000 T | C621 | 1380 | 525 | 3000 | 3170 |
| Naphthalene | µg/kg | 37 | 31 | 84 | 17 | 1600 | C621 | 154 | 60 | 291 | 425 | 0.47 U | 1600 | C621 | 130 | 50 | 272 | 344 |
| Phenanthrene | µg/kg | 36 | 35 | 97 | 2 | 10000 | C621 | 760 | 300 | 1690 | 1690 | 1.9 U | 10000 | C621 | 739 | 290 | 1670 | 1680 |
| Total cPAHs | µg/kg | 36 | 36 | 100 | 0.457 JT | 4300 T | C621 | 544 | 336 | 756 | 1670 | 0.457 JT | 4300 T | C621 | 544 | 336 | 756 | 1670 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 32 | 13 | 41 | 3.4 J | 240 | B401-C1 | 26.4 | 7.5 | 64.4 | 108 | 2.1 U | 240 | B401-C1 | 16 | 5.85 | 41.4 | 25.4 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 32 | 5 | 16 | 0.16 J | 0.71 J | WR-VC-12 | 0.402 | 0.34 | 0.219 | 0.674 | 0.066 U | 200 U | B401-C1 | 7.52 | 0.39 | 35.3 | 11.3 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 32 | 13 | 41 | 0.95 J | 3.9 NJ | C634 | 2.33 | 2.4 | 0.829 | 3.42 | 0.21 U | 610 U | B401-C1 | 23.1 | 1.55 | 108 | 33.5 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 31 | 30 | 97 | 2.7 J | 420 J | C621 | 187 | 205 | 117 | 371 | 2.7 J | 420 J | C621 | 181 | 190 | 120 | 370 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 8 | 6 | 75 | 63 J | 330 J | C630 | 184 | 165 | 121 | 323 | 1.6 U | 330 J | C630 | 139 | 83 | 133 | 320 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 31 | 29 | 94 | 6.9 JT | 1100 J | C167 | 530 | 570 | 281 | 918 | 6.9 JT | 1100 J | C167 | 496 | 560 | 301 | 915 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 8 | 6 | 75 | 98 J | 670 J | C630 | 295 | 235 | 230 | 609 | 5.8 UT | 670 J | C630 | 223 | 115 | 236 | 584 |
| Total Petroleum Hydrocarbons | mg/kg | 31 | 31 | 100 | 2.7 JA | 1480 JT | C167 | 677 | 710 | 411 | 1280 | 2.7 JA | 1480 JT | C167 | 677 | 710 | 411 | 1280 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 8 | 6 | 75 | 161 JA | 1000 JA | C630 | 480 | 427 | 345 | 918 | 5.8 UT | 1000 JA | C630 | 362 | 198 | 365 | 885 |

Table D1.3-15. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Navigation Channel.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| ***RM 05-06*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 34 | 28 | 82 | 0.045 | 0.4 | WR-VC-34 | 0.164 | 0.0825 | 0.132 | 0.37 | 0.045 | 0.4 | WR-VC-34 | 0.149 | 0.081 | 0.124 | 0.364 |
| Lead | mg/kg | 34 | 34 | 100 | 2.04 | 39.8 | WR-VC-17 | 11.3 | 4.91 | 11.3 | 31.5 | 2.04 | 39.8 | WR-VC-17 | 11.3 | 4.91 | 11.3 | 31.5 |
| Mercury | mg/kg | 34 | 34 | 100 | 0.008 J | 0.11 | WR-VC-19 | 0.0424 | 0.0285 | 0.0343 | 0.0992 | 0.008 J | 0.11 | WR-VC-19 | 0.0424 | 0.0285 | 0.0343 | 0.0992 |
| Nickel | mg/kg | 34 | 34 | 100 | 13.3 | 28.5 | C169 | 18.4 | 17.8 | 3.89 | 27.2 | 13.3 | 28.5 | C169 | 18.4 | 17.8 | 3.89 | 27.2 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 4 | 3 | 75 | 0.0000000696 JT | 0.00000025 JT | C6442 | 0.00000018 | 0.000000219 | 0.0000000965 | 0.000000247 | 0.0000000696 JT | 0.00015 UT | C6441 | 0.0000376 | 0.000000235 | 0.0000749 | 0.000128 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 34 | 5 | 15 | 0.1 J | 0.992 NJ | C220 | 0.512 | 0.54 | 0.359 | 0.934 | 0.062 U | 2 U | WR-GC-19 | 0.369 | 0.36 | 0.371 | 0.88 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 35 | 27 | 77 | 0.5 J | 5800 | C221 | 631 | 280 | 1170 | 2180 | 0.14 U | 5800 | C221 | 487 | 260 | 1060 | 2020 |
| Total HPAHs | µg/kg | 35 | 29 | 83 | 1.2 JT | 74300 T | C221 | 6720 | 2540 | 14600 | 26500 | 0.64 UT | 74300 T | C221 | 5560 | 2290 | 13500 | 26400 |
| Total LPAHs | µg/kg | 35 | 31 | 89 | 0.39 JT | 43100 T | C221 | 2730 | 424 | 8000 | 10300 | 0.39 JT | 43100 T | C221 | 2420 | 350 | 7560 | 9060 |
| Naphthalene | µg/kg | 36 | 23 | 64 | 0.39 J | 880 | C171 | 109 | 57 | 177 | 210 | 0.37 UT | 880 | C171 | 70.3 | 33.5 | 150 | 210 |
| Phenanthrene | µg/kg | 35 | 27 | 77 | 1.5 J | 26000 | C221 | 1820 | 230 | 5150 | 7190 | 0.75 U | 26000 | C221 | 1410 | 180 | 4570 | 5710 |
| Total cPAHs | µg/kg | 35 | 29 | 83 | 0.05 JT | 7500 T | C221 | 778 | 385 | 1470 | 2790 | 0.05 JT | 7500 T | C221 | 644 | 360 | 1370 | 2660 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 33 | 9 | 27 | 3.4 J | 650 | WR-VC-23 | 80.3 | 7.7 | 214 | 397 | 1.9 U | 650 | WR-VC-23 | 27.5 | 4.5 | 112 | 28.4 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 34 | 6 | 18 | 0.068 JT | 1.21 J | C221 | 0.623 | 0.661 | 0.442 | 1.14 | 0.063 U | 7.8 U | C171 | 0.792 | 0.16 | 1.8 | 5.08 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 34 | 6 | 18 | 1.2 J | 5.4 J | C652 | 2.25 | 1.7 | 1.58 | 4.6 | 0.19 U | 5.4 J | C652 | 0.837 | 0.52 | 0.978 | 1.94 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 33 | 26 | 79 | 1.8 JT | 1400 J | C221 | 179 | 78.5 | 276 | 410 | 1.5 U | 1400 J | C221 | 141 | 64 | 255 | 354 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 15 | 5 | 33 | 1.8 J | 46 J | C652 | 24 | 30 | 17.3 | 42.8 | 1.5 U | 46 J | C652 | 9.06 | 1.7 | 14.3 | 34.8 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 33 | 26 | 79 | 6.9 J | 1900 J | C221 | 366 | 255 | 417 | 830 | 3.5 U | 1900 J | C221 | 290 | 81.5 | 398 | 774 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 15 | 5 | 33 | 3.6 J | 78 J | C652 | 25.4 | 4.4 | 32.7 | 69.8 | 3.5 U | 78 J | C652 | 13.8 | 4.4 | 20.3 | 49.3 |
| Total Petroleum Hydrocarbons | mg/kg | 33 | 28 | 85 | 1.8 JA | 3300 JT | C221 | 507 | 281 | 670 | 1140 | 1.8 JA | 3300 JT | C221 | 430 | 140 | 642 | 1130 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 15 | 7 | 47 | 4.2 JA | 124 JA | C652 | 35.3 | 12 | 45.2 | 107 | 3.5 UA | 124 JA | C652 | 19 | 4.9 | 33.6 | 84.1 |
| ***RM 06-07*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 62 | 60 | 97 | 0.041 | 0.524 | C664 | 0.185 | 0.123 | 0.149 | 0.439 | 0.041 | 0.524 | C664 | 0.184 | 0.128 | 0.147 | 0.437 |
| Lead | mg/kg | 66 | 66 | 100 | 2.01 | 3330 J | C326 | 63.2 | 6.6 | 409 | 36.7 | 2.01 | 3330 J | C326 | 63.2 | 6.6 | 409 | 36.7 |
| Mercury | mg/kg | 61 | 56 | 92 | 0.004 J | 0.38 | C314 | 0.0839 | 0.052 | 0.0892 | 0.307 | 0.004 J | 0.38 | C314 | 0.0788 | 0.044 | 0.0872 | 0.303 |
| Nickel | mg/kg | 66 | 66 | 100 | 10.4 J | 523 | C299 | 26.9 | 18.5 | 62.2 | 29.1 | 10.4 J | 523 | C299 | 26.9 | 18.5 | 62.2 | 29.1 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 2 | 2 | 100 | 0.00011 JT | 0.00361 T | C664 | 0.00186 | 0.00186 | 0.00247 | 0.00344 | 0.00011 JT | 0.00361 T | C664 | 0.00186 | 0.00186 | 0.00247 | 0.00344 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 45 | 6 | 13 | 0.76 NJ | 9.6 | C521 | 3.57 | 2.7 | 3.22 | 8.29 | 0.062 U | 12 U | WR-VC-52 | 1.63 | 0.6 | 2.75 | 8.55 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 110 | 83 | 75 | 0.25 J | 280000 J | GS-C7 | 14500 | 300 | 42200 | 75800 | 0.14 U | 280000 J | GS-C7 | 11000 | 106 | 37200 | 58800 |
| Total HPAHs | µg/kg | 110 | 99 | 90 | 0.66 JT | 3300000 JT | GS-C7 | 149000 | 1680 | 473000 | 952000 | 0.62 UT | 3300000 JT | GS-C7 | 134000 | 974 | 451000 | 762000 |
| Total LPAHs | µg/kg | 110 | 100 | 91 | 0.48 JT | 9000000 JT | GS-C7 | 321000 | 1050 | 1200000 | 2120000 | 0.48 JT | 9000000 JT | GS-C7 | 292000 | 586 | 1150000 | 1970000 |
| Naphthalene | µg/kg | 111 | 85 | 77 | 0.6 J | 4300000 J | GS-C7 | 175000 | 170 | 654000 | 1180000 | 0.17 U | 4300000 J | GS-C7 | 134000 | 71 | 577000 | 955000 |
| Phenanthrene | µg/kg | 110 | 95 | 86 | 1.2 J | 1900000 | GS-C7 | 79200 | 541 | 258000 | 520000 | 0.43 U | 1900000 | GS-C7 | 68400 | 250 | 241000 | 404000 |
| Total cPAHs | µg/kg | 110 | 86 | 78 | 0.041 JT | 377000 JT | GS-C7 | 18600 | 315 | 55700 | 100000 | 0.041 JT | 377000 JT | GS-C7 | 14600 | 113 | 49800 | 77500 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 87 | 2 | 2 | 9.4 | 12 | WR-VC-62 | 10.7 | 10.7 | 1.84 | 11.9 | 1.9 U | 1500 U | C521 | 101 | 84.2 | 189 | 267 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 87 | 8 | 9 | 0.947 J | 9.85 J | C305-2 | 3.36 | 2.24 | 3.18 | 8.72 | 0.06 U | 1660 U | GP31 | 84.4 | 56 | 192 | 315 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 87 | 10 | 11 | 1.2 J | 270 | C299 | 40.8 | 5.75 | 83.8 | 180 | 0.21 U | 8260 U | GP31 | 333 | 7.2 | 917 | 732 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 42 | 35 | 83 | 2.1 J | 23000 J | C521 | 2230 | 260 | 4430 | 8490 | 1.3 U | 23000 J | C521 | 1860 | 205 | 4120 | 8330 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 6 | 2 | 33 | 11 J | 280 J | C664 | 146 | 146 | 190 | 267 | 1.3 U | 280 J | C664 | 49.9 | 2.75 | 113 | 213 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 42 | 34 | 81 | 3.1 J | 11000 J | C521 | 1520 | 665 | 2230 | 5040 | 3.1 J | 11000 J | C521 | 1230 | 393 | 2080 | 4940 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 6 | 3 | 50 | 10 J | 540 J | C664 | 190 | 21 | 303 | 488 | 3 U | 540 J | C664 | 97.5 | 7.95 | 217 | 410 |
| Total Petroleum Hydrocarbons | mg/kg | 42 | 37 | 88 | 2.1 JA | 37400 JT | C521 | 3660 | 880 | 6970 | 12600 | 2.1 JA | 37400 JT | C521 | 3230 | 553 | 6640 | 12200 |

Table D1.3-15. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Navigation Channel.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 6 | 3 | 50 | 10 JT | 820 JA | C664 | 287 | 32 | 461 | 741 | 3 UA | 820 JA | C664 | 146 | 7.95 | 330 | 623 |
| ***RM 07-08*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 36 | 32 | 89 | 0.034 J | 0.6 | SD120 | 0.302 | 0.3 | 0.113 | 0.5 | 0.034 J | 0.6 | SD120 | 0.279 | 0.291 | 0.124 | 0.5 |
| Lead | mg/kg | 36 | 36 | 100 | 2.06 | 67 | PSY36C | 20.8 | 23 | 13 | 37.3 | 2.06 | 67 | PSY36C | 20.8 | 23 | 13 | 37.3 |
| Mercury | mg/kg | 35 | 33 | 94 | 0.019 | 0.251 | C349 | 0.091 | 0.08 | 0.0508 | 0.213 | 0.019 | 0.251 | C349 | 0.0887 | 0.08 | 0.0502 | 0.213 |
| Nickel | mg/kg | 36 | 36 | 100 | 15.2 | 32.8 | C381 | 24.4 | 25 | 4.45 | 31.5 | 15.2 | 32.8 | C381 | 24.4 | 25 | 4.45 | 31.5 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 30 | 5 | 17 | 1 NJ | 3.76 NJ | C357 | 2.24 | 2.21 | 0.994 | 3.47 | 0.0693 U | 11 UJ | WB-12; WB-15; WB-20 | 2.33 | 0.724 | 3.57 | 11 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 35 | 29 | 83 | 7.2 | 1300 J | PSY36C | 91 | 28 | 244 | 288 | 0.36 U | 1300 J | PSY36C | 76.6 | 26 | 224 | 194 |
| Total HPAHs | µg/kg | 35 | 32 | 91 | 0.68 JT | 13600 T | PSY36C | 947 | 278 | 2510 | 3970 | 0.68 JT | 13600 T | PSY36C | 867 | 251 | 2410 | 3660 |
| Total LPAHs | µg/kg | 35 | 31 | 89 | 0.71 JT | 5950 T | PSY36C | 413 | 66.1 | 1160 | 2180 | 0.71 JT | 5950 T | PSY36C | 366 | 60.5 | 1090 | 2110 |
| Naphthalene | µg/kg | 35 | 21 | 60 | 5.3 | 260 | PSY39C | 36.5 | 19 | 55.5 | 97 | 0.51 U | 260 | PSY39C | 25.2 | 14 | 44.9 | 69 |
| Phenanthrene | µg/kg | 35 | 31 | 89 | 0.71 J | 3700 J | PSY36C | 236 | 31 | 717 | 1300 | 0.71 J | 3700 J | PSY36C | 210 | 29 | 677 | 1300 |
| Total cPAHs | µg/kg | 35 | 30 | 86 | 2.02 T | 1820 JT | PSY36C | 124 | 39.3 | 338 | 401 | 0.42 UT | 1820 JT | PSY36C | 107 | 36.1 | 315 | 281 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 36 | 16 | 44 | 5.2 J | 23 J | PSY36C | 12 | 9.85 | 5.96 | 20.8 | 1.8 U | 23 J | PSY36C | 9.09 | 7.1 | 6.55 | 20 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 30 | 4 | 13 | 0.1 NJ | 3.59 J | C341 | 1.45 | 1.05 | 1.52 | 3.25 | 0.059 U | 20 U | SD116; SD120 | 4.41 | 2.25 | 5.79 | 19.6 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 36 | 3 | 8 | 2.6 J | 47 | WR-VC-68 | 19 | 7.4 | 24.4 | 43 | 0.46 U | 100 UJ | PSY36C; PSY39C | 28.5 | 1.1 | 42.2 | 100 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 10 | 9 | 90 | 7.8 J | 210 J | WR-VC-68; WR-VC-72 | 140 | 180 | 76.4 | 210 | 5 U | 210 J | WR-VC-68; WR-VC-72 | 126 | 140 | 83.7 | 210 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 10 | 10 | 100 | 36 J | 690 J | WR-VC-64 | 447 | 525 | 250 | 681 | 36 J | 690 J | WR-VC-64 | 447 | 525 | 250 | 681 |
| Total Petroleum Hydrocarbons | mg/kg | 10 | 10 | 100 | 36 JT | 890 JT | WR-VC-64 | 573 | 663 | 333 | 886 | 36 JT | 890 JT | WR-VC-64 | 573 | 663 | 333 | 886 |
| ***RM 08-09*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 21 | 21 | 100 | 0.183 | 0.448 | C449 | 0.251 | 0.24 | 0.0584 | 0.313 | 0.183 | 0.448 | C449 | 0.251 | 0.24 | 0.0584 | 0.313 |
| Lead | mg/kg | 21 | 21 | 100 | 11 | 31.9 | C449 | 16.4 | 14.2 | 5.78 | 29.7 | 11 | 31.9 | C449 | 16.4 | 14.2 | 5.78 | 29.7 |
| Mercury | mg/kg | 20 | 20 | 100 | 0.05 | 0.305 | C449 | 0.0903 | 0.07 | 0.0676 | 0.253 | 0.05 | 0.305 | C449 | 0.0903 | 0.07 | 0.0676 | 0.253 |
| Nickel | mg/kg | 21 | 21 | 100 | 20.2 J | 32 | C449 | 25.1 | 24.4 | 2.84 | 28.9 | 20.2 J | 32 | C449 | 25.1 | 24.4 | 2.84 | 28.9 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 26 | 0 | 0 -- | -- | | -- | -- | -- | -- | -- | 0.114 U | 2 U | WR-VC-05 | 0.736 | 0.2 | 0.747 | 1.78 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 29 | 26 | 90 | 4.7 | 37 J | PSY50C | 15.6 | 13.5 | 8.78 | 32.5 | 2.8 U | 37 J | PSY50C | 14.3 | 13 | 9.17 | 32.2 |
| Total HPAHs | µg/kg | 29 | 29 | 100 | 8.9 T | 336 T | PSY50C | 151 | 123 | 85.6 | 308 | 8.9 T | 336 T | PSY50C | 151 | 123 | 85.6 | 308 |
| Total LPAHs | µg/kg | 29 | 28 | 97 | 7.3 T | 668 T | PSY50C | 56.6 | 27.8 | 122 | 75.3 | 3.2 UT | 668 T | PSY50C | 54.8 | 26.5 | 120 | 75.1 |
| Naphthalene | µg/kg | 29 | 17 | 59 | 3.7 | 23 | C15-17 | 9.98 | 10 | 4.98 | 18.2 | 2.8 U | 23 | C15-17 | 8.06 | 6.6 | 4.92 | 16.2 |
| Phenanthrene | µg/kg | 29 | 28 | 97 | 5.5 | 655 J | PSY50C | 39.5 | 14 | 121 | 35.6 | 3.2 U | 655 J | PSY50C | 38.3 | 13 | 119 | 35.4 |
| Total cPAHs | µg/kg | 29 | 28 | 97 | 2.3 T | 46.5 T | C400 | 19.7 | 17.4 | 12.4 | 44.8 | 2.3 T | 46.5 T | C400 | 19.1 | 17.4 | 12.6 | 44.8 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 30 | 17 | 57 | 2.9 J | 19 | WR-VC-08 | 9.43 | 8.5 | 5.64 | 17.4 | 2.7 U | 19 | WR-VC-08 | 8.06 | 4.95 | 5.49 | 16.6 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 29 | 0 | 0 -- | -- | | -- | -- | -- | -- | -- | 0.0271 UT | 18 U | C400 | 6.69 | 4.1 | 6.25 | 15.6 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 30 | 8 | 27 | 2.9 J | 47 | WR-VC-09 | 17.7 | 15.5 | 13.1 | 38.3 | 0.7 U | 100 UJ | PSY50C | 16.8 | 14.5 | 24.7 | 76.1 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 2 | 2 | 100 | 90.5 JT | 270 J | C720 | 180 | 180 | 127 | 261 | 90.5 JT | 270 J | C720 | 180 | 180 | 127 | 261 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 2 | 2 | 100 | 77 JT | 230 J | C720 | 154 | 154 | 108 | 222 | 77 JT | 230 J | C720 | 154 | 154 | 108 | 222 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 2 | 2 | 100 | 425 JT | 910 J | C720 | 668 | 668 | 343 | 886 | 425 JT | 910 J | C720 | 668 | 668 | 343 | 886 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 2 | 2 | 100 | 270 JT | 580 J | C720 | 425 | 425 | 219 | 565 | 270 JT | 580 J | C720 | 425 | 425 | 219 | 565 |
| Total Petroleum Hydrocarbons | mg/kg | 2 | 2 | 100 | 516 JA | 1180 JA | C720 | 848 | 848 | 470 | 1150 | 516 JA | 1180 JA | C720 | 848 | 848 | 470 | 1150 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 2 | 2 | 100 | 347 JA | 810 JA | C720 | 579 | 579 | 327 | 787 | 347 JA | 810 JA | C720 | 579 | 579 | 327 | 787 |
| ***Swan Island Lagoon*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 8 | 8 | 100 | 0.166 | 0.5 | SD125 | 0.284 | 0.3 | 0.109 | 0.441 | 0.166 | 0.5 | SD125 | 0.284 | 0.3 | 0.109 | 0.441 |
| Lead | mg/kg | 8 | 8 | 100 | 9.85 | 38 | SD125 | 23 | 20.9 | 11.1 | 37.9 | 9.85 | 38 | SD125 | 23 | 20.9 | 11.1 | 37.9 |
| Mercury | mg/kg | 8 | 8 | 100 | 0.069 | 0.33 | PSY34C | 0.128 | 0.085 | 0.092 | 0.285 | 0.069 | 0.33 | PSY34C | 0.128 | 0.085 | 0.092 | 0.285 |
| Nickel | mg/kg | 8 | 8 | 100 | 19 | 33 J | SD125 | 23.2 | 21.8 | 4.53 | 30.2 | 19 | 33 J | SD125 | 23.2 | 21.8 | 4.53 | 30.2 |

Table D1.3-15. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Navigation Channel.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.08 U | 1 UJ | C04-06 | 0.311 | 0.0825 | 0.459 | 0.863 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 8 | 8 | 100 | 12 | 150 | SD125 | 66 | 63 | 48.6 | 132 | 12 | 150 | SD125 | 66 | 63 | 48.6 | 132 |
| Total HPAHs | µg/kg | 8 | 8 | 100 | 134 JT | 1710 T | SD125 | 742 | 641 | 566 | 1520 | 134 JT | 1710 T | SD125 | 742 | 641 | 566 | 1520 |
| Total LPAHs | µg/kg | 8 | 8 | 100 | 36.5 JT | 544 T | SD125 | 185 | 149 | 171 | 443 | 36.5 JT | 544 T | SD125 | 185 | 149 | 171 | 443 |
| Naphthalene | µg/kg | 8 | 7 | 88 | 4.7 J | 51 | SD125 | 18.6 | 11 | 17.1 | 45 | 4.7 J | 51 | SD125 | 17.5 | 10.5 | 16.2 | 44 |
| Phenanthrene | µg/kg | 8 | 8 | 100 | 14 | 310 | SD125 | 105 | 86 | 96.6 | 254 | 14 | 310 | SD125 | 105 | 86 | 96.6 | 254 |
| Total cPAHs | µg/kg | 8 | 8 | 100 | 19.5 JT | 199 T | SD125 | 93 | 88.9 | 65.3 | 178 | 19.5 JT | 199 T | SD125 | 93 | 88.9 | 65.3 | 178 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 8 | 6 | 75 | 5.7 J | 24 | SD125 | 17.1 | 20 | 6.63 | 23 | 5.7 J | 24 | SD125 | 15.3 | 16.5 | 6.5 | 22.6 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.2 U | 20 U | SD125 | 5.6 | 1.3 | 8.16 | 16.9 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 18 U | 100 U | PSY34C | 59.9 | 60.5 | 42.6 | 100 |
| ***RM 09-10*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 35 | 35 | 100 | 0.126 | 0.4 | SD150 | 0.243 | 0.239 | 0.0527 | 0.336 | 0.126 | 0.4 | SD150 | 0.243 | 0.239 | 0.0527 | 0.336 |
| Lead | mg/kg | 35 | 35 | 100 | 8.33 | 26.6 | C739 | 14.9 | 13.2 | 4.75 | 24.6 | 8.33 | 26.6 | C739 | 14.9 | 13.2 | 4.75 | 24.6 |
| Mercury | mg/kg | 35 | 35 | 100 | 0.025 J | 0.143 | C739 | 0.0631 | 0.059 | 0.0212 | 0.0985 | 0.025 J | 0.143 | C739 | 0.0631 | 0.059 | 0.0212 | 0.0985 |
| Nickel | mg/kg | 35 | 35 | 100 | 13.9 J | 35.8 J | RC483-2 | 25.5 | 24.5 | 5.05 | 33.9 | 13.9 J | 35.8 J | RC483-2 | 25.5 | 24.5 | 5.05 | 33.9 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 4 | 4 | 100 | 0.00109 JT | 0.00608 T | C739 | 0.00271 | 0.00183 | 0.0023 | 0.00551 | 0.00109 JT | 0.00608 T | C739 | 0.00271 | 0.00183 | 0.0023 | 0.00551 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 34 | 1 | 3 | 0.36 NJ | 0.36 NJ | C739 | 0.36 | 0.36 | -- | 0.36 | 0.062 U | 2.1 U | WR-VC-03 | 0.454 | 0.3 | 0.479 | 1.6 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 38 | 35 | 92 | 5.1 | 330 | C739 | 29.4 | 14 | 55 | 75.9 | 2.7 U | 330 | C739 | 27.3 | 13 | 53.3 | 75.5 |
| Total HPAHs | µg/kg | 38 | 38 | 100 | 26.6 T | 4600 T | C739 | 325 | 160 | 730 | 697 | 26.6 T | 4600 T | C739 | 325 | 160 | 730 | 697 |
| Total LPAHs | µg/kg | 38 | 38 | 100 | 3.7 T | 600 T | C739 | 58.3 | 38.7 | 94.1 | 92.1 | 3.7 T | 600 T | C739 | 58.3 | 38.7 | 94.1 | 92.1 |
| Naphthalene | µg/kg | 38 | 23 | 61 | 2.7 | 22 | C739 | 10.9 | 10 | 5.21 | 19.8 | 0.76 U | 22 | C739 | 8.95 | 8.85 | 5.5 | 19.2 |
| Phenanthrene | µg/kg | 38 | 38 | 100 | 3.7 | 500 | C739 | 35.5 | 17.5 | 79 | 60 | 3.7 | 500 | C739 | 35.5 | 17.5 | 79 | 60 |
| Total cPAHs | µg/kg | 38 | 38 | 100 | 1.18 T | 533 T | C739 | 39.8 | 18.5 | 85.9 | 112 | 1.18 T | 533 T | C739 | 39.8 | 18.5 | 85.9 | 112 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 39 | 12 | 31 | 2.6 J | 54 | WR-VC-04 | 9.03 | 5.3 | 14.3 | 29.8 | 2.1 U | 54 | WR-VC-04 | 6.17 | 3.1 | 8.76 | 17.2 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 39 | 2 | 5 | 0.23 J | 0.62 J | RC483-2 | 0.425 | 0.425 | 0.276 | 0.601 | 0.0253 U | 19 U | SD150 | 3.09 | 0.38 | 4.74 | 14.3 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 39 | 9 | 23 | 0.36 J | 67 | WR-VC-03 | 9.96 | 3.2 | 21.5 | 42.7 | 0.33 U | 96 U | SD150 | 9.06 | 1 | 18.6 | 22.9 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 22 | 22 | 100 | 28 J | 210 J | C739 | 85.4 | 69.5 | 50.8 | 179 | 28 J | 210 J | C739 | 85.4 | 69.5 | 50.8 | 179 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 4 | 4 | 100 | 120 J | 190 J | C739 | 143 | 130 | 32 | 181 | 120 J | 190 J | C739 | 143 | 130 | 32 | 181 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 22 | 22 | 100 | 100 J | 780 J | RC483-2 | 475 | 455 | 186 | 768 | 100 J | 780 J | RC483-2 | 475 | 455 | 186 | 768 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 4 | 4 | 100 | 270 J | 460 J | C739 | 343 | 320 | 82.2 | 441 | 270 J | 460 J | C739 | 343 | 320 | 82.2 | 441 |
| Total Petroleum Hydrocarbons | mg/kg | 22 | 22 | 100 | 128 JT | 910 JT | WR-VC-45 | 561 | 526 | 210 | 860 | 128 JT | 910 JT | WR-VC-45 | 561 | 526 | 210 | 860 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 4 | 4 | 100 | 390 JA | 650 JA | C739 | 485 | 450 | 114 | 622 | 390 JA | 650 JA | C739 | 485 | 450 | 114 | 622 |
| ***RM 10-11*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 68 | 67 | 99 | 0.03 | 43.7 | C752 | 0.912 | 0.23 | 5.31 | 0.567 | 0.029 UT | 43.7 | C752 | 0.899 | 0.23 | 5.27 | 0.562 |
| Lead | mg/kg | 68 | 68 | 100 | 1.88 | 348 | WR-VC-110 | 36 | 18.1 | 53.8 | 154 | 1.88 | 348 | WR-VC-110 | 36 | 18.1 | 53.8 | 154 |
| Mercury | mg/kg | 68 | 68 | 100 | 0.017 J | 1.17 | C752 | 0.124 | 0.0745 | 0.176 | 0.437 | 0.017 J | 1.17 | C752 | 0.124 | 0.0745 | 0.176 | 0.437 |
| Nickel | mg/kg | 68 | 68 | 100 | 12.5 | 38.8 | C752 | 23.9 | 22.9 | 5.35 | 33.3 | 12.5 | 38.8 | C752 | 23.9 | 22.9 | 5.35 | 33.3 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 6 | 6 | 100 | 0.000644 JT | 0.0149 T | C752 | 0.00608 | 0.00379 | 0.00582 | 0.0141 | 0.000644 JT | 0.0149 T | C752 | 0.00608 | 0.00379 | 0.00582 | 0.0141 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 68 | 2 | 3 | 0.17 JT | 0.31 NJ | C746 | 0.24 | 0.24 | 0.099 | 0.303 | 0.062 U | 2 UJ | WR-GC-32; WR-GC-33; WR-GC-34; WR-GC-35 | 0.475 | 0.31 | 0.483 | 1.9 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 68 | 67 | 99 | 0.4 J | 550 | WR-VC-59 | 45.7 | 18 | 96.6 | 149 | 0.14 U | 550 | WR-VC-59 | 45 | 17.5 | 96 | 145 |
| Total HPAHs | µg/kg | 68 | 68 | 100 | 0.37 JT | 5630 JT | WR-VC-110 | 477 | 200 | 980 | 1370 | 0.37 JT | 5630 JT | WR-VC-110 | 477 | 200 | 980 | 1370 |
| Total LPAHs | µg/kg | 68 | 66 | 97 | 1.6 JT | 2360 JT | WR-VC-110 | 141 | 50 | 319 | 518 | 0.91 UT | 2360 JT | WR-VC-110 | 137 | 48 | 315 | 496 |
| Naphthalene | µg/kg | 68 | 39 | 57 | 3.5 | 130 J | WR-VC-110 | 23.1 | 15 | 25.1 | 59.4 | 0.58 U | 130 J | WR-VC-110 | 14.8 | 8.3 | 21.4 | 46.7 |
| Phenanthrene | µg/kg | 68 | 66 | 97 | 1 J | 1500 J | WR-VC-110 | 78.2 | 22.5 | 204 | 278 | 0.75 U | 1500 J | WR-VC-110 | 76 | 22 | 201 | 268 |
| Total cPAHs | µg/kg | 68 | 67 | 99 | 0.641 JT | 795 T | WR-VC-59 | 65.4 | 26 | 139 | 201 | 0.28 UT | 795 T | WR-VC-59 | 64.4 | 25.4 | 138 | 197 |

Table D1.3-15. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Navigation Channel.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 64 | 19 | 30 | 4.3 J | 210 | RC02-2 | 24.9 | 9.1 | 46.3 | 57.9 | 2.2 U | 210 | RC02-2 | 12.7 | 4.9 | 27.5 | 39.6 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 64 | 7 | 11 | 0.12 J | 0.65 J | C752 | 0.284 | 0.18 | 0.201 | 0.593 | 0.068 U | 6 U | C7482; C757 | 0.587 | 0.265 | 1.21 | 3.41 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 64 | 35 | 55 | 0.42 J | 64 | WR-VC-51 | 6.02 | 2.3 | 11.6 | 18.9 | 0.19 UT | 64 | WR-VC-51 | 4.25 | 1.45 | 8.95 | 13 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 64 | 63 | 98 | 3.4 J | 600 J | C752 | 129 | 96 | 122 | 326 | 1.6 U | 600 J | C752 | 128 | 94.3 | 122 | 324 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 32 | 31 | 97 | 2.6 J | 570 J | C752 | 126 | 80 | 137 | 400 | 1.6 U | 570 J | C752 | 122 | 74.5 | 137 | 386 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 64 | 62 | 97 | 18.2 JT | 1300 J | C752 | 533 | 500 | 304 | 1000 | 14 U | 1300 J | C752 | 517 | 495 | 312 | 1000 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 32 | 28 | 88 | 11.6 JT | 1100 J | C752 | 358 | 303 | 272 | 932 | 7 U | 1100 J | C752 | 317 | 265 | 277 | 836 |
| Total Petroleum Hydrocarbons | mg/kg | 64 | 63 | 98 | 3.4 JA | 1900 JA | C752 | 655 | 600 | 417 | 1320 | 3.4 JA | 1900 JA | C752 | 645 | 590 | 421 | 1320 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 32 | 31 | 97 | 2.6 JA | 1670 JA | C752 | 449 | 374 | 414 | 1260 | 2.6 JA | 1670 JA | C752 | 436 | 351 | 415 | 1220 |
| ***RM 11-11.8*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 35 | 35 | 100 | 0.016 J | 2.12 | WR-CD-43 | 0.217 | 0.11 | 0.358 | 0.465 | 0.016 J | 2.12 | WR-CD-43 | 0.217 | 0.11 | 0.358 | 0.465 |
| Lead | mg/kg | 35 | 35 | 100 | 1.54 | 489 | WR-CD-43 | 30.6 | 14.9 | 81.8 | 65 | 1.54 | 489 | WR-CD-43 | 30.6 | 14.9 | 81.8 | 65 |
| Mercury | mg/kg | 35 | 34 | 97 | 0.007 J | 0.87 J | WR-CD-42 | 0.0884 | 0.045 | 0.155 | 0.251 | 0.005 UJ | 0.87 J | WR-CD-42 | 0.086 | 0.041 | 0.153 | 0.244 |
| Nickel | mg/kg | 35 | 35 | 100 | 9.64 | 53.7 JT | UC03 | 18.2 | 16.7 | 8.53 | 32.6 | 9.64 | 53.7 JT | UC03 | 18.2 | 16.7 | 8.53 | 32.6 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 8 | 3 | 38 | 0.000000257 JT | 0.000185 JT | C779 | 0.0000619 | 0.000000404 | 0.000107 | 0.000167 | 0.000000257 JT | 0.000191 UT | C779 | 0.000127 | 0.000158 | 0.0000799 | 0.000189 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 39 | 5 | 13 | 0.2 J | 3.4 J | UC03 | 1.19 | 0.88 | 1.28 | 2.91 | 0.051 U | 3.4 J | UC03 | 0.966 | 0.42 | 0.919 | 2 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 39 | 31 | 79 | 0.26 J | 168 J | WR-CD-43 | 39.6 | 25 | 41.8 | 125 | 0.14 U | 168 J | WR-CD-43 | 31.5 | 19 | 40.5 | 121 |
| Total HPAHs | µg/kg | 39 | 31 | 79 | 3.8 JT | 1650 T | WR-CD-43 | 442 | 289 | 463 | 1550 | 0.64 UT | 1650 T | WR-CD-43 | 351 | 202 | 449 | 1510 |
| Total LPAHs | µg/kg | 39 | 32 | 82 | 0.35 JT | 890 T | UC03 | 169 | 101 | 222 | 680 | 0.35 JT | 890 T | UC03 | 139 | 60.1 | 211 | 673 |
| Naphthalene | µg/kg | 39 | 26 | 67 | 0.4 J | 212 J | WR-CD-43 | 33 | 19 | 45.5 | 95 | 0.4 J | 212 J | WR-CD-43 | 22.3 | 9 | 39.9 | 89.8 |
| Phenanthrene | µg/kg | 39 | 30 | 77 | 0.9 J | 420 | UC03 | 80.5 | 42.5 | 101 | 289 | 0.75 U | 420 | UC03 | 62.1 | 29 | 94.6 | 237 |
| Total cPAHs | µg/kg | 39 | 31 | 79 | 0.339 JT | 218 JT | WR-CD-43 | 53.5 | 33.9 | 56.1 | 174 | 0.28 UT | 218 JT | WR-CD-43 | 42.6 | 25.5 | 54.4 | 170 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 26 | 6 | 23 | 3.5 J | 6.6 J | WR-VC-126 | 4.9 | 5.05 | 1.19 | 6.35 | 1.8 U | 28 U | UC03 | 6.2 | 3.2 | 6.08 | 18 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 26 | 1 | 4 | 0.87 J | 0.87 J | WR-VC-122 | 0.87 | 0.87 | -- | 0.87 | 0.068 U | 12 U | WR-VC-06 | 1.9 | 0.13 | 3.88 | 10.8 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 26 | 6 | 23 | 0.41 J | 2.5 J | UC03 | 1.36 | 1.3 | 0.745 | 2.33 | 0.18 U | 12 U | WR-VC-06 | 2.25 | 0.735 | 3.75 | 10.8 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 20 | 15 | 75 | 1.5 J | 220 J | WR-VC-132 | 75.6 | 75 | 72.4 | 206 | 1.4 U | 220 J | WR-VC-132 | 57 | 24.7 | 70.4 | 201 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 10 | 3 | 30 | 1.8 J | 3.8 J | C779 | 3 | 3.4 | 1.06 | 3.76 | 1.4 U | 3.8 J | C779 | 2.12 | 1.55 | 0.967 | 3.62 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 20 | 15 | 75 | 5.45 JT | 750 J | UC03 | 285 | 280 | 251 | 680 | 3.3 U | 750 J | UC03 | 215 | 103 | 249 | 655 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 10 | 3 | 30 | 4.1 J | 8.6 J | C779 | 6.2 | 5.9 | 2.26 | 8.33 | 3.3 U | 8.6 J | C779 | 4.64 | 3.65 | 1.81 | 7.75 |
| Total Petroleum Hydrocarbons | mg/kg | 20 | 16 | 80 | 2.2 JT | 980 JT | UC03 | 343 | 316 | 331 | 898 | 2.2 JT | 980 JT | UC03 | 275 | 133 | 326 | 876 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 10 | 3 | 30 | 5.9 JA | 12.4 JA | C779 | 9.2 | 9.3 | 3.25 | 12.1 | 3.3 UA | 12.4 JA | C779 | 5.54 | 3.65 | 3.12 | 11 |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TEQ - toxic equivalent concentration

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-16. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Western Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| ***Study Area*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 574 | 506 | 88 | 0.0156 J | 9.3 | HA-43 | 0.407 | 0.259 | 0.745 | 0.899 | 0.00177 U | 9.3 | HA-43 | 0.425 | 0.264 | 0.723 | 1.18 |
| Lead | mg/kg | 580 | 579 | 100 | 2.75 | 1290 J | G355 | 45.2 | 17.1 | 111 | 162 | 2.75 | 1290 J | G355 | 45.2 | 17.2 | 111 | 161 |
| Mercury | mg/kg | 554 | 496 | 90 | 0.008 J | 2.01 | G453 | 0.102 | 0.07 | 0.135 | 0.282 | 0.00189 U | 2.01 | G453 | 0.099 | 0.07 | 0.129 | 0.262 |
| Nickel | mg/kg | 547 | 543 | 99 | 6.22 J | 341 | HA-43 | 27.6 | 24.1 | 22.4 | 46 | 6.22 J | 341 | HA-43 | 27.5 | 24.1 | 22.3 | 45.8 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 77 | 77 | 100 | 0.00000255 JT | 0.239 T | G453 | 0.00643 | 0.00116 | 0.0279 | 0.0199 | 0.00000255 JT | 0.239 T | G453 | 0.00643 | 0.00116 | 0.0279 | 0.0199 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 457 | 80 | 18 | 0.0089 J | 430 | 07R006 | 7.97 | 1.57 | 47.9 | 8.94 | 0.00833 U | 430 | 07R006 | 4.27 | 0.55 | 22.8 | 11.2 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 612 | 582 | 95 | 0.86 J | 160000 | GS04APG2 | 2830 | 150 | 13500 | 11900 | 0.33 U | 160000 | GS04APG2 | 2700 | 149 | 13200 | 9740 |
| Total HPAHs | µg/kg | 612 | 602 | 98 | 2.16 JT | 1680000 T | GS04APG2 | 28100 | 1600 | 137000 | 99600 | 2.16 JT | 1680000 T | GS04APG2 | 27700 | 1520 | 136000 | 95300 |
| Total LPAHs | µg/kg | 612 | 585 | 96 | 0.65 JT | 772000 JA | AN-1-3 | 12000 | 310 | 69500 | 30300 | 0.65 JT | 772000 JA | AN-1-3 | 11500 | 308 | 68000 | 27600 |
| Naphthalene | µg/kg | 616 | 434 | 70 | 0.89 J | 73000 J | AN-1-3; G294-1 | 938 | 36 | 6110 | 1700 | 0.43 U | 73000 J | AN-1-3; G294-1 | 674 | 23.5 | 5150 | 1030 |
| Phenanthrene | µg/kg | 612 | 584 | 95 | 0.53 J | 400000 | G301 | 6450 | 160 | 35300 | 19900 | 0.53 J | 400000 | G301 | 6160 | 150 | 34500 | 17900 |
| Total cPAHs | µg/kg | 612 | 591 | 97 | 0.05 JT | 212000 T | GS04APG2 | 3750 | 211 | 17800 | 15000 | 0.05 JT | 212000 T | GS04APG2 | 3630 | 201 | 17500 | 13200 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 539 | 100 | 19 | 2.2 J | 840 J | G355 | 54.6 | 13.5 | 129 | 202 | 1.7 U | 6600 U | A2GS12; HA-43 | 104 | 14 | 492 | 345 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 542 | 190 | 35 | 0.062 J | 340 | OSS004 | 8.07 | 1.1 | 38.4 | 15.8 | 0.0151 UT | 6600 U | A2GS12 | 63.3 | 2.2 | 397 | 178 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 532 | 106 | 20 | 0.57 J | 680 | OSS004 | 27.2 | 5.95 | 81.2 | 133 | 0.167 U | 20000 U | A2GS12 | 212 | 4.5 | 1390 | 386 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 299 | 281 | 94 | 8.3 J | 20000 J | G294-1 | 496 | 120 | 1850 | 1300 | 4.3 U | 20000 J | G294-1 | 468 | 110 | 1800 | 1170 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 54 | 33 | 61 | 23.8 | 370 J | G619 | 100 | 68 | 85.1 | 280 | 15.3 U | 370 J | G619 | 71.3 | 38 | 75.5 | 243 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 238 | 231 | 97 | 8.4 J | 18000 J | G453 | 983 | 480 | 2240 | 2450 | 8.4 J | 18000 J | G453 | 961 | 465 | 2210 | 2420 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 54 | 40 | 74 | 38.3 | 520 J | G619 | 172 | 152 | 113 | 378 | 30.5 U | 520 J | G619 | 139 | 94 | 113 | 368 |
| Total Petroleum Hydrocarbons | mg/kg | 299 | 293 | 98 | 8.4 JT | 33100 JT | G294-1 | 1280 | 500 | 3740 | 3190 | 8.4 JT | 33100 JT | G294-1 | 1260 | 490 | 3710 | 3120 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 54 | 46 | 85 | 23.8 A | 890 JA | G619 | 222 | 172 | 195 | 642 | 23.8 A | 890 JA | G619 | 196 | 120 | 191 | 641 |
| ***RM 01.9-03*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 16 | 16 | 100 | 0.088 | 1.15 | G029 | 0.357 | 0.289 | 0.274 | 0.855 | 0.088 | 1.15 | G029 | 0.357 | 0.289 | 0.274 | 0.855 |
| Lead | mg/kg | 16 | 16 | 100 | 4.98 | 20.5 | G029 | 11.6 | 12.4 | 4.49 | 18.6 | 4.98 | 20.5 | G029 | 11.6 | 12.4 | 4.49 | 18.6 |
| Mercury | mg/kg | 16 | 16 | 100 | 0.019 | 0.14 | G029 | 0.0613 | 0.0535 | 0.037 | 0.133 | 0.019 | 0.14 | G029 | 0.0613 | 0.0535 | 0.037 | 0.133 |
| Nickel | mg/kg | 16 | 15 | 94 | 15.7 J | 26.6 | G003; G012 | 22.8 | 23.3 | 2.72 | 26.6 | 15.7 J | 26.6 | G003; G012 | 23 | 23.4 | 2.69 | 26.6 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 2 | 2 | 100 | 0.000141 JT | 0.000341 JT | D1-1 | 0.000241 | 0.000241 | 0.000141 | 0.000331 | 0.000141 JT | 0.000341 JT | D1-1 | 0.000241 | 0.000241 | 0.000141 | 0.000331 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 16 | 4 | 25 | 0.17 NJ | 3.11 NJ | G012 | 1.56 | 1.48 | 1.45 | 3.01 | 0.0733 U | 3.11 NJ | G012 | 0.494 | 0.135 | 0.912 | 2.63 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 16 | 16 | 100 | 12 | 970 J | WR-PG-04 | 202 | 55.8 | 286 | 798 | 12 | 970 J | WR-PG-04 | 202 | 55.8 | 286 | 798 |
| Total HPAHs | µg/kg | 16 | 16 | 100 | 76.1 JT | 6480 JT | WR-PG-04 | 1520 | 444 | 2090 | 6040 | 76.1 JT | 6480 JT | WR-PG-04 | 1520 | 444 | 2090 | 6040 |
| Total LPAHs | µg/kg | 16 | 16 | 100 | 6.16 JT | 1650 T | G041 | 267 | 56.9 | 514 | 1520 | 6.16 JT | 1650 T | G041 | 267 | 56.9 | 514 | 1520 |
| Naphthalene | µg/kg | 16 | 11 | 69 | 5.2 | 160 | G029 | 38.4 | 12 | 56 | 150 | 1.9 U | 160 | G029 | 27.7 | 9 | 48.6 | 145 |
| Phenanthrene | µg/kg | 16 | 16 | 100 | 1.7 J | 1000 | G041 | 138 | 22 | 296 | 828 | 1.7 J | 1000 | G041 | 138 | 22 | 296 | 828 |
| Total cPAHs | µg/kg | 16 | 16 | 100 | 15.6 JT | 1310 JT | WR-PG-04 | 270 | 76.2 | 384 | 1070 | 15.6 JT | 1310 JT | WR-PG-04 | 270 | 76.2 | 384 | 1070 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 16 | 2 | 12 | 3.5 JT | 7.1 J | G012 | 5.3 | 5.3 | 2.55 | 6.92 | 1.9 U | 15 U | WR-PG-04 | 4.47 | 3.05 | 4.11 | 14.3 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 16 | 6 | 38 | 0.108 J | 1.01 J | D2 | 0.598 | 0.725 | 0.343 | 0.949 | 0.0298 U | 20 U | G041 | 3.05 | 1.81 | 4.81 | 8.68 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 16 | 1 | 6 | 1.2 NJ | 1.2 NJ | WR-PG-04 | 1.2 | 1.2 | -- | 1.2 | 0.29 UT | 4.5 U | D1-2; G003 | 2.66 | 3.2 | 1.73 | 4.5 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 1 | 1 | 100 | 69 J | 69 J | WR-PG-04 | 69 | 69 | -- | 69 | 69 J | 69 J | WR-PG-04 | 69 | 69 | -- | 69 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 1 | 1 | 100 | 310 J | 310 J | WR-PG-04 | 310 | 310 | -- | 310 | 310 J | 310 J | WR-PG-04 | 310 | 310 | -- | 310 |
| Total Petroleum Hydrocarbons | mg/kg | 1 | 1 | 100 | 379 JT | 379 JT | WR-PG-04 | 379 | 379 | -- | 379 | 379 JT | 379 JT | WR-PG-04 | 379 | 379 | -- | 379 |

Table D1.3-16. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Western Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| ***RM 03-04*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 31 | 30 | 97 | 0.06 | 0.4 | SD005; SD011 | 0.241 | 0.252 | 0.0826 | 0.373 | 0.06 | 0.4 | SD005; SD011 | 0.238 | 0.25 | 0.0832 | 0.37 |
| Lead | mg/kg | 31 | 31 | 100 | 5.85 T | 26 | G105 | 13.9 | 13.9 | 3.37 | 18.7 | 5.85 T | 26 | G105 | 13.9 | 13.9 | 3.37 | 18.7 |
| Mercury | mg/kg | 30 | 25 | 83 | 0.024 T | 0.219 | G100 | 0.0831 | 0.064 | 0.0491 | 0.19 | 0.024 T | 0.219 | G100 | 0.0789 | 0.0635 | 0.0466 | 0.187 |
| Nickel | mg/kg | 31 | 30 | 97 | 17.9 JT | 27.8 | SD015 | 24.2 | 24.7 | 2.64 | 27.4 | 15.9 UJ | 27.8 | SD015 | 23.9 | 24.6 | 2.99 | 27.4 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 4 | 4 | 100 | 0.000248 JT | 0.000775 JT | G105 | 0.000457 | 0.000402 | 0.000226 | 0.000724 | 0.000248 JT | 0.000775 JT | G105 | 0.000457 | 0.000402 | 0.000226 | 0.000724 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 28 | 5 | 18 | 0.17 J | 4.05 NJ | G072 | 1.6 | 0.559 | 1.77 | 3.82 | 0.076 U | 4.05 NJ | G072 | 0.622 | 0.19 | 0.96 | 2.6 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 31 | 31 | 100 | 5.2 T | 3600 | G619 | 421 | 230 | 674 | 1150 | 5.2 T | 3600 | G619 | 421 | 230 | 674 | 1150 |
| Total HPAHs | µg/kg | 31 | 31 | 100 | 44.6 T | 38000 T | G619 | 3800 | 1640 | 6940 | 10400 | 44.6 T | 38000 T | G619 | 3800 | 1640 | 6940 | 10400 |
| Total LPAHs | µg/kg | 31 | 30 | 97 | 26 T | 12000 T | G619 | 970 | 239 | 2200 | 2360 | 19 UT | 12000 T | G619 | 939 | 225 | 2170 | 2360 |
| Naphthalene | µg/kg | 31 | 28 | 90 | 8.2 | 980 | G619 | 127 | 46 | 199 | 367 | 8.2 | 980 | G619 | 116 | 31 | 192 | 365 |
| Phenanthrene | µg/kg | 31 | 30 | 97 | 24 | 8400 | G619 | 562 | 110 | 1530 | 1260 | 19 U | 8400 | G619 | 545 | 110 | 1510 | 1250 |
| Total cPAHs | µg/kg | 31 | 31 | 100 | 6.94 T | 4800 T | G619 | 566 | 305 | 898 | 1540 | 6.94 T | 4800 T | G619 | 566 | 305 | 898 | 1540 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 31 | 2 | 6 | 9.8 J | 36 | 03R032 | 22.9 | 22.9 | 18.5 | 34.7 | 2.1 U | 58 U | 03R002 | 11.9 | 4.8 | 12.8 | 34 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 31 | 6 | 19 | 0.16 J | 1 J | G077 | 0.563 | 0.479 | 0.313 | 0.967 | 0.0178 U | 20 U | SD001; SD011 | 4.95 | 2 | 6.81 | 19.5 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 31 | 3 | 10 | 1.9 J | 110 J | SD003 | 42.2 | 14.7 | 59.1 | 100 | 0.35 U | 110 J | SD003 | 21.6 | 4.5 | 35.8 | 98.5 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 7 | 7 | 100 | 35 J | 570 J | G619 | 174 | 77 | 197 | 489 | 35 J | 570 J | G619 | 174 | 77 | 197 | 489 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 1 | 1 | 100 | 370 J | 370 J | G619 | 370 | 370 | -- | 370 | 370 J | 370 J | G619 | 370 | 370 | -- | 370 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 7 | 5 | 71 | 380 J | 940 J | G619 | 588 | 480 | 240 | 898 | 110 U | 940 J | G619 | 454 | 410 | 301 | 877 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 1 | 1 | 100 | 520 J | 520 J | G619 | 520 | 520 | -- | 520 | 520 J | 520 J | G619 | 520 | 520 | -- | 520 |
| Total Petroleum Hydrocarbons | mg/kg | 7 | 7 | 100 | 35 JT | 1510 JA | G619 | 594 | 487 | 529 | 1370 | 35 JT | 1510 JA | G619 | 594 | 487 | 529 | 1370 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 1 | 1 | 100 | 890 JA | 890 JA | G619 | 890 | 890 | -- | 890 | 890 JA | 890 JA | G619 | 890 | 890 | -- | 890 |
| ***RM 04-05*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 95 | 69 | 73 | 0.043 J | 0.848 | G155 | 0.232 | 0.244 | 0.123 | 0.4 | 0.043 J | 1.31 U | SS-48 | 0.417 | 0.267 | 0.359 | 1.22 |
| Lead | mg/kg | 98 | 97 | 99 | 2.75 | 330 | R2AR02PG | 21.6 | 15.9 | 33.6 | 41.1 | 2.75 | 330 | R2AR02PG | 21.6 | 16 | 33.4 | 40.6 |
| Mercury | mg/kg | 94 | 70 | 74 | 0.008 J | 0.74 | G153 | 0.0863 | 0.0635 | 0.101 | 0.191 | 0.00189 U | 0.74 | G153 | 0.0893 | 0.07 | 0.0912 | 0.192 |
| Nickel | mg/kg | 91 | 91 | 100 | 6.22 J | 41 J | SS-37 | 23.5 | 23 | 7.42 | 36.7 | 6.22 J | 41 J | SS-37 | 23.5 | 23 | 7.42 | 36.7 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 7 | 7 | 100 | 0.000283 JT | 0.0033 T | G147 | 0.00113 | 0.00065 | 0.00104 | 0.00276 | 0.000283 JT | 0.0033 T | G147 | 0.00113 | 0.00065 | 0.00104 | 0.00276 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 55 | 10 | 18 | 0.204 J | 2.5 J | G150 | 0.884 | 0.588 | 0.787 | 2.34 | 0.0129 U | 41 U | S3 | 1.95 | 0.46 | 6.54 | 6.7 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 100 | 94 | 94 | 0.86 J | 7500 | ARC03B | 615 | 194 | 1140 | 2910 | 0.86 J | 7500 | ARC03B | 639 | 198 | 1150 | 3110 |
| Total HPAHs | µg/kg | 100 | 98 | 98 | 9.75 T | 81900 T | ARC03B | 6020 | 2150 | 12000 | 27600 | 9.75 T | 81900 T | ARC03B | 5910 | 2070 | 11900 | 27400 |
| Total LPAHs | µg/kg | 100 | 94 | 94 | 4.08 JT | 32300 T | ARC03B | 2010 | 368 | 5120 | 10900 | 4.08 JT | 32300 T | ARC03B | 1930 | 354 | 4980 | 10800 |
| Naphthalene | µg/kg | 100 | 76 | 76 | 6.8 | 1400 | ARC03B | 132 | 42.5 | 261 | 603 | 0.43 U | 3370 U | S3 | 164 | 31.5 | 431 | 1000 |
| Phenanthrene | µg/kg | 100 | 94 | 94 | 1.9 J | 22000 | ARC03B | 1240 | 187 | 3300 | 7080 | 1.9 J | 22000 | ARC03B | 1210 | 187 | 3210 | 6670 |
| Total cPAHs | µg/kg | 100 | 94 | 94 | 1.62 JT | 9840 T | ARC03B | 832 | 274 | 1520 | 3920 | 1.62 JT | 9840 T | ARC03B | 843 | 284 | 1510 | 3800 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 77 | 4 | 5 | 6.6 J | 80 J | G139 | 31.9 | 20.5 | 32.7 | 71.2 | 1.8 U | 3370 U | S3 | 126 | 13 | 518 | 396 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 80 | 25 | 31 | 0.15 J | 2 | WR-PG-24 | 0.609 | 0.415 | 0.508 | 1.66 | 0.0162 UT | 3370 U | S3 | 113 | 1.37 | 510 | 346 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 77 | 10 | 13 | 1.4 NJ | 29 J | G124 | 7.58 | 3.85 | 9.31 | 24.7 | 0.48 U | 10200 U | S3 | 361 | 4.2 | 1570 | 1200 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 57 | 54 | 95 | 8.3 J | 945 JT | ARC06B-1 | 163 | 100 | 192 | 589 | 4.3 U | 945 JT | ARC06B-1 | 155 | 98 | 190 | 568 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 37 | 16 | 43 | 23.8 | 300 T | SS-41 | 102 | 78.3 | 81.6 | 275 | 15.3 U | 300 T | SS-41 | 59.1 | 30.9 | 65.2 | 192 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 52 | 52 | 100 | 8.4 J | 2400 J | G139 | 510 | 380 | 480 | 1550 | 8.4 J | 2400 J | G139 | 510 | 380 | 480 | 1550 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 37 | 23 | 62 | 38.3 | 376 J | SS-29 | 128 | 93.5 | 91.8 | 354 | 30.5 U | 376 J | SS-29 | 95.6 | 68.7 | 83.8 | 282 |
| Total Petroleum Hydrocarbons | mg/kg | 57 | 57 | 100 | 8.4 JT | 2760 JT | G139 | 623 | 456 | 631 | 1850 | 8.4 JT | 2760 JT | G139 | 623 | 456 | 631 | 1850 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 37 | 29 | 78 | 23.8 A | 664 A | SS-41 | 158 | 82 | 166 | 559 | 23.8 A | 664 A | SS-41 | 134 | 73.7 | 154 | 476 |

Table D1.3-16. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Western Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| ***RM 05-06*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 67 | 65 | 97 | 0.084 | 0.9 | G245 | 0.234 | 0.242 | 0.11 | 0.317 | 0.084 | 0.9 | G245 | 0.236 | 0.242 | 0.11 | 0.376 |
| Lead | mg/kg | 67 | 67 | 100 | 5.74 J | 232 | SD05 | 19.5 | 14.1 | 27.3 | 32.5 | 5.74 J | 232 | SD05 | 19.5 | 14.1 | 27.3 | 32.5 |
| Mercury | mg/kg | 67 | 66 | 99 | 0.013 J | 0.172 J | BT014 | 0.0633 | 0.0585 | 0.0311 | 0.125 | 0.013 J | 0.172 J | BT014 | 0.0635 | 0.059 | 0.0309 | 0.125 |
| Nickel | mg/kg | 66 | 66 | 100 | 10.8 | 30.6 | SDBH11SS | 23.7 | 24.9 | 4.82 | 29.8 | 10.8 | 30.6 | SDBH11SS | 23.7 | 24.9 | 4.82 | 29.8 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 6 | 6 | 100 | 0.000244 JT | 0.00208 JT | C187 | 0.000761 | 0.000417 | 0.000713 | 0.00183 | 0.000244 JT | 0.00208 JT | C187 | 0.000761 | 0.000417 | 0.000713 | 0.00183 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 50 | 13 | 26 | 0.0103 J | 6.66 J | G189 | 2.61 | 2.5 | 2.23 | 6.07 | 0.0103 J | 6.66 J | G189 | 0.974 | 0.355 | 1.52 | 4.7 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 82 | 82 | 100 | 8 | 23000 | G210 | 1230 | 308 | 3160 | 6710 | 8 | 23000 | G210 | 1230 | 308 | 3160 | 6710 |
| Total HPAHs | µg/kg | 82 | 82 | 100 | 64 JT | 260000 T | G210 | 13100 | 2630 | 35800 | 77000 | 64 JT | 260000 T | G210 | 13100 | 2630 | 35800 | 77000 |
| Total LPAHs | µg/kg | 82 | 82 | 100 | 12.8 JT | 85500 T | G210 | 4220 | 527 | 13900 | 19000 | 12.8 JT | 85500 T | G210 | 4220 | 527 | 13900 | 19000 |
| Naphthalene | µg/kg | 82 | 74 | 90 | 4.2 | 2500 | LPSG-S-021-R-1 | 133 | 49 | 326 | 405 | 0.48 U | 2500 | LPSG-S-021-R-1 | 120 | 42 | 312 | 374 |
| Phenanthrene | µg/kg | 82 | 82 | 100 | 5.3 | 66000 | G210 | 2850 | 270 | 9760 | 14600 | 5.3 | 66000 | G210 | 2850 | 270 | 9760 | 14600 |
| Total cPAHs | µg/kg | 82 | 82 | 100 | 11.5 JT | 30000 T | G210 | 1640 | 419 | 4140 | 8930 | 11.5 JT | 30000 T | G210 | 1640 | 419 | 4140 | 8930 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 67 | 12 | 18 | 3 J | 55 | 05R020 | 18.1 | 7.3 | 18.7 | 52.8 | 2 U | 1200 U | SD05 | 34.3 | 11 | 147 | 53.8 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 68 | 30 | 44 | 0.062 J | 12 J | SDBH14SS | 1.34 | 0.626 | 2.26 | 3.75 | 0.062 J | 580 U | SD05 | 14 | 1.12 | 70.1 | 20 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 67 | 15 | 22 | 1.7 J | 140 T | 05R020; WR-PG-36 | 22.8 | 4.7 | 47.7 | 140 | 0.53 U | 17000 U | SD05 | 303 | 4.5 | 2070 | 440 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 45 | 42 | 93 | 30 J | 2400 J | G179 | 231 | 110 | 420 | 717 | 14 U | 2400 J | G179 | 220 | 110 | 408 | 708 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 3 | 3 | 100 | 34 J | 230 J | G654 | 145 | 170 | 100 | 224 | 34 J | 230 J | G654 | 145 | 170 | 100 | 224 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 44 | 41 | 93 | 24 J | 2900 J | G179 | 505 | 360 | 522 | 1200 | 24 J | 2900 J | G179 | 499 | 385 | 504 | 1190 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 3 | 3 | 100 | 140 J | 410 J | G654 | 250 | 200 | 142 | 389 | 140 J | 410 J | G654 | 250 | 200 | 142 | 389 |
| Total Petroleum Hydrocarbons | mg/kg | 45 | 43 | 96 | 24 JT | 5340 JT | G179 | 711 | 500 | 925 | 1760 | 24 JT | 5340 JT | G179 | 699 | 450 | 906 | 1740 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 3 | 3 | 100 | 174 JA | 640 JA | G654 | 395 | 370 | 234 | 613 | 174 JA | 640 JA | G654 | 395 | 370 | 234 | 613 |
| ***RM 06-07*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 106 | 98 | 92 | 0.05 | 0.78 | 22B04 | 0.281 | 0.254 | 0.13 | 0.5 | 0.00189 U | 1.1 U | 22C04 | 0.276 | 0.253 | 0.16 | 0.5 |
| Lead | mg/kg | 109 | 109 | 100 | 3.32 J | 684 | G270-1 | 44.2 | 24.6 | 81 | 154 | 3.32 J | 684 | G270-1 | 44.2 | 24.6 | 81 | 154 |
| Mercury | mg/kg | 105 | 99 | 94 | 0.012 J | 0.722 | G327 | 0.11 | 0.075 | 0.116 | 0.354 | 0.012 J | 0.722 | G327 | 0.107 | 0.074 | 0.113 | 0.331 |
| Nickel | mg/kg | 108 | 108 | 100 | 7.03 | 200 JT | G263 | 32.7 | 26 | 25.6 | 79.7 | 7.03 | 200 JT | G263 | 32.7 | 26 | 25.6 | 79.7 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 9 | 9 | 100 | 0.000284 JT | 0.00355 T | G327 | 0.00166 | 0.00116 | 0.0013 | 0.00347 | 0.000284 JT | 0.00355 T | G327 | 0.00166 | 0.00116 | 0.0013 | 0.00347 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 92 | 19 | 21 | 0.146 J | 22 | 06R004 | 4.6 | 2.35 | 5.49 | 12.1 | 0.0728 U | 50 U | SD081 | 3.74 | 0.732 | 9.37 | 20.4 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 109 | 109 | 100 | 13 | 160000 | GS04APG2 | 13000 | 1400 | 29000 | 73800 | 13 | 160000 | GS04APG2 | 13000 | 1400 | 29000 | 73800 |
| Total HPAHs | µg/kg | 109 | 109 | 100 | 127 T | 1680000 T | GS04APG2 | 133000 | 15000 | 299000 | 701000 | 127 T | 1680000 T | GS04APG2 | 133000 | 15000 | 299000 | 701000 |
| Total LPAHs | µg/kg | 109 | 109 | 100 | 8.95 JT | 772000 JA | AN-1-3 | 58500 | 2970 | 152000 | 377000 | 8.95 JT | 772000 JA | AN-1-3 | 58500 | 2970 | 152000 | 377000 |
| Naphthalene | µg/kg | 109 | 103 | 94 | 0.89 J | 73000 J | AN-1-3; G294-1 | 3660 | 140 | 12200 | 14800 | 0.47 U | 73000 J | AN-1-3; G294-1 | 3460 | 130 | 11900 | 14200 |
| Phenanthrene | µg/kg | 109 | 109 | 100 | 4.1 | 400000 | G301 | 30600 | 1800 | 77000 | 210000 | 4.1 | 400000 | G301 | 30600 | 1800 | 77000 | 210000 |
| Total cPAHs | µg/kg | 109 | 109 | 100 | 18.2 T | 212000 T | GS04APG2 | 17400 | 1970 | 38400 | 96000 | 18.2 T | 212000 T | GS04APG2 | 17400 | 1970 | 38400 | 96000 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 105 | 11 | 10 | 4.5 J | 58 | 06R001 | 17.7 | 7.2 | 17.4 | 50 | 2 U | 830 U | G264 | 71.5 | 19 | 122 | 308 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 105 | 49 | 47 | 0.18 J | 140 J | SDUD27SS | 5.84 | 1.79 | 19.9 | 14.2 | 0.0307 UJ | 1200 U | G264 | 32.3 | 2.03 | 132 | 174 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 105 | 32 | 30 | 1 J | 290 | G263 | 20.7 | 8.03 | 51 | 52.2 | 0.167 U | 1000 U | SD067 | 48 | 6.59 | 149 | 99.8 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 68 | 68 | 100 | 11.2 | 20000 J | G294-1 | 1340 | 185 | 3460 | 9650 | 11.2 | 20000 J | G294-1 | 1340 | 185 | 3460 | 9650 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 1 | 1 | 100 | 61 J | 61 J | G656 | 61 | 61 | -- | 61 | 61 J | 61 J | G656 | 61 | 61 | -- | 61 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 59 | 58 | 98 | 61 JT | 17000 J | G283 | 1950 | 535 | 3610 | 11300 | 47 UT | 17000 J | G283 | 1910 | 530 | 3580 | 11200 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 1 | 1 | 100 | 200 J | 200 J | G656 | 200 | 200 | -- | 200 | 200 J | 200 J | G656 | 200 | 200 | -- | 200 |
| Total Petroleum Hydrocarbons | mg/kg | 68 | 68 | 100 | 11.2 A | 33100 JT | G294-1 | 3010 | 608 | 6760 | 19100 | 11.2 A | 33100 JT | G294-1 | 3010 | 608 | 6760 | 19100 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 1 | 1 | 100 | 261 JA | 261 JA | G656 | 261 | 261 | -- | 261 | 261 JA | 261 JA | G656 | 261 | 261 | -- | 261 |

Table D1.3-16. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Western Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| ***RM 07-08*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 108 | 100 | 93 | 0.0156 J | 5.79 | TOS-SD5 | 0.606 | 0.293 | 1.14 | 3.91 | 0.00177 U | 5.79 | TOS-SD5 | 0.563 | 0.282 | 1.11 | 3.07 |
| Lead | mg/kg | 108 | 108 | 100 | 5.84 | 1290 J | G355 | 38.3 | 16.4 | 127 | 89.4 | 5.84 | 1290 J | G355 | 38.3 | 16.4 | 127 | 89.4 |
| Mercury | mg/kg | 107 | 92 | 86 | 0.016 J | 0.46 | G394 | 0.0799 | 0.07 | 0.0584 | 0.143 | 0.016 J | 0.46 | G394 | 0.0766 | 0.07 | 0.0552 | 0.127 |
| Nickel | mg/kg | 97 | 96 | 99 | 12.6 J | 102 | G355 | 25.1 | 22.9 | 10.4 | 34.8 | 12.6 J | 102 | G355 | 25 | 22.8 | 10.4 | 34.6 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 17 | 17 | 100 | 0.00000255 JT | 0.0332 T | G355 | 0.00352 | 0.000826 | 0.0079 | 0.0133 | 0.00000255 JT | 0.0332 T | G355 | 0.00352 | 0.000826 | 0.0079 | 0.0133 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 104 | 7 | 7 | 0.0089 J | 430 | 07R006 | 62.8 | 1.22 | 162 | 303 | 0.0089 J | 430 | 07R006 | 12.6 | 1.56 | 45.9 | 49.9 |
| Total DDD | µg/kg | 108 | 93 | 86 | 0.233 NJT | 11000 A | OSS004 | 405 | 49 | 1270 | 1900 | 0.233 NJT | 11000 A | OSS004 | 350 | 19.9 | 1190 | 1520 |
| Total DDE | µg/kg | 108 | 87 | 81 | 0.356 NJT | 1480 A | OSS004 | 124 | 11 | 292 | 812 | 0.0406 UT | 1480 A | OSS004 | 108 | 8.96 | 266 | 567 |
| Total DDT | µg/kg | 108 | 88 | 81 | 0.099 JT | 81000 A | OSS002 | 2480 | 158 | 9270 | 10000 | 0.099 JT | 81000 A | OSS002 | 2020 | 47.7 | 8420 | 9330 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 133 | 119 | 89 | 2 J | 12000 | G355 | 283 | 67 | 1240 | 651 | 0.33 U | 12000 | G355 | 256 | 54 | 1170 | 598 |
| Total HPAHs | µg/kg | 133 | 127 | 95 | 2.16 JT | 143000 T | G355 | 3160 | 733 | 14200 | 8300 | 2.16 JT | 143000 T | G355 | 3020 | 714 | 13900 | 8010 |
| Total LPAHs | µg/kg | 133 | 119 | 89 | 0.65 JT | 6340 JT | G355 | 355 | 156 | 734 | 1410 | 0.65 JT | 6340 JT | G355 | 341 | 154 | 700 | 1240 |
| Naphthalene | µg/kg | 137 | 72 | 53 | 1.4 J | 154 | 2203 | 25.9 | 18 | 26.7 | 83.4 | 0.5 U | 168 UJ | TOS-SD3 | 18.9 | 13.4 | 25.3 | 64.4 |
| Phenanthrene | µg/kg | 133 | 118 | 89 | 0.53 J | 4900 | G355 | 218 | 90.5 | 520 | 1020 | 0.53 J | 4900 | G355 | 194 | 73 | 494 | 830 |
| Total cPAHs | µg/kg | 133 | 125 | 94 | 0.05 JT | 21900 T | G355 | 445 | 77.6 | 2170 | 959 | 0.05 JT | 21900 T | G355 | 419 | 70.4 | 2110 | 906 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 115 | 19 | 17 | 4.7 J | 840 J | G355 | 64.7 | 15 | 190 | 192 | 1.8 U | 1200 UJ | TOS-SD3 | 77.1 | 16 | 183 | 500 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 115 | 40 | 35 | 0.127 J | 340 | OSS004 | 24 | 3.16 | 74.2 | 84.3 | 0.0161 UT | 1200 UJ | TOS-SD3 | 60.6 | 10 | 169 | 500 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 109 | 18 | 17 | 0.57 J | 680 | OSS004 | 75.2 | 9.2 | 173 | 374 | 0.26 U | 2400 UJ | TOS-SD3 | 146 | 12 | 344 | 1000 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 37 | 36 | 97 | 20 J | 501 | 2201 | 171 | 131 | 115 | 437 | 4.9 U | 501 | 2201 | 167 | 130 | 117 | 434 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 4 | 4 | 100 | 44 J | 170 JT | G694 | 103 | 99.5 | 52.3 | 161 | 44 J | 170 JT | G694 | 103 | 99.5 | 52.3 | 161 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 30 | 29 | 97 | 16 J | 1100 J | BT020 | 487 | 470 | 229 | 880 | 16 J | 1100 J | BT020 | 473 | 460 | 238 | 865 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 4 | 4 | 100 | 88 J | 320 JT | G694 | 228 | 253 | 99.8 | 313 | 88 J | 320 JT | G694 | 228 | 253 | 99.8 | 313 |
| Total Petroleum Hydrocarbons | mg/kg | 37 | 37 | 100 | 16 JT | 1520 JT | BT020 | 549 | 540 | 313 | 1010 | 16 JT | 1520 JT | BT020 | 549 | 540 | 313 | 1010 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 4 | 4 | 100 | 132 JA | 490 JA | G694 | 332 | 352 | 150 | 474 | 132 JA | 490 JA | G694 | 332 | 352 | 150 | 474 |
| ***RM 08-09*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 67 | 60 | 90 | 0.0608 J | 5.41 | G453 | 0.673 | 0.457 | 0.883 | 1.65 | 0.00228 U | 5.41 | G453 | 0.687 | 0.45 | 0.872 | 2.03 |
| Lead | mg/kg | 67 | 67 | 100 | 3.07 J | 956 | G453 | 99.9 | 40.6 | 154 | 361 | 3.07 J | 956 | G453 | 99.9 | 40.6 | 154 | 361 |
| Mercury | mg/kg | 67 | 62 | 93 | 0.015 J | 2.01 | G453 | 0.187 | 0.101 | 0.27 | 0.455 | 0.01 U | 2.01 | G453 | 0.177 | 0.1 | 0.262 | 0.454 |
| Nickel | mg/kg | 67 | 67 | 100 | 10.1 J | 153 J | 19A01 | 27.6 | 23.2 | 18.7 | 50 | 10.1 J | 153 J | 19A01 | 27.6 | 23.2 | 18.7 | 50 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 14 | 14 | 100 | 0.000499 T | 0.239 T | G453 | 0.02 | 0.00192 | 0.0632 | 0.0946 | 0.000499 T | 0.239 T | G453 | 0.02 | 0.00192 | 0.0632 | 0.0946 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 49 | 10 | 20 | 0.00981 JT | 6.86 J | G441 | 1.64 | 1.27 | 1.99 | 4.83 | 0.00833 U | 6.86 J | G441 | 0.822 | 0.484 | 1.12 | 2.08 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 66 | 60 | 91 | 4.3 | 1670 | A2GS12 | 175 | 50 | 315 | 834 | 4.3 | 1670 | A2GS12 | 161 | 46.5 | 303 | 806 |
| Total HPAHs | µg/kg | 66 | 66 | 100 | 69.4 JT | 19600 T | A2GS12 | 1740 | 533 | 3230 | 7650 | 69.4 JT | 19600 T | A2GS12 | 1740 | 533 | 3230 | 7650 |
| Total LPAHs | µg/kg | 66 | 64 | 97 | 12.9 JT | 6790 T | A2GS12 | 552 | 160 | 1150 | 2390 | 12.9 JT | 6790 T | A2GS12 | 611 | 167 | 1190 | 3110 |
| Naphthalene | µg/kg | 66 | 37 | 56 | 5.7 | 269 J | 19A01 | 54.5 | 24 | 62.9 | 164 | 0.69 U | 269 J | 19A01 | 39.5 | 19 | 55.4 | 149 |
| Phenanthrene | µg/kg | 66 | 64 | 97 | 6 | 4820 | A2GS12 | 294 | 65.5 | 703 | 1040 | 6 | 4820 | A2GS12 | 286 | 65.5 | 694 | 1020 |
| Total cPAHs | µg/kg | 66 | 62 | 94 | 6.09 T | 2120 T | A2GS12 | 241 | 66.8 | 431 | 1150 | 6.09 T | 2120 T | A2GS12 | 227 | 64.5 | 420 | 1150 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 64 | 18 | 28 | 2.2 J | 760 | 08R001 | 111 | 23 | 192 | 441 | 1.7 U | 6600 U | A2GS12 | 267 | 19 | 947 | 1520 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 67 | 21 | 31 | 0.102 JT | 5.44 J | PP011806 | 1.51 | 1.2 | 1.45 | 4.6 | 0.0151 UT | 6600 U | A2GS12 | 201 | 2.56 | 931 | 1160 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 63 | 13 | 21 | 0.84 J | 18 J | G445 | 6.55 | 3.7 | 5.17 | 16.3 | 0.168 UT | 20000 U | A2GS12 | 664 | 4.1 | 2900 | 4520 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 36 | 31 | 86 | 16.2 J | 8400 J | G453 | 568 | 150 | 1600 | 2230 | 16.2 J | 8400 J | G453 | 494 | 115 | 1490 | 1450 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 1 | 1 | 100 | 41.5 JT | 41.5 JT | G717 | 41.5 | 41.5 | -- | 41.5 | 41.5 JT | 41.5 JT | G717 | 41.5 | 41.5 | -- | 41.5 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 14 | 14 | 100 | 290 J | 18000 J | G453 | 2000 | 750 | 4640 | 7790 | 290 J | 18000 J | G453 | 2000 | 750 | 4640 | 7790 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 1 | 1 | 100 | 155 JT | 155 JT | G717 | 155 | 155 | -- | 155 | 155 JT | 155 JT | G717 | 155 | 155 | -- | 155 |

Table D1.3-16. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Western Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| Total Petroleum Hydrocarbons | mg/kg | 36 | 35 | 97 | 16.2 JA | 26500 JT | G453 | 1370 | 354 | 4450 | 3220 | 16.2 JA | 26500 JT | G453 | 1330 | 348 | 4390 | 3180 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 1 | 1 | 100 | 197 JA | 197 JA | G717 | 197 | 197 | -- | 197 | 197 JA | 197 JA | G717 | 197 | 197 | -- | 197 |
| ***RM 09-10*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 36 | 35 | 97 | 0.133 T | 9.3 | HA-43 | 0.693 | 0.242 | 1.55 | 1.45 | 0.133 T | 9.3 | HA-43 | 0.686 | 0.245 | 1.53 | 1.41 |
| Lead | mg/kg | 36 | 36 | 100 | 8.3 | 1030 | HA-43 | 95.6 | 20.5 | 207 | 473 | 8.3 | 1030 | HA-43 | 95.6 | 20.5 | 207 | 473 |
| Mercury | mg/kg | 36 | 35 | 97 | 0.0285 JT | 0.99 | HA-43 | 0.149 | 0.07 | 0.2 | 0.493 | 0.0285 JT | 0.99 | HA-43 | 0.147 | 0.07 | 0.198 | 0.479 |
| Nickel | mg/kg | 36 | 35 | 97 | 11.7 | 341 | HA-43 | 41.6 | 23.1 | 65.3 | 138 | 11.7 | 341 | HA-43 | 41 | 23.1 | 64.4 | 131 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 13 | 13 | 100 | 0.00102 JT | 0.0484 T | G477 | 0.00912 | 0.00308 | 0.0144 | 0.0384 | 0.00102 JT | 0.0484 T | G477 | 0.00912 | 0.00308 | 0.0144 | 0.0384 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 31 | 7 | 23 | 0.0115 J | 7.15 J | G492-2 | 3.41 | 3.6 | 2.59 | 6.69 | 0.0115 J | 9.7 UT | SD151 | 1.32 | 0.24 | 2.35 | 6.38 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 36 | 36 | 100 | 4.2 | 840 | G738 | 144 | 56 | 210 | 556 | 4.2 | 840 | G738 | 144 | 56 | 210 | 556 |
| Total HPAHs | µg/kg | 36 | 36 | 100 | 40.2 JT | 17000 JT | G467 | 1920 | 688 | 3350 | 6590 | 40.2 JT | 17000 JT | G467 | 1920 | 688 | 3350 | 6590 |
| Total LPAHs | µg/kg | 36 | 36 | 100 | 8.39 JT | 8070 JT | G467 | 576 | 115 | 1500 | 2470 | 8.39 JT | 8070 JT | G467 | 576 | 115 | 1500 | 2470 |
| Naphthalene | µg/kg | 36 | 18 | 50 | 5.5 | 350 | G738 | 39.1 | 17.5 | 79 | 109 | 0.65 UJ | 350 | G738 | 32.5 | 14.5 | 60.5 | 100 |
| Phenanthrene | µg/kg | 36 | 36 | 100 | 2.65 JT | 5600 | G467 | 393 | 69 | 1050 | 1410 | 2.65 JT | 5600 | G467 | 393 | 69 | 1050 | 1410 |
| Total cPAHs | µg/kg | 36 | 36 | 100 | 5.35 JT | 1210 T | G738 | 213 | 84.5 | 309 | 818 | 5.35 JT | 1210 T | G738 | 213 | 84.5 | 309 | 818 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 36 | 17 | 47 | 3.95 JT | 480 | G477 | 86.7 | 40 | 119 | 256 | 2.3 U | 6600 U | HA-43 | 272 | 15 | 1100 | 608 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 32 | 9 | 28 | 0.14 J | 2.01 JT | G492-1 | 1.02 | 1.13 | 0.689 | 1.89 | 0.0161 UT | 20 U | SD149 | 2.13 | 0.555 | 4.67 | 10.9 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 32 | 5 | 16 | 0.94 J | 98 JT | 09R002 | 29.9 | 4.2 | 42.4 | 87.4 | 0.33 U | 99 U | SD149 | 14.2 | 3.25 | 28.8 | 96.4 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 19 | 19 | 100 | 37 J | 460 J | G497 | 126 | 120 | 91.2 | 226 | 37 J | 460 J | G497 | 126 | 120 | 91.2 | 226 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 5 | 5 | 100 | 27 J | 71 J | G738 | 49.2 | 43 | 19.4 | 70.4 | 27 J | 71 J | G738 | 49.2 | 43 | 19.4 | 70.4 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 15 | 15 | 100 | 350 J | 2500 J | G497 | 759 | 650 | 520 | 1450 | 350 J | 2500 J | G497 | 759 | 650 | 520 | 1450 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 5 | 5 | 100 | 120 J | 270 J | G740 | 178 | 160 | 55.9 | 252 | 120 J | 270 J | G740 | 178 | 160 | 55.9 | 252 |
| Total Petroleum Hydrocarbons | mg/kg | 19 | 19 | 100 | 301 A | 2960 JT | G497 | 805 | 710 | 580 | 1380 | 301 A | 2960 JT | G497 | 805 | 710 | 580 | 1380 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 5 | 5 | 100 | 147 JA | 338 JA | G740 | 227 | 223 | 70.1 | 317 | 147 JA | 338 JA | G740 | 227 | 223 | 70.1 | 317 |
| ***RM 10-11*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 39 | 24 | 62 | 0.149 T | 1.23 | SED-2 | 0.289 | 0.213 | 0.229 | 0.645 | 0.124 U | 1.23 | SED-2 | 0.325 | 0.203 | 0.294 | 0.992 |
| Lead | mg/kg | 39 | 39 | 100 | 10.3 JT | 961 | SED-3 | 75.7 | 37.1 | 157 | 239 | 10.3 JT | 961 | SED-3 | 75.7 | 37.1 | 157 | 239 |
| Mercury | mg/kg | 23 | 23 | 100 | 0.041 | 0.139 | WR-PG-106 | 0.075 | 0.068 | 0.0256 | 0.125 | 0.041 | 0.139 | WR-PG-106 | 0.075 | 0.068 | 0.0256 | 0.125 |
| Nickel | mg/kg | 26 | 26 | 100 | 17.6 | 51.5 | SED-12 | 28.5 | 25.1 | 9.84 | 50.3 | 17.6 | 51.5 | SED-12 | 28.5 | 25.1 | 9.84 | 50.3 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 5 | 5 | 100 | 0.000676 T | 0.00292 T | G503 | 0.00151 | 0.0011 | 0.000964 | 0.00275 | 0.000676 T | 0.00292 T | G503 | 0.00151 | 0.0011 | 0.000964 | 0.00275 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 23 | 5 | 22 | 0.51 NJ | 8.83 J | G503 | 2.75 | 1.5 | 3.43 | 7.42 | 0.133 U | 8.83 J | G503 | 1.26 | 0.79 | 1.95 | 4.67 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 30 | 27 | 90 | 5.1 | 810 | G508 | 75.8 | 32 | 156 | 217 | 5.1 | 810 | G508 | 70.2 | 30.1 | 149 | 215 |
| Total HPAHs | µg/kg | 30 | 28 | 93 | 59.9 JT | 5900 T | G508 | 873 | 393 | 1340 | 3570 | 20 UT | 5900 T | G508 | 816 | 351 | 1310 | 3390 |
| Total LPAHs | µg/kg | 30 | 27 | 90 | 10.3 JT | 2370 T | G518 | 270 | 93.2 | 478 | 817 | 10.3 JT | 2370 T | G518 | 245 | 82.2 | 459 | 781 |
| Naphthalene | µg/kg | 30 | 13 | 43 | 4 | 274 | SED-8 | 57.8 | 9.7 | 95.4 | 266 | 3.1 U | 274 | SED-8 | 30 | 7.25 | 66.4 | 178 |
| Phenanthrene | µg/kg | 30 | 27 | 90 | 5.4 | 960 | G518 | 114 | 49.8 | 209 | 513 | 5.4 | 960 | G518 | 104 | 41.5 | 200 | 479 |
| Total cPAHs | µg/kg | 30 | 28 | 93 | 2.2 T | 1280 T | G508 | 110 | 41.6 | 242 | 310 | 2.2 T | 1280 T | G508 | 104 | 39.2 | 235 | 303 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 20 | 10 | 50 | 4.9 J | 21 | GCA10W | 9.84 | 7.15 | 6.05 | 20.6 | 1.9 UJ | 21 | GCA10W | 6.61 | 4.9 | 5.37 | 20.1 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 20 | 3 | 15 | 0.17 J | 5.2 J | WR-PG-108 | 1.85 | 0.17 | 2.9 | 4.7 | 0.17 J | 5.2 J | G510; WR-PG-108 | 2.29 | 1.15 | 2.08 | 5.2 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 23 | 8 | 35 | 1.5 J | 38 | WR-PG-118 | 11 | 5.5 | 12.8 | 32.8 | 1.5 J | 100 U | T1S-02; T1S-04; T1S-06 | 20 | 5 | 32.7 | 100 |

Table D1.3-16. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Surface Sediment, Study Area (RM 1.9-11.8) Western Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 21 | 15 | 71 | 52 J | 300 | SED-2 | 118 | 100 | 62.2 | 214 | 12.5 U | 300 | SED-2 | 88.9 | 85 | 70.1 | 177 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 1 | 1 | 100 | 36 J | 36 J | G763 | 36 | 36 | -- | 36 | 36 J | 36 J | G763 | 36 | 36 | -- | 36 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 8 | 8 | 100 | 330 J | 960 J | WR-PG-120 | 659 | 650 | 234 | 939 | 330 J | 960 J | WR-PG-120 | 659 | 650 | 234 | 939 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 1 | 1 | 100 | 160 J | 160 J | G763 | 160 | 160 | -- | 160 | 160 J | 160 J | G763 | 160 | 160 | -- | 160 |
| Total Petroleum Hydrocarbons | mg/kg | 21 | 18 | 86 | 26.7 A | 1520 A | SED-2 | 560 | 397 | 421 | 1160 | 25 UA | 1520 A | SED-2 | 484 | 386 | 432 | 1100 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 1 | 1 | 100 | 196 JA | 196 JA | G763 | 196 | 196 | -- | 196 | 196 JA | 196 JA | G763 | 196 | 196 | -- | 196 |
| ***RM 11-11.8*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 9 | 9 | 100 | 0.171 | 0.249 | WR-PG-122 | 0.203 | 0.206 | 0.0247 | 0.238 | 0.171 | 0.249 | WR-PG-122 | 0.203 | 0.206 | 0.0247 | 0.238 |
| Lead | mg/kg | 9 | 9 | 100 | 10.5 | 19 J | G772 | 13.7 | 12.8 | 2.78 | 18 | 10.5 | 19 J | G772 | 13.7 | 12.8 | 2.78 | 18 |
| Mercury | mg/kg | 9 | 8 | 89 | 0.04 | 0.087 | WR-PG-122 | 0.0568 | 0.055 | 0.0157 | 0.0807 | 0.038 U | 0.087 | WR-PG-122 | 0.0547 | 0.054 | 0.0159 | 0.0798 |
| Nickel | mg/kg | 9 | 9 | 100 | 19.5 J | 26.7 | T1S-08 | 23.5 | 24 | 2.09 | 26.1 | 19.5 J | 26.7 | T1S-08 | 23.5 | 24 | 2.09 | 26.1 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.31 U | 1.6 U | T1S-08 | 0.666 | 0.58 | 0.381 | 1.27 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 9 | 8 | 89 | 8 | 330 | WR-PG-130 | 60.4 | 20 | 110 | 231 | 8 | 330 | WR-PG-130 | 55.9 | 20 | 104 | 217 |
| Total HPAHs | µg/kg | 9 | 9 | 100 | 53 T | 3260 T | WR-PG-130 | 565 | 183 | 1030 | 2200 | 53 T | 3260 T | WR-PG-130 | 565 | 183 | 1030 | 2200 |
| Total LPAHs | µg/kg | 9 | 8 | 89 | 21.6 JT | 2990 T | WR-PG-130 | 422 | 29.8 | 1040 | 2000 | 20 UT | 2990 T | WR-PG-130 | 378 | 25.3 | 981 | 1860 |
| Naphthalene | µg/kg | 9 | 2 | 22 | 40 | 320 | WR-PG-130 | 180 | 180 | 198 | 306 | 4 U | 320 | WR-PG-130 | 46.6 | 6.8 | 103 | 208 |
| Phenanthrene | µg/kg | 9 | 8 | 89 | 10 | 1500 | WR-PG-130 | 214 | 18 | 520 | 1000 | 10 | 1500 | WR-PG-130 | 193 | 20 | 491 | 931 |
| Total cPAHs | µg/kg | 9 | 8 | 89 | 11.6 JT | 435 T | WR-PG-130 | 82 | 28.2 | 144 | 307 | 11.6 JT | 435 T | WR-PG-130 | 75.1 | 25.8 | 136 | 289 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 8 | 5 | 62 | 4.5 J | 29 J | G772 | 13.6 | 5.8 | 11.9 | 28 | 3.1 U | 29 J | G772 | 9.85 | 4.65 | 10.4 | 27.3 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 8 | 1 | 12 | 180 | 180 | G772 | 180 | 180 | -- | 180 | 0.39 U | 180 | G772 | 22.9 | 0.46 | 63.5 | 117 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 9 | 1 | 11 | 3.1 NJ | 3.1 NJ | G772 | 3.1 | 3.1 | -- | 3.1 | 0.9 U | 100 U | T1S-08 | 13.4 | 1.2 | 32.6 | 64.4 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 8 | 8 | 100 | 46 J | 150 J | WR-PG-130 | 91.3 | 77.5 | 37.3 | 143 | 46 J | 150 J | WR-PG-130 | 91.3 | 77.5 | 37.3 | 143 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 1 | 1 | 100 | 63 J | 63 J | G772 | 63 | 63 | -- | 63 | 63 J | 63 J | G772 | 63 | 63 | -- | 63 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 8 | 8 | 100 | 320 J | 900 J | G772; WR-PG-130 | 606 | 540 | 223 | 900 | 320 J | 900 J | G772; WR-PG-130 | 606 | 540 | 223 | 900 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 1 | 1 | 100 | 360 J | 360 J | G772 | 360 | 360 | -- | 360 | 360 J | 360 J | G772 | 360 | 360 | -- | 360 |
| Total Petroleum Hydrocarbons | mg/kg | 8 | 8 | 100 | 366 JT | 1050 JT | WR-PG-130 | 698 | 618 | 259 | 1040 | 366 JT | 1050 JT | WR-PG-130 | 698 | 618 | 259 | 1040 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 1 | 1 | 100 | 423 JA | 423 JA | G772 | 423 | 423 | -- | 423 | 423 JA | 423 JA | G772 | 423 | 423 | -- | 423 |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TEQ - toxic equivalent concentration

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-17. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Western Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| ***Study Area*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 529 | 494 | 93 | 0.011 J | 26.7 | HA-42 | 0.457 | 0.305 | 1.53 | 0.757 | 0.008 UJ | 26.7 | HA-42 | 0.47 | 0.309 | 1.48 | 0.898 |
| Lead | mg/kg | 537 | 537 | 100 | 2.67 | 2950 | HA-43 | 44.7 | 22.8 | 182 | 103 | 2.67 | 2950 | HA-43 | 44.7 | 22.8 | 182 | 103 |
| Mercury | mg/kg | 483 | 461 | 95 | 0.007 J | 10.6 | HA-43 | 0.208 | 0.121 | 0.568 | 0.483 | 0.007 J | 10.6 | HA-43 | 0.202 | 0.118 | 0.556 | 0.466 |
| Nickel | mg/kg | 521 | 521 | 100 | 5.99 J | 716 | C356 | 29.4 | 24.7 | 44.5 | 39.1 | 5.99 J | 716 | C356 | 29.4 | 24.7 | 44.5 | 39.1 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 47 | 47 | 100 | 0.000000291 JT | 0.24 T | C455 | 0.01 | 0.00225 | 0.035 | 0.0216 | 0.000000291 JT | 0.24 T | C455 | 0.01 | 0.00225 | 0.035 | 0.0216 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 510 | 44 | 9 | 0.18 J | 172 NJ | C356 | 8.86 | 1.47 | 26.8 | 35.7 | 0.062 U | 9900 U | WB-36 | 63.2 | 0.607 | 520 | 98.6 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 621 | 574 | 92 | 0.26 J | 1010000 | GP26 | 14600 | 150 | 77300 | 55400 | 0.14 U | 1010000 | GP26 | 13600 | 130 | 74400 | 44000 |
| Total HPAHs | µg/kg | 621 | 599 | 96 | 0.31 JT | 13400000 T | C302 | 181000 | 1600 | 987000 | 515000 | 0.31 JT | 13400000 T | C302 | 175000 | 1510 | 970000 | 500000 |
| Total LPAHs | µg/kg | 621 | 602 | 97 | 0.23 JT | 39900000 T | C302 | 399000 | 630 | 2820000 | 644000 | 0.23 JT | 39900000 T | C302 | 387000 | 568 | 2770000 | 631000 |
| Naphthalene | µg/kg | 648 | 503 | 78 | 0.61 J | 20000000 | C302 | 232000 | 95 | 1660000 | 317000 | 0.43 U | 20000000 | C302 | 180000 | 50 | 1470000 | 94900 |
| Phenanthrene | µg/kg | 621 | 587 | 95 | 0.46 J | 8500000 | C302 | 103000 | 310 | 617000 | 244000 | 0.44 U | 8500000 | C302 | 96900 | 280 | 601000 | 220000 |
| Total cPAHs | µg/kg | 621 | 587 | 95 | 0.031 JT | 1310000 T | GP26 | 18800 | 199 | 99900 | 70000 | 0.031 JT | 1310000 T | GP26 | 17800 | 191 | 97200 | 57200 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 557 | 53 | 10 | 2.3 J | 11800 | HA-42 | 246 | 10 | 1620 | 114 | 1.9 U | 11800 | HA-42 | 151 | 14 | 675 | 492 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 573 | 136 | 24 | 0.066 J | 14000 | OSS004 | 124 | 1.64 | 1210 | 64.8 | 0.0186 U | 14000 | OSS004 | 126 | 3 | 721 | 340 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 553 | 157 | 28 | 0.78 NJ | 5600 | C301 | 75.8 | 4.3 | 479 | 106 | 0.2 U | 36000 U | LWMTCLP11C | 414 | 3.8 | 2070 | 2000 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 363 | 319 | 88 | 1.75 JT | 190000 J | C301 | 2920 | 390 | 15600 | 4620 | 1.75 JT | 190000 J | C301 | 2570 | 320 | 14700 | 4440 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 81 | 70 | 86 | 5.5 J | 88000 J | C662 | 1900 | 245 | 10500 | 3420 | 1.6 UT | 88000 J | C662 | 1650 | 205 | 9780 | 3200 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 324 | 291 | 90 | 6.6 J | 110000 J | C301 | 2210 | 780 | 8500 | 4500 | 4.6 U | 110000 J | C301 | 1990 | 715 | 8080 | 3900 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 81 | 71 | 88 | 5.4 J | 15000 J | C662 | 868 | 520 | 1830 | 2650 | 3.7 UT | 15000 J | C662 | 764 | 460 | 1740 | 2600 |
| Total Petroleum Hydrocarbons | mg/kg | 363 | 333 | 92 | 3 JT | 321000 JT | C301 | 4990 | 1130 | 24400 | 8690 | 3 JT | 321000 JT | C301 | 4580 | 1020 | 23400 | 8570 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 81 | 72 | 89 | 5.4 JA | 103000 JA | C662 | 2710 | 733 | 12100 | 6340 | 3.7 UA | 103000 JA | C662 | 2410 | 690 | 11400 | 6200 |
| ***RM 03-04*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 12 | 12 | 100 | 0.139 | 0.7 | SD001 | 0.286 | 0.209 | 0.182 | 0.601 | 0.139 | 0.7 | SD001 | 0.286 | 0.209 | 0.182 | 0.601 |
| Lead | mg/kg | 12 | 12 | 100 | 4.99 | 27 | SD001 | 14.3 | 11.6 | 8.89 | 25.6 | 4.99 | 27 | SD001 | 14.3 | 11.6 | 8.89 | 25.6 |
| Mercury | mg/kg | 12 | 12 | 100 | 0.025 | 0.333 | C060 | 0.148 | 0.146 | 0.117 | 0.312 | 0.025 | 0.333 | C060 | 0.148 | 0.146 | 0.117 | 0.312 |
| Nickel | mg/kg | 12 | 12 | 100 | 19.3 | 32.6 | SD001 | 24.5 | 24.3 | 3.6 | 30.1 | 19.3 | 32.6 | SD001 | 24.5 | 24.3 | 3.6 | 30.1 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.0895 UJ | 0.96 UJ | SD001 | 0.315 | 0.15 | 0.273 | 0.703 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 12 | 11 | 92 | 1.4 J | 5700 | SD001 | 1330 | 360 | 2000 | 5150 | 0.34 U | 5700 | SD001 | 1220 | 229 | 1950 | 5100 |
| Total HPAHs | µg/kg | 12 | 12 | 100 | 2.61 JT | 63900 T | SD001 | 13100 | 2540 | 21900 | 57500 | 2.61 JT | 63900 T | SD001 | 13100 | 2540 | 21900 | 57500 |
| Total LPAHs | µg/kg | 12 | 12 | 100 | 0.67 JT | 32400 T | SD001 | 5830 | 690 | 10700 | 27600 | 0.67 JT | 32400 T | SD001 | 5830 | 690 | 10700 | 27600 |
| Naphthalene | µg/kg | 13 | 8 | 62 | 1.9 J | 2900 | SD001 | 691 | 310 | 971 | 2310 | 0.54 U | 2900 | SD001 | 428 | 86 | 818 | 1880 |
| Phenanthrene | µg/kg | 12 | 11 | 92 | 0.62 J | 18000 | SD001 | 3530 | 510 | 6320 | 16000 | 0.48 U | 18000 | SD001 | 3230 | 345 | 6110 | 15800 |
| Total cPAHs | µg/kg | 12 | 12 | 100 | 0.05 JT | 7720 T | SD001 | 1620 | 313 | 2590 | 6760 | 0.05 JT | 7720 T | SD001 | 1620 | 313 | 2590 | 6760 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.2 U | 73 U | SD001 | 14.2 | 3.7 | 20.6 | 47.2 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 13 | 2 | 15 | 0.24 | 1.37 J | C077 | 0.805 | 0.805 | 0.799 | 1.31 | 0.125 UJ | 73 U | SD001 | 11.5 | 3.2 | 20.9 | 50.8 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 12 | 3 | 25 | 5.6 J | 15 NJ | C615 | 8.8 | 5.8 | 5.37 | 14.1 | 0.57 U | 370 UJ | SD001 | 33.4 | 0.605 | 106 | 175 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 7 | 5 | 71 | 69 J | 890 J | C060 | 366 | 290 | 311 | 782 | 14 U | 890 J | C060 | 265 | 230 | 307 | 728 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 1 | 1 | 100 | 209 JT | 209 JT | C615 | 209 | 209 | -- | 209 | 209 JT | 209 JT | C615 | 209 | 209 | -- | 209 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 7 | 7 | 100 | 59 J | 1400 J | C060 | 506 | 590 | 472 | 1170 | 59 J | 1400 J | C060 | 506 | 590 | 472 | 1170 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 1 | 1 | 100 | 457 JT | 457 JT | C615 | 457 | 457 | -- | 457 | 457 JT | 457 JT | C615 | 457 | 457 | -- | 457 |
| Total Petroleum Hydrocarbons | mg/kg | 7 | 7 | 100 | 59 JT | 2290 JT | C060 | 767 | 855 | 779 | 1890 | 59 JT | 2290 JT | C060 | 767 | 855 | 779 | 1890 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 1 | 1 | 100 | 666 JA | 666 JA | C615 | 666 | 666 | -- | 666 | 666 JA | 666 JA | C615 | 666 | 666 | -- | 666 |

Table D1.3-17. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Western Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| ***RM 04-05*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 82 | 69 | 84 | 0.05 JT | 0.639 | C130 | 0.318 | 0.309 | 0.128 | 0.526 | 0.05 JT | 1.08 U | S2 | 0.353 | 0.315 | 0.178 | 0.696 |
| Lead | mg/kg | 82 | 82 | 100 | 2.7 | 61.9 T | SGP-16 | 22.1 | 21.2 | 10.8 | 36.4 | 2.7 | 61.9 T | SGP-16 | 22.1 | 21.2 | 10.8 | 36.4 |
| Mercury | mg/kg | 63 | 59 | 94 | 0.009 JT | 0.91 | C142 | 0.178 | 0.149 | 0.162 | 0.378 | 0.009 JT | 0.91 | C142 | 0.174 | 0.14 | 0.158 | 0.365 |
| Nickel | mg/kg | 77 | 77 | 100 | 11.9 | 32 | C133 | 24.1 | 25.1 | 4.54 | 30 | 11.9 | 32 | C133 | 24.1 | 25.1 | 4.54 | 30 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 1 | 1 | 100 | 0.00000754 JT | 0.00000754 JT | LWMC6 | 0.00000754 | 0.00000754 | -- | 0.00000754 | 0.00000754 JT | 0.00000754 JT | LWMC6 | 0.00000754 | 0.00000754 | -- | 0.00000754 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 61 | 2 | 3 | 0.86 NJ | 1.2 NJ | C135 | 1.03 | 1.03 | 0.24 | 1.18 | 0.0705 UJT | 43.3 U | S2 | 2.23 | 0.533 | 6.5 | 6.7 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 75 | 69 | 92 | 0.45 J | 16000 | C147 | 1610 | 500 | 3140 | 7340 | 0.29 U | 16000 | C147 | 1590 | 560 | 3030 | 6920 |
| High Molecular Weight PAH | µg/kg | 75 | 73 | 97 | 1.48 JT | 181000 T | C147 | 17400 | 4710 | 35600 | 79700 | 1.48 JT | 181000 T | C147 | 17000 | 4330 | 35200 | 77000 |
| Low Molecular Weight PAH | µg/kg | 75 | 73 | 97 | 0.73 JT | 77000 T | C142 | 7370 | 1470 | 15400 | 34800 | 0.73 JT | 77000 T | C142 | 7230 | 1470 | 15200 | 33000 |
| Naphthalene | µg/kg | 77 | 61 | 79 | 1.4 J | 1900 | SD035 | 353 | 120 | 487 | 1500 | 0.45 U | 3550 U | S2 | 383 | 110 | 619 | 1650 |
| Phenanthrene | µg/kg | 75 | 73 | 97 | 0.73 J | 52000 | C142 | 4830 | 800 | 10300 | 22400 | 0.73 J | 52000 | C142 | 4750 | 800 | 10100 | 21300 |
| Total cPAHs | µg/kg | 75 | 69 | 92 | 0.559 JT | 20900 T | C147 | 2150 | 694 | 4160 | 9750 | 0.34 UT | 20900 T | C147 | 2080 | 694 | 4010 | 9180 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 67 | 12 | 18 | 2.7 J | 120 | NA-1B | 24.3 | 5.9 | 42.5 | 115 | 1.9 U | 3550 U | S2 | 139 | 5.9 | 515 | 561 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 72 | 15 | 21 | 0.21 NJ | 5.29 J | C133 | 1.09 | 0.81 | 1.19 | 2.45 | 0.0196 U | 3550 U | S2 | 115 | 1.37 | 499 | 479 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 66 | 24 | 36 | 1.1 J | 9.1 J | C136 | 3.83 | 3.4 | 2.03 | 7.71 | 0.47 UT | 10800 U | S2 | 367 | 2.4 | 1580 | 1750 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 56 | 49 | 88 | 13 J | 1600 J | C142 | 525 | 470 | 345 | 1160 | 4.5 U | 1600 J | C142 | 460 | 420 | 365 | 1130 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 22 | 15 | 68 | 20.7 T | 760 J | C626; SGP-14 | 263 | 165 | 247 | 760 | 13.1 U | 760 J | C626; SGP-14 | 184 | 82.2 | 233 | 747 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 55 | 48 | 87 | 6.9 J | 2000 J | C139; C142 | 942 | 905 | 483 | 1870 | 6.6 U | 2000 J | C139; C142 | 823 | 830 | 548 | 1830 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 22 | 15 | 68 | 35.1 | 960 J | C626 | 358 | 250 | 301 | 859 | 26.2 U | 960 J | C626 | 255 | 109 | 291 | 808 |
| Total Petroleum Hydrocarbons | mg/kg | 56 | 50 | 89 | 6.9 JT | 3640 JT | C142 | 1430 | 1320 | 840 | 2990 | 6.6 UT | 3640 JT | C142 | 1280 | 1250 | 907 | 2960 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 22 | 15 | 68 | 57.3 A | 1720 JA | C626 | 621 | 385 | 544 | 1620 | 26.2 UA | 1720 JA | C626 | 434 | 183 | 525 | 1560 |
| ***RM 05-06*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 54 | 52 | 96 | 0.07 | 3.47 | C227 | 0.335 | 0.272 | 0.464 | 0.559 | 0.07 | 3.47 | C227 | 0.33 | 0.257 | 0.455 | 0.551 |
| Lead | mg/kg | 54 | 54 | 100 | 4.08 J | 117 | C245 | 21.3 | 18.8 | 17.2 | 45.7 | 4.08 J | 117 | C245 | 21.3 | 18.8 | 17.2 | 45.7 |
| Mercury | mg/kg | 53 | 51 | 96 | 0.01 JT | 0.522 J | C182 | 0.122 | 0.101 | 0.0958 | 0.25 | 0.009 U | 0.522 J | C182 | 0.118 | 0.099 | 0.0964 | 0.25 |
| Nickel | mg/kg | 53 | 53 | 100 | 11.3 J | 33 J | SD055C | 22.9 | 22.8 | 4.42 | 28.6 | 11.3 J | 33 J | SD055C | 22.9 | 22.8 | 4.42 | 28.6 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 2 | 2 | 100 | 0.00125 JT | 0.00324 T | C184 | 0.00225 | 0.00225 | 0.00141 | 0.00314 | 0.00125 JT | 0.00324 T | C184 | 0.00225 | 0.00225 | 0.00141 | 0.00314 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 50 | 4 | 8 | 0.26 J | 1.63 J | C245 | 1.02 | 1.09 | 0.59 | 1.58 | 0.0767 U | 8.7 U | SD055C | 0.898 | 0.51 | 1.33 | 2.5 |
| Total DDD | µg/kg | 50 | 40 | 80 | 0.079 JT | 680 T | C531 | 64.5 | 14.6 | 122 | 234 | 0.0484 UT | 680 T | C531 | 51.7 | 7.8 | 112 | 230 |
| Total DDE | µg/kg | 50 | 33 | 66 | 0.08 JT | 58 NJT | C182 | 11.3 | 4.44 | 15.4 | 46.4 | 0.0454 UT | 58 NJT | C182 | 8.5 | 2.61 | 13.6 | 41.2 |
| Total DDT | µg/kg | 50 | 33 | 66 | 0.211 JT | 100 JT | C531 | 17.4 | 9.25 | 21.1 | 52.2 | 0.0527 UJT | 100 JT | C531 | 11.6 | 3.54 | 18.9 | 46.8 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 59 | 56 | 95 | 0.59 J | 30000 | SD05 | 2830 | 738 | 4870 | 9730 | 0.3 U | 30000 | SD05 | 2690 | 640 | 4780 | 9470 |
| Total HPAHs | µg/kg | 59 | 58 | 98 | 0.77 JT | 403000 T | SD05 | 31800 | 7920 | 61200 | 114000 | 0.66 UT | 403000 T | SD05 | 31300 | 7260 | 60800 | 113000 |
| Total LPAHs | µg/kg | 59 | 59 | 100 | 0.47 JT | 182000 JT | SD05 | 14100 | 2120 | 29800 | 55900 | 0.47 JT | 182000 JT | SD05 | 14100 | 2120 | 29800 | 55900 |
| Naphthalene | µg/kg | 62 | 54 | 87 | 4.8 | 2000 | SD055C | 424 | 175 | 550 | 1800 | 0.44 U | 2000 | SD055C | 370 | 130 | 532 | 1790 |
| Phenanthrene | µg/kg | 59 | 58 | 98 | 0.47 J | 120000 | SD05 | 9050 | 1100 | 19300 | 37500 | 0.44 U | 120000 | SD05 | 8900 | 1000 | 19200 | 37000 |
| Total cPAHs | µg/kg | 59 | 58 | 98 | 0.038 JT | 39400 T | SD05 | 3600 | 888 | 6310 | 12500 | 0.038 JT | 39400 T | SD05 | 3540 | 869 | 6270 | 12300 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 57 | 5 | 9 | 2.3 J | 100 J | SD05 | 26.1 | 8.8 | 41.6 | 83 | 1.9 U | 190 U | SD055C | 24.3 | 13 | 34 | 80 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 59 | 11 | 19 | 0.066 J | 3.1 J | C245 | 0.976 | 0.57 | 0.985 | 2.63 | 0.0187 U | 590 U | SD05 | 27.4 | 2.9 | 83.5 | 116 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 57 | 13 | 23 | 1.5 J | 10 J | C179 | 4.91 | 3.8 | 3.26 | 9.4 | 0.22 U | 18000 U | SD05 | 354 | 0.92 | 2380 | 440 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 49 | 44 | 90 | 9.3 J | 2800 | SD05 | 544 | 375 | 584 | 1740 | 4.4 U | 2800 | SD05 | 492 | 340 | 575 | 1640 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 4 | 4 | 100 | 13 J | 780 JT | C531 | 311 | 225 | 334 | 708 | 13 J | 780 JT | C531 | 311 | 225 | 334 | 708 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 48 | 39 | 81 | 70 J | 2300 J | C240; SD05 | 808 | 710 | 530 | 1850 | 7.4 U | 2300 J | C240; SD05 | 674 | 625 | 557 | 1730 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 4 | 3 | 75 | 300 J | 640 JT | C531 | 430 | 350 | 184 | 611 | 19 U | 640 JT | C531 | 327 | 325 | 254 | 597 |

Table D1.3-17. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Western Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| Total Petroleum Hydrocarbons | mg/kg | 49 | 44 | 90 | 21 JA | 5140 JT | SD05 | 1280 | 1060 | 1140 | 3590 | 9.1 UT | 5140 JT | SD05 | 1160 | 880 | 1140 | 3430 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 4 | 4 | 100 | 13 JA | 1400 JT | C531 | 628 | 550 | 575 | 1280 | 13 JA | 1400 JT | C531 | 628 | 550 | 575 | 1280 |
| ***RM 06-07*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 147 | 145 | 99 | 0.011 J | 7.03 | C324 | 0.33 | 0.275 | 0.59 | 0.584 | 0.011 J | 7.03 | C324 | 0.328 | 0.275 | 0.586 | 0.576 |
| Lead | mg/kg | 155 | 155 | 100 | 2.67 | 363 | SDDC24SB | 31.2 | 22.3 | 45.6 | 79.6 | 2.67 | 363 | SDDC24SB | 31.2 | 22.3 | 45.6 | 79.6 |
| Mercury | mg/kg | 148 | 140 | 95 | 0.008 J | 2.34 | SDUD1SB | 0.175 | 0.125 | 0.237 | 0.441 | 0.007 U | 2.34 | SDUD1SB | 0.169 | 0.119 | 0.232 | 0.437 |
| Nickel | mg/kg | 150 | 150 | 100 | 5.99 J | 168 | C324 | 28.2 | 24.4 | 15.9 | 57.2 | 5.99 J | 168 | C324 | 28.2 | 24.4 | 15.9 | 57.2 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 5 | 5 | 100 | 0.0000307 JT | 0.00714 JT | C263 | 0.00282 | 0.000353 | 0.00364 | 0.00701 | 0.0000307 JT | 0.00714 JT | C263 | 0.00282 | 0.000353 | 0.00364 | 0.00701 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 127 | 16 | 13 | 0.2 J | 12 J | SDDB22SB | 3.28 | 2.13 | 3.25 | 7.97 | 0.0682 UJ | 160 U | LWMTCLP11B; LWMTCLP11C | 8.64 | 0.98 | 24.3 | 46.6 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 216 | 196 | 91 | 0.26 J | 1010000 | GP26 | 41200 | 2050 | 128000 | 188000 | 0.26 J | 1010000 | GP26 | 37400 | 1350 | 123000 | 159000 |
| Total HPAHs | µg/kg | 216 | 206 | 95 | 0.56 JT | 13400000 T | C302 | 507000 | 20000 | 1640000 | 2340000 | 0.56 JT | 13400000 T | C302 | 483000 | 15300 | 1600000 | 2240000 |
| Total LPAHs | µg/kg | 216 | 212 | 98 | 0.23 JT | 39900000 T | C302 | 1120000 | 8210 | 4660000 | 5190000 | 0.23 JT | 39900000 T | C302 | 1100000 | 6080 | 4620000 | 5110000 |
| Naphthalene | µg/kg | 225 | 189 | 84 | 0.61 J | 20000000 | C302 | 616000 | 484 | 2670000 | 2420000 | 0.43 U | 20000000 | C302 | 517000 | 280 | 2460000 | 1860000 |
| Phenanthrene | µg/kg | 216 | 203 | 94 | 0.46 J | 8500000 | C302 | 291000 | 4800 | 1030000 | 1290000 | 0.46 J | 8500000 | C302 | 274000 | 3190 | 996000 | 1250000 |
| Total cPAHs | µg/kg | 216 | 198 | 92 | 0.054 JT | 1310000 T | GP26 | 53500 | 2780 | 167000 | 240000 | 0.054 JT | 1310000 T | GP26 | 49000 | 1810 | 160000 | 212000 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 161 | 6 | 4 | 3.3 J | 11 J | C528; SDOF28SB | 7.03 | 6.25 | 3.48 | 11 | 2 U | 3800 U | C301 | 218 | 49 | 539 | 1500 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 166 | 32 | 19 | 0.073 J | 71 | C302 | 7.4 | 1.54 | 16.6 | 48.4 | 0.061 U | 7100 U | LWMTCLP11C | 148 | 2.9 | 640 | 685 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 163 | 36 | 22 | 1 J | 5600 | C301 | 297 | 13 | 977 | 1400 | 0.5 U | 36000 U | LWMTCLP11C | 714 | 6.9 | 3220 | 2000 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 105 | 92 | 88 | 2.1 J | 190000 J | C301 | 8610 | 885 | 28300 | 45300 | 2.1 J | 190000 J | C301 | 7540 | 670 | 26700 | 30000 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 7 | 6 | 86 | 710 J | 88000 J | C662 | 17200 | 3500 | 34800 | 67700 | 3.7 U | 88000 J | C662 | 14800 | 1400 | 32400 | 63600 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 102 | 92 | 90 | 6.6 J | 110000 J | C301 | 4770 | 955 | 14600 | 19000 | 6.1 U | 110000 J | C301 | 4320 | 790 | 13900 | 14000 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 7 | 6 | 86 | 770 JT | 15000 J | C662 | 3630 | 1190 | 5620 | 12000 | 6.1 U | 15000 J | C662 | 3110 | 970 | 5310 | 11300 |
| Total Petroleum Hydrocarbons | mg/kg | 105 | 98 | 93 | 3 JT | 321000 JT | C301 | 13300 | 1800 | 43800 | 55300 | 3 JT | 321000 JT | C301 | 12400 | 1600 | 42500 | 49100 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 7 | 6 | 86 | 1500 JT | 103000 JA | C662 | 20800 | 4700 | 40400 | 79600 | 6.1 UT | 103000 JA | C662 | 17900 | 2400 | 37700 | 74900 |
| ***RM 07-08*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 125 | 112 | 90 | 0.056 J | 2.07 | C401 | 0.335 | 0.289 | 0.249 | 0.668 | 0.056 J | 2.07 | C401 | 0.391 | 0.31 | 0.29 | 0.92 |
| Lead | mg/kg | 125 | 125 | 100 | 2.74 | 127 J | LWMTCLP14A | 25.8 | 22.1 | 16 | 49.5 | 2.74 | 127 J | LWMTCLP14A | 25.8 | 22.1 | 16 | 49.5 |
| Mercury | mg/kg | 104 | 97 | 93 | 0.0135 JT | 1.05 J | DMMU-3(A+B+D+E) | 0.156 | 0.102 | 0.164 | 0.41 | 0.009 U | 1.05 J | DMMU-3(A+B+D+E) | 0.153 | 0.104 | 0.16 | 0.401 |
| Nickel | mg/kg | 123 | 123 | 100 | 10.2 | 716 | C356 | 32.2 | 24.3 | 65.1 | 37.6 | 10.2 | 716 | C356 | 32.2 | 24.3 | 65.1 | 37.6 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 17 | 17 | 100 | 0.000434 JT | 0.0132 T | LWMC14 | 0.00442 | 0.0036 | 0.004 | 0.0125 | 0.000434 JT | 0.0132 T | LWMC14 | 0.00442 | 0.0036 | 0.004 | 0.0125 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 169 | 14 | 8 | 0.21 JT | 172 NJ | C356 | 22.7 | 6.19 | 45.4 | 90 | 0.067 U | 9900 U | WB-36 | 182 | 2.34 | 893 | 466 |
| Total DDD | µg/kg | 474 | 401 | 85 | 0.085 JT | 1230000 JT | WB-37 | 13400 | 41 | 86600 | 22500 | 0.0503 UT | 1230000 JT | WB-37 | 11300 | 16.5 | 79800 | 17900 |
| Total DDE | µg/kg | 474 | 338 | 71 | 0.069 JT | 24000 A | WB-9 | 417 | 13 | 1940 | 1540 | 0.0454 UT | 24000 A | WB-9 | 360 | 6.16 | 1720 | 1520 |
| Total DDT | µg/kg | 473 | 382 | 81 | 0.125 JT | 3500000 A | WB-24 | 26300 | 62.5 | 234000 | 29200 | 0.0581 UJT | 3500000 A | WB-24 | 21200 | 20.1 | 211000 | 25900 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 154 | 142 | 92 | 0.89 J | 9600 | OSS004 | 197 | 84.4 | 813 | 504 | 0.3 U | 9600 | OSS004 | 182 | 76.5 | 782 | 438 |
| Total HPAHs | µg/kg | 154 | 148 | 96 | 1.17 JT | 118000 T | OSS004 | 2640 | 1120 | 10200 | 6980 | 1.17 JT | 118000 T | OSS004 | 2530 | 1070 | 10000 | 6770 |
| Total LPAHs | µg/kg | 154 | 143 | 93 | 0.53 JT | 17000 T | OSS004 | 982 | 360 | 2250 | 4460 | 0.53 JT | 17000 T | OSS004 | 912 | 325 | 2180 | 4150 |
| Naphthalene | µg/kg | 162 | 109 | 67 | 0.74 J | 5100 | WB-42 | 148 | 35 | 524 | 607 | 0.45 U | 5100 | WB-42 | 107 | 23.4 | 434 | 320 |
| Phenanthrene | µg/kg | 154 | 142 | 92 | 0.745 JT | 15000 | OSS004 | 562 | 185 | 1730 | 1690 | 0.745 JT | 15000 | OSS004 | 518 | 169 | 1670 | 1570 |
| Total cPAHs | µg/kg | 154 | 148 | 96 | 0.031 JT | 14500 JT | OSS004 | 293 | 116 | 1210 | 754 | 0.031 JT | 14500 JT | OSS004 | 281 | 112 | 1190 | 715 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 152 | 7 | 5 | 8.6 J | 42 | OSS006 | 15.9 | 12 | 11.7 | 34.2 | 1.9 U | 1230 U | DMMU-2-A | 102 | 17 | 212 | 320 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 157 | 55 | 35 | 0.097 J | 14000 | OSS004 | 301 | 6.9 | 1890 | 124 | 0.066 UJ | 14000 | OSS004 | 230 | 10 | 1150 | 1140 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 149 | 36 | 24 | 1.1 J | 100 | WB-36 | 23.3 | 9.1 | 31.1 | 97.8 | 0.51 U | 6140 U | DMMU-3-B | 416 | 9.7 | 1030 | 3320 |

Table D1.3-17. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Western Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 80 | 70 | 88 | 20 T | 4500 J | C377 | 781 | 310 | 1060 | 3400 | 4.6 UT | 4500 J | C377 | 686 | 240 | 1020 | 2950 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 18 | 18 | 100 | 43 J | 3600 JT | C532 | 1080 | 565 | 1200 | 3260 | 43 J | 3600 JT | C532 | 1080 | 565 | 1200 | 3260 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 55 | 52 | 95 | 11 J | 3900 J | C690 | 1060 | 730 | 931 | 3190 | 4.9 UT | 3900 J | C690 | 999 | 720 | 936 | 3160 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 18 | 18 | 100 | 140 J | 3600 J | C695 | 1140 | 795 | 1010 | 2840 | 140 J | 3600 J | C695 | 1140 | 795 | 1010 | 2840 |
| Total Petroleum Hydrocarbons | mg/kg | 80 | 73 | 91 | 11 JT | 7720 JT | C377 | 1600 | 880 | 1830 | 5860 | 4.9 UT | 7720 JT | C377 | 1460 | 692 | 1800 | 5370 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 18 | 18 | 100 | 183 JA | 6500 JA | C695 | 2220 | 1360 | 2180 | 6250 | 183 JA | 6500 JA | C695 | 2220 | 1360 | 2180 | 6250 |
| ***RM 08-09*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 77 | 74 | 96 | 0.034 | 5.3 | SD143 | 0.515 | 0.366 | 0.785 | 1.14 | 0.034 | 5.3 | SD143 | 0.503 | 0.364 | 0.772 | 1.11 |
| Lead | mg/kg | 77 | 77 | 100 | 2.86 | 1080 | SD143 | 55.9 | 29.4 | 127 | 160 | 2.86 | 1080 | SD143 | 55.9 | 29.4 | 127 | 160 |
| Mercury | mg/kg | 72 | 71 | 99 | 0.007 J | 1.3 | C455 | 0.209 | 0.156 | 0.247 | 0.634 | 0.007 J | 1.3 | C455 | 0.206 | 0.15 | 0.247 | 0.613 |
| Nickel | mg/kg | 76 | 76 | 100 | 11.6 | 150 | HA-37 | 26.3 | 25.8 | 15 | 30.8 | 11.6 | 150 | HA-37 | 26.3 | 25.8 | 15 | 30.8 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 14 | 14 | 100 | 0.000000291 JT | 0.24 T | C455 | 0.0213 | 0.00117 | 0.0636 | 0.106 | 0.000000291 JT | 0.24 T | C455 | 0.0213 | 0.00117 | 0.0636 | 0.106 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 64 | 7 | 11 | 0.18 J | 8.72 NJ | C453 | 1.82 | 0.25 | 3.17 | 6.9 | 0.062 U | 10.9 U | C455 | 0.677 | 0.245 | 1.71 | 1.52 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 76 | 72 | 95 | 0.3 J | 840 | C457 | 80.8 | 50.5 | 123 | 199 | 0.14 U | 910 U | SD143 | 88.5 | 48 | 154 | 213 |
| Total HPAHs | µg/kg | 76 | 74 | 97 | 0.31 JT | 9350 T | C457 | 944 | 584 | 1410 | 2470 | 0.31 JT | 9350 T | C457 | 931 | 584 | 1390 | 2440 |
| Total LPAHs | µg/kg | 76 | 76 | 100 | 0.66 JT | 13600 T | C455 | 580 | 170 | 1650 | 2260 | 0.66 JT | 13600 T | C455 | 580 | 170 | 1650 | 2260 |
| Naphthalene | µg/kg | 80 | 58 | 72 | 0.85 J | 440 | C455 | 61.3 | 40 | 69.8 | 139 | 0.47 U | 910 U | SD143 | 58.2 | 26.5 | 116 | 133 |
| Phenanthrene | µg/kg | 76 | 73 | 96 | 0.52 J | 3800 | C455 | 252 | 78 | 542 | 926 | 0.52 J | 3800 | C455 | 242 | 72 | 534 | 883 |
| Total cPAHs | µg/kg | 76 | 74 | 97 | 0.031 JT | 1230 T | C457 | 113 | 68.7 | 178 | 285 | 0.031 JT | 1230 T | C457 | 122 | 68.7 | 198 | 307 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 77 | 9 | 12 | 4 J | 34 | C444 | 15.2 | 10 | 9.83 | 29.6 | 2 U | 910 U | SD143 | 30.3 | 5.2 | 110 | 71.2 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 78 | 16 | 21 | 0.069 JT | 36.1 J | C455 | 3.03 | 0.416 | 8.86 | 10.9 | 0.0186 U | 910 U | SD143 | 18.9 | 1.3 | 103 | 41.9 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 78 | 30 | 38 | 0.89 J | 51 | C455 | 5.1 | 2.55 | 9 | 8.58 | 0.2 U | 4500 U | SD143 | 65.8 | 1.25 | 510 | 15.9 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 42 | 37 | 88 | 1.75 JT | 12000 J | C455 | 738 | 280 | 1990 | 2140 | 1.75 JT | 12000 J | C455 | 652 | 250 | 1880 | 2000 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 17 | 14 | 82 | 61 J | 410 J | C701 | 221 | 220 | 113 | 378 | 1.6 UT | 410 J | C701 | 182 | 170 | 134 | 370 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 41 | 38 | 93 | 8.6 JT | 25000 J | C455 | 1550 | 695 | 4040 | 3730 | 4.6 U | 25000 J | C455 | 1440 | 630 | 3910 | 3500 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 17 | 16 | 94 | 5.4 J | 840 J | C701 | 436 | 450 | 257 | 795 | 3.7 UT | 840 J | C701 | 410 | 440 | 270 | 792 |
| Total Petroleum Hydrocarbons | mg/kg | 42 | 39 | 93 | 10.4 JA | 37100 JT | C455 | 2230 | 960 | 5950 | 5760 | 4.9 UA | 37100 JT | C455 | 2070 | 840 | 5760 | 5520 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 17 | 16 | 94 | 5.4 JA | 1250 JA | C701 | 629 | 630 | 385 | 1170 | 3.7 UA | 1250 JA | C701 | 592 | 610 | 403 | 1160 |
| ***RM 09-10*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 26 | 24 | 92 | 0.051 | 26.7 | HA-42 | 2.41 | 0.4 | 6.37 | 16.2 | 0.008 UJ | 26.7 | HA-42 | 2.33 | 0.4 | 6.13 | 14.8 |
| Lead | mg/kg | 26 | 26 | 100 | 3.05 | 2950 | HA-43 | 310 | 32.1 | 750 | 2130 | 3.05 | 2950 | HA-43 | 310 | 32.1 | 750 | 2130 |
| Mercury | mg/kg | 25 | 25 | 100 | 0.0185 JT | 10.6 | HA-43 | 0.898 | 0.178 | 2.22 | 3.97 | 0.0185 JT | 10.6 | HA-43 | 0.898 | 0.178 | 2.22 | 3.97 |
| Nickel | mg/kg | 24 | 24 | 100 | 15.4 | 627 | HA-42 | 68.3 | 26.1 | 134 | 282 | 15.4 | 627 | HA-42 | 68.3 | 26.1 | 134 | 282 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 8 | 8 | 100 | 0.00000191 JT | 0.0228 T | LWMC19 | 0.00974 | 0.00708 | 0.00896 | 0.0214 | 0.00000191 JT | 0.0228 T | LWMC19 | 0.00974 | 0.00708 | 0.00896 | 0.0214 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 20 | 1 | 5 | 0.54 J | 0.54 J | C738 | 0.54 | 0.54 | -- | 0.54 | 0.062 U | 47 U | LWMTCLP19 | 5.88 | 0.27 | 13.6 | 42.3 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 23 | 22 | 96 | 3.4 | 12400 | HA-43 | 756 | 79.5 | 2620 | 984 | 0.55 U | 12400 | HA-43 | 723 | 72 | 2560 | 980 |
| Total HPAHs | µg/kg | 23 | 22 | 96 | 40 JT | 190000 T | HA-43 | 10900 | 879 | 40100 | 10700 | 1.3 UT | 190000 T | HA-43 | 10500 | 671 | 39300 | 10600 |
| Total LPAHs | µg/kg | 23 | 21 | 91 | 24 JT | 168000 T | HA-43 | 8630 | 350 | 36500 | 2710 | 1.5 UT | 168000 T | HA-43 | 7890 | 330 | 34900 | 2650 |
| Naphthalene | µg/kg | 23 | 18 | 78 | 5.3 | 10900 | HA-43 | 674 | 42 | 2550 | 1940 | 1.5 U | 10900 | HA-43 | 533 | 34 | 2260 | 347 |
| Phenanthrene | µg/kg | 23 | 21 | 91 | 10 | 75900 | HA-43 | 4020 | 210 | 16500 | 2230 | 0.95 U | 75900 | HA-43 | 3670 | 160 | 15800 | 2150 |
| Total cPAHs | µg/kg | 23 | 22 | 96 | 4.75 JT | 16800 T | HA-43 | 1020 | 112 | 3540 | 1220 | 0.55 UT | 16800 T | HA-43 | 978 | 108 | 3470 | 1220 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 25 | 12 | 48 | 3 J | 11800 | HA-42 | 1020 | 16.5 | 3390 | 5460 | 1.9 U | 11800 | HA-42 | 799 | 16 | 2640 | 5350 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 22 | 3 | 14 | 0.64 | 2.18 J | C461 | 1.18 | 0.724 | 0.866 | 2.03 | 0.068 U | 66 U | LWMTCLP19 | 10.9 | 3.7 | 18.4 | 59.9 |

Table D1.3-17. Summary Statistics by River Mile for Other Contaminants and Physical Parameters in Subsurface Sediment, Study Area (RM 1.9-11.8) Western Nearshore.

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **Units** | **Sample Count** | **Detected Sample Count** | **Percent Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile[b] (full DL)** |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 22 | 9 | 41 | 0.78 NJ | 9.1 | C738 | 3.31 | 2.6 | 2.64 | 7.54 | 0.2 U | 330 U | LWMTCLP19 | 36.8 | 2.7 | 93.9 | 299 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 18 | 16 | 89 | 47.5 | 1810 | HA-43 | 282 | 158 | 425 | 768 | 7 U | 1810 | HA-43 | 254 | 140 | 407 | 628 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 6 | 6 | 100 | 5.5 J | 390 J | C738 | 174 | 167 | 142 | 355 | 5.5 J | 390 J | C738 | 174 | 167 | 142 | 355 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 10 | 9 | 90 | 300 J | 930 J | C738 | 537 | 540 | 192 | 814 | 33 U | 930 J | C738 | 486 | 540 | 241 | 800 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 6 | 6 | 100 | 15 J | 750 J | C738 | 359 | 350 | 256 | 680 | 15 J | 750 J | C738 | 359 | 350 | 256 | 680 |
| Total Petroleum Hydrocarbons | mg/kg | 18 | 16 | 89 | 196 JA | 4370 A | HA-43 | 886 | 713 | 984 | 2110 | 33 UA | 4370 A | HA-43 | 795 | 609 | 961 | 1800 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 6 | 6 | 100 | 20.5 JA | 1140 JA | C738 | 534 | 522 | 397 | 1030 | 20.5 JA | 1140 JA | C738 | 534 | 522 | 397 | 1030 |
| ***RM 11-11.8*** | | | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 6 | 6 | 100 | 0.172 T | 0.449 T | C7732 | 0.306 | 0.311 | 0.0916 | 0.421 | 0.172 T | 0.449 T | C7732 | 0.306 | 0.311 | 0.0916 | 0.421 |
| Lead | mg/kg | 6 | 6 | 100 | 17.7 T | 132 T | C7732 | 75.1 | 70.8 | 47.6 | 130 | 17.7 T | 132 T | C7732 | 75.1 | 70.8 | 47.6 | 130 |
| Mercury | mg/kg | 6 | 6 | 100 | 0.056 T | 0.128 | C7731 | 0.0856 | 0.0834 | 0.0239 | 0.118 | 0.056 T | 0.128 | C7731 | 0.0856 | 0.0834 | 0.0239 | 0.118 |
| Nickel | mg/kg | 6 | 6 | 100 | 24.3 | 27.5 | C7731 | 26.2 | 26.6 | 1.36 | 27.5 | 24.3 | 27.5 | C7731 | 26.2 | 26.6 | 1.36 | 27.5 |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.062 UT | 0.79 U | C7731 | 0.377 | 0.36 | 0.316 | 0.75 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 6 | 6 | 100 | 24 | 160 | C7731 | 60.8 | 46.5 | 49.5 | 133 | 24 | 160 | C7731 | 60.8 | 46.5 | 49.5 | 133 |
| Total HPAHs | µg/kg | 6 | 6 | 100 | 290 T | 3100 T | C7731 | 922 | 585 | 1080 | 2480 | 290 T | 3100 T | C7731 | 922 | 585 | 1080 | 2480 |
| Total LPAHs | µg/kg | 6 | 6 | 100 | 57 JT | 1000 T | C7731 | 321 | 235 | 347 | 828 | 57 JT | 1000 T | C7731 | 321 | 235 | 347 | 828 |
| Naphthalene | µg/kg | 6 | 6 | 100 | 5.3 T | 53 | C7731 | 28.9 | 30 | 17.5 | 50 | 5.3 T | 53 | C7731 | 28.9 | 30 | 17.5 | 50 |
| Phenanthrene | µg/kg | 6 | 6 | 100 | 33 T | 580 | C7731 | 180 | 125 | 203 | 478 | 33 T | 580 | C7731 | 180 | 125 | 203 | 478 |
| Total cPAHs | µg/kg | 6 | 6 | 100 | 35.1 T | 241 T | C7731 | 89.8 | 67.8 | 75.4 | 199 | 35.1 T | 241 T | C7731 | 89.8 | 67.8 | 75.4 | 199 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 6 | 2 | 33 | 9.1 JT | 29 JT | C7732 | 19.1 | 19.1 | 14.1 | 28 | 6.4 U | 29 JT | C7732 | 15.4 | 16 | 7.83 | 25.8 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 6 | 2 | 33 | 0.083 JT | 0.3 T | C7732 | 0.192 | 0.192 | 0.153 | 0.289 | 0.083 JT | 0.34 U | C7731 | 0.239 | 0.245 | 0.101 | 0.338 |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 6 | 6 | 100 | 1.5 JT | 4.6 JT | C7732 | 3.03 | 2.95 | 1.24 | 4.53 | 1.5 JT | 4.6 JT | C7732 | 3.03 | 2.95 | 1.24 | 4.53 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 6 | 6 | 100 | 51 JT | 245 JT | C7732 | 190 | 208 | 71.8 | 244 | 51 JT | 245 JT | C7732 | 190 | 208 | 71.8 | 244 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 6 | 6 | 100 | 40.5 JT | 220 JT | C7732 | 169 | 190 | 65.6 | 216 | 40.5 JT | 220 JT | C7732 | 169 | 190 | 65.6 | 216 |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 6 | 6 | 100 | 305 JT | 885 JT | C7732 | 711 | 748 | 213 | 884 | 305 JT | 885 JT | C7732 | 711 | 748 | 213 | 884 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 6 | 6 | 100 | 185 JT | 640 JT | C7732 | 511 | 543 | 168 | 639 | 185 JT | 640 JT | C7732 | 511 | 543 | 168 | 639 |
| Total Petroleum Hydrocarbons | mg/kg | 6 | 6 | 100 | 356 JA | 1130 JA | C7732 | 903 | 955 | 286 | 1130 | 356 JA | 1130 JA | C7732 | 903 | 955 | 286 | 1130 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 6 | 6 | 100 | 226 JA | 855 JA | C7732 | 680 | 733 | 232 | 853 | 226 JA | 855 JA | C7732 | 680 | 733 | 232 | 853 |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TEQ - toxic equivalent concentration

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-18. Summary Statistics for Other Contaminants and Physical Parameters in Surface Sediment, Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Grainsize** | | | | | | | | | | | | | | | | |
| Fines | percent | 80 | 80 | 100 | 0.28 | 98.4 T | U6TOC-2 | 30.5 | 28.3 | 67.4 | 0.28 | 98.4 T | U6TOC-2 | 30.5 | 28.3 | 67.4 |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Total organic carbon | percent | 77 | 77 | 100 | 0.12 | 2.57 | U6TOC-2 | 1.13 | 1.18 | 2.29 | 0.12 | 2.57 | U6TOC-2 | 1.13 | 1.18 | 2.29 |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 72 | 63 | 87.5 | 0.04 J | 0.281 T | G027 | 0.1256 | 0.12 | 0.2099 | 0.04 J | 0.3 UJ | HC-SS29; HC-SS31; HC-SS32 | 0.1201 | 0.118 | 0.2095 |
| Lead | mg/kg | 72 | 72 | 100 | 3.96 JT | 31.6 J | BH04SD | 8.55 | 7.68 J | 14 | 3.96 JT | 31.6 J | BH04SD | 8.55 | 7.68 J | 14 |
| Mercury | mg/kg | 68 | 60 | 88.2 | 0.009 J | 0.061 | G786 | 0.03314 | 0.034 | 0.05115 | 0.009 J | 0.19 U | HC-SS29; HC-SS31; HC-SS32 | 0.03535 | 0.034 | 0.07985 |
| Nickel | mg/kg | 72 | 72 | 100 | 12.3 J | 35.7 | HC08 | 21.3 | 21.3 | 26.5 J | 12.3 J | 35.7 | HC08 | 21.3 | 21.3 | 26.5 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | pg/g | 26 | 25 | 96.2 | 0.000455 T | 0.723 JT | U2C-2 | 0.0996443 | 0.00608 JT | 0.5618 J | 0.000455 T | 2.65 UT | WR06SD | 0.146773 | 0.006205 J | 0.70575 J |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 77 | 1 | 1.3 | 0.32 NJ | 0.32 NJ | UG12C | 0.32 | 0.32 NJ | 0.32 NJ | 0.043 U | 2.1 U | HC08 | 0.2134 | 0.086 U | 0.95 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 78 | 51 | 65.4 | 0.53 J | 124 JT | G027 | 11 | 6.9 T | 27.5 | 0.33 U | 124 JT | G027 | 9.06 | 5.55 | 25.3 |
| Total HPAHs | µg/kg | 78 | 62 | 79.5 | 1.7 JT | 1320 T | G027 | 96 | 61.3 J | 265 J | 1 UT | 1320 T | G027 | 77.9 | 49.8 J | 188 J |
| Total LPAHs | µg/kg | 78 | 54 | 69.2 | 0.44 JT | 192 T | G027 | 15.4 | 10.8 J | 29.1 J | 0.44 JT | 192 T | G027 | 12.5 | 7.3 J | 26.4 J |
| Naphthalene | µg/kg | 78 | 28 | 35.9 | 1.5 J | 9.9 | UG03B | 5.06 | 4.7 | 8.1 | 0.55 U | 50 U | HC-SS29; HC-SS31; HC-SS32 | 4.37 | 2.98 | 12.2 |
| Phenanthrene | µg/kg | 77 | 40 | 51.9 | 0.91 J | 128 JT | G027 | 11.2 | 6.2 | 21.6 | 0.59 U | 128 JT | G027 | 8.02 | 4.3 J | 25 U |
| Total cPAHs | µg/kg | 78 | 62 | 79.5 | 0.49 JT | 700 JT | G027 | 53.1 | 34.2 J | 140 J | 0.49 JT | 700 JT | G027 | 43.8 | 25 J | 140 J |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 72 | 17 | 23.6 | 2.7 J | 33 J | UG11C | 10 | 8 J | 21 J | 2.2 U | 100 U | HC-SS29; HC-SS31; HC-SS32 | 8 | 2.8 J | 41 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 72 | 26 | 36.1 | 0.075 J | 1.04 J | U2C-3 | 0.347 | 0.208 J | 0.975 J | 0.068 U | 24 U | WR03SD; WR05SD | 2.1 | 0.255 J | 10.7 U |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 78 | 6 | 7.7 | 1.5 J | 12 | U1C-1 | 4.6 | 2.6 J | 11 J | 0.25 U | 250 U | HC-SS29; HC-SS31; HC-SS32 | 14 | 1.6 U | 110 U |
| **Petroleum** | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 43 | 34 | 79.1 | 2.6 T | 69 J | UG02F | 36.1 | 35.5 J | 59.1 J | 2.6 T | 69 J | UG02F | 30.1 | 30.3 JT | 57.8 J |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 32 | 32 | 100 | 1.7 T | 49.5 JT | G027 | 22.1 | 20.4 J | 38.9 J | 1.7 T | 49.5 JT | G027 | 22.1 | 20.4 J | 38.9 J |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 39 | 36 | 92.3 | 9.2 T | 420 J | UG02F | 226 | 219 J | 390 J | 9.2 T | 420 J | UG02F | 210 | 214 JT | 390 J |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 32 | 32 | 100 | 6.9 T | 315 JT | G027 | 96.8 | 86 J | 182 J | 6.9 T | 315 JT | G027 | 96.8 | 86 J | 182 J |
| Total Petroleum Hydrocarbons | mg/kg | 43 | 39 | 90.7 | 11.8 A | 489 JA | UG02F | 254 | 250 JA | 447 J | 11.8 A | 489 JA | UG02F | 232 | 240 | 445 J |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 32 | 32 | 100 | 8.6 A | 365 T | G027 | 119 | 108 J | 217 J | 8.6 A | 365 T | G027 | 119 | 108 J | 217 J |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
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Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-19. Summary Statistics for Other Contaminants and Physical Parameters in Subsurface Sediment, Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Grainsize** | | | | | | | | | | | | | | | | |
| Fines | percent | 3 | 3 | 100 | 22.2 T | 43.6 T | C016 | 30.6 | 25.9 T | 41.8 | 22.2 T | 43.6 T | C016 | 30.6 | 25.9 T | 41.8 |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Total organic carbon | percent | 3 | 3 | 100 | 1.15 | 1.8 T | C016 | 1.47 | 1.47 | 1.77 | 1.15 | 1.8 T | C016 | 1.47 | 1.47 | 1.77 |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 3 | 3 | 100 | 0.132 | 0.217 | C016 | 0.179 | 0.187 | 0.214 | 0.132 | 0.217 | C016 | 0.179 | 0.187 | 0.214 |
| Lead | mg/kg | 3 | 3 | 100 | 9.34 J | 19.4 J | C016 | 14.4 | 14.6 J | 18.9 J | 9.34 J | 19.4 J | C016 | 14.4 | 14.6 J | 18.9 J |
| Mercury | mg/kg | 3 | 3 | 100 | 0.031 | 0.172 T | C016 | 0.0943 | 0.08 | 0.163 | 0.031 | 0.172 T | C016 | 0.0943 | 0.08 | 0.163 |
| Nickel | mg/kg | 3 | 3 | 100 | 19 | 21.1 | C017 | 20.2 | 20.6 | 21.1 | 19 | 21.1 | C017 | 20.2 | 20.6 | 21.1 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.043 U | 0.2 U | C016; C032 | 0.0738 | 0.1 U | 0.1 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 3 | 3 | 100 | 20 | 34 | C016 | 29 | 32 | 34 | 20 | 34 | C016 | 29 | 32 | 34 |
| Total HPAHs | µg/kg | 3 | 3 | 100 | 230 T | 404 T | C016 | 317 | 317 T | 395 | 230 T | 404 T | C016 | 317 | 317 T | 395 |
| Total LPAHs | µg/kg | 3 | 3 | 100 | 23.2 T | 129 T | C016 | 67.1 | 49.1 T | 121 | 23.2 T | 129 T | C016 | 67.1 | 49.1 T | 121 |
| Naphthalene | µg/kg | 3 | 3 | 100 | 4.2 | 36 | C016 | 16 | 8.9 | 33 | 4.2 | 36 | C016 | 16 | 8.9 | 33 |
| Phenanthrene | µg/kg | 3 | 3 | 100 | 12 | 55 | C016 | 29 | 21 | 52 | 12 | 55 | C016 | 29 | 21 | 52 |
| Total cPAHs | µg/kg | 3 | 3 | 100 | 130 T | 200 T | C016 | 170 | 190 T | 200 | 130 T | 200 T | C016 | 170 | 190 T | 200 |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 3 | 1 | 33.3 | 16 | 16 | C016 | 16 | 16 | 16 | 3.2 U | 16 | C016 | 6.4 | 1.6 U | 15 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 3 | 1 | 33.3 | 0.28 | 0.28 | C016 | 0.28 | 0.28 | 0.28 | 0.12 U | 0.28 | C016 | 0.13 | 0.06 U | 0.26 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 5.4 U | 5.8 U | C016; C032 | 2.8 | 2.9 U | 2.9 U |
| **Petroleum** | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 3 | 3 | 100 | 21 J | 58 J | C016 | 42 | 46 J | 57 J | 21 J | 58 J | C016 | 42 | 46 J | 57 J |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 3 | 3 | 100 | 130 J | 290 J | C016 | 190 | 160 J | 280 J | 130 J | 290 J | C016 | 190 | 160 J | 280 J |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 3 | 3 | 100 | 176 T | 348 T | C016 | 235 | 181 T | 331 | 176 T | 348 T | C016 | 235 | 181 T | 331 |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
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ND - not detected
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TEQ - toxic equivalent concentration

Reason codes for qualifiers:
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Reason codes for descriptors:
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-20. Summary Statistics for Other Contaminants and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Grain Size** | | | | | | | | | | | | | | | | |
| Fines | percent | 135 | 135 | 100 | 0.3 T | 89.4 T | WRS38 | 21.9 | 14.4 T | 67.2 | 0.3 T | 89.4 T | WRS38 | 21.9 | 14.4 T | 67.2 |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Total organic carbon | percent | 208 | 208 | 100 | 0.033 | 13.1 | G045 | 1.066 | 0.8475 | 2.327 | 0.033 | 13.1 | G045 | 1.066 | 0.8475 | 2.327 |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 269 | 218 | 81 | 0.03 J | 132 J | R12 | 1.476 | 0.217 | 5.745 | 0.03 J | 132 J | R12 | 1.242 | 0.213 | 4.22 J |
| Lead | mg/kg | 269 | 256 | 95.2 | 1.57 J | 20800 J | R12 | 214.1 | 23.6 | 625 J | 0.576 U | 20800 J | R12 | 203.9 | 22.9 J | 592.6 J |
| Mercury | mg/kg | 263 | 227 | 86.3 | 0.005 J | 29.2 J | C029 | 0.43785 | 0.055 | 1.1379 J | 0.00172 U | 29.2 J | C029 | 0.38312 | 0.052 T | 0.9245 J |
| Nickel | mg/kg | 243 | 242 | 99.6 | 3.89 J | 11500 J | R50 | 77.73 | 19 J | 81.65 | 0.0508 U | 11500 J | R50 | 77.41 | 19 J | 81.3 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | pg/g | 8 | 8 | 100 | 0.000879 JT | 4.51 T | GCA12E | 1.27123 | 0.354 J | 4.034 | 0.000879 JT | 4.51 T | GCA12E | 1.27123 | 0.354 J | 4.034 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 145 | 20 | 13.8 | 0.059 J | 2.3 | C090 | 0.496 | 0.315 J | 1.45 J | 0.011 UJ | 2.3 | C090 | 0.156 | 0.055 UJ | 0.63 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 269 | 223 | 82.9 | 0.0097 | 3800 | PGC-10 | 181.73 | 33.2 | 736.6 | 0.0097 | 3800 | PGC-10 | 151.23 | 20 | 659 |
| Total HPAHs | µg/kg | 269 | 242 | 90 | 0.0734 T | 38700 T | PGC-10 | 1740 | 295.5 | 6885 | 0.0734 T | 38700 T | PGC-10 | 1566 | 215 T | 6120 |
| Total LPAHs | µg/kg | 269 | 227 | 84.4 | 0.11 T | 23800 T | PGC-10 | 522 | 69 A | 2285 | 0.0088 UT | 23800 T | PGC-10 | 441.2 | 41.2 JT | 2048 |
| Naphthalene | µg/kg | 269 | 195 | 72.5 | 0.57 J | 5300 | G003 | 95.27 | 12 | 165 | 0.0088 U | 5300 | G003 | 70.02 | 6.4 | 136 |
| Phenanthrene | µg/kg | 269 | 214 | 79.6 | 0.11 | 11000 | PGC-10 | 251 | 36.5 | 1214 | 0.0088 U | 11000 | PGC-10 | 200.3 | 23 | 856.4 |
| Total cPAHs | µg/kg | 269 | 232 | 86.2 | 0.058 T | 18400 T | C087 | 922 | 164 | 3840 | 0.058 T | 18400 T | C087 | 796 | 110 T | 3560 |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 96 | 29 | 30.2 | 3.6 J | 580 | G007 | 54 | 14 | 350 J | 2.6 U | 580 | G007 | 21 | 1.8 U | 50 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 149 | 60 | 40.3 | 0.094 J | 3.4 | G100 | 0.456 | 0.28 J | 1.42 | 0.068 U | 20 U | HC-SS02; HC-SS03; HC-SS04; HC-SS30 | 0.603 | 0.11 J | 2.56 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 107 | 12 | 11.2 | 3.2 NJ | 890 | G057 | 130 | 38 J | 510 | 0.17 U | 2100 U | PGC-10 | 38 | 2.8 U | 150 U |
| **Petroleum** | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 61 | 22 | 36.1 | 6.4 J | 530 | PGC-10 | 142 | 79.5 J | 501 J | 0.064 U | 530 | PGC-10 | 59.9 | 14 U | 280 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 128 | 116 | 90.6 | 1.9 JT | 760 J | C090 | 70.1 | 33.5 J | 223 J | 1.3 U | 760 J | C090 | 63.9 | 30.5 J | 210 J |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 21 | 20 | 95.2 | 10 J | 1800 J | UG07 | 405 | 300 | 822 J | 10 J | 1800 J | UG07 | 389 | 280 | 770 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 128 | 121 | 94.5 | 4.9 JT | 1500 J | C090 | 264 | 160 J | 910 | 3.1 U | 1500 J | C090 | 250 | 150 J | 875 J |
| Total Petroleum Hydrocarbons | mg/kg | 61 | 41 | 67.2 | 0.17 A | 2400 JT | UG07 | 382 | 244 A | 1130 T | 0.17 A | 2400 JT | UG07 | 270 | 125 U | 941 T |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 128 | 124 | 96.9 | 2.2 JA | 2260 JA | C090 | 324 | 187 J | 1020 J | 2.2 JA | 2260 JA | C090 | 314 | 181 J | 1010 J |
| **Excluding All Zidell Data** | | | | | | | | | | | | | | | | |
| **Grain Size** | | | | | | | | | | | | | | | | |
| Fines | percent | 115 | 115 | 100 | 0.3 T | 73.5 T | G015 | 19.8 | 14.3 T | 60.9 | 0.3 T | 73.5 T | G015 | 19.8 | 14.3 T | 60.9 |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Total organic carbon | percent | 165 | 165 | 100 | 0.033 | 13.1 | G045 | 1.069 | 0.81 | 2.292 | 0.033 | 13.1 | G045 | 1.069 | 0.81 | 2.292 |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 159 | 154 | 96.9 | 0.03 J | 1.7 | G059 | 0.2316 | 0.1635 | 0.6719 | 0.03 J | 1.7 | G059 | 0.2282 | 0.156 | 0.6684 |
| Lead | mg/kg | 159 | 159 | 100 | 1.57 J | 457 | G094 | 45.9 | 19.2 | 189 J | 1.57 J | 457 | G094 | 45.9 | 19.2 | 189 J |
| Mercury | mg/kg | 159 | 155 | 97.5 | 0.005 J | 29.2 J | C029 | 0.3073 | 0.041 | 0.4394 | 0.005 J | 29.2 J | C029 | 0.302 | 0.042 | 0.4338 |
| Nickel | mg/kg | 134 | 134 | 100 | 8.07 | 39.6 | G093 | 17.1 | 16.8 J | 27.7 | 8.07 | 39.6 | G093 | 17.1 | 16.8 J | 27.7 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | pg/g | 8 | 8 | 100 | 0.000879 JT | 4.51 T | GCA12E | 1.27123 | 0.354 J | 4.034 | 0.000879 JT | 4.51 T | GCA12E | 1.27123 | 0.354 J | 4.034 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 145 | 20 | 13.8 | 0.059 J | 2.3 | C090 | 0.496 | 0.315 J | 1.45 J | 0.011 UJ | 2.3 | C090 | 0.156 | 0.055 UJ | 0.63 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 157 | 140 | 89.2 | 0.17 J | 3800 | PGC-10 | 149 | 19 | 292 | 0.14 U | 3800 | PGC-10 | 133 | 18 | 266 |
| Total HPAHs | µg/kg | 157 | 144 | 91.7 | 2.02 JT | 38700 T | PGC-10 | 1480 | 216 | 3710 | 0.64 UT | 38700 T | PGC-10 | 1360 | 200 JT | 3190 |
| Total LPAHs | µg/kg | 157 | 149 | 94.9 | 0.57 JT | 23800 T | PGC-10 | 520 | 47 T | 1460 J | 0.57 JT | 23800 T | PGC-10 | 494 | 41 JT | 1290 J |
| Naphthalene | µg/kg | 157 | 139 | 88.5 | 0.57 J | 5300 | G003 | 111 | 7.9 | 146 | 0.57 J | 5300 | G003 | 98.8 | 6.4 | 140 |
| Phenanthrene | µg/kg | 157 | 136 | 86.6 | 0.95 J | 11000 | PGC-10 | 243 | 24 | 595 | 0.75 U | 11000 | PGC-10 | 211 | 20 | 502 |
| Total cPAHs | µg/kg | 157 | 142 | 90.4 | 0.8 JT | 18400 T | C087 | 718 | 111 | 1810 | 0.48 UT | 18400 T | C087 | 650 | 99.6 JT | 1530 |

Table D1.3-20. Summary Statistics for Other Contaminants and Physical Parameters in Surface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 96 | 29 | 30.2 | 3.6 J | 580 | G007 | 54 | 14 | 350 J | 2.6 U | 580 | G007 | 21 | 1.8 U | 50 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 149 | 60 | 40.3 | 0.094 J | 3.4 | G100 | 0.456 | 0.28 J | 1.42 | 0.068 U | 20 U | HC-SS02; HC-SS03; HC-SS04; HC-SS30 | 0.603 | 0.11 J | 2.56 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 107 | 12 | 11.2 | 3.2 NJ | 890 | G057 | 130 | 38 J | 510 | 0.17 U | 2100 U | PGC-10 | 38 | 2.8 U | 150 U |
| **Petroleum** | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 25 | 19 | 76 | 6.4 J | 530 | PGC-10 | 156 | 97 | 512 J | 1.3 U | 530 | PGC-10 | 119 | 61 | 474 J |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 128 | 116 | 90.6 | 1.9 JT | 760 J | C090 | 70.1 | 33.5 J | 223 J | 1.3 U | 760 J | C090 | 63.9 | 30.5 J | 210 J |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 21 | 20 | 95.2 | 10 J | 1800 J | UG07 | 405 | 300 | 822 J | 10 J | 1800 J | UG07 | 389 | 280 | 770 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 128 | 121 | 94.5 | 4.9 JT | 1500 J | C090 | 264 | 160 J | 910 | 3.1 U | 1500 J | C090 | 250 | 150 J | 875 J |
| Total Petroleum Hydrocarbons | mg/kg | 25 | 23 | 92 | 10 JA | 2400 JT | UG07 | 504 | 314 T | 1290 | 10 JA | 2400 JT | UG07 | 467 | 280 JT | 1270 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 128 | 124 | 96.9 | 2.2 JA | 2260 JA | C090 | 324 | 187 J | 1020 J | 2.2 JA | 2260 JA | C090 | 314 | 181 J | 1010 J |
| **Zidell Data Only** | | | | | | | | | | | | | | | | |
| **Grain Size** | | | | | | | | | | | | | | | | |
| Fines | percent | 20 | 20 | 100 | 0.5 | 89.4 T | WRS38 | 34.3 | 26.8 | 80.5 | 0.5 | 89.4 T | WRS38 | 34.3 | 26.8 | 80.5 |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Total organic carbon | percent | 43 | 43 | 100 | 0.229 | 2.59 | WRS-96 | 1.053 | 0.932 | 2.504 | 0.229 | 2.59 | WRS-96 | 1.053 | 0.932 | 2.504 |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 110 | 64 | 58.2 | 0.127 | 132 J | R12 | 4.47 | 1.35 J | 8.037 J | 0.0369 U | 132 J | R12 | 2.707 | 0.5 U | 6.428 J |
| Lead | mg/kg | 110 | 97 | 88.2 | 2.1 | 20800 J | R12 | 489.8 | 41 | 1438 J | 0.576 U | 20800 J | R12 | 432.3 | 31.23 J | 1378 J |
| Mercury | mg/kg | 104 | 72 | 69.2 | 0.0223 T | 20.2 J | R50 | 0.71889 | 0.171 | 2.298 J | 0.00172 U | 20.2 J | R50 | 0.50716 | 0.1 U | 1.468 J |
| Nickel | mg/kg | 109 | 108 | 99.1 | 3.89 J | 11500 J | R50 | 153 | 21.6 J | 153.9 J | 0.0508 U | 11500 J | R50 | 151.6 | 21.3 J | 153.6 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 112 | 83 | 74.1 | 0.0097 | 3320 | R20 | 237.76 | 75.3 | 899.1 | 0.0097 | 3320 | R20 | 176.66 | 36.65 | 730.3 |
| Total HPAHs | µg/kg | 112 | 98 | 87.5 | 0.0734 T | 28000 T | R20 | 2124 | 500 | 7515 | 0.0734 T | 28000 T | R20 | 1858 | 357 | 6900 |
| Total LPAHs | µg/kg | 112 | 78 | 69.6 | 0.11 T | 4330 T | WRS16 | 526.3 | 133 | 2626 | 0.0088 UT | 4330 T | WRS16 | 367.2 | 47.9 | 2350 |
| Naphthalene | µg/kg | 112 | 56 | 50 | 5 | 495 | R22 | 56.88 | 29.3 | 165 | 0.0088 U | 495 | R22 | 29.7 | 6.5 U | 115.4 |
| Phenanthrene | µg/kg | 112 | 78 | 69.6 | 0.11 | 2020 | R47 | 265.8 | 63.85 | 1264 | 0.0088 U | 2020 | R47 | 185.6 | 30.3 | 1112 |
| Total cPAHs | µg/kg | 112 | 90 | 80.4 | 0.058 T | 16000 T | R20 | 1240 | 326 | 4830 | 0.058 T | 16000 T | R20 | 1000 | 184 | 3840 |
| **Petroleum** | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 36 | 3 | 8.3 | 44 | 74 | WRS22 | 57 | 53 T | 71.9 | 0.064 U | 110 U | WRS28 | 18.6 | 13.5 U | 53.5 |
| Total Petroleum Hydrocarbons | mg/kg | 36 | 18 | 50 | 0.17 A | 642 | WRS07 | 226 | 172 | 635 | 0.17 A | 642 | WRS07 | 132 | 34 U | 532 |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TEQ - toxic equivalent concentration

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-21. Summary Statistics for Other Contaminants and Physical Parameters in Subsurface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Grain Size** | | | | | | | | | | | | | | | | |
| Fines | percent | 129 | 129 | 100 | 0.31 T | 89 T | WRS37 | 33.08 | 32.8 T | 71.36 | 0.31 T | 89 T | WRS37 | 33.08 | 32.8 T | 71.36 |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Total organic carbon | percent | 159 | 156 | 98.1 | 0.034 J | 22.4 J | C024 | 1.81 | 0.939 | 7.53 | 0.02 UJ | 22.4 J | C024 | 1.78 | 0.92 J | 7.44 |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 178 | 159 | 89.3 | 0.03 | 3.6 | WRS46 | 0.467 | 0.211 J | 1.91 | 0.026 U | 3.6 | WRS46 | 0.464 | 0.239 | 1.82 J |
| Lead | mg/kg | 178 | 168 | 94.4 | 1.35 J | 1380 | PGC-07 | 65 | 30.9 | 173 J | 1.35 J | 1380 | PGC-07 | 61.8 | 25 | 171 J |
| Mercury | mg/kg | 178 | 163 | 91.6 | 0.005 J | 3.46 JT | C783 | 0.3509 | 0.116 | 1.556 | 0.005 J | 3.46 JT | C783 | 0.3283 | 0.1 U | 1.376 |
| Nickel | mg/kg | 114 | 114 | 100 | 6.77 | 151 | WRS06 | 22.2 | 19.6 | 34 J | 6.77 | 151 | WRS06 | 22.2 | 19.6 | 34 J |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 94 | 31 | 33 | 0.12 J | 1.9 JT | IPC-C014 | 0.528 | 0.4 J | 1.35 J | 0.043 U | 2.9 U | C783 | 0.27 | 0.113 U | 1.02 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 161 | 132 | 82 | 0.23 J | 170000 | PGC-06 | 8990 | 51 | 91300 | 0.14 U | 170000 | PGC-06 | 7370 | 27 | 68000 |
| Total HPAHs | µg/kg | 161 | 145 | 90.1 | 0.28 T | 1950000 T | PGC-06 | 91900 | 513 T | 850000 | 0.28 T | 1950000 T | PGC-06 | 82800 | 377 T | 748000 T |
| Total LPAHs | µg/kg | 161 | 150 | 93.2 | 0.25 JT | 3030000 T | PGC-05 | 141000 | 353 | 1360000 | 0.25 JT | 3030000 T | PGC-05 | 132000 | 222 T | 1300000 T |
| Naphthalene | µg/kg | 162 | 125 | 77.2 | 0.45 J | 1600000 | PGC-05 | 63100 | 84 | 628000 | 0.44 U | 1600000 | PGC-05 | 48700 | 37.5 | 487000 |
| Phenanthrene | µg/kg | 161 | 135 | 83.9 | 1.9 J | 750000 | PGC-06 | 38400 | 150 | 342000 | 0.4 U | 750000 | PGC-06 | 32200 | 81 | 300000 |
| Total cPAHs | µg/kg | 161 | 140 | 87 | 0.28 JT | 788000 T | PGC-06 | 37700 | 244 | 351000 | 0.28 JT | 788000 T | PGC-06 | 32800 | 150 T | 292000 T |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 64 | 6 | 9.4 | 3.3 J | 33 T | C031 | 14 | 11 J | 30 | 1.7 U | 160 U | C783 | 7.4 | 1.6 U | 31 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 94 | 13 | 13.8 | 0.14 J | 2.8 | O33-C005 | 0.454 | 0.24 J | 1.5 J | 0.068 U | 2.8 | O33-C005 | 0.137 | 0.06 U | 0.308 J |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 109 | 3 | 2.8 | 0.24 J | 26 T | UC05-2 | 9.7 | 3 J | 24 J | 0.16 U | 83000 UJ | PGC-06 | 1500 | 30 U | 3000 UJ |
| **Petroleum** | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 107 | 65 | 60.7 | 1.9 J | 19000 | PGC-06 | 2360 | 420 | 14600 | 1.3 UT | 19000 | PGC-06 | 1430 | 38 | 11700 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 57 | 47 | 82.5 | 4.65 JT | 1200 J | C783 | 237 | 140 J | 852 J | 1.3 UT | 1200 J | C783 | 196 | 110 | 773 J |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 83 | 64 | 77.1 | 3.6 JT | 13000 | PGC-06 | 1940 | 505 | 9040 | 3.2 U | 13000 | PGC-06 | 1500 | 210 | 8690 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 57 | 50 | 87.7 | 5.25 JT | 2300 J | C783 | 472 | 335 | 1380 J | 3.1 UT | 2300 J | C783 | 417 | 290 J | 1330 J |
| Total Petroleum Hydrocarbons | mg/kg | 107 | 95 | 88.8 | 0.92 JT | 36800 T | PGC-06 | 3330 | 490 JT | 23800 | 0.92 JT | 36800 T | PGC-06 | 2960 | 381 | 22900 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 57 | 50 | 87.7 | 6.7 JA | 3500 JA | C783 | 694 | 495 | 2120 | 3.1 UA | 3500 JA | C783 | 611 | 410 T | 2060 |
| **Excluding All Zidell Data** | | | | | | | | | | | | | | | | |
| **Grain Size** | | | | | | | | | | | | | | | | |
| Fines | percent | 119 | 119 | 100 | 0.31 T | 75.6 T | PGC-04 | 32.72 | 33.6 T | 71.03 | 0.31 T | 75.6 T | PGC-04 | 32.72 | 33.6 T | 71.03 |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Total organic carbon | percent | 159 | 156 | 98.1 | 0.034 J | 22.4 J | C024 | 1.81 | 0.939 | 7.53 | 0.02 UJ | 22.4 J | C024 | 1.78 | 0.92 J | 7.44 |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 148 | 145 | 98 | 0.03 | 3.02 J | PGC-03 | 0.304 | 0.206 | 0.831 | 0.026 U | 3.02 J | PGC-03 | 0.299 | 0.203 | 0.816 |
| Lead | mg/kg | 148 | 147 | 99.3 | 1.35 J | 1380 | PGC-07 | 62.6 | 31.9 | 173 J | 1.35 J | 1380 | PGC-07 | 62.3 | 31.6 | 173 J |
| Mercury | mg/kg | 148 | 148 | 100 | 0.005 J | 3.46 JT | C783 | 0.3649 | 0.124 | 1.671 | 0.005 J | 3.46 JT | C783 | 0.3649 | 0.124 | 1.671 |
| Nickel | mg/kg | 84 | 84 | 100 | 6.77 | 36.9 J | UC08 | 19 | 18.7 | 31.1 J | 6.77 | 36.9 J | UC08 | 19 | 18.7 | 31.1 J |
| **PCB Aroclors** | | | | | | | | | | | | | | | | |
| Aroclors | µg/kg | 98 | 57 | 58.2 | 1.4 JT | 610 T | C022 | 89.6 | 41 T | 522 J | 0.73 UT | 610 T | C022 | 52.5 | 7.2 | 242 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 94 | 31 | 33 | 0.12 J | 1.9 JT | IPC-C014 | 0.528 | 0.4 J | 1.35 J | 0.043 U | 2.9 U | C783 | 0.27 | 0.113 U | 1.02 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 149 | 124 | 83.2 | 0.23 J | 170000 | PGC-06 | 9570 | 79 | 96900 | 0.14 U | 170000 | PGC-06 | 7970 | 39 | 78200 |
| Total HPAHs | µg/kg | 149 | 135 | 90.6 | 0.28 T | 1950000 T | PGC-06 | 98700 | 578 T | 928000 | 0.28 T | 1950000 T | PGC-06 | 89400 | 506 T | 825000 |
| Total LPAHs | µg/kg | 149 | 145 | 97.3 | 0.25 JT | 3030000 T | PGC-05 | 146000 | 375 T | 1380000 | 0.25 JT | 3030000 T | PGC-05 | 142000 | 360 T | 1360000 |
| Naphthalene | µg/kg | 150 | 122 | 81.3 | 0.45 J | 1600000 | PGC-05 | 64700 | 87 | 652000 | 0.44 U | 1600000 | PGC-05 | 52600 | 46.3 | 496000 |
| Phenanthrene | µg/kg | 149 | 131 | 87.9 | 1.9 J | 750000 | PGC-06 | 39600 | 170 | 350000 | 0.4 U | 750000 | PGC-06 | 34800 | 110 | 318000 |
| Total cPAHs | µg/kg | 149 | 131 | 87.9 | 0.28 JT | 788000 T | PGC-06 | 40300 | 286 T | 395000 | 0.28 JT | 788000 T | PGC-06 | 35400 | 210 T | 324000 |

Table D1.3-21. Summary Statistics for Other Contaminants and Physical Parameters in Subsurface Sediment, Downtown Reach (RM 11.8-15.3).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 64 | 6 | 9.4 | 3.3 J | 33 T | C031 | 14 | 11 J | 30 | 1.7 U | 160 U | C783 | 7.4 | 1.6 U | 31 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 94 | 13 | 13.8 | 0.14 J | 2.8 | O33-C005 | 0.454 | 0.24 J | 1.5 J | 0.068 U | 2.8 | O33-C005 | 0.137 | 0.06 U | 0.308 J |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 109 | 3 | 2.8 | 0.24 J | 26 T | UC05-2 | 9.7 | 3 J | 24 J | 0.16 U | 83000 UJ | PGC-06 | 1500 | 30 U | 3000 UJ |
| **Petroleum** | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 83 | 63 | 75.9 | 1.9 J | 19000 | PGC-06 | 2430 | 430 | 14800 | 1.3 UT | 19000 | PGC-06 | 1840 | 130 | 12900 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | mg/kg | 57 | 47 | 82.5 | 4.65 JT | 1200 J | C783 | 237 | 140 J | 852 J | 1.3 UT | 1200 J | C783 | 196 | 110 | 773 J |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 83 | 64 | 77.1 | 3.6 JT | 13000 | PGC-06 | 1940 | 505 | 9040 | 3.2 U | 13000 | PGC-06 | 1500 | 210 | 8690 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | mg/kg | 57 | 50 | 87.7 | 5.25 JT | 2300 J | C783 | 472 | 335 | 1380 J | 3.1 UT | 2300 J | C783 | 417 | 290 J | 1330 J |
| Total Petroleum Hydrocarbons | mg/kg | 83 | 71 | 85.5 | 0.92 JT | 36800 T | PGC-06 | 4280 | 589 T | 25200 | 0.92 JT | 36800 T | PGC-06 | 3670 | 390 T | 24300 |
| Total Petroleum Hydrocarbons (silica gel treated) | mg/kg | 57 | 50 | 87.7 | 6.7 JA | 3500 JA | C783 | 694 | 495 | 2120 | 3.1 UA | 3500 JA | C783 | 611 | 410 T | 2060 |
| **Zidell Data Only** | | | | | | | | | | | | | | | | |
| **Grain Size** | | | | | | | | | | | | | | | | |
| Fines | percent | 10 | 10 | 100 | 3.1 | 89 T | WRS37 | 37.4 | 25.1 | 87.7 | 3.1 | 89 T | WRS37 | 37.4 | 25.1 | 87.7 |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 30 | 14 | 46.7 | 1 | 3.6 | WRS46 | 2.15 | 1.95 | 3.54 | 1 | 3.6 | WRS46 | 1.28 | 0.7 U | 3.41 |
| Lead | mg/kg | 30 | 21 | 70 | 2.9 T | 972 | WRS07 | 81.4 | 25 | 115 | 2.1 U | 972 | WRS07 | 59.4 | 15.5 | 113 |
| Mercury | mg/kg | 30 | 15 | 50 | 0.0255 T | 1.3 | WRS07 | 0.2135 | 0.093 | 0.67 | 0.016 U | 1.3 | WRS07 | 0.1479 | 0.1 U | 0.373 |
| Nickel | mg/kg | 30 | 30 | 100 | 16 | 151 | WRS06 | 31.2 | 26 | 54.6 | 16 | 151 | WRS06 | 31.2 | 26 | 54.6 |
| **PCB Aroclors** | | | | | | | | | | | | | | | | |
| Aroclors | µg/kg | 12 | 2 | 16.7 | 140 T | 190 T | WRS28 | 170 | 170 | 190 | 110 UT | 190 T | WRS28 | 81 | 65 U | 160 |
| **Total PCBs[c]** | | | | | | | | | | | | | | | | |
| Total PCBs | µg/kg | 12 | 2 | 16.7 | 140 T | 190 T | WRS28 | 170 | 170 | 190 | 110 UT | 190 T | WRS28 | 81 | 65 U | 160 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 12 | 8 | 66.7 | 4.8 | 24 | WRS46 | 12 | 10 | 20 | 3.5 U | 24 | WRS46 | 8.4 | 8.7 | 18 |
| Total HPAHs | µg/kg | 12 | 10 | 83.3 | 4.8 T | 309 T | WRS46 | 91.3 | 80.2 | 245 | 3.9 UT | 309 T | WRS46 | 76.4 | 51.5 | 231 |
| Total LPAHs | µg/kg | 12 | 5 | 41.7 | 5.9 T | 208 T | WRS25 | 90.1 | 58.8 T | 195 | 3.5 UT | 208 T | WRS25 | 38.8 | 2.75 U | 172 |
| Naphthalene | µg/kg | 12 | 3 | 25 | 15 | 70 | WRS25 | 37 | 25 | 66 | 3.5 U | 70 | WRS25 | 11 | 2.5 U | 45 |
| Phenanthrene | µg/kg | 12 | 4 | 33.3 | 19 | 60 | WRS46 | 40 | 41 | 60 | 3.5 U | 60 | WRS46 | 15 | 2.5 U | 58 |
| Total cPAHs | µg/kg | 12 | 9 | 75 | 4.8 T | 140 T | WRS46 | 50 | 41 T | 120 | 3.5 UT | 140 T | WRS46 | 38 | 26 | 110 |
| **Petroleum** | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 24 | 2 | 8.3 | 98 | 160 | WRS37 | 130 | 130 | 160 | 10 U | 210 U | WRS31 | 22 | 5 U | 100 |
| Total Petroleum Hydrocarbons | mg/kg | 24 | 24 | 100 | 42 A | 1630 | WRS06 | 493 | 314 | 1390 | 42 A | 1630 | WRS06 | 493 | 314 | 1390 |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TEQ - toxic equivalent concentration

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2

Table D1.3-22. Summary Statistics for Other Contaminants and Physical Parameters in Surface Sediment, Downstream Reach (RM 0-1.9).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Grain Size** | | | | | | | | | | | | | | | | |
| Fines | percent | 21 | 21 | 100 | 2.13 T | 95.4 T | DG03 | 53.3 | 59.9 T | 94.5 T | 2.13 T | 95.4 T | DG03 | 53.3 | 59.9 T | 94.5 T |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Total organic carbon | percent | 25 | 25 | 100 | 0.13 | 2.63 | DG07 | 1.16 | 1.15 T | 2.44 | 0.13 | 2.63 | DG07 | 1.16 | 1.15 T | 2.44 |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 25 | 24 | 96 | 0.08 | 1.63 | DG08 | 0.477 | 0.305 | 0.99 | 0.08 | 1.63 | DG08 | 0.459 | 0.3 T | 0.986 |
| Lead | mg/kg | 25 | 25 | 100 | 3.23 | 27.7 | DG15 | 11.7 | 12.1 | 21.6 | 3.23 | 27.7 | DG15 | 11.7 | 12.1 | 21.6 |
| Mercury | mg/kg | 25 | 25 | 100 | 0.011 J | 7.11 J | DG15 | 0.3344 | 0.054 T | 0.1216 J | 0.011 J | 7.11 J | DG15 | 0.3344 | 0.054 T | 0.1216 J |
| Nickel | mg/kg | 25 | 25 | 100 | 9 | 31.7 | DG03 | 21.4 | 21.6 | 31 | 9 | 31.7 | DG03 | 21.4 | 21.6 | 31 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | pg/g | 4 | 4 | 100 | 0.00266 JT | 0.0153 JT | GCRSP01W | 0.008125 | 0.00727 J | 0.014156 J | 0.00266 JT | 0.0153 JT | GCRSP01W | 0.008125 | 0.00727 J | 0.014156 J |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 25 | 1 | 4 | 2.4 NJT | 2.4 NJT | GCRSP01W | 2.4 | 2.4 NJT | 2.4 NJT | 0.062 U | 2.6 U | DG05 | 0.435 | 0.15 U | 1.24 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 25 | 24 | 96 | 5 | 1400 | DG05 | 98.7 | 27 | 220 J | 0.33 U | 1400 | DG05 | 94.7 | 23 | 214 J |
| Total HPAHs | µg/kg | 25 | 25 | 100 | 0.54 JT | 13000 T | DG05 | 864 | 240 T | 1680 | 0.54 JT | 13000 T | DG05 | 864 | 240 T | 1680 |
| Total LPAHs | µg/kg | 25 | 25 | 100 | 0.84 JT | 4900 JT | DG05 | 248 | 36 JT | 160 J | 0.84 JT | 4900 JT | DG05 | 248 | 36 JT | 160 J |
| Naphthalene | µg/kg | 25 | 20 | 80 | 0.84 J | 370 | DG05 | 27 | 8.1 J | 48 | 0.63 U | 370 | DG05 | 22 | 6.5 | 29 |
| Phenanthrene | µg/kg | 25 | 24 | 96 | 3.7 | 2700 | DG05 | 140 | 21 | 100 | 0.49 U | 2700 | DG05 | 130 | 20 | 100 |
| Total cPAHs | µg/kg | 25 | 24 | 96 | 29 JT | 6300 T | DG05 | 460 | 150 J | 1000 J | 0.71 UT | 6300 T | DG05 | 440 | 130 T | 980 J |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 21 | 12 | 57.1 | 2.8 J | 9.6 | GCR01E-ALT | 5.6 | 6 J | 8.4 J | 2.2 U | 9.6 | GCR01E-ALT | 3.8 | 3.2 J | 7.4 JT |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 21 | 1 | 4.8 | 0.19 JT | 0.19 JT | GCRSP01W | 0.19 | 0.19 JT | 0.19 JT | 0.068 U | 5.7 U | DG07 | 0.472 | 0.075 U | 2.55 U |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 21 | 13 | 61.9 | 0.47 NJ | 4.1 J | DG07 | 1.2 | 0.77 J | 3.1 J | 0.2 U | 4.1 J | DG07 | 0.85 | 0.71 NJ | 2.5 J |
| **Petroleum** | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 17 | 16 | 94.1 | 5 J | 130 JT | DG05 | 36 | 34 J | 94 J | 1.9 U | 130 JT | DG05 | 34 | 33 JT | 92 J |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 17 | 16 | 94.1 | 36 J | 440 J | DG03 | 220 | 230 J | 430 J | 4.3 U | 440 J | DG03 | 210 | 210 JT | 420 J |
| Total Petroleum Hydrocarbons | mg/kg | 17 | 17 | 100 | 1.3 JT | 480 JT | DG03 | 240 | 240 JT | 470 J | 1.3 JT | 480 JT | DG03 | 240 | 240 JT | 470 J |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TEQ - toxic equivalent concentration

Reason codes for qualifiers:
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N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-23. Summary Statistics for Other Contaminants and Physical Parameters in Subsurface Sediment, Downstream Reach (RM 0-1.9).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th (half DL)[b]** |
| **Grain Size** | | | | | | | | | | | | | | | | |
| Fines | percent | 17 | 17 | 100 | 2.47 T | 96.4 T | DC03 | 69.6 | 79.9 T | 91.8 | 2.47 T | 96.4 T | DC03 | 69.6 | 79.9 T | 91.8 |
| **Conventionals** | | | | | | | | | | | | | | | | |
| Total organic carbon | percent | 26 | 26 | 100 | 0.05 | 2.78 | DC03 | 1 | 0.97 | 2.13 | 0.05 | 2.78 | DC03 | 1 | 0.97 | 2.13 |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg | 26 | 26 | 100 | 0.03 | 1.95 | DC02 | 0.838 | 0.77 | 1.83 | 0.03 | 1.95 | DC02 | 0.838 | 0.77 | 1.83 |
| Lead | mg/kg | 26 | 26 | 100 | 1.2 | 37.7 | DC02 | 15.8 | 14.9 | 33.2 | 1.2 | 37.7 | DC02 | 15.8 | 14.9 | 33.2 |
| Mercury | mg/kg | 26 | 26 | 100 | 0.006 J | 0.282 J | DC03 | 0.0924 | 0.0785 J | 0.252 J | 0.006 J | 0.282 J | DC03 | 0.0924 | 0.0785 J | 0.252 J |
| Nickel | mg/kg | 26 | 26 | 100 | 4.4 | 20.4 J | DC07 | 15.9 | 16.8 J | 19.7 J | 4.4 | 20.4 J | DC07 | 15.9 | 16.8 J | 19.7 J |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.19 U | 2 UJ | WR-BC-03; WR-GC-02; WR-GC-04; WR-GC-05; WR-GC-06 | 0.46 | 0.14 U | 1 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg | 26 | 23 | 88.5 | 0.9 J | 770 | DC03 | 73.2 | 39 | 123 J | 0.32 U | 770 | DC03 | 64.8 | 23.5 | 122 J |
| Total HPAHs | µg/kg | 26 | 24 | 92.3 | 0.64 JT | 11000 T | DC03 | 824 | 350 | 1350 | 0.64 JT | 11000 T | DC03 | 761 | 240 J | 1320 |
| Total LPAHs | µg/kg | 26 | 26 | 100 | 0.49 JT | 12000 T | DC03 | 576 | 43 J | 853 | 0.49 JT | 12000 T | DC03 | 576 | 43 J | 853 |
| Naphthalene | µg/kg | 27 | 20 | 74.1 | 0.6 J | 330 | DC03 | 43 | 12 | 270 | 0.49 U | 330 | DC03 | 32 | 4 J | 200 |
| Phenanthrene | µg/kg | 26 | 26 | 100 | 0.49 J | 7200 | DC03 | 330 | 20 J | 360 | 0.49 J | 7200 | DC03 | 330 | 20 J | 360 |
| Total cPAHs | µg/kg | 26 | 23 | 88.5 | 4.9 JT | 4200 T | DC03 | 370 | 190 T | 610 J | 0.7 UT | 4200 T | DC03 | 330 | 120 J | 610 J |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.9 U | 6.2 U | DC04 | 1.4 | 1.2 U | 2.5 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg | 17 | 1 | 5.9 | 0.42 J | 0.42 J | DC06 | 0.42 | 0.42 J | 0.42 J | 0.096 U | 3.3 U | DC05 | 0.207 | 0.065 U | 0.73 U |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg | 17 | 8 | 47.1 | 0.5 J | 6 J | DC02 | 1.4 | 0.54 J | 4.6 J | 0.17 U | 6 J | DC02 | 0.73 | 0.12 U | 2.8 J |
| **Petroleum** | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 17 | 17 | 100 | 2 JT | 370 J | DC03 | 62 | 35 J | 270 J | 2 JT | 370 J | DC03 | 62 | 35 J | 270 J |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 17 | 14 | 82.4 | 7.4 JT | 680 J | DC03 | 220 | 150 J | 670 J | 7.4 JT | 680 J | DC03 | 180 | 130 J | 660 J |
| Total Petroleum Hydrocarbons | mg/kg | 17 | 17 | 100 | 2.4 JT | 1100 JT | DC03 | 250 | 170 JT | 970 J | 2.4 JT | 1100 JT | DC03 | 250 | 170 JT | 970 J |

**Notes:**

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[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
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Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
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U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D1.3-24. Number of Surface and Subsurface Samples (Detected only) for Other Contaminants by Concentration Range, Study Area (RM 1.9-11.8)

| | Surface Sediment Concentration Ranges | | | | | | | Subsurface Sediment Concentration Ranges | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **<1** | **1-10** | **10-100** | **100-1000** | **1000-10000** | **>10000** | **Surface Total** | **<1** | **1-10** | **10-100** | **100-1000** | **1000-10000** | **>10000** | **Subsurface Total** | **Grand Total** |
| **Metals** | | | | | | | | | | | | | | | |
| Cadmium | 1312 | 90 | 1 | | | | 1403 | 1381 | 51 | 3 | | | | 1435 | 2838 |
| Lead | | 215 | 1242 | 97 | 5 | 1 | 1560 | | 453 | 1024 | 107 | 5 | | 1589 | 3149 |
| Mercury | 1394 | 3 | 1 | | | | 1398 | 1345 | 26 | 2 | | | | 1373 | 2771 |
| Nickel | | 7 | 1474 | 13 | | | 1494 | | 4 | 1508 | 9 | | | 1521 | 3015 |
| **PCB TEQ** | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | 152 | 91 | 17 | 4 | | | 264 | 54 | 80 | 16 | 5 | | | 155 | 419 |
| **Pesticides** | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | 95 | 106 | 4 | 1 | | | 206 | 55 | 58 | 7 | 1 | | | 121 | 327 |
| Total DDD | 165 | 658 | 171 | 56 | 9 | 1 | 1060 | 182 | 541 | 342 | 150 | 60 | 30 | 1305 | 2365 |
| Total DDE | 151 | 762 | 87 | 20 | 5 | | 1025 | 183 | 635 | 231 | 73 | 25 | 4 | 1151 | 2176 |
| Total DDT | 254 | 462 | 145 | 55 | 16 | 4 | 936 | 212 | 481 | 241 | 121 | 65 | 40 | 1160 | 2096 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | |
| Total cPAH | 14 | 69 | 642 | 619 | 201 | 68 | 1613 | 98 | 126 | 467 | 564 | 184 | 133 | 1572 | 3185 |
| Benzo(a)pyrene | 1 | 102 | 718 | 549 | 158 | 53 | 1581 | 63 | 134 | 554 | 486 | 156 | 115 | 1508 | 3089 |
| Total HPAHs | | 7 | 117 | 704 | 604 | 208 | 1640 | 35 | 94 | 151 | 511 | 528 | 296 | 1615 | 3255 |
| Total LPAHs | 1 | 48 | 568 | 655 | 226 | 84 | 1582 | 52 | 103 | 343 | 577 | 305 | 214 | 1594 | 3176 |
| Naphthalene | 6 | 229 | 665 | 184 | 31 | 10 | 1125 | 36 | 162 | 600 | 351 | 70 | 66 | 1285 | 2410 |
| Phenanthrene | 3 | 120 | 698 | 545 | 150 | 60 | 1576 | 34 | 146 | 454 | 525 | 219 | 160 | 1538 | 3114 |
| **Phthalates** | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | | 159 | 257 | 50 | 4 | | 470 | | 125 | 118 | 20 | | 1 | 264 | 734 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | |
| Hexachlorobenzene | 256 | 158 | 14 | 4 | | | 432 | 120 | 91 | 21 | 2 | 1 | 1 | 236 | 668 |
| **Phenols** | | | | | | | | | | | | | | | |
| Pentachlorophenol | 17 | 159 | 73 | 16 | 1 | | 266 | 18 | 294 | 67 | 8 | 3 | | 390 | 656 |
| **Petroleum** | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | 3 | 25 | 444 | 268 | 25 | 2 | 767 | 7 | 52 | 237 | 499 | 98 | 11 | 904 | 1671 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | | 3 | 153 | 25 | 5 | | 186 | | 13 | 56 | 122 | 13 | 1 | 205 | 391 |
| Total Petroleum Hydrocarbons (Residual) | 3 | 7 | 46 | 519 | 58 | 5 | 638 | 7 | 33 | 105 | 545 | 153 | 11 | 854 | 1492 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | | 3 | 42 | 156 | 4 | | 205 | | 12 | 26 | 147 | 18 | 2 | 205 | 410 |
| Total Petroleum Hydrocarbons | 3 | 20 | 113 | 550 | 96 | 7 | 789 | 7 | 44 | 122 | 461 | 312 | 23 | 969 | 1758 |
| Total Petroleum Hydrocarbons (silica gel treated) | | 3 | 35 | 166 | 5 | 2 | 211 | | 14 | 23 | 127 | 48 | 2 | 214 | 425 |

**Notes:**

cPAH - carcinogenic polycyclic aromatic hydrocarbon
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PCB - polychlorinated biphenyl
TEQ - toxic equivalent concentration

Table D1.3-25. Number of Surface and Subsurface Samples (Detected and Not Detected) for Other Contaminants by Concentration Range, Study Area (RM 1.9-11.8).

| | Surface Sediment Concentration Ranges | | | | | | | Subsurface Sediment Concentration Ranges | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **<1** | **1-10** | **10-100** | **100-1000** | **1000-10000** | **>10000** | **Surface Total** | **<1** | **1-10** | **10-100** | **100-1000** | **1000-10000** | **>10000** | **Subsurface Total** | **Grand Total** |
| **Metals** | | | | | | | | | | | | | | | |
| Cadmium | 1430 | 120 | 1 | | | | 1551 | 1470 | 57 | 3 | | | | 1530 | 3081 |
| Lead | | 218 | 1254 | 97 | 5 | 1 | 1575 | | 455 | 1030 | 107 | 5 | | 1597 | 3172 |
| Mercury | 1523 | 3 | 1 | | | | 1527 | 1426 | 26 | 2 | | | | 1454 | 2981 |
| Nickel | | 7 | 1491 | 13 | | | 1511 | | 4 | 1508 | 9 | | | 1521 | 3032 |
| **PCB TEQ** | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | 152 | 91 | 17 | 4 | | | 264 | 60 | 80 | 16 | 5 | | | 161 | 425 |
| **Pesticides** | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | 875 | 285 | 34 | 1 | | | 1195 | 867 | 267 | 61 | 18 | 7 | | 1220 | 2415 |
| Total DDD | 209 | 793 | 180 | 57 | 9 | 1 | 1249 | 502 | 585 | 349 | 153 | 60 | 30 | 1679 | 2928 |
| Total DDE | 205 | 899 | 113 | 24 | 5 | | 1246 | 571 | 727 | 262 | 83 | 32 | 4 | 1679 | 2925 |
| Total DDT | 380 | 629 | 162 | 57 | 16 | 4 | 1248 | 600 | 578 | 270 | 125 | 65 | 40 | 1678 | 2926 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | |
| Total cPAH | 14 | 85 | 669 | 622 | 203 | 68 | 1661 | 147 | 207 | 471 | 570 | 187 | 133 | 1715 | 3376 |
| Benzo(a)pyrene | 4 | 138 | 751 | 555 | 160 | 53 | 1661 | 137 | 252 | 560 | 492 | 159 | 115 | 1715 | 3376 |
| Total HPAHs | | 15 | 128 | 706 | 604 | 208 | 1661 | 70 | 151 | 153 | 516 | 529 | 296 | 1715 | 3376 |
| Total LPAHs | 1 | 75 | 609 | 663 | 229 | 84 | 1661 | 75 | 188 | 350 | 581 | 307 | 214 | 1715 | 3376 |
| Naphthalene | 69 | 488 | 871 | 194 | 34 | 10 | 1666 | 177 | 417 | 657 | 363 | 78 | 66 | 1758 | 3424 |
| Phenanthrene | 3 | 157 | 743 | 547 | 151 | 60 | 1661 | 80 | 270 | 457 | 527 | 221 | 160 | 1715 | 3376 |
| **Phthalates** | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | | 649 | 696 | 142 | 17 | | 1504 | | 799 | 619 | 144 | 26 | 1 | 1589 | 3093 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | |
| Hexachlorobenzene | 582 | 528 | 238 | 29 | 10 | | 1387 | 596 | 453 | 206 | 85 | 26 | 1 | 1367 | 2754 |
| **Phenols** | | | | | | | | | | | | | | | |
| Pentachlorophenol | 274 | 643 | 428 | 92 | 13 | 4 | 1454 | 507 | 497 | 211 | 115 | 39 | 10 | 1379 | 2833 |
| **Petroleum** | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | 3 | 36 | 490 | 269 | 25 | 2 | 825 | 10 | 101 | 390 | 499 | 98 | 11 | 1109 | 1934 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | | 13 | 178 | 25 | 5 | | 221 | | 49 | 65 | 122 | 13 | 1 | 250 | 471 |
| Total Petroleum Hydrocarbons (Residual) | 3 | 8 | 59 | 528 | 58 | 5 | 661 | 9 | 78 | 214 | 555 | 153 | 11 | 1020 | 1681 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | | 3 | 58 | 156 | 4 | | 221 | | 40 | 43 | 147 | 18 | 2 | 250 | 471 |
| Total Petroleum Hydrocarbons | 3 | 21 | 146 | 552 | 96 | 7 | 825 | 9 | 66 | 231 | 468 | 312 | 23 | 1109 | 1934 |
| Total Petroleum Hydrocarbons (silica gel treated) | | 3 | 45 | 166 | 5 | 2 | 221 | | 42 | 31 | 127 | 48 | 2 | 250 | 471 |

**Notes:**

cPAH - carcinogenic polycyclic aromatic hydrocarbon
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PCB - polychlorinated biphenyl
TEQ - toxic equivalent concentration

Table D1.3-26. Number of Surface and Subsurface Samples (Detected Only) for Other Contaminants by Concentration Range, Upriver Reach (RM 15.3-28.4).

| | Surface Sediment Concentration Ranges | | | | | | | Subsurface Sediment Concentration Ranges | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **<1** | **1-10** | **10-100** | **100-1000** | **1000-10000** | **>10000** | **Surface Total** | **<1** | **1-10** | **10-100** | **100-1000** | **1000-10000** | **Subsurface Total** | **Grand Total** |
| **Metals** | | | | | | | | | | | | | | |
| Cadmium | 63 | | | | | | 63 | 3 | | | | | 3 | 66 |
| Lead | | 62 | 10 | | | | 72 | | 1 | 2 | | | 3 | 75 |
| Mercury | 60 | | | | | | 60 | 3 | | | | | 3 | 63 |
| Nickel | | | 72 | | | | 72 | | | 3 | | | 3 | 75 |
| **PCB TEQ** | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | 25 | | | | | | 25 | | | | | | | 25 |
| **Pesticides** | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | 1 | | | | | | 1 | | | | | | | 1 |
| Total DDD | 41 | 6 | | | | | 47 | 1 | 2 | | | | 3 | 50 |
| Total DDE | 31 | 24 | | | | | 55 | 1 | 2 | | | | 3 | 58 |
| Total DDT | 16 | 6 | 1 | | | | 23 | | 2 | | | | 2 | 25 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | |
| Total cPAH | 10 | 26 | 25 | 1 | | | 62 | | | 3 | | | 3 | 65 |
| Benzo(a)pyrene | 2 | 37 | 11 | 1 | | | 51 | | | 3 | | | 3 | 54 |
| Total HPAHs | | 5 | 45 | 11 | 1 | | 62 | | | | 3 | | 3 | 65 |
| Total LPAHs | 5 | 21 | 27 | 1 | | | 54 | | | 2 | 1 | | 3 | 57 |
| Naphthalene | | 28 | | | | | 28 | | 2 | 1 | | | 3 | 31 |
| Phenanthrene | 1 | 31 | 7 | 1 | | | 40 | | | 3 | | | 3 | 43 |
| **Phthalates** | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | | 12 | 5 | | | | 17 | | | 1 | | | 1 | 18 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | |
| Hexachlorobenzene | 24 | 2 | | | | | 26 | 1 | | | | | 1 | 27 |
| **Phenols** | | | | | | | | | | | | | | |
| Pentachlorophenol | | 5 | 1 | | | | 6 | | | | | | | 6 |
| **Petroleum** | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | | 2 | 32 | | | | 34 | | | | | | | 34 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | | 4 | 28 | | | | 32 | | | 3 | | | 3 | 35 |
| Total Petroleum Hydrocarbons (Residual) | | 1 | 3 | 32 | | | 36 | | | | | | | 36 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | | 1 | 22 | 9 | | | 32 | | | | 3 | | 3 | 35 |
| Total Petroleum Hydrocarbons | | | 4 | 35 | | | 39 | | | | | | | 39 |
| Total Petroleum Hydrocarbons (silica gel treated) | | 1 | 13 | 18 | | | 32 | | | | 3 | | 3 | 35 |

**Notes:**

cPAH - carcinogenic polycyclic aromatic hydrocarbon
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PCB - polychlorinated biphenyl
TEQ - toxic equivalent concentration

Table D1.3-27. Number of Surface and Subsurface Samples (Detected and Not Detected) for Other Contaminants by Concentration Range, Upriver Reach (RM 15.3-28.4).

| | Surface Sediment Concentration Ranges | | | | | | | Subsurface Sediment Concentration Ranges | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **<1** | **1-10** | **10-100** | **100-1000** | **1000-10000** | **>10000** | **Surface Total** | **<1** | **1-10** | **10-100** | **100-1000** | **1000-10000** | **Subsurface Total** | **Grand Total** |
| **Metals** | | | | | | | | | | | | | | |
| Cadmium | 72 | | | | | | 72 | 3 | | | | | 3 | 75 |
| Lead | | 62 | 10 | | | | 72 | | 1 | 2 | | | 3 | 75 |
| Mercury | 68 | | | | | | 68 | 3 | | | | | 3 | 71 |
| Nickel | | | 72 | | | | 72 | | | 3 | | | 3 | 75 |
| **PCB TEQ** | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | 25 | 1 | | | | | 26 | | | | | | | 26 |
| **Pesticides** | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | 65 | 12 | | | | | 77 | 3 | | | | | 3 | 80 |
| Total DDD | 61 | 20 | | | | | 81 | 1 | 2 | | | | 3 | 84 |
| Total DDE | 43 | 38 | | | | | 81 | 1 | 2 | | | | 3 | 84 |
| Total DDT | 61 | 19 | 1 | | | | 81 | 1 | 2 | | | | 3 | 84 |
| **Polycyclic Aromatic Hydrocarbons** | 38 | 302 | 243 | 38 | 2 | | 623 | | 2 | 12 | 10 | | 24 | 647 |
| Total cPAH | 13 | 34 | 30 | 1 | | | 78 | | | 3 | | | 3 | 81 |
| Benzo(a)pyrene | 6 | 54 | 17 | 1 | | | 78 | | | 3 | | | 3 | 81 |
| Total HPAHs | | 16 | 50 | 11 | 1 | | 78 | | | | 3 | | 3 | 81 |
| Total LPAHs | 5 | 40 | 32 | 1 | | | 78 | | | 2 | 1 | | 3 | 81 |
| Naphthalene | 3 | 68 | 7 | | | | 78 | | 2 | 1 | | | 3 | 81 |
| Phenanthrene | 5 | 58 | 13 | 1 | | | 77 | | | 3 | | | 3 | 80 |
| **Phthalates** | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | | 50 | 22 | | | | 72 | | 2 | 1 | | | 3 | 75 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | |
| Hexachlorobenzene | 45 | 16 | 11 | | | | 72 | 3 | | | | | 3 | 75 |
| **Phenols** | | | | | | | | | | | | | | |
| Pentachlorophenol | 34 | 28 | 9 | 7 | | | 78 | | 3 | | | | 3 | 81 |
| **Petroleum** | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | | 6 | 37 | | | | 43 | | | | | | | 43 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | | 4 | 28 | | | | 32 | | | 3 | | | 3 | 35 |
| Total Petroleum Hydrocarbons (Residual) | | 1 | 6 | 32 | | | 39 | | | | | | | 39 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | | 1 | 22 | 9 | | | 32 | | | | 3 | | 3 | 35 |
| Total Petroleum Hydrocarbons | | | 8 | 35 | | | 43 | | | | | | | 43 |
| Total Petroleum Hydrocarbons (silica gel treated) | | 1 | 13 | 18 | | | 32 | | | | 3 | | 3 | 35 |

**Notes:**

cPAH - carcinogenic polycyclic aromatic hydrocarbon
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PCB - polychlorinated biphenyl
TEQ - toxic equivalent concentration

Table D1.3-28. Number of Surface and Subsurface Samples (Detected Only) for Other Contaminants by Concentration Range, Downtown Reach (RM 11.8-15.3).

| | Surface Sediment Concentration Ranges | | | | | | | Subsurface Sediment Concentration Ranges | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **<1** | **1-10** | **10-100** | **100-1000** | **1000-10000** | **>10000** | **Surface Total** | **<1** | **1-10** | **10-100** | **100-1000** | **1000-10000** | **>10000** | **Subsurface Total** | **Grand Total** |
| **Metals** | | | | | | | | | | | | | | | |
| Cadmium | 180 | 35 | 2 | 1 | | | 218 | 140 | 19 | | | | | 159 | 377 |
| Lead | | 68 | 131 | 48 | 8 | 1 | 256 | | 44 | 96 | 27 | 1 | | 168 | 424 |
| Mercury | 215 | 10 | 2 | | | | 227 | 149 | 14 | | | | | 163 | 390 |
| Nickel | | 17 | 216 | 8 | | 1 | 242 | | 2 | 111 | 1 | | | 114 | 356 |
| **PCB TEQ** | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | 5 | 3 | | | | | 8 | | | | | | | | 8 |
| **Pesticides** | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | 17 | 3 | | | | | 20 | 26 | 4 | | | | | 30 | 50 |
| Total DDD | 61 | 46 | 6 | | | | 113 | 17 | 28 | 9 | | | | 54 | 167 |
| Total DDE | 75 | 39 | 1 | | | | 115 | 16 | 29 | 1 | | | | 46 | 161 |
| Total DDT | 37 | 59 | 8 | | | | 104 | 18 | 30 | 5 | | | | 53 | 157 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | |
| Total cPAH | 14 | 27 | 121 | 56 | 14 | | 232 | 9 | 18 | 50 | 34 | 17 | 12 | 140 | 372 |
| Benzo(a)pyrene | 12 | 41 | 111 | 49 | 10 | | 223 | 3 | 22 | 52 | 31 | 12 | 12 | 132 | 355 |
| Total HPAHs | 1 | 16 | 45 | 119 | 50 | 11 | 242 | 3 | 12 | 17 | 54 | 34 | 25 | 145 | 387 |
| Total LPAHs | 9 | 29 | 95 | 73 | 19 | 2 | 227 | 7 | 9 | 36 | 50 | 25 | 23 | 150 | 377 |
| Naphthalene | 10 | 83 | 83 | 15 | 4 | | 195 | 1 | 20 | 48 | 35 | 10 | 11 | 125 | 320 |
| Phenanthrene | 3 | 42 | 109 | 47 | 12 | 1 | 214 | | 18 | 42 | 39 | 19 | 17 | 135 | 349 |
| **Phthalates** | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | | 13 | 14 | 2 | | | 29 | | 3 | 3 | | | | 6 | 35 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | |
| Hexachlorobenzene | 54 | 6 | | | | | 60 | 12 | 1 | | | | | 13 | 73 |
| **Phenols** | | | | | | | | | | | | | | | |
| Pentachlorophenol | | 2 | 6 | 4 | | | 12 | 1 | 1 | 1 | | | | 3 | 15 |
| **Petroleum** | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | | 2 | 11 | 9 | | | 22 | | 9 | 12 | 27 | 10 | 7 | 65 | 87 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | | 20 | 73 | 23 | | | 116 | | 2 | 14 | 30 | 1 | | 47 | 163 |
| Total Petroleum Hydrocarbons (Residual) | | 1 | 3 | 15 | 1 | | 20 | | 4 | 11 | 25 | 21 | 3 | 64 | 84 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | | 5 | 36 | 77 | 3 | | 121 | | 2 | 8 | 35 | 5 | | 50 | 171 |
| Total Petroleum Hydrocarbons | 1 | 4 | 4 | 29 | 3 | | 41 | 1 | 9 | 15 | 35 | 25 | 10 | 95 | 136 |
| Total Petroleum Hydrocarbons (silica gel treated) | | 8 | 29 | 80 | 7 | | 124 | | 2 | 8 | 29 | 12 | | 51 | 175 |

**Notes:**

cPAH - carcinogenic polycyclic aromatic hydrocarbon
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PCB - polychlorinated biphenyl
TEQ - toxic equivalent concentration

Table D1.3-29. Number of Surface and Subsurface Samples (Detected and Not Detected) for Other Contaminants by Concentration Range, Downtown Reach (RM 11.8-15.3).

| | Surface Sediment Concentration Ranges | | | | | | | Subsurface Sediment Concentration Ranges | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **<1** | **1-10** | **10-100** | **100-1000** | **1000-10000** | **>10000** | **Surface Total** | **<1** | **1-10** | **10-100** | **100-1000** | **1000-10000** | **>10000** | **Subsurface Total** | **Grand Total** |
| **Metals** | | | | | | | | | | | | | | | |
| Cadmium | 215 | 51 | 2 | 1 | | | 269 | 143 | 35 | | | | | 178 | 447 |
| Lead | 2 | 76 | 134 | 48 | 8 | 1 | 269 | | 46 | 104 | 27 | 1 | | 178 | 447 |
| Mercury | 251 | 10 | 2 | | | | 263 | 164 | 14 | | | | | 178 | 441 |
| Nickel | 1 | 17 | 216 | 8 | | 1 | 243 | | 2 | 111 | 1 | | | 114 | 357 |
| **PCB TEQ** | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | 5 | 3 | | | | | 8 | | | | | | | | 8 |
| **Pesticides** | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | 137 | 8 | | | | | 145 | 85 | 8 | | | | | 93 | 238 |
| Total DDD | 93 | 50 | 6 | | | | 149 | 54 | 30 | 9 | | | | 93 | 242 |
| Total DDE | 100 | 48 | 1 | | | | 149 | 59 | 33 | 1 | | | | 93 | 242 |
| Total DDT | 68 | 71 | 10 | | | | 149 | 54 | 34 | 5 | | | | 93 | 242 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | |
| Total cPAH | 25 | 47 | 127 | 56 | 14 | | 269 | 24 | 24 | 50 | 34 | 17 | 12 | 161 | 430 |
| Benzo(a)pyrene | 24 | 69 | 117 | 49 | 10 | | 269 | 23 | 31 | 52 | 31 | 12 | 12 | 161 | 430 |
| Total HPAHs | 10 | 30 | 49 | 119 | 50 | 11 | 269 | 14 | 17 | 17 | 54 | 34 | 25 | 161 | 430 |
| Total LPAHs | 12 | 62 | 101 | 73 | 19 | 2 | 269 | 9 | 18 | 36 | 50 | 25 | 23 | 161 | 430 |
| Naphthalene | 19 | 137 | 94 | 15 | 4 | | 269 | 19 | 36 | 50 | 36 | 10 | 11 | 162 | 431 |
| Phenanthrene | 22 | 72 | 115 | 47 | 12 | 1 | 269 | 9 | 35 | 42 | 39 | 19 | 17 | 161 | 430 |
| **Phthalates** | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | | 69 | 24 | 3 | | | 96 | | 49 | 12 | 3 | | | 64 | 160 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | |
| Hexachlorobenzene | 134 | 11 | 4 | | | | 149 | 91 | 2 | | | | | 93 | 242 |
| **Phenols** | | | | | | | | | | | | | | | |
| Pentachlorophenol | 10 | 70 | 15 | 11 | 1 | | 107 | 23 | 28 | 32 | 8 | 13 | 5 | 109 | 216 |
| **Petroleum** | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | 3 | 18 | 30 | 10 | | | 61 | | 34 | 28 | 28 | 10 | 7 | 107 | 168 |
| Total Petroleum Hydrocarbons (Diesel) (silica gel treated) | | 28 | 77 | 23 | | | 128 | | 7 | 19 | 30 | 1 | | 57 | 185 |
| Total Petroleum Hydrocarbons (Residual) | | 1 | 3 | 16 | 1 | | 21 | | 10 | 17 | 32 | 21 | 3 | 83 | 104 |
| Total Petroleum Hydrocarbons (Residual) (silica gel treated) | | 11 | 36 | 78 | 3 | | 128 | | 6 | 9 | 37 | 5 | | 57 | 185 |
| Total Petroleum Hydrocarbons | 1 | 4 | 20 | 33 | 3 | | 61 | 1 | 13 | 17 | 41 | 25 | 10 | 107 | 168 |
| Total Petroleum Hydrocarbons (silica gel treated) | | 11 | 29 | 81 | 7 | | 128 | | 6 | 9 | 30 | 12 | | 57 | 185 |

**Notes:**

cPAH - carcinogenic polycyclic aromatic hydrocarbon
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PCB - polychlorinated biphenyl
TEQ - toxic equivalent concentration

Table D1.3-30. Number of Surface and Subsurface Samples (Detected Only) for Other Contaminants by Concentration Range, Downstream Reach (RM 0-1.9).

| | Surface Sediment Concentration Ranges | | | | | | | Subsurface Sediment Concentration Ranges | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **<1** | **1-10** | **10-100** | **100-1000** | **1000-10000** | **>10000** | **Surface Total** | **<1** | **1-10** | **10-100** | **100-1000** | **1000-10000** | **>10000** | **Subsurface Total** | **Grand Total** |
| **Metals** | | | | | | | | | | | | | | | |
| Cadmium | 22 | 2 | | | | | 24 | 14 | 12 | | | | | 26 | 50 |
| Lead | | 10 | 15 | | | | 25 | | 10 | 16 | | | | 26 | 51 |
| Mercury | 24 | 1 | | | | | 25 | 26 | | | | | | 26 | 51 |
| Nickel | | 2 | 23 | | | | 25 | | 3 | 23 | | | | 26 | 51 |
| **PCB TEQ** | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | 4 | | | | | | 4 | | | | | | | | 4 |
| **Pesticides** | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | | 1 | | | | | 1 | | | | | | | | 1 |
| Total DDD | 11 | 9 | | | | | 20 | 2 | 7 | 7 | | | | 16 | 36 |
| Total DDE | 8 | 12 | | | | | 20 | 4 | 10 | 2 | | | | 16 | 36 |
| Total DDT | 7 | 9 | 1 | | | | 17 | 2 | 6 | 3 | | | | 11 | 28 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | |
| Total cPAH | | 2 | 18 | 3 | 1 | | 24 | | 7 | 9 | 6 | 1 | | 23 | 47 |
| Benzo(a)pyrene | | 5 | 16 | 2 | 1 | | 24 | 2 | 7 | 10 | 4 | | | 23 | 47 |
| Total HPAHs | 1 | | 6 | 16 | 1 | 1 | 25 | 1 | 1 | 8 | 11 | 2 | 1 | 24 | 49 |
| Total LPAHs | 1 | 3 | 16 | 4 | 1 | | 25 | 4 | 3 | 10 | 8 | | 1 | 26 | 51 |
| Naphthalene | 1 | 13 | 5 | 1 | | | 20 | 1 | 9 | 8 | 2 | | | 20 | 40 |
| Phenanthrene | | 6 | 16 | 1 | 1 | | 24 | 4 | 7 | 11 | 3 | 1 | | 26 | 50 |
| **Phthalates** | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | | 12 | | | | | 12 | | | | | | | | 12 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | |
| Hexachlorobenzene | 1 | | | | | | 1 | 1 | | | | | | 1 | 2 |
| **Phenols** | | | | | | | | | | | | | | | |
| Pentachlorophenol | 8 | 5 | | | | | 13 | 6 | 2 | | | | | 8 | 21 |
| **Petroleum** | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | | 3 | 12 | 1 | | | 16 | | 5 | 10 | 2 | | | 17 | 33 |
| Total Petroleum Hydrocarbons (Residual) | | | 4 | 12 | | | 16 | | 1 | 3 | 10 | | | 14 | 30 |
| Total Petroleum Hydrocarbons | | 1 | 3 | 13 | | | 17 | | 4 | 3 | 9 | 1 | | 17 | 34 |

**Notes:**

cPAH - carcinogenic polycyclic aromatic hydrocarbon
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PCB - polychlorinated biphenyl
TEQ - toxic equivalent concentration

Table D1.3-31. Number of Surface and Subsurface Samples (Detected and Not Detected) for Other Contaminants by Concentration Range, Downstream Reach (RM 0-1.9).

| | Surface Sediment Concentration Ranges | | | | | | | Subsurface Sediment Concentration Ranges | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Chemical** | **<1** | **1-10** | **10-100** | **100-1000** | **1000-10000** | **>10000** | **Surface Total** | **<1** | **1-10** | **10-100** | **100-1000** | **1000-10000** | **>10000** | **Subsurface Total** | **Grand Total** |
| **Metals** | | | | | | | | | | | | | | | |
| Cadmium | 23 | 2 | | | | | 25 | 14 | 12 | | | | | 26 | 51 |
| Lead | | 10 | 15 | | | | 25 | | 10 | 16 | | | | 26 | 51 |
| Mercury | 24 | 1 | | | | | 25 | 26 | | | | | | 26 | 51 |
| Nickel | | 2 | 23 | | | | 25 | | 3 | 23 | | | | 26 | 51 |
| **PCB TEQ** | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | 4 | | | | | | 4 | | | | | | | | 4 |
| **Pesticides** | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | 17 | 8 | | | | | 25 | 15 | 11 | | | | | 26 | 51 |
| Total DDD | 14 | 11 | | | | | 25 | 7 | 12 | 7 | | | | 26 | 51 |
| Total DDE | 9 | 16 | | | | | 25 | 9 | 15 | 2 | | | | 26 | 51 |
| Total DDT | 9 | 15 | 1 | | | | 25 | 7 | 16 | 3 | | | | 26 | 51 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | |
| Total cPAH | 1 | 2 | 18 | 3 | 1 | | 25 | 3 | 7 | 9 | 6 | 1 | | 26 | 51 |
| Benzo(a)pyrene | 1 | 5 | 16 | 2 | 1 | | 25 | 5 | 7 | 10 | 4 | | | 26 | 51 |
| Total HPAHs | 1 | | 6 | 16 | 1 | 1 | 25 | 3 | 1 | 8 | 11 | 2 | 1 | 26 | 51 |
| Total LPAHs | 1 | 3 | 16 | 4 | 1 | | 25 | 4 | 3 | 10 | 8 | | 1 | 26 | 51 |
| Naphthalene | 2 | 17 | 5 | 1 | | | 25 | 7 | 10 | 8 | 2 | | | 27 | 52 |
| Phenanthrene | 1 | 6 | 16 | 1 | 1 | | 25 | 4 | 7 | 11 | 3 | 1 | | 26 | 51 |
| **Phthalates** | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | | 21 | | | | | 21 | | 17 | | | | | 17 | 38 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | |
| Hexachlorobenzene | 17 | 4 | | | | | 21 | 15 | 2 | | | | | 17 | 38 |
| **Phenols** | | | | | | | | | | | | | | | |
| Pentachlorophenol | 15 | 6 | | | | | 21 | 15 | 2 | | | | | 17 | 38 |
| **Petroleum** | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | | 4 | 12 | 1 | | | 17 | | 5 | 10 | 2 | | | 17 | 34 |
| Total Petroleum Hydrocarbons (Residual) | | 1 | 4 | 12 | | | 17 | | 2 | 5 | 10 | | | 17 | 34 |
| Total Petroleum Hydrocarbons | | 1 | 3 | 13 | | | 17 | | 4 | 3 | 9 | 1 | | 17 | 34 |

**Notes:**

cPAH - carcinogenic polycyclic aromatic hydrocarbon
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PCB - polychlorinated biphenyl
TEQ - toxic equivalent concentration

Table D1.3-32. Surface and Subsurface Sediment Samples Excluded from Summary Statistics Tables per Exclusion Criteria.

| Excluded Sediment Samples | Excluded Sediment Samples | Excluded Sediment Samples | Excluded Sediment Samples | Excluded Sediment Samples | Excluded Sediment Samples |
|---|---|---|---|---|---|
| LW2-B016 | LWG0104R002SDS015C00 | MBCREOS1M3ASC81A | WLCARI08200811131 | WLCCPF01SD0101SD141F | WLCGSG04RAA14SD1420 |
| LW2-C086-B | LWG0106R031SDS015C00 | MBCREOS1M3ASC81B | WLCARI08200811132 | WLCCPF01SD0101SD1S1C | WLCGWF03GNCOMP2003 |
| LW2-C086-C | LWG2-PG-R2AR4 | MBCREOS1M4ASC47 | WLCARI08200811133 | WLCCPF01SD0102SD239F | WLCGWF03GNVC01A |
| LW2-C086-D | LWPTZSARCO6B-2 | MBCREOS1M5ASC36 | WLCARI0820081114PRS16 | WLCCPF01SD0102SD241F | WLCGWF03GNVC03A1 |
| LW2-C093-A | MBCREOS1BE1SCB1A | MBCREOS1M8ASC20 | WLCARI0820081115PRS17 | WLCCPF01SD0102SD2S1C | WLCITA96S01S01 |
| LW2-C093-B | MBCREOS1BE1SCB1B | MBCREOS1Q4ASC49 | WLCASF97S007W4153 | WLCCPF01SD0103SD339F | WLCITC03SS010007 |
| LW2-C093-C | MBCREOS1BE2SCB2 | MBCREOS1R3ASC85 | WLCASF97S017W4149 | WLCCPF01SD0103SD341F | WLCITC03SS010708 |
| LW2-C093-D | MBCREOS1BE3SCB3 | MBCREOS2I12ASSJ12 | WLCASF97S048W4165 | WLCCPF01SD0103SD3S1C | WLCITC03SS010710C |
| LW2-C155-B | MBCREOS1BE4SCB4 | MBCREOS2I2BSSJ2 | WLCBPE06SGP011012 | WLCCPF01SD0104SD439F | WLCITC03SS011011 |
| LW2-C155-C | MBCREOS1I10ASC11 | MBCREOS2J10AK09051 | WLCBPE06SGP0124 | WLCCPF01SD0104SD441F | WLCITC03SS020013 |
| LW2-C155-D | MBCREOS1I11ASC6 | MBCREOS2J10AK09200 | WLCBPE06SGP0168 | WLCCPF01SD0104SD4S1C | WLCITC03SS021314 |
| LW2-C161-B | MBCREOS1I9ASCC16A | MBCREOS2J10AK09467 | WLCBPE06SGP021012 | WLCCPF01SD0105D5SC1C | WLCITC03SS021517C |
| LW2-C161-C | MBCREOS1J1BCC65AA | MBCREOS2J2DK01038 | WLCBPE06SGP0224 | WLCCPF01SD0105SD539F | WLCITC03SS021617 |
| LW2-C161-D | MBCREOS1J1BCC65AB | MBCREOS2J2DK01215 | WLCBPE06SGP0268 | WLCCPF01SD0105SD541F | WLCITC03SS03R0102 |
| LW2-C276-B | MBCREOS1J1BCC65AC | MBCREOS2J2DK01424 | WLCBPE06SGP0301 | WLCDRD05PG05050 | WLCITC03SS03R0204C |
| LW2-C276-C | MBCREOS1J2ASC65 | MBCREOS2J7CSSJ7 | WLCBPE06SGP0346 | WLCDRD05VC05050 | WLCITC03SS03R0506 |
| LW2-C276-D | MBCREOS1J2CSC66A | MBCREOS2K10ASSL10 | WLCBPE06SGP03810 | WLCGAB99GASD021299C | WLCITC03SS040008 |
| LW2-C278-B | MBCREOS1J2CSC66B | MBCREOS2K5ASSL6 | WLCBPE06SGP0401 | WLCGAB99GASD021299G | WLCITC03SS050012 |
| LW2-C278-C | MBCREOS1J6ASC29 | MBCREOS2K5CL06090 | WLCBPE06SGP041012 | WLCGAF00GAC001GAC001 | WLCITC03SS051213 |
| LW2-C278-D | MBCREOS1J6BC30B01 | MBCREOS2K5CL06275 | WLCBPE06SGP0435 | WLCGAF00GAC002GAC002 | WLCITC03SS051416C |
| LW2-C284-B | MBCREOS1J6BC30B02 | MBCREOS2K5CL06665 | WLCBPE06SGP0701 | WLCGAF00GAC003GAC003 | WLCITC03SS051516 |
| LW2-C284-C | MBCREOS1J6BC30B03 | MBCREOS2L1CM01015 | WLCBPE06SGP0724 | WLCGAF00GAC004GAC004 | WLCITC03SS060007 |
| LW2-C284-D | MBCREOS1J6BSC30A | MBCREOS2L1CM01240 | WLCBPE06SGP0768 | WLCGAF00GAC005GAC005 | WLCITC03SS060708 |
| LW2-C284-E | MBCREOS1J7ASC26 | MBCREOS2L1CM01765 | WLCBPE06SGP081214 | WLCGSA96SD07SD0701 | WLCITC03SS060810C |
| LW2-C288-B | MBCREOS1J7BSC25 | MBCREOS2L2CM02025 | WLCBPE06SGP0824 | WLCGSA96SD07SD0705 | WLCITC03SS061011 |
| LW2-C288-C | MBCREOS1J7CC25B01 | MBCREOS2L2CM02147 | WLCBPE06SGP0868 | WLCGSA96SD08SD0801 | WLCITH98SD01SD01 |
| LW2-C288-D | MBCREOS1J7CC25B02 | MBCREOS2L2CM02298 | WLCBPE06SGP0968 | WLCGSA96SD08SD0810 | WLCMBA01ED0101ED0101 |
| LW2-C294-B | MBCREOS1J7CSC25A | MBCREOS2L4FSSL4 | WLCBPE06SGP09910 | WLCGSD01AN0201_00-10 | WLCMBA01ED0102ED0102 |
| LW2-C294-C | MBCREOS1J9BSC16 | MBCREOS2L5CM05075 | WLCBPE06SGP1224 | WLCGSD01AN0201_10-20 | WLCMBA01ED0106ED0106 |
| LW2-C294-D | MBCREOS1K2ASC77 | MBCREOS2L5CM05350 | WLCBPE06SGP1246 | WLCGSD01AN0201_30-40 | WLCMBA01ED0107ED0107 |
| LW2-C494-A | MBCREOS1K3ASC80 | MBCREOS2L5CM05475 | WLCBPE06SGP12910 | WLCGSD01AN0202_00-10 | WLCMBA01ED0113ED0113 |
| LW2-C494-B | MBCREOS1K3ASCC44A | MCAL1286MC123MC123 | WLCBPE06SGP1701 | WLCGSD01AN0202_10-20 | WLCMBA01ED0113ED0141 |
| LW2-C494-C | MBCREOS1K4ASC41A | MCAL1286MC456MC456 | WLCBPE06SGP1724 | WLCGSD01AN0202_30-40 | WLCMBA01ED0117ED0117 |
| LW2-C494-D | MBCREOS1K4BSC41 | PPTLDT24B416U1B416C1 | WLCBPE06SGP1801 | WLCGSD01AN0203_00-10 | WLCMBA01ED0120ED0120 |
| LW2-C494-E | MBCREOS1K5ASC34 | PPTLDT24T2U1B204C1 | WLCBPE06SGP1824 | WLCGSD01AN0203_10-20 | WLCMBA01ED0126ED0126 |
| LW2-G086 | MBCREOS1K5ASCC34A | PPTLDT24T2U2B203C1 | WLCBPE06SGP1901 | WLCGSD01AN0203_30-40 | WLCMBA01ED0127ED0127 |
| LW2-G087 | MBCREOS1K5ASCC34B | RM11E-C033-A | WLCBPE06SGP1924 | WLCGSD01AN0204_00-10 | WLCMBA01ED0128ED0128 |
| LW2-G088 | MBCREOS1K6ASC31 | RM11E-C033-B | WLCBPE06SGP2001 | WLCGSD01AN0204_10-20 | WLCMBA01ED0129ED0129 |
| LW2-G090 | MBCREOS1K6CSCC31 | RM11E-C033-C | WLCBPE06SGP2024 | WLCGSD01AN0204_30-40 | WLCMBI02PASH06PASH06 |
| LW2-G091 | MBCREOS1K9ASC17 | RM11E-C033-D | WLCBPE06SGP2079 | WLCGSG04RAA02SD1019 | WLCMBI02SED01SED01 |
| LW2-G104 | MBCREOS1L1ASCC68A | RM11E-C041-B | WLCBPE06SGP2101 | WLCGSG04RAA04SD0506 | WLCMBI02SED03SED03 |
| LW2-G108 | MBCREOS1L1ASCC68B | RM11E-G043 | WLCBPE06SGP2124 | WLCGSG04RAA04SD0620 | WLCMBI02SED04SED04 |
| LW2-G157 | MBCREOS1L1BSCC56 | RM11E-G048 | WLCBPE06SS05 | WLCGSG04RAA05SD1020 | WLCMBI02SED05SED05 |
| LW2-G160 | MBCREOS1L2ASC52 | WLCACF05C13A | WLCBPE06SS20 | WLCGSG04RAA06SD0407 | WLCMBI02SED05SED51 |
| LW2-G161 | MBCREOS1L2ASC78 | WLCARI0820080811PRS12 | WLCBPE06SS21a | WLCGSG04RAA06SD0415 | WLCMBI02SED06SED06 |
| LW2-G276 | MBCREOS1L2BSC53 | WLCARI0820080930PRS01 | WLCBPE06SS23 | WLCGSG04RAA06SD1520 | WLCMBI02SED07SED07 |
| LW2-G278 | MBCREOS1L4ASC45 | WLCARI0820080930PRS02 | WLCBPE06SS24 | WLCGSG04RAA08SD0720 | WLCMBI02SED09SED09 |
| LW2-G284 | MBCREOS1L4BSC42 | WLCARI0820081029PRS05 | WLCCIF01020304020304 | WLCGSG04RAA09SD0516 | WLCMBJ99D09903D09903 |
| LW2-G288 | MBCREOS1L5ASCC35 | WLCARI0820081104PRS06 | WLCCIF01T01T01 | WLCGSG04RAA10SD1020 | WLCMBJ99D09904D09904 |

Table D1.3-32. Surface and Subsurface Sediment Samples Excluded from Summary Statistics Tables per Exclusion Criteria.

| Excluded Sediment Samples | Excluded Sediment Samples | Excluded Sediment Samples | Excluded Sediment Samples | Excluded Sediment Samples | Excluded Sediment Samples |
|---|---|---|---|---|---|
| LW2-G292 | MBCREOS1L6BSC32 | WLCARI0820081104PRS07 | WLCCIF01T02T02 | WLCGSG04RAA11SD1320 | WLCMBJ99D09907D09907 |
| LW2-G298 | MBCREOS1L8ASC19 | WLCARI0820081107PRS09 | WLCCIF01T03T03 | WLCGSG04RAA12SD1820 | WLCMBJ99D09908D09908 |
| LW2-G519-1 | MBCREOS1M1ASC56 | WLCARI0820081107PRS11 | WLCCIF01T04T04 | WLCGSG04RAA13SD1115 | WLCMBJ99D09909D09909 |
| LW2-G519-2 | MBCREOS1M1ASC69 | WLCARI08200811124.0 | WLCCPF01SD0101SD139F | WLCGSG04RAA14SD1014 | WLCMBJ99D09909D09953 |
| WLCMBJ99D09911D09911 | WLCRIL99HCSS15HCSS15 | WLCRIV99G10G10S14 | WLCT4C04VC24VC2435 | WLCT4G06T4PI02E | WLCT4J98HCS30HCS30 |
| WLCMBJ99D09912D09912 | WLCRIL99HCSS16HCSS16 | WLCRIV99G1112.514 | WLCT4C04VC24VC2457 | WLCT4G06T4PI02F | WLCT4J98HCS31HCS31 |
| WLCMBJ99D09913D09913 | WLCRIL99HCSS17HCSS17 | WLCRIV99G1238.540 | WLCT4C04VC24VC2479 | WLCT4G06T4PI02G | WLCT4J98HCS35HCS35 |
| WLCMBJ99D09914D09914 | WLCRIL99HCSS18HCSS18 | WLCRIV99G1248.550 | WLCT4E97T401HCT401 | WLCT4G06T4PI02H | WLCT4J98HCS37HCS37 |
| WLCMBJ99D09915D09915 | WLCRIL99HCSS19HCSS19 | WLCRIV99G125354.5 | WLCT4E97T401HCT401B | WLCT4G06T4PI032A | WLCT4J98HCS38HCS38 |
| WLCMBJ99D09916D09916 | WLCRIL99HCSS20HCSS20 | WLCRIV99G126869.5 | WLCT4E97T402HCT402 | WLCT4G06T4PI032B | WLCT4L01T4COMPCOMP |
| WLCMBJ99D09916D09951 | WLCRIL99HCSS22HCSS22 | WLCRIV99G127374.5 | WLCT4E97T402HCT402B | WLCT4G06T4PI032C | WLCT4L01T4VC01T4011A |
| WLCMBJ99D09917D09917 | WLCRIL99HCSS25HCSS25 | WLCRIV99G12G12S08 | WLCT4E97T403HCT403 | WLCT4G06T4PI03A | WLCT4L01T4VC01T4011B |
| WLCMBJ99D09918D09918 | WLCRIL99HCSS26HCSS26 | WLCRIV99G12G12S11 | WLCT4E97T403HCT403B | WLCT4G06T4PI03B | WLCT4L01T4VC01T4011C |
| WLCMBJ99D09919D09919 | WLCRIL99HCSS28HCSS28 | WLCRIV99G13A13AS02 | WLCT4G06T4B41101A | WLCT4G06T4PI03C | WLCT4L01T4VC02T4012A |
| WLCMBJ99D09920D09920 | WLCRIL99HCSS34CSS101 | WLCRIV99G13A13AS07 | WLCT4G06T4B41101B | WLCT4G06T4PI03D | WLCT4L01T4VC02T4012B |
| WLCMBJ99D09921D09921 | WLCRIL99HCSS34HCSS34 | WLCRIV99G13A15.518 | WLCT4G06T4B41102A | WLCT4G06T4PI03E | WLCT4L01T4VC02T4012C |
| WLCMBJ99D09923D09923 | WLCRIV99G01G01S03 | WLCRIV99G13ACG13AC | WLCT4G06T4B41102B | WLCT4G06T4PI03F | WLCT4L01T4VC03T4013A |
| WLCMBJ99D09924D09924 | WLCRIV99G01G01S06 | WLCRIV99G13B13BS07 | WLCT4G06T4B41103A | WLCT4G06T4PI03G | WLCT4L93T408-1T40801 |
| WLCMBJ99D09925D09925 | WLCRIV99G04G04S03 | WLCRIV99G13B13BS17 | WLCT4G06T4B41103AA | WLCT4G06T4PI03H | WLCT4L93T408-2T40802 |
| WLCMBJ99D09926D09926 | WLCRIV99G04G04S07 | WLCRIV99G13B13BS18 | WLCT4G06T4B41103B | WLCT4G06T4PI042A | WLCT4L93T408-3T40803 |
| WLCMBJ99D09926D09952 | WLCRIV99G04G04S08 | WLCRIV99G13B13BS19 | WLCT4G06T4B41103BB | WLCT4G06T4PI042B | WLCT5K99B50101B50101 |
| WLCMBJ99D09927D09927 | WLCRIV99G05.566.5 | WLCRIV99G1414S09A | WLCT4G06T4B41103C | WLCT4G06T4PI042C | WLCT5K99B50102B50102 |
| WLCMBJ99D09928D09928 | WLCRIV99G055/7879 | WLCRIV99G14G14S04 | WLCT4G06T4B41103CC | WLCT4G06T4PI042D | WLCT5K99B50103argeC1 |
| WLCMBJ99D09929D09929 | WLCRIV99G05G05S00 | WLCRIV99G14G14S06 | WLCT4G06T4B41103D | WLCT4G06T4PI042E | WLCT5K99B501C1B501C1 |
| WLCMBJ99D09933D09933 | WLCRIV99G05G05S04 | WLCRIV99G16G16S06 | WLCT4G06T4B41103E | WLCT4G06T4PI04A | WLCT5K99B503C1B503C1 |
| WLCMBJ99D09933D09950 | WLCRIV99G05G05S05 | WLCRIV99G16G16S10 | WLCT4G06T4B41104A | WLCT4G06T4PI04B | WLR048811.7C11.7C1 |
| WLCMBJ99D09937D09937 | WLCRIV99G05HCG05C | WLCRIV99G16G16S12 | WLCT4G06T4B41104AA | WLCT4G06T4PI04C | WLR048811.7C11.7C2 |
| WLCOFJ02480448040 | WLCRIV99G05HCG101 | WLCRIV99PA01PA01 | WLCT4G06T4B41104B | WLCT4G06T4PI04D | WLR048811.7C11.7C3 |
| WLCRFE95RF151115RF | WLCRIV99G06A06AS02 | WLCRIV99PA02PA02 | WLCT4G06T4B41104BB | WLCT4G06T4PI07A | WLR04888.1L8.1L |
| WLCRFE95RF161116RF | WLCRIV99G06A06AS04 | WLCT0F01T20101T2011A | WLCT4G06T4B41104C | WLCT4G06T4PI07B | WLR04888.3L8.3L |
| WLCRFE95RF171117RF | WLCRIV99G06B.565.5 | WLCT0F01T20101T2011B | WLCT4G06T4B41104D | WLCT4G06T4PI07C | WLR04888.7L8.7L |
| WLCRFE95RF181118RF | WLCRIV99G06B06BS02 | WLCT0F01T20101T2011C | WLCT4G06T4B41104E | WLCT4G06T4PI08A | WLR048881L90L81L90L |
| WLCRFE95RF181119RF | WLCRIV99G06B06BS13 | WLCT0F01T20102T2012A | WLCT4G06T4B41401A | WLCT4G06T4PI08B | WLR048883L87L83L87L |
| WLCRIJ9918COMP18COMP | WLCRIV99G06B3940.5 | WLCT0F01T20102T2012B | WLCT4G06T4B41401B | WLCT4G06T4PI08C | WLR04889.0C9.0C |
| WLCRIJ99CZ01CZ01 | WLCRIV99G06B51.553 | WLCT0F01T50101T5011A | WLCT4G06T4B41401C | WLCT4G06T4PI08D | WLR04889.0L9.0L |
| WLCRIJ99CZ02CZ02 | WLCRIV99G06B61.563 | WLCT0F01T50102T5012A | WLCT4G06T4B41401D | WLCT4G06T4PI08E | WLR04889.2L9.2L |
| WLCRIJ99CZ03CZ03 | WLCRIV99G06BCG06BC | WLCT0I98B501C1B501C1 | WLCT4G06T4B41401E | WLCT4G06T4PI08F | WLR04889.8L9.8L |
| WLCRIJ99CZ03CZ031 | WLCRIV99G07G07S03 | WLCT0I98B501C2B501C2 | WLCT4G06T4B41401F | WLCT4G06T4S304A | WLR0692WRGC01WRGC1 |
| WLCRIJ99CZ04CZ04 | WLCRIV99G07G07S05 | WLCT0I98ISC1ISC1 | WLCT4G06T4MD01A | WLCT4G06T4S304B | WLR0692WRGC02WRGC2B |
| WLCRIJ99CZ05CZ05 | WLCRIV99G07G07S06 | WLCT0I98ISC2ISC2 | WLCT4G06T4MD01B | WLCT4G06T4S304C | WLR0692WRGC02WRGC2T |
| WLCRIJ99CZ06CZ06 | WLCRIV99G07G07S19 | WLCT0K96C0304HCT201 | WLCT4G06T4MD01C | WLCT4G06T4S304D | WLR0692WRGC03WRGC3 |
| WLCRIJ99CZ07CZ07 | WLCRIV99G07G07S27 | WLCT0K96C0506HCT202 | WLCT4G06T4MD01D | WLCT4G06T4S304E | WLR0692WRGC04WRGC4 |
| WLCRIJ99CZ08CZ08 | WLCRIV99G07HCG07C | WLCT0K96C0506HCT2021 | WLCT4G06T4MD02A | WLCT4G06T4S304F | WLR0692WRGC05WRGC5 |
| WLCRIJ99VS18R1VS18R1 | WLCRIV99G08.545.5 | WLCT0K96C0708HCT203 | WLCT4G06T4MD02B | WLCT4J97104105B41603 | WLR0797WRGC30RGC30A |
| WLCRIJ99VS18R2VS18R2 | WLCRIV99G0856.558 | WLCT0K96HCGC01HCT101 | WLCT4G06T4MD02C | WLCT4J97CVC102B41601 | WLR0797WRGC31RGC31A |
| WLCRIL99HCSS05CSS100 | WLCRIV99G0876.578 | WLCT0K96HCGC02HCT102 | WLCT4G06T4MD02D | WLCT4J97CVC102B41604 | WLR0988LWR10LWR10 |
| WLCRIL99HCSS05HCSS05 | WLCRIV99G08G08S03 | WLCT0K96HCGC10HCT501 | WLCT4G06T4MD02E | WLCT4J97CVC103B41602 | WLR0988LWR10LWR101 |
| WLCRIL99HCSS06HCSS06 | WLCRIV99G08HCG08C | WLCT0K96HCSS09HCT502 | WLCT4G06T4PI01A | WLCT4J98HCS01HCS01 | WLR1196WRVC01WRVC01 |

Table D1.3-32. Surface and Subsurface Sediment Samples Excluded from Summary Statistics Tables per Exclusion Criteria.

| Excluded Sediment Samples | Excluded Sediment Samples | Excluded Sediment Samples | Excluded Sediment Samples | Excluded Sediment Samples | Excluded Sediment Samples |
|---|---|---|---|---|---|
| WLCRIL99HCSS07HCSS07 | WLCRIV99G08HCG100 | WLCT1L91TERM01112172 | WLCT4G06T4PI01B | WLCT4J98HCS02HCS02 | WLR1196WRVC02WRVC02 |
| WLCRIL99HCSS08HCSS08 | WLCRIV99G09.512.5 | WLCT1L91TERM01112173 | WLCT4G06T4PI01C | WLCT4J98HCS03HCS03 | WLR1196WRVC03WRVC03 |
| WLCRIL99HCSS09HCSS09 | WLCRIV99G091617.5 | WLCT4C04PS33331113 | WLCT4G06T4PI01D | WLCT4J98HCS09HCS09 | WLR1196WRVC04WRVC04 |
| WLCRIL99HCSS10HCSS10 | WLCRIV99G092122.5 | WLCT4C04PS33C33911 | WLCT4G06T4PI01E | WLCT4J98HCS10HCS10 | WLR1196WRVC05WRVC05 |
| WLCRIL99HCSS11HCSS11 | WLCRIV99G10G10S04 | WLCT4C04PS33VC3357 | WLCT4G06T4PI01F | WLCT4J98HCS18HCS18 | WLR1196WRVC06WRVC06 |
| WLCRIL99HCSS12HCSS12 | WLCRIV99G10G10S05 | WLCT4C04VC24241113 | WLCT4G06T4PI02A | WLCT4J98HCS18VC18S1 | WLRPT294GC123B |
| WLCRIL99HCSS13HCSS13 | WLCRIV99G10G10S08 | WLCT4C04VC24C24911 | WLCT4G06T4PI02B | WLCT4J98HCS18VC18S2 | WLRPT294GC123T |
| WLCRIL99HCSS14HCSS14 | WLCRIV99G10G10S10 | WLCT4C04VC24VC2401 | WLCT4G06T4PI02C | WLCT4J98HCS19HCS19 | WLRPT294GC4 |
| WLCRIL99HCSS15CSS102 | WLCRIV99G10G10S12 | WLCT4C04VC24VC2413 | WLCT4G06T4PI02D | WLCT4J98HCS24HCS24 | WR-WSI98SD0140 |
| | | | | | WR-WSI98SD0290 |
| | | | | | WR-WSI98SD0320 |
| | | | | | WR-WSI98SD0640 |
| | | | | | WR-WSI98SD0650 |
| | | | | | WR-WSI98SD0760 |
| | | | | | WR-WSI98SD0790 |
| | | | | | WR-WSI98SD0820 |
| | | | | | WR-WSI98SD1090 |
| | | | | | WR-WSI98SD1120 |

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D1.4
# COMPARISON AND USE OF PCB AROCLOR AND CONGENER DATA

**FINAL**

February 8, 2016

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# APPENDIX D1.4 COMPARISON AND USE OF PCB AROCLOR AND CONGENER DATA

## D1.4.1 Introduction

Depending on the objectives of the specific investigation, two types of PCB analyses were used for Portland Harbor RI samples: 1) identification and quantification of PCBs as Aroclors using gas chromatography with electron capture detection (most commonly by USEPA Method 8082), and 2) direct analysis of PCB congeners. PCB congener analysis is generally performed using high-resolution gas chromatography with high-resolution mass spectrometry (USEPA Method 1668A); however, some data using method 8082 for congeners are included in the Portland Harbor SCRA Database (Tetra Tech 2006). In order to provide a clear representation of the patterns and trends of PCBs in the Study Area, PCB totals based on both congeners and Aroclors are displayed together on maps and graphs in Section 5 for sediments and biota. As described below, the PCB congener analysis is preferred when available and should be given greater weight in any analysis. However, both sets of data can be useful for generally assessing the spatial distribution of PCBs and combining both types of data allows presentation of the most complete and representative data set.

The numbers of available samples from the Study Area and adjacent and upstream areas that were analyzed for Aroclors and PCB congeners are as follows:

| Matrix | Number of Samples Analyzed for Aroclors | Number of Samples Analyzed for PCB Congeners | Number of Samples Analyzed for Both Aroclors and PCB Congeners |
|---|---|---|---|
| Surface Sediment | 1,514 | 299 | 290 |
| Subsurface Sediment | 1,539 | 151 | 149 |
| Biota | 170 | 369 | 89 |
| Sediment Trap Samples | 48 | 52 | 48 |

This appendix provides a description of the analytical methods used for Aroclors and PCB congeners with supporting information to provide context for these methods, followed by a comparison and evaluation of the total PCB data obtained by the two methods.

## D1.4.2 PCB Analysis Methods

In North America the primary source of PCBs to the environment was the industrial use of Aroclors (Sather et al. 2001). Aroclor® was the trade name for various PCB mixtures produced by the Monsanto Corporation. The nine most commonly analyzed Aroclors are Aroclors 1221, 1232, 1016, 1242, 1248, 1254, 1260, 1262, and 1268. The last two numbers in the Aroclor name indicate the percent of chlorine, by weight, in the technical mixture. Aroclor 1016 is an exception to this rule, with 41 percent chlorine by weight. The PCB congener (and homolog group) distribution of each Aroclor is unique (Newman et al. 1998), as shown in Appendix D1.5, Figure D1.5-1.

Historically, most PCB analyses have been based on Aroclors, reflecting the primary source of the PCBs. Aroclor identification is generally performed by comparing the chromatogram of a sample to chromatograms of Aroclor standards. Each Aroclor has a PCB congener composition that yields a characteristic pattern of peaks. If the PCB pattern observed in the sample matches an Aroclor standard, the Aroclor is identified as present in the sample and quantified.

Several factors complicate Aroclor analyses, including "weathering," differences between Aroclor formulations and production lots, and the presence of multiple Aroclors and chemical interferents. "Weathering" can modify Aroclor patterns in samples, including processes such as partitioning, photolysis, and biodegradation. In general, the more chlorinated the PCB congener, the more persistent it is in the environment. However, various "weathering" processes may remove less chlorinated or more highly chlorinated congeners (Erickson 1997); conversely transport processes may enrich some congeners. Additionally, other "weathering" processes may selectively remove congeners from an Aroclor pattern without production of new congeners (Frame et al. 1996). Photolytic and anaerobic microbial dechlorination can lead to the presence of congeners not originally present in Aroclors. The congener composition of PCBs found in environmental samples frequently differs greatly from the source Aroclors (Sather et al. 2003), and these changes can affect the ability of the laboratory to accurately identify or quantify the PCBs.

Analyses of the PCB congener distributions in Aroclors have also shown that different production lots of an Aroclor can have different congener compositions (Frame et al. 1996). The differences in homolog distributions between the lots were relatively minor; however, differences in PCB congener distributions were more significant. These differences can introduce error to the quantification of Aroclors to the extent that the standards and released Aroclors are dissimilar in PCB composition.

It is also common in environmental samples to encounter interferences from non-PCB sources or multiple Aroclors. The presence of such background interferences or effects of "weathering," or both, can make it difficult to differentiate between Aroclors with similar chlorine content, such as Aroclors 1016 and 1242, 1242 and 1248, or 1260 and 1262. The co-occurrence of Aroclors in a sample can also make identification of Aroclor patterns difficult (USEPA 2007).

In addition, the presence of multiple Aroclors, weathered PCBs, and interferences may cause the laboratory to elevate detection limits for affected Aroclors. This was the case with a number of samples collected for the Portland Harbor RI/FS. For the RI data set, non-detected Aroclors are treated as zero in the summation to calculate total PCB Aroclors (if no Aroclors are detected, then the highest detection limit is used for the total PCB detection limit). If PCBs are present at a concentration below the elevated Aroclor detection limit but above the regular detection limit, the total Aroclor value may underestimate total PCBs.

Quantification of PCBs as Aroclors is based on the assumption that the PCB congeners in the sample are present in the same ratio as in the Aroclor that is used as a standard. As a result, when a sample has undergone substantial modification due to "weathering," or when two or more source Aroclors are present that have congeners in common, the quantification of the PCBs as Aroclors may not fully reflect the concentration of PCB congeners present in the sample. The bias may be high or low, depending on whether the peaks used to quantify the Aroclors represent congeners that are depleted or enriched relative to their concentration in the original source Aroclor. The magnitude and direction of the bias are also affected by the extent to which the ratio between peaks used to quantify the Aroclors and the remaining peaks has been altered. This is a source of error that is inherent in the method and can result in differences between total PCBs analyzed as Aroclors or by direct measurement of congeners. Nevertheless, Aroclor analyses are based on established methodology and are widely used. Total Aroclor concentrations are considered to be sufficiently reliable for RI/FS purposes.

The analysis of PCB congeners is more expensive and time-consuming than Aroclor analysis, but it is less affected by the factors described above. Each congener of interest is identified and quantified separately. When all 209 congeners are analyzed, any congeners that were not initially present in the Aroclors, or originated from other sources, are also accounted for. PCB congener analysis is usually performed using mass spectrometry, which is better able to differentiate PCBs from non-PCB interferences and is therefore less influenced by the presence of other chemicals. Additionally, the method employed for the analysis of PCB congeners is more sensitive than the Aroclor method and will detect congeners at lower levels than the Aroclor method. Examples of this sensitivity are seen in the RI data set, which includes 90 samples (65 sediments, 18 sediment trap samples, and 7 biota) with detections for PCB congeners when Aroclors were undetected.

The total PCB congener and total Aroclor data for sediments and biota were combined into a single data set to facilitate characterization of PCBs in the Study Area. These total PCB data were used to create Maps 5.2-2 and 5.2-3a-hh. Due to the laboratory method and analytical considerations discussed above (and with the exception noted below), the total PCB data set includes the result for total PCB congeners for each sample when available, and the result for total Aroclors when no total PCB congener data are available. However, total Aroclor data were selected to represent total PCBs for Round 2A beach sediment samples even though congener analyses were also conducted, because the beach samples were only analyzed for coplanar PCB congeners, which constitute a small fraction of Aroclor-related congeners. Congener analyses for the remaining LWG sediment samples included all 209 congeners. Total PCB data for the Study Area are available for 1,184 surface and 1,325 subsurface samples. Most of the PCB data are based on Aroclor analyses (Tables 5.2-1 and 5.2-2).

### D1.4.3 Comparison of Total Aroclor and Total PCB Congener Concentrations

The total Aroclor and total PCB congener results were evaluated to determine the comparability of data obtained by the two PCB methods. Scatter plots displaying PCB concentrations by river mile within the Study Area are provided in Figures D1.4-1a–b. In general, the high total Aroclor concentrations correspond well with the high total congener concentrations spatially; the two data sets are consistent in their representation of the distribution of total PCBs and identification of areas of high PCB concentrations.

The concentrations obtained using the two PCB methods were compared by regressing the total congener concentration on the total Aroclor concentration for samples that were analyzed by both methods, as shown in Figure D1.4-2. Data were log-transformed to satisfy the assumptions of normality for linear regression analysis. For sediments, data were available from RM 1.4 to 18.8 and Multnomah Channel, and for tissues, data were available from RM 2.4 to above the falls. Sediment trap data were available from RM 1.8 to 15. The numbers of samples used in these plots are fewer than the sample counts tabulated above, as samples with non-detects are excluded. Biota (coefficient of determination [$r^2$] = 0.87) showed the best correlation, with subsurface sediments showing the poorest ($r^2$ = 0.48). For all data assessed together, $r^2$ was 0.70. The slopes of the regression formulae are less than 1 for all matrices except sediment traps, indicating that the total Aroclor data provide a higher total PCB estimate overall than total PCB congener data. This is not unexpected as "weathering" processes or the presence of multiple Aroclors or chemical interferences can lead to a high bias in total Aroclor results.

The regressions of PCB Aroclor and congener concentrations were not significantly different for surface and subsurface sediment data (P = 0.42). These two data sets were analyzed together (N = 360) and their regression ($r^2$ = 0.88, P < 0.01) statistically compared to the 1:1 line (Figure D1.4-3). This analysis indicated that total Aroclor data tend to overpredict (using the log-log linear regression) total PCB congeners in concentrations below ~750 μg/kg (total PCB Aroclors) and may result in underprediction above this threshold.

For the surface sediment data, an in-depth Simulation-Extrapolation procedure was performed to assess the effect of measurement error of Aroclor concentrations on the regression-predicted values of total PCB congener concentrations. The methods and results of this analysis are presented in Attachment D1.4-1. In short, this analysis highlights increasing uncertainty in the predictive power of a linear model between total Aroclor and congeners in surface sediment with increasing total Aroclor concentrations.

### D1.4.4 QC Sample Variability

Several types of quality control (QC) samples were collected to assess field and laboratory precision, including field duplicates (i.e., post-homogenization split samples) for Aroclors and PCB congeners, laboratory duplicates (separate analyses of the same

sample) for PCB congener analyses, and matrix spikes and matrix spike duplicates (MS/MSDs) for Aroclor analyses. The variability of these QC samples provides a measure of the extent to which the variability observed in the Aroclor and congener data may be attributed to field and laboratory procedures. Scatter plots of field and laboratory duplicate concentrations are provided in Figures D1.4-4 and D1.4-5a–b. These figures include samples collected by the LWG for which Aroclors and PCB congeners were both detected. A summary of the relative percent difference values for environmental and QC samples is provided in Table D1.4-1.

Among the different levels of replication illustrated in Figures D1.4-4 through D1.4-5a–b and summarized in Table D1.4-1, laboratory duplicate, MS/MSD, and field duplicate results all showed better correlation overall than total PCBs analyzed as Aroclors and congeners in the same samples. One would expect the correlation to be highest between MS/MSDs and laboratory duplicates because the same sample jar and the same laboratory and method are used for these analyses. Field duplicates were collected in different jars, as were the samples for the two different PCB analyses for this investigation, but the same laboratory analyzed the field duplicates, often in the same processing batch. Samples for Aroclor and PCB congener analyses, however, were analyzed from different jars and by different laboratories using different extraction and cleanup procedures. This combination of conditions would be expected to yield greater variability between Aroclor and PCB congener results than MS/MSDs, laboratory duplicates, and field duplicates for each of the PCB analyses. Nonetheless, it can be seen in Table D1.4-1 that a sizable portion of the measured variability can be attributed to the environmental sample collection and analysis process.

While total Aroclor and total congener results generally track each other across the entire data set, there is a small subset of samples where the totals measured by the two methods diverge dramatically. Aroclors and PCB congeners were detected in a total of 535 samples, and the total Aroclor and total congener concentrations differed by more than a factor of 10 in 11 (or 2 percent) of these samples. These samples are listed in Table D1.4-2. For these 11 samples, the differences between the results by the two PCB methods are markedly greater than would be expected based on differences between the two PCB methodologies.

To investigate these differences, the laboratory data were examined for all samples with greater than ten-fold differences between reported total PCB Aroclor and congener concentrations, and for surface sediment samples with differences greater than five-fold, to determine whether a chemical interference or laboratory error could be identified. Although no obvious errors or consistent problems were identified, at least a portion of the differences between results could be attributed to one or more of the factors discussed above that commonly affect Aroclor quantification. These included chemical interferences, including TPH, PAHs, and DDx; the presence of multiple Aroclors, which affected the quantification of individual Aroclors; the presence of weathered PCBs with low chlorination levels that don’t resemble an Aroclor; and PCB concentrations close to the reporting limit, where quantification is less precise than at

higher concentrations. For most of these samples, however, these interferences did not appear to be sufficient to fully account for the large differences found between the total Aroclor and total PCB congener results. The differences are also likely to be the result of sample inhomogeneities related to the small-scale distribution of PCBs in the sediment, possibly including the presence of particles of materials such as paint, soot, or other organic particles, droplets, or colloids with associated PCBs.

Measurement error in Aroclor concentrations also increases the uncertainty of a linear regression prediction of congener concentrations (for example, in samples where only Aroclors were measured). This effect was examined and quantified using a simulation-extrapolation procedure detailed in Attachment D1.4-1.

### D1.4.5 Conclusion

PCB congener data better represent total PCB concentrations than Aroclor data, as the congener method is less affected by "weathering," non-PCB interferences, and subjective Aroclor identifications. However, both methods represent the total PCB concentrations well, and measured total PCB concentrations are fairly comparable between methods in most cases (especially when measurement error is considered). Overall, results for total PCB congeners and Aroclors agreed within a factor of 2 for 72 percent of samples and within a factor of 4 for 90 percent of the samples. As the Portland Harbor SCRA database includes both total PCB congener results and total Aroclor results, it is useful to combine them to represent the spatial distribution of PCBs in the Study Area as fully as possible. In addition, the analysis of sediment data indicated that total Aroclor data overpredict total PCB congeners in concentrations below ~750 µg/kg total Aroclors and may result in underprediction above this threshold. Therefore, the use of Aroclor data to represent total PCBs will result in similar or more conservative site management decisions with a much larger spatial and temporal coverage than the use of congener data alone.

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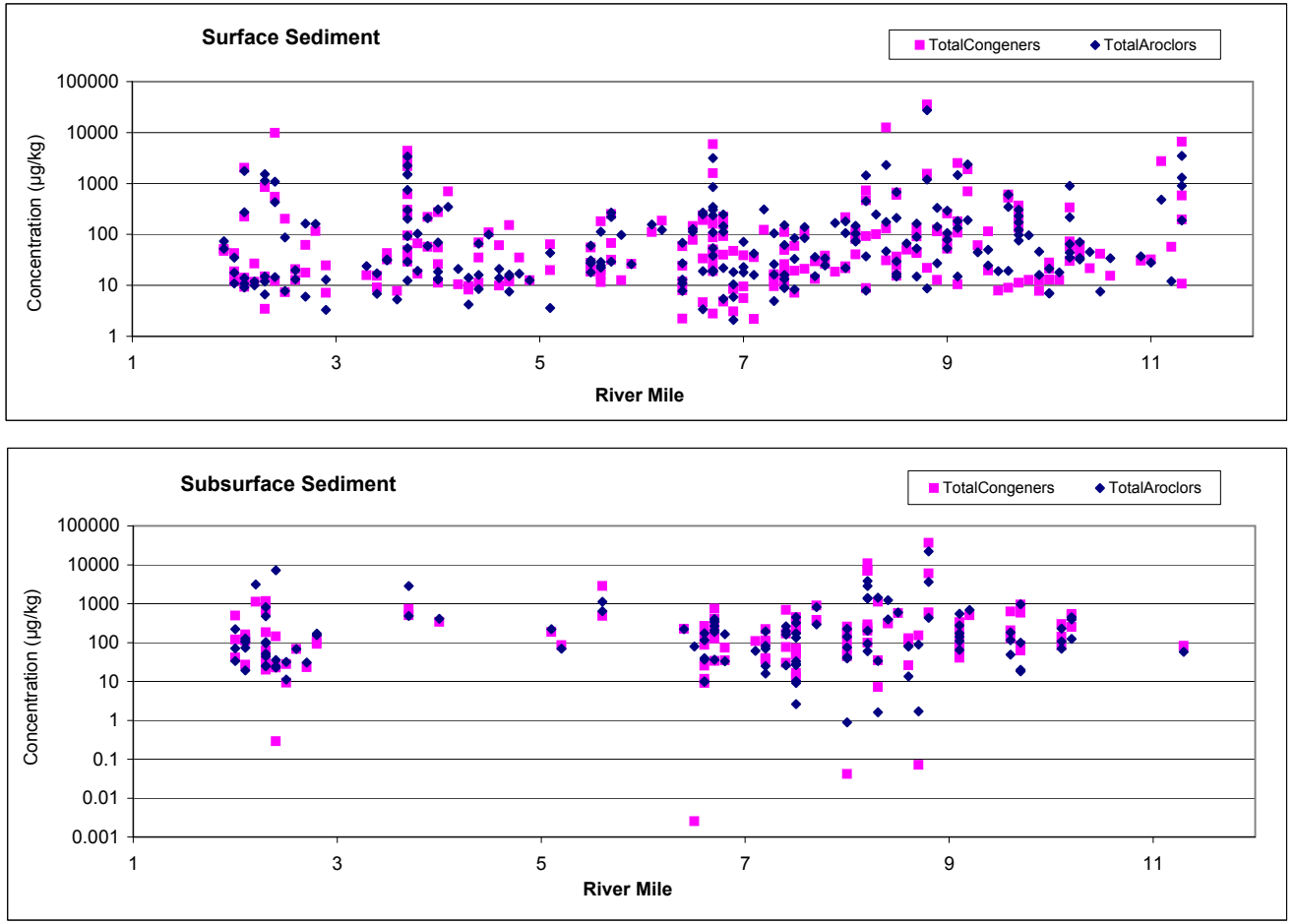



**Figure D1.4-1a**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plots of Total Aroclor and Total PCB Congener Concentrations
In Study Area Sediment, Biota, and Sediment Trap
Samples Analyzed by Both Methods

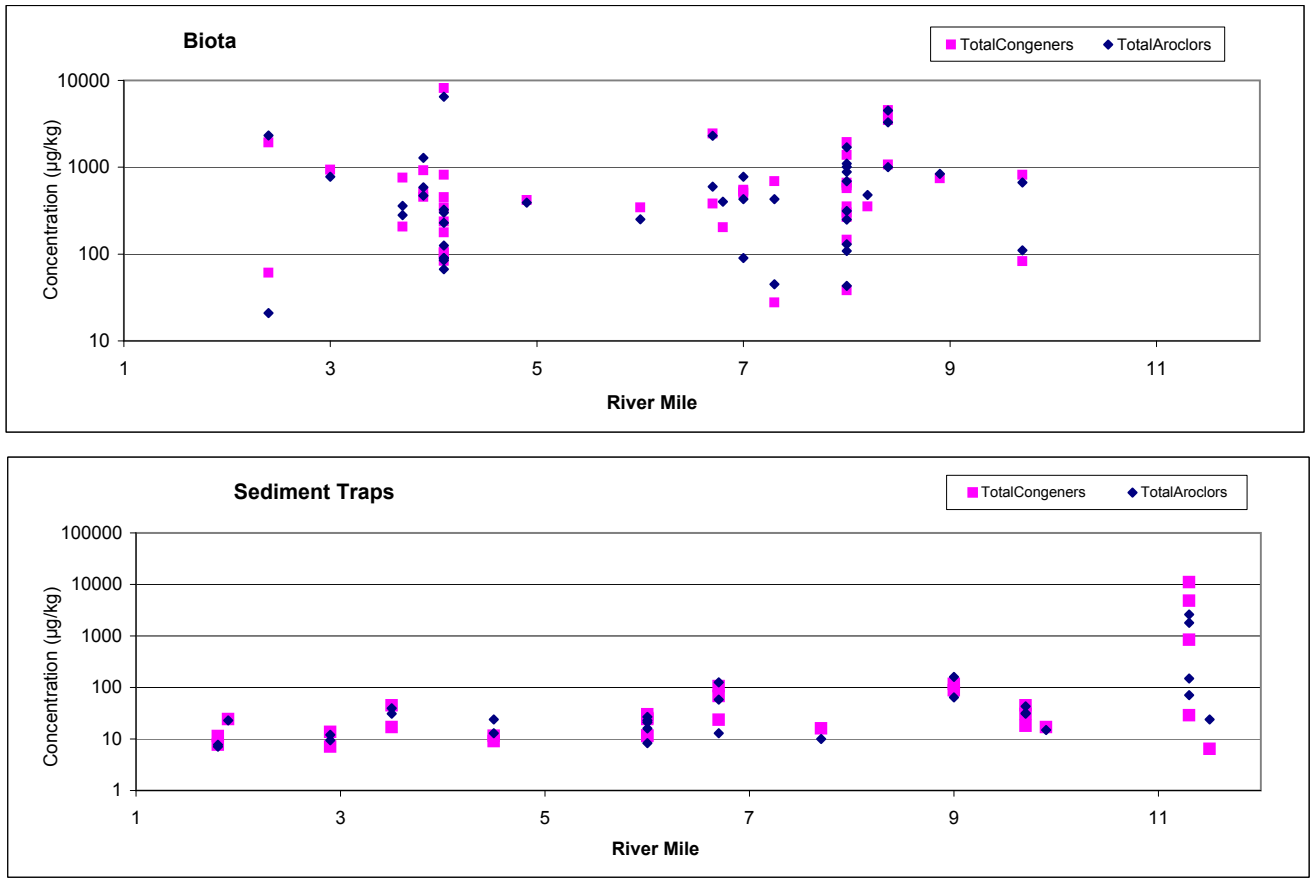
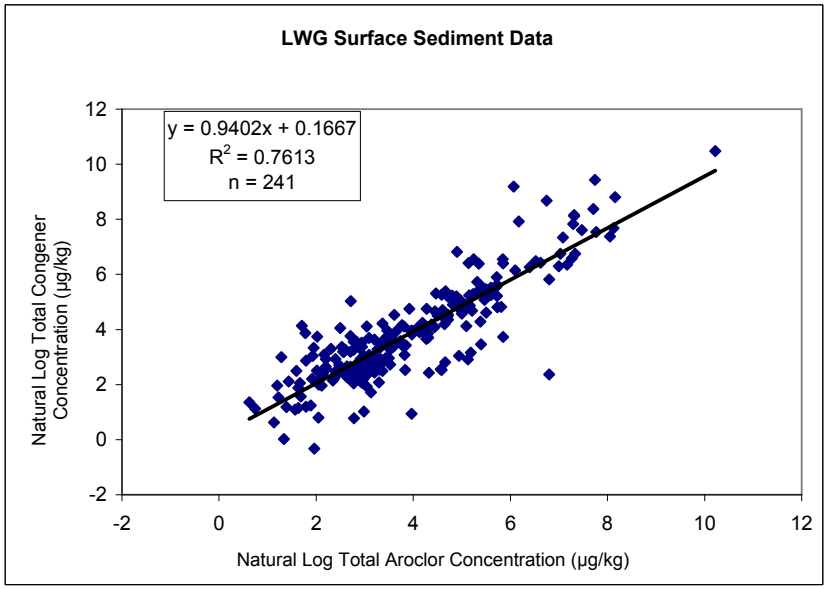
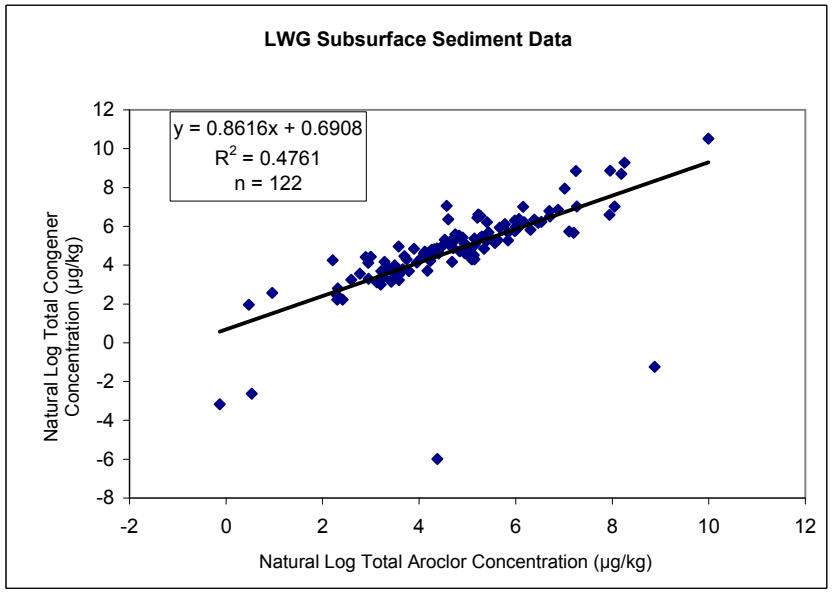
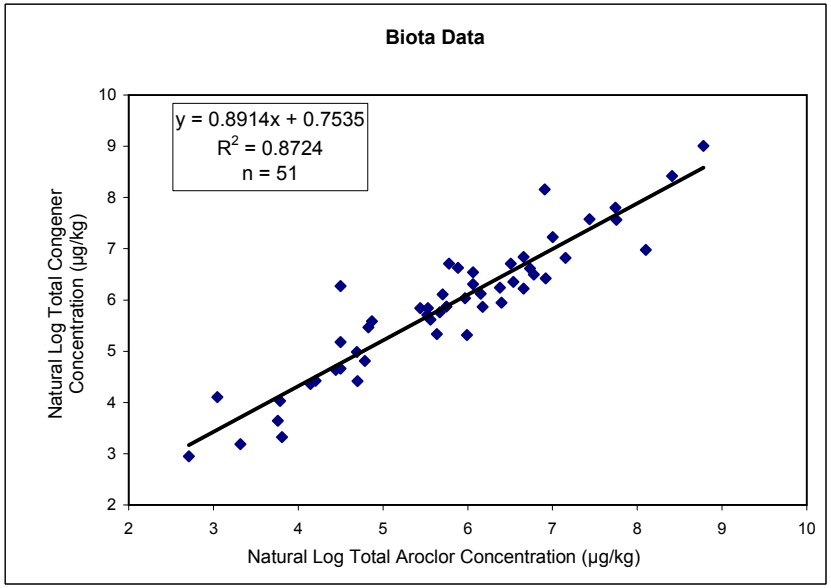



**Figure D1.4-1b**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plots of Total Aroclor and Total PCB Congener Concentrations
In Study Area Sediment, Biota, and Sediment Trap
Samples Analyzed by Both Methods



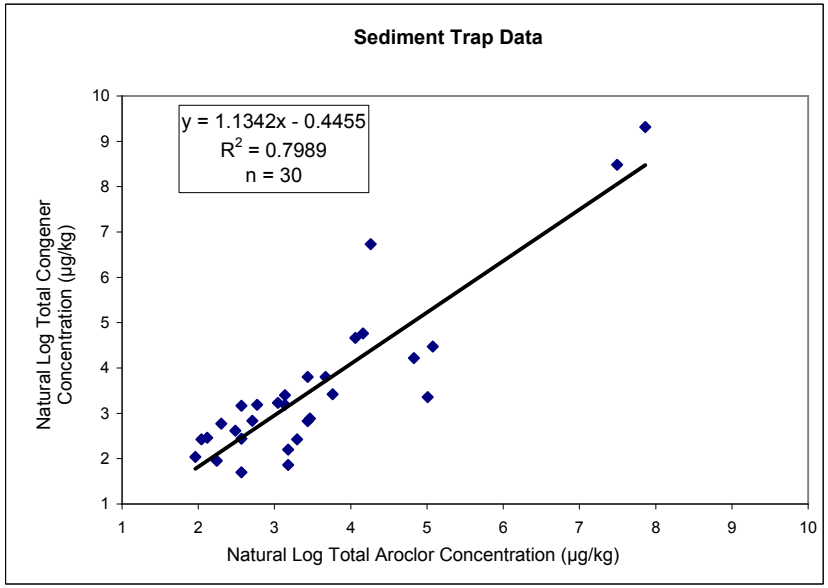
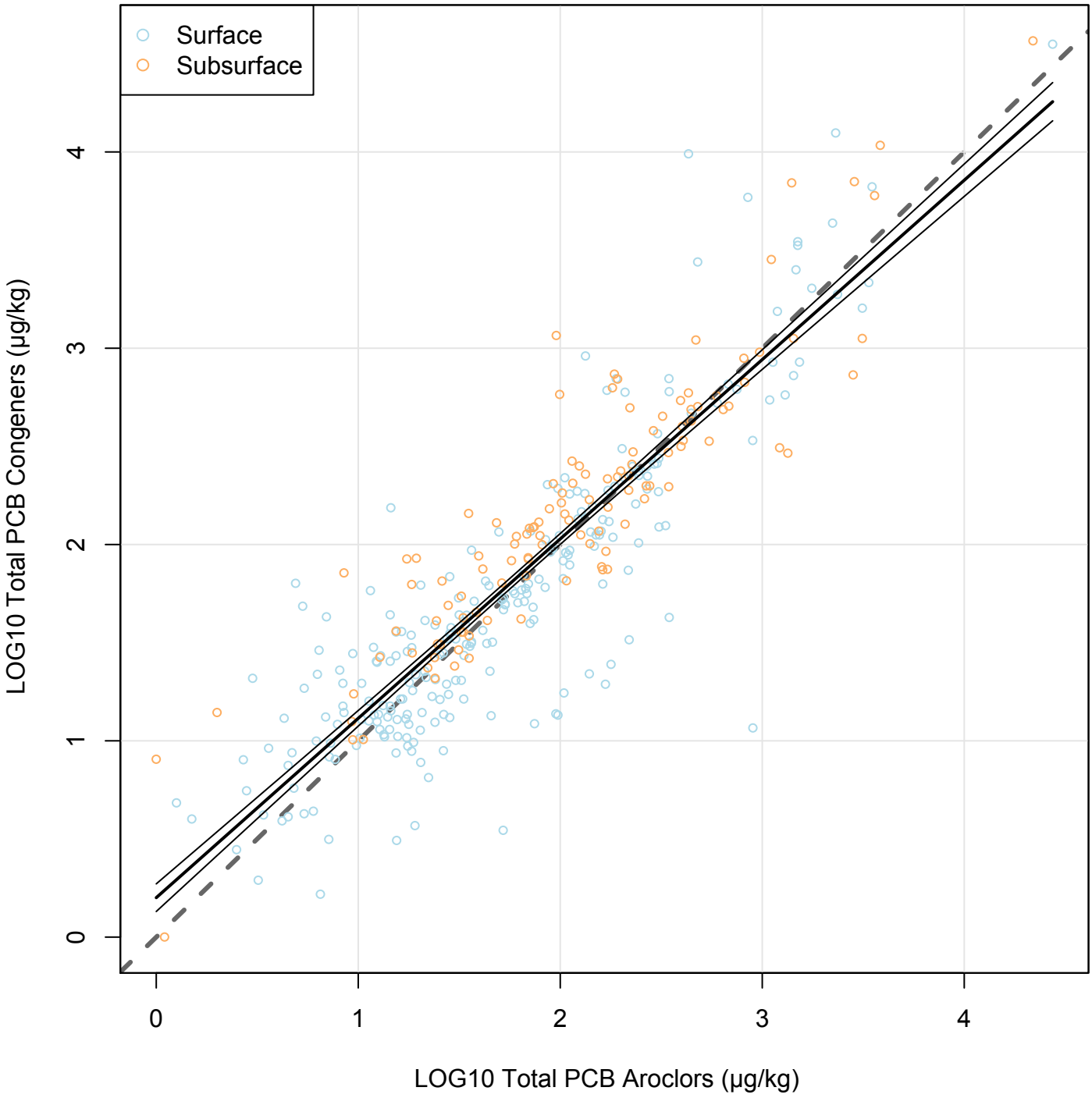
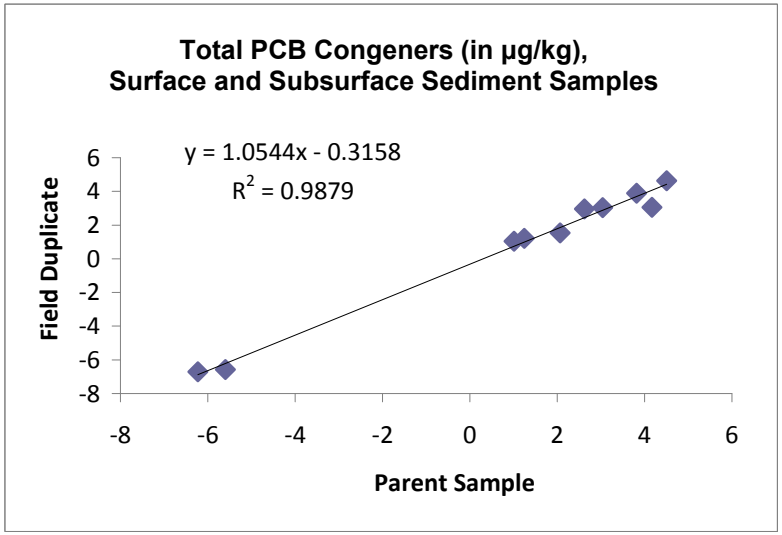



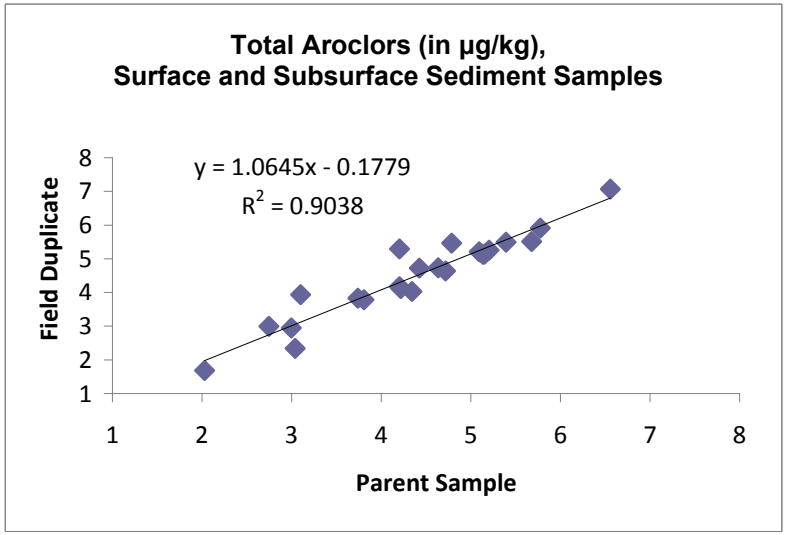

**Figure D1.4-2**
Portland Harbor RI/FS
Remedial Investigation Report
Correlation of Aroclors and PCB Congeners in
Surface and Subsurface Sediment, Sediment Traps, and Biota

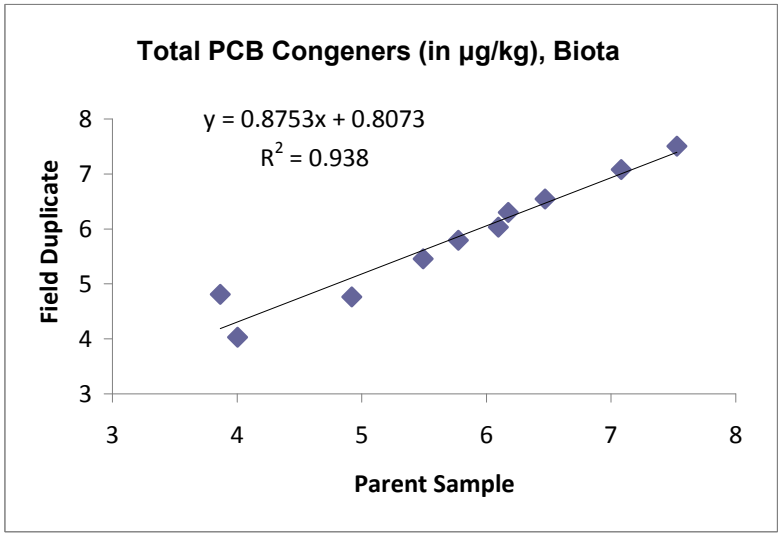



Note: 95% CI (solid lines) and 1:1 line (dashed)

**Figure D1.4-3**
Portland Harbor RI/FS
Remedial Investigation Report
Regression of Total PCB Congeners and Aroclors



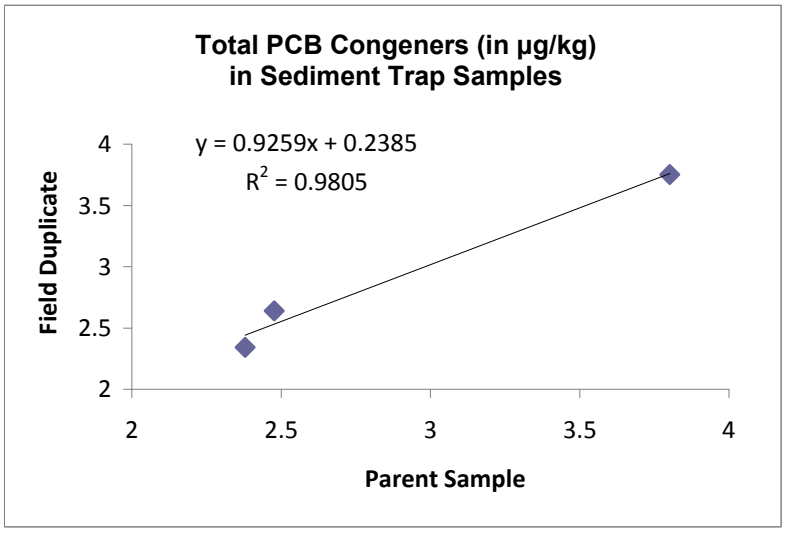
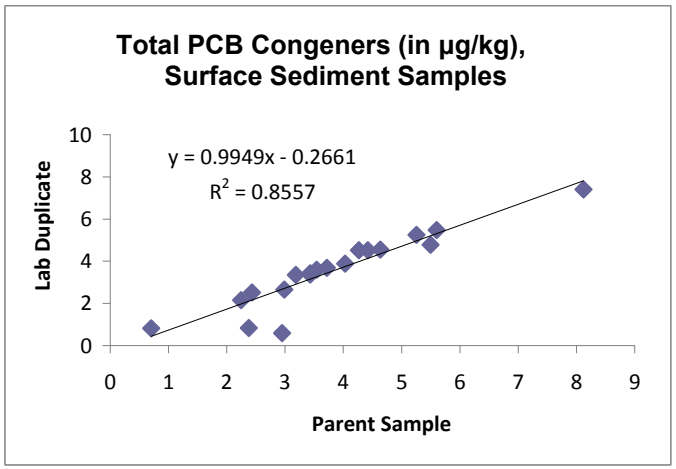
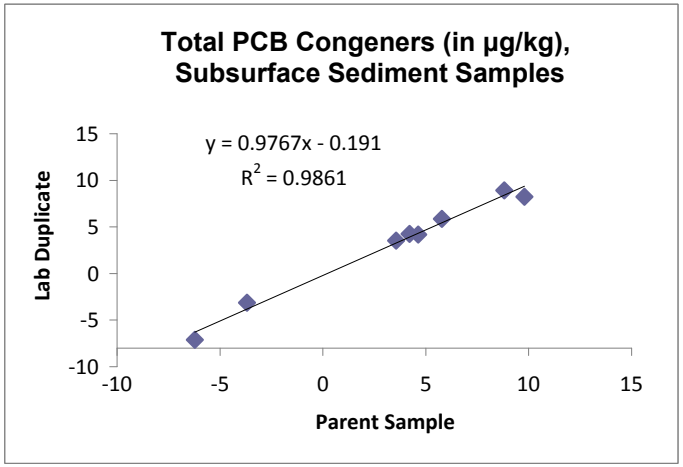
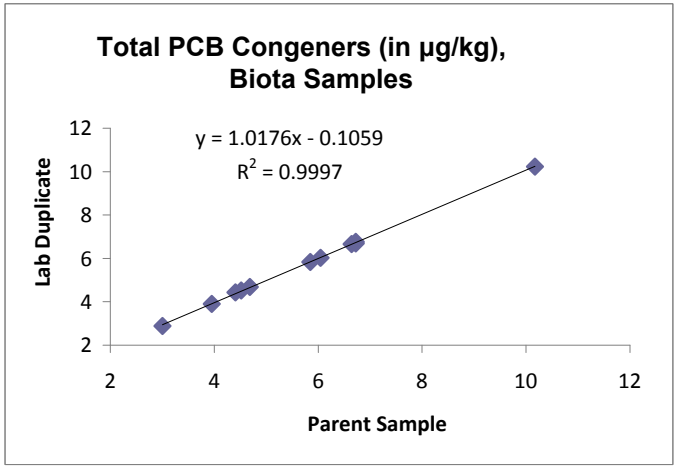




**Figure D1.4-4**
Portland Harbor RI/FS
Remedial Investigation Report
Correlation of Total PCBs in Field Duplicate Samples



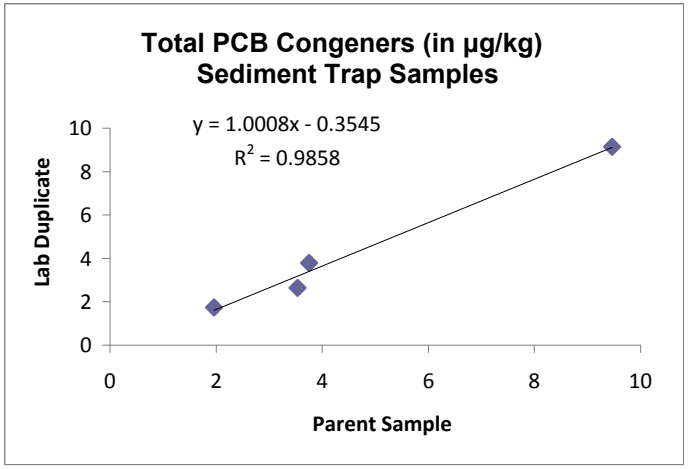
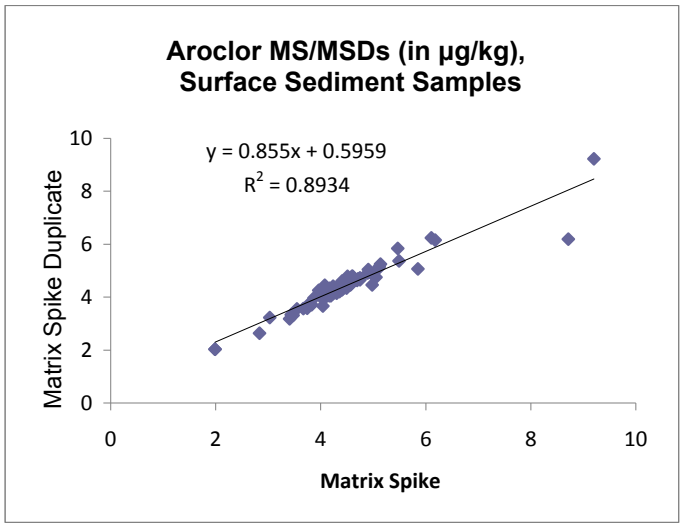
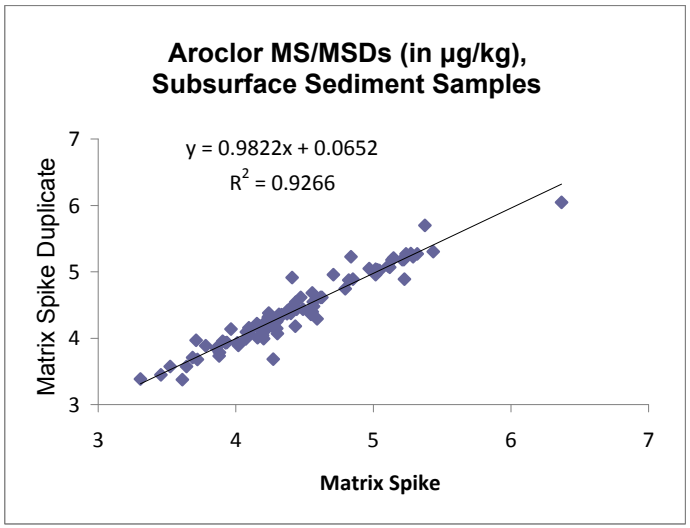
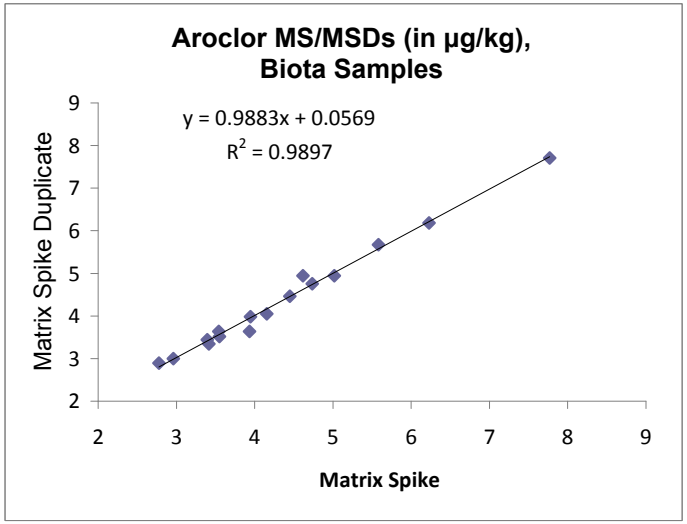




**Figure D1.4-5a**
Portland Harbor RI/FS
Remedial Investigation Report
Correlation of Total PCBs in Laboratory Duplicate Samples



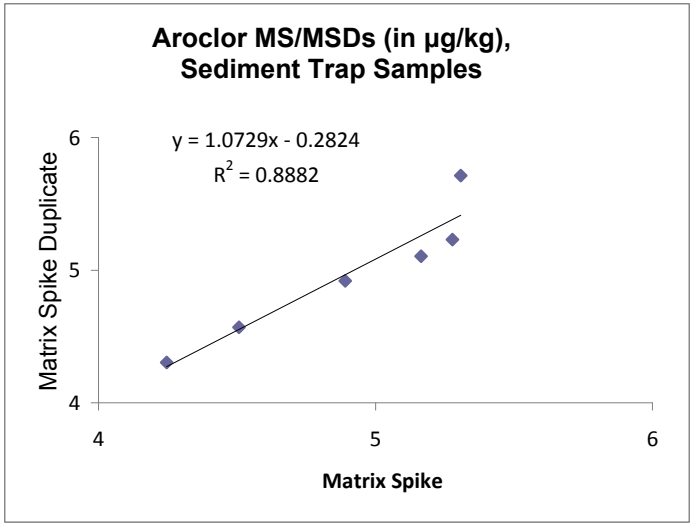




**Figure D1.4-5b**
Portland Harbor RI/FS
Remedial Investigation Report
Correlation of Total PCBs in MS/MSD Samples

Table D1.4-1. Samples with Greater Than Ten-Fold Difference Between Total Aroclor and Total PCB Congener Results.

| Location | Sample ID | River Mile | Total Aroclors (µg/kg) | Total Congeners (µg/kg) |
|---|---|---|---|---|
| **Surface Sediment** | | | | |
| G025 | LW2-G025 | 2.4 | 432 T | 9780 T |
| G147 | LW2-G147 | 4.7 | 15.1 T | 153 T |
| GCRSP11E | LW3-GCRSP11E | 11.3 | 900 T | 10.7 JT |
| GCA12W | LW3-GCA12W-C00 | 11.9 | 5.5 JT | 62.5 JT |
| UG02C | LW3-UG02C | 16.7 | 52.8 JT | 2.57 JT |
| **Subsurface Sediment** | | | | |
| C025-1 | LW2-C025-C1 | 2.4 | 7170 JT | 0.291 JT |
| C019-1 | LW2-C019-C1 | 2.9 | 96.2 JT | 1160 JT |
| C266 | LW2-C266-C | 6.5 | 79.5 JT | 0.00252 JT |
| C703 | LW3-C703-D | 8 | 0.88 JT | 0.0418 JT |
| C724 | LW3-C724-E | 8.7 | 1.7 JT | 0.0719 JT |
| **Sediment Trap Samples** | | | | |
| ST007 | LW3-ST-2007 | 11.3 | 71 JT | 840 T |

**Notes:**

Qualifier Definitions:

J - The associated numerical value is an estimated quantity.

Descriptor Definition:

T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

PCB - polychlorinated biphenyl

Table D1.4-2. Summary of RPDs and Ratios for Total Aroclors and Total PCB Congeners in Field Samples and Field and Laboratory Duplicates.

| Sample Type | Number of Samples | Maximum RPD [a] | Mean RPD [a] | Median RPD [a] | 95th percentile | Minimum Ratio [b] | Maximum Ratio [b] | Mean Ratio [b] | Median Ratio [b] |
|---|---|---|---|---|---|---|---|---|---|
| **Samples Analyzed by Both PCB Methods** | | | | | | | | | |
| ***Total Aroclors and Total PCB Congeners*** | | | | | | | | | |
| Surface Sediment | 241 | 195% | 53% | 41% | 152% | 0.044 | 84 | 1.9 | 1.1 |
| Subsurface Sediment | 122 | 200% | 53% | 45% | 141% | 0.083 | 31548 | 462 | 0.84 |
| Biota | 51 | 142% | 35% | 24% | 100% | 0.17 | 3.1 | 0.98 | 0.87 |
| Sediment Trap Samples | 30 | 169% | 55% | 51% | 131% | 0.085 | 5.2 | 1.3 | 0.88 |
| **Field Duplicates** | | | | | | | | | |
| ***Total Aroclors*** | | | | | | | | | |
| Surface Sediment | 16 | 79% | 23% | 13% | 70% | 0.50 | 2.3 | 1.1 | 1.0 |
| Subsurface Sediment | 11 | 199% | 55% | 29% | 180% | 0.11 | 331 | 31 | 1.1 |
| Biota | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Sediment Trap Samples | 3 | 39% | -- | -- | -- | 0.68 | 1.2 | -- | -- |
| ***Total PCB Congeners*** | | | | | | | | | |
| Surface Sediment | 8 | 102% | 27% | 11% | 84% | 0.33 | 1.4 | 0.94 | 1.0 |
| Subsurface Sediment | 2 | 91% | -- | -- | -- | 0.37 | 0.61 | -- | -- |
| Biota | 10 | 88% | 14% | 5% | 56% | 0.85 | 2.58 | 1.16 | 1.01 |
| Sediment Trap Samples | 3 | 16% | -- | -- | -- | 0.95 | 0.96 | -- | -- |
| **Laboratory Precision** | | | | | | | | | |
| ***Total Aroclors, MS/MSDs*** | | | | | | | | | |
| Surface Sediment | 87 | 170% | 13% | 9% | 37% | 0.08 | 1.5 | 0.98 | 0.98 |
| Subsurface Sediment | 92 | 57% | 9% | 5% | 32% | 0.56 | 1.7 | 1.00 | 1.00 |
| Biota | 16 | 32% | 9% | 7% | 30% | 0.74 | 1.4 | 1.0 | 1.0 |
| Sediment Trap Samples | 6 | 40% | 11% | 6% | 32% | 0.94 | 1.5 | 1.1 | 1.0 |
| ***Total PCB Congeners, Laboratory Duplicates*** | | | | | | | | | |
| Surface Sediment | 19 | 166% | 31% | 12% | 133% | 0.094 | 1.3 | 0.86 | 0.94 |
| Subsurface Sediment | 9 | 130% | 44% | 43% | 111% | 0.21 | 1.7 | 0.90 | 1.0 |
| Biota | 11 | 11% | 3% | 2% | 9% | 0.90 | 1.1 | 1.0 | 1.0 |
| Sediment Trap Samples | 4 | 84% | 36% | 27% | 76% | 0.41 | 1.0 | 0.74 | 0.76 |

**Notes:**

[a] RPD is the difference between duplicate results divided by the average of the duplicate results, expressed as a percentage

[b] Ratio of the total Aroclors concentration to the total PCB congeners concentration for samples analyzed by both methods; ratio of duplicate to parent sample for field and laboratory duplicates and MS/MSD.

MS/MSD - matrix spike/matrix spike duplicate
PCB - polychlorinated biphenyl
RPD - relative percent difference

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D1.4, ATTACHMENT D1.4-1
# MEMORANDUM REGARDING PREDICTED CONGENER CONCENTRATIONS IN LOWER WILLAMETTE RIVER SURFACE SEDIMENTS

**FINAL**

February 8, 2016

TerraStat
CONSULTING GROUP

*Quantitative Analysis for the Natural Sciences*
10636 Sand Point Way NE
Seattle, WA 98125
206-362-3299

# MEMORANDUM

To: Gene Revelas, Integral Consulting
From: Alice Shelly and Lorraine Read
Subject: Predicted Congener Concentrations in Lower Willamette Surface Sediments
Date: December 15, 2008

This memorandum describes the process we used to generate predicted total congener concentrations from sampled total Aroclor concentrations in surface sediments in the Lower Willamette River.

The sampled surface sediment total Aroclor and total congener concentrations are right-skewed, and the variance in the regression relationship increases with concentration (see Figure 1). Natural log transformations of both variables results in a clearly linear relationship with homogeneous variance (see Figure 2). Sometimes this model is not favored because of the lack of clarity as to proper back-transformation methods and the coverage of a back-transformed confidence limit. However, we believe this model provides the best fit to these data and will provide the best predictions for total congener concentrations for sites where only Aroclors were measured.

There are two issues that preclude simple linear regression predictions for these data: measurement error in total Aroclor concentrations and the back-transformation issue. Both of these issues result in bias to the predictions from the regression. We use the Simulation-Extrapolation (*Simex*; Cook and Stefanski, 1994) method to address measurement error, and the Bradu-Mundlak correction to eliminate back-transformation bias.

Naïve Model

The model for the linear least squares ln-ln regression is:

$$E(C) = 0.624A^{1.04}, \qquad \text{Eq.} \qquad [1]$$

where E(C) is the expected congener concentration for a given Aroclor concentration A ($R^2 = 0.78$).

Simex Model

Measurement error on the independent variable in a linear regression can result in serious bias to the estimated parameters. The *Simex* method as implemented in R (Lederer and Kuchenhoff, 2006) was used to correct for the measurement error in the reported Aroclor concentrations. An estimate of measurement error in the ln-transformed Aroclors is needed to estimate the Simex model. The variance of each available pair of lab sediment

splits (ln-transformed concentrations) provides an estimate of measurement error for a particular Aroclor. We used the average of these variances for each Aroclor, then summed these variances to estimate the variance of the summed Aroclors. There were two Aroclors (out of seven) for which there were no splits, so we used the average of the five Aroclor variance estimates in the sum for these two Aroclors. The square root of this sum of variances is 0.47, the standard observation error needed as input to the Simex model.

The estimated Simex model is:

$$E(C) = 0.382A^{1.15}. \qquad \text{Eq.} \qquad [2]$$

The two models (naïve and Simex) are displayed in Figure 3.

Bradu-Mundlak Correction

When back-transformed, predictions from a log-linear model are biased estimates of the mean in original units. Because of this bias, the coverage of confidence or prediction intervals is also in question. We use the minimum-variance unbiased estimators (MVUEs) originally described by Finney (1941) and developed by Bradu and Mundlak (1970; See also Cohn et al, 1989), which can be implemented as a correction to the back-transformed parameters from the regression described above. This method is available in SAS, (Powell, 1991), but we wrote a script program for use in R. The formulas for the correction follow:

$$E(C) = (0.382A^{1.15}) * g(q), \qquad \text{Eq.} \qquad [3]$$

where

$$g(q) = \sum_{j=0}^{\infty} \left( \frac{m^j (m+2j)}{\prod_{i=0}^{j} (m+2i)} \right) * \left( \frac{q^j}{j!} \right) * \left( \frac{m}{m+1} \right)^j, \quad \text{Eq.} \qquad [4]$$

$$q = \left( \frac{m+1}{2m} \right) * \left( s^2 - \hat{\sigma}^2_{\hat{C}_h} \right), \qquad \text{Eq.} \qquad [5]$$

m = the degrees of freedom from the regression (219),

$s^2$ = the MSE from the Simex regression (0.651),

$\hat{\sigma}^2_{\hat{C}_h} = s^2 \left[ 1 + \frac{1}{n} + \frac{(A_h - \overline{A})^2}{\sum_{i=1}^{n} (A_i - \overline{A})^2} \right]$ is the variance of $\hat{C}_h$, the predicted ln-congener concentration at ln-Aroclor concentration ($A_h$), and n = 221.

The prediction limits for an unbiased estimate of the mean in original units, (i.e., E(C), given by Eq. [3]), are then given by:

$$\left[E(C)*\exp(t_{.975,m}*\hat{\sigma}_{\hat{C}_h}),\ \ E(C)*\exp(t_{.975,m}*\hat{\sigma}_{\hat{C}_h})\right] \text{ Eq.} \qquad [6]$$

The resulting predictions and prediction intervals are displayed in Figure 4 and provided in the attached excel spreadsheet.

*References*

Bradu, D., and Y. Mundlak (1970). Estimation in lognormal linear models. Journal of the American Statistical Association 65:198-211.

Cohn, Timothy A., Lewis L. DeLong, Edward J. Gilroy, Robert M. Hirsch, and Deborah K. Wells (1989). Estimating constituent loads. Water Resources Research, 25(5):937-942.

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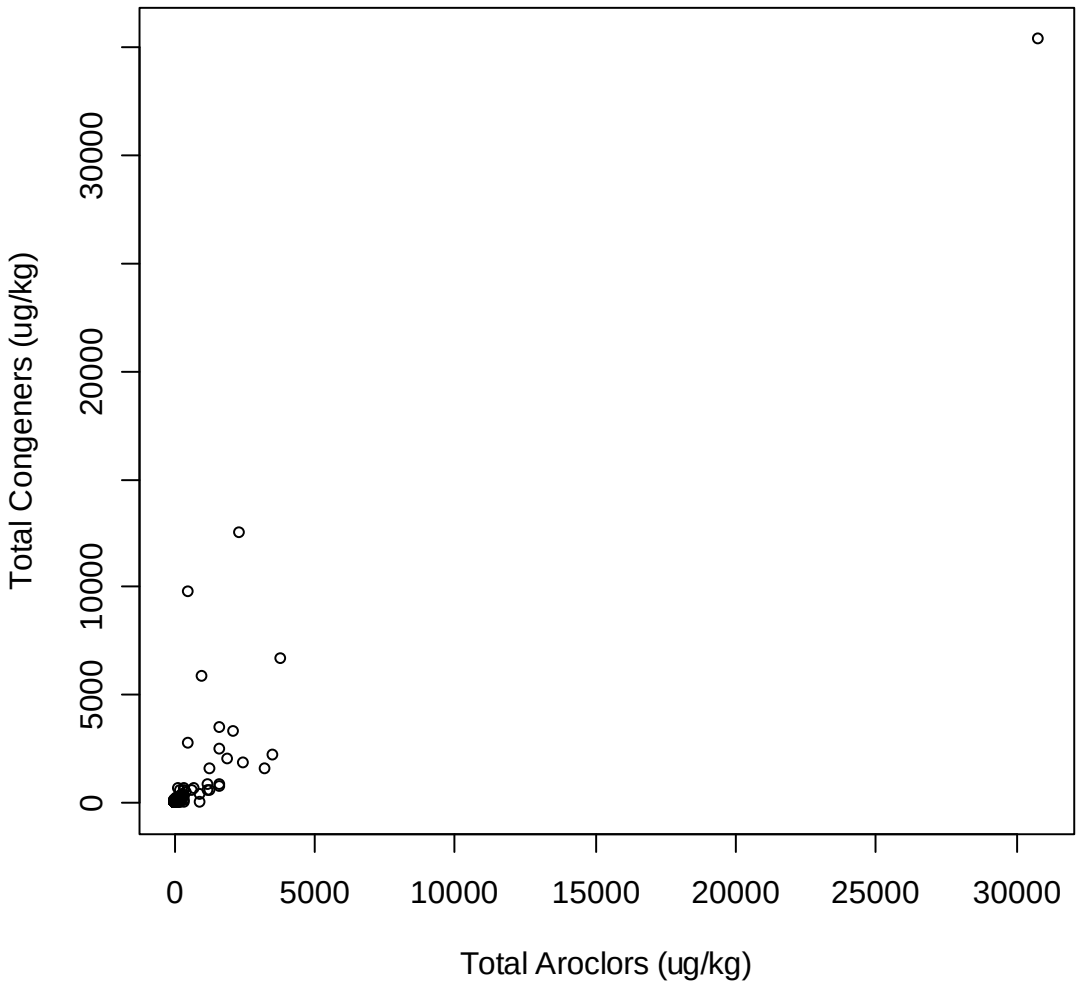


Figure 1. Measured total Aroclors vs. total congeners in surface sediments on the Lower Willamette River.

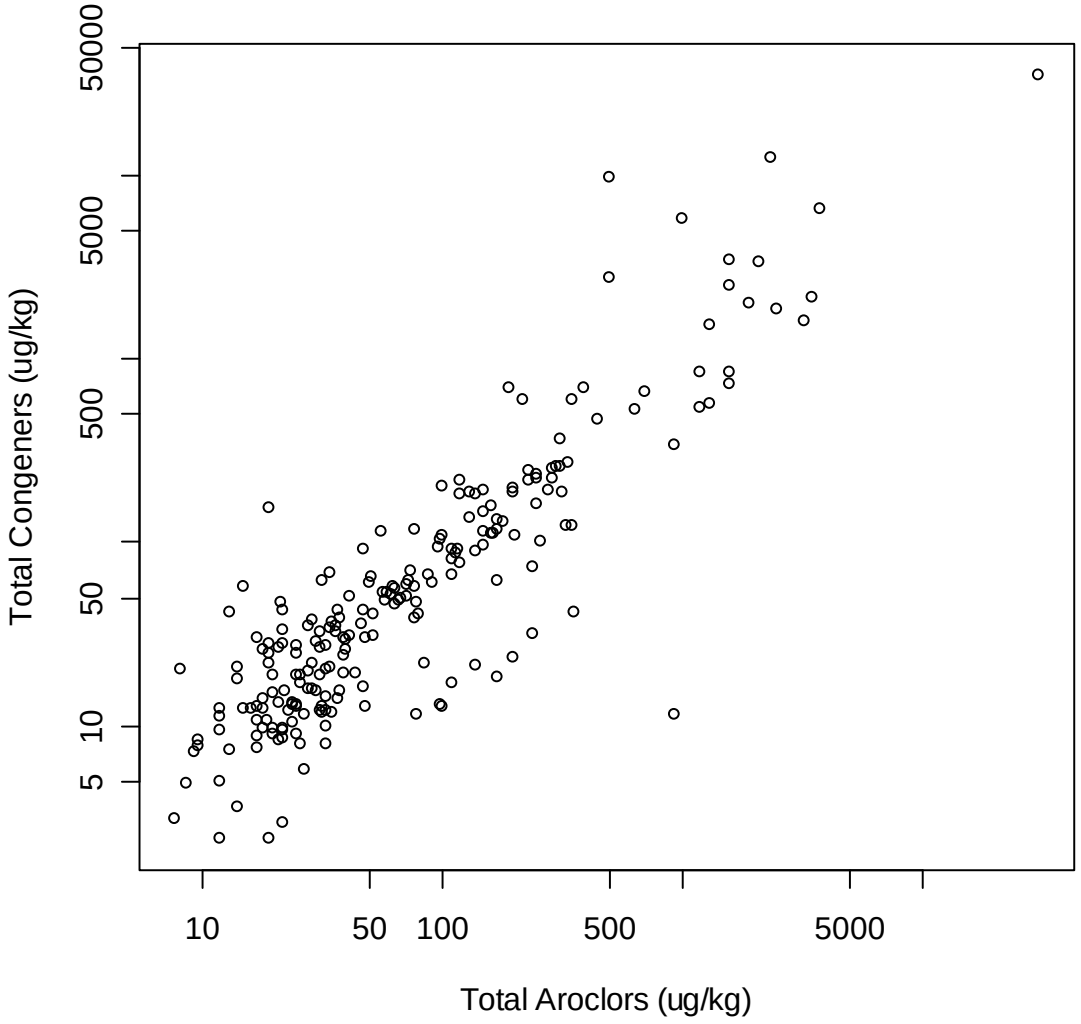


Figure 2. Total congeners as a function of total Aroclors with both variables on the log-scale.

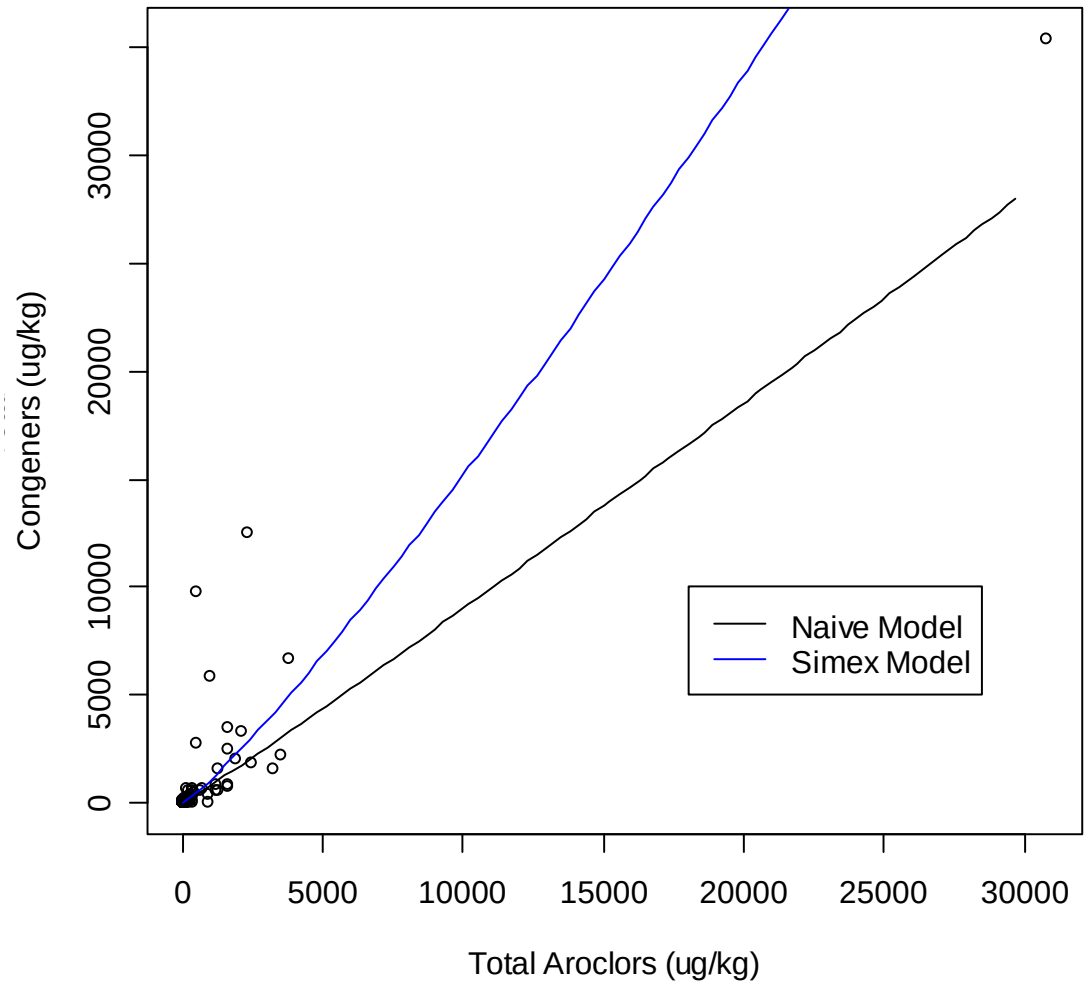


Figure 3. Naïve and Simex models compared.

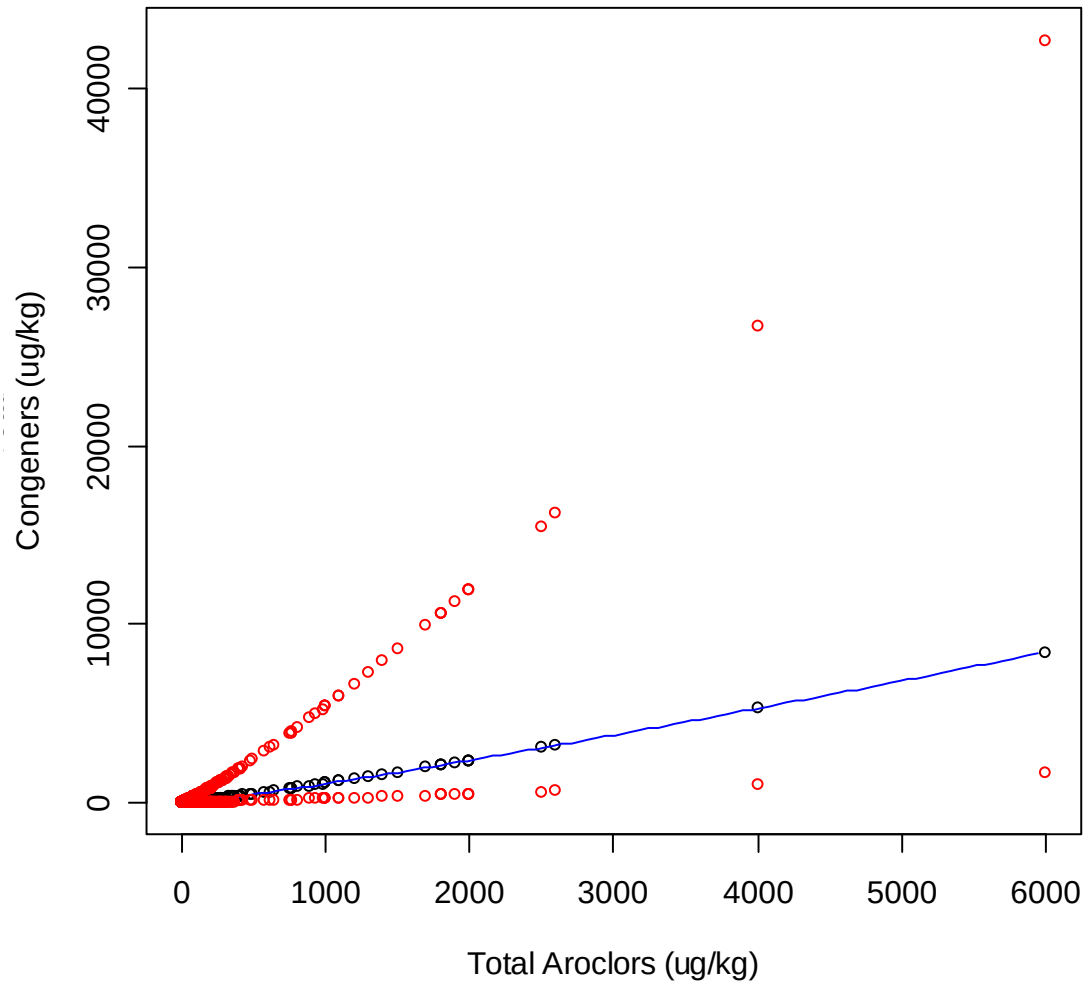


Figure 4. Bias-corrected MVUE predictions from the Simex model with 95% prediction intervals. The blue line is the Simex model fit. The black circles are the bias corrected predictions, and the orange circles are the upper and lower prediction limits.

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D1.5
# PATTERNS AND TRENDS OF PCBS, PCDD/FS, DDX, AND PAHS IN BEDDED SEDIMENT

February 8, 2016

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# APPENDIX D1.5 PATTERNS AND TRENDS OF PCBS, PCDD/FS, DDX, AND PAHS IN BEDDED SEDIMENT

## D1.5.1 Introduction

This appendix provides additional details on the nature of the four grouped indicator contaminants, polychlorinated biphenyls (PCBs), polychlorinated dibenzo-p-dioxins/furans (PCDD/Fs), DDx, and polycyclic aromatic hydrocarbons (PAHs), by examining the spatial patterns in the occurrence of the constituent chemicals that make up these compound groups.

## D1.5.2 Patterns and Trends of PCBs in Sediment

This subsection includes a general description of the distribution of PCB homologs and Aroclors in sediment to provide information that may be used to infer the presence of different sources and PCB transport within the study area. Aroclor distributions are compared to homolog distributions to evaluate the Aroclor identifications made by the laboratories.

### D1.5.2.1 Distribution of PCB Homologs and Aroclors

PCB homologs are congener groups based on chlorination level (i.e., the number of chlorine atoms [1–10] bonded to the biphenyl molecule). All of the PCB congeners within each homolog group are isomers. Homolog groups are identified as monochlorobiphenyl (one chlorine atom [$C_{12}H_9Cl$]; monoCB) through decachlorobiphenyl (10 chlorine atoms [$C_{12}Cl_{10}$]; decaCB). Examples of the PCB congener content of Aroclors has been reported by several authors (e.g., Erickson 1997; Frame et al. 1996) and was used to present the PCB homolog content of Aroclors in Figure D1.5-1. Identification of PCB Aroclors at the analytical laboratory can be subjective if the PCB pattern in the sample does not closely reflect the Aroclor standards. This is frequently the case in environmental samples as a result of fate and transport processes, the presence of more than one Aroclor in a sample, and chromatographic interference. Differing sorption, solution, and volatilization rates for different congeners and degradation processes can lead to weathering of Aroclors in the natural environment. Varying degrees of weathering were observed in the sediment samples, with some samples exhibiting what appeared to be weathered Aroclor patterns and other samples exhibiting Aroclor patterns that closely resembled Aroclor standards. Complex mixtures of two or more Aroclors were also observed in many sediment samples. Additional discussion about weathering and comparison of PCB congener and Aroclor totals is provided in Appendix D1.4.

PCB homolog group sums were calculated by summing the constituent congener concentrations, following the summation rules for the RI data.[1] PCB homolog and Aroclor compositions for samples within the study area are presented as stacked bar

[1] Calculated totals for each homolog are the sum of all detected constituent congeners. Non-detected congeners in a homolog group are assigned a value of zero. If all congeners in a homolog group were not detected, then the homolog total is assigned the highest detection limit among the constituent congeners and qualified with a U.

charts in Figures D1.5-2 through D1.5-5. The bar charts show the percent composition of individual PCB homologs and Aroclors for each sample, while the total concentration of the indicator contaminant is displayed as a line on a logarithmic scale. Station location labels are provided on the x-axis, and river mile is indicated on the secondary x-axis along the top of the chart. In this data presentation, non-detected (U-qualified) homologs and Aroclors were assigned a value of zero; therefore, they do not appear on the bar charts. Also, the stacked bar charts do *not* include data from dredged or capped sediment samples. The figures are organized to show the eastern nearshore, navigation channel, and western nearshore (relative to the top of the navigation channel boundary). The dominant homolog (i.e., the homolog group detected at the highest concentration) at each sampling location is displayed on Maps D1.5-1 and D1.5-2, and the dominant Aroclor at each sampling location (i.e., the Aroclor detected at the highest concentration) is shown on Maps D1.5-3 and D1.5-4. Subsurface homolog and Aroclor patterns are shown only for the depth interval with the highest PCB concentration at each location. The PCB composition at other depths may differ from that at the depth of maximum concentration.

Spatial variations in apparent PCB patterns are evident throughout the study area, and areas of high PCB concentrations often exhibit homolog patterns that appear distinct from surrounding areas of lower PCB concentrations. These variances in the relative abundances of the homolog groups potentially reflect the differences in the sources of the PCBs and the transport and weathering processes affecting the Aroclors. Overall, the tetrachlorobiphenyl (tetraCB), pentachlorobiphenyl (pentaCB), hexachlorobiphenyl (hexaCB), and heptachlorobiphenyl (heptaCB) homolog groups are predominant in the study area, with localized exceptions (Figures D1.5-2a–c and D1.5-3a–c). In the eastern nearshore zone, the overall chlorination level of PCBs in the surface and subsurface sediments tends to appear higher upriver in the study area and lower downstream. Between RM 6.7 and 11.3 in the eastern nearshore zone, the highest concentration samples are chiefly composed of hexaCBs and heptaCBs. The chlorination levels appear lower at several locations of higher PCB concentrations, from about RM 2 to 4 east, with a dominance of trichlorobiphenyls (triCBs), tetraCBs, and pentaCBs. Homolog patterns in areas of high PCB concentration appear to be more variable in the western nearshore zone.

The PCB homolog patterns in subsurface sediment appear generally similar to surface sediment patterns at the locations where PCB congener data are available for both surface and subsurface sediment. However, PCB homolog patterns in subsurface sediment appear different from surface sediment at RM 2.8 (sample location LW3-G609/LW3-C609), RM 3.7 (sample location LW3-C093), and RM 8.4 (sample location LW3-C393) in the eastern nearshore zone; RM 10.1 (sample location LW3-G747) in the navigation channel; and at RM 5.1 (sample location LW3-G184), RM 7.7 (sample location LW3-G401), and RM 9.6 (sample location LW3-G738) in the western nearshore zone. As noted previously, patterns displayed by the stacked bar charts may or may not be statistically significant and indicative of different potential

sources. Detailed forensic analyses would be required to distinguish significant patterns in the data and potential source contributions.

Aroclors 1248, 1254, and 1260 were identified throughout the study area (Figures D1.5-4a–h and D1.5-5a–d). Aroclor 1221 was identified locally in surface sediments, and Aroclors 1242 and 1268 were identified locally in both surface and subsurface sediments; however, these Aroclors were not widespread (Figures D1.5-4a–h and D1.5-5a–d). Within the study area, Aroclor 1016 was identified in one surface sediment sample, and Aroclors 1232 and 1262 were identified in one subsurface sediment sample each. Aroclor patterns in the subsurface sediments were also generally similar to the surface sediment patterns.

The PCB homolog profiles of the RM 11–11.8 surface and subsurface sediments are generally similar to the profiles of study area PCBs from locations with low PCB concentrations (i.e., tetraCBs through heptaCBs are predominant) (Figures D1.5-2a-c and D1.5-3a-c). The PCB Aroclor profiles of the RM 11–11.8 data also mirror those of low-concentration locations in the study area, consisting primarily of Aroclors 1254 and 1260 (Figures D1.5-4a-h and D1.5-5a-d).

#### D1.5.2.2 Comparison of PCB Homolog Patterns with Reported Aroclors

For areas with total PCB concentrations greater than 1,000 µg/kg[2] and infrequently reported Aroclors, a comparison of identified Aroclors to the PCB homolog groups was made by comparing the Aroclor homolog profiles as presented in Figure D1.5-1. The PCB homolog data, where available, generally supported the Aroclor identifications of Aroclors 1242, 1248, 1254 and 1260, with two notable exceptions.

Near RM 8.8 (western nearshore zone) Aroclors 1242 and 1248 dominated the PCBs in surface and subsurface sediment, and concentrations greater than 1,000 µg/kg of Aroclor 1260 in surface sediment and Aroclor 1254 in subsurface sediment were also reported. Aroclors 1242 and 1248 are generally difficult to differentiate on a gas chromatogram and may be reported differently by different laboratories or analysts. The PCB homolog distribution in this area supports the identification of Aroclor 1242, although it does not definitively rule out the additional presence of Aroclor 1248 (Figures D1.5-4a–h and D1.5-5a–d). TriCBs were notably abundant in the sediment, often in a pattern that resembled Aroclor 1242 more than Aroclor 1248. The presence of dichlorobiphenyls (diCBs) further supports the identification of Aroclor 1242. Overall, the homolog patterns were very similar for the two samples in this area with the highest concentration (LW2-G453 and LW2-GBT028), even though the Aroclors identified in these samples were different. The reporting of two Aroclors in this area by the laboratories appears to reflect the difficulty of Aroclor identification rather than a difference in the PCBs present in the samples.

[2] This data comparison was performed prior to the availability post-2008 data sets and does not include those data.

In samples with total PCB concentrations greater than 1,000 µg/kg at RM 2.1–2.5 (eastern nearshore zone), Aroclors 1248, 1254, and 1260 were identified in the surface and subsurface sediments in this area, and Aroclor 1242 was identified in five of the subsurface sediment samples. The PCB homolog distribution in this area was consistent with the identification of Aroclor 1248 as the predominant Aroclor in the surface sediments. However, for some subsurface samples (e.g. LW2-C015-B) the homolog pattern was not consistent with the reported Aroclors. Aroclors 1254 and 1260 were reported as dominant in these samples, but the homolog profiles for these samples resemble the profile for Aroclor 1242 or 1248, with a potential contribution of Aroclors 1254 or 1260. The lack of agreement between the homolog profiles and Aroclor identifications suggests the influence of weathering effects.

Aroclors not commonly reported in the study area (i.e., identified in fewer than 100 sediment samples or Aroclors other than 1242, 1248, 1254, and 1260) were also evaluated using PCB homolog data as described in the following paragraphs.

Aroclor 1221 was reported in surface sediment in the eastern nearshore zone and eastern edge of the navigation channel between RM 9.3 and 10 at concentrations up to 109 µg/kg (Station G472). However, the PCB homolog pattern is not consistent with Aroclor 1221 in the two samples from this area that were analyzed for PCB congeners. MonoCBs and diCBs are the dominant homologs in Aroclor 1221 (Erickson 1997; Figure D1.5-1), but tetra- through heptaCBs dominated the homolog profiles in this area. The same homolog profile was also present at adjacent location BT031, which was sampled at a later date and analyzed by a different laboratory, and for which Aroclor 1221 was not identified. Based on the PCB homolog patterns, and the fact that Aroclor 1221 is rarely reported in environmental samples, the identification of Aroclor 1221 in this area appears questionable.

Aroclor 1221 was also identified in surface sediment at four isolated locations: in the eastern nearshore zone near RM 11, in the western edge of the navigation channel near RM 10.3, in the western nearshore zone at RM 7, and in the navigation channel near RM 8. PCB congeners were analyzed at all of these stations, and in all four cases, monoCBs and diCBs were not reported at sufficient levels to support the identification of Aroclor 1221. A focused review of Aroclor chromatograms confirmed the laboratory identifications, although some differences were noted in the PCB patterns in the samples relative to the standards. The differences in PCB patterns identified by the two methods may be the result of sample heterogeneity or another unidentified cause.

Aroclor 1268 was reported in surface and subsurface sediment in the eastern nearshore zone near RM 5.6 at concentrations up to 474 J µg/kg. PCB congener profiles generally confirm the presence of Aroclor 1268. Nonachlorobiphenyls (nonaCBs) and decaCBs are present in Aroclor 1268 (Figure D1.5-1) and were more abundant in both surface sediment locations and in one of the two subsurface sediment locations analyzed in this area than in areas without Aroclor 1268 detections.

Aroclor 1268 was also identified in isolated locations in several other areas. The Aroclor 1268 identifications were confirmed by the PCB homolog profile in surface sediments in the eastern nearshore zone at RM 3.7, off the mouth of the International Terminals Slip. PCB homolog profiles did not confirm the presence of Aroclor 1268 reported in surface and subsurface samples in the eastern nearshore zone near RM 4, the surface sediments in the eastern nearshore near RM 7.3, or in the subsurface sediments in the western nearshore zone near RM 7.4. Aroclor 1268 could not be evaluated at other locations because either no PCB homolog data were available, or Aroclor 1268 constituted a relatively small fraction of the Aroclor total.

Highly chlorinated PCBs were present at one location where Aroclor 1268 was not identified. At one subsurface location (C093-B) in the International Terminals Slip, nonaCBs and decaCB together accounted for approximately 25 percent of the PCB congener total, suggesting the presence of Aroclor 1268. A review of the Aroclor chromatogram for this sample confirmed the laboratories' Aroclor identifications. Again, the differences in PCB patterns identified by the two methods may be the result of sample heterogeneity or another unidentified cause.

Aroclors 1232 and 1016 were each identified in only one sample. Aroclor 1232 was identified in subsurface sediment at location PSY36C in the navigation channel near RM 8, and Aroclor 1016 was identified in surface sediment sample PP01M105 near the east bank of Swan Island Lagoon at approximately RM 8. The distinct Aroclor constituted a small fraction of the total PCB Aroclors at both locations. PCB homolog data are not available at either location to corroborate the identifications; PCB homolog data at locations near these samples do not show evidence of Aroclors 1232 or 1016.

### D1.5.3 Patterns and Trends of PCDD/Fs in Sediment

PCDD/F homolog compositions for samples within the study area are presented as bar charts in Figures D1.5-6a–c and D1.5-7a–c. The bar charts show the percent composition of the individual PCDD/F homologs for each sample. The figures are organized to show the eastern nearshore zone, navigation channel, and western nearshore zone (relative to the navigation channel boundary). Subsurface homolog patterns are shown only for the depth interval with the highest total PCDD/F concentration at each location. The PCDD/F composition at other depths may differ from that at the depth of maximum concentration.

Octachlorodibenzo-p-dioxin (OCDD) is generally the dominant homolog (>50 percent of the total concentration) present in surface and subsurface sediments throughout the study area, with heptachlorodibenzo-p-dioxin (HpCDD) present to a significant but lesser degree. The other homolog groups generally constitute 20 percent or less of the total concentration. Exceptions where PCDD/F homolog distributions appear to vary significantly (possibly reflecting isolated areas of differing sources or weathering patterns) are clustered throughout the study area, including between RM 11.1 and 11.4E. The largest clusters occur along the western nearshore area around RM 6.8 and

near RM 7.4, where data points are relatively dense in comparison to the rest of the study area.

The apparent variations in PCDD/F homolog compositions do not always reflect variations in total PCDD/Fs concentrations. Near RM 6.7E and from RM 6.8 to 7.4W, samples with high total PCDD/Fs concentrations are marked by a high proportion of furans relative to other areas. However, in general, samples with high PCDD/F concentrations have homolog profiles that match the prevailing pattern of OCDD and HpCDD dominance. Also, the surface and subsurface homolog distributions did not appear to vary greatly for any given location.

Finally, and as noted previously, definitive statements about spatial patterns in PCDD/F composition cannot be made based on the stacked bar charts, particularly for PCDD/Fs, which were analyzed in a limited number of samples collected using a biased sampling design. Detailed forensic analyses would be required to determine the existence of statistically significant patterns in the data.

### D1.5.4 Patterns and Trends of DDx in Sediment

The distribution of concentrations and observed trends of DDx constituent isomers in the study area sediment are discussed in this section. Note that some of the results of the component isomers that were summed in the DDx concentrations were N-qualified. Additionally, some of the DDx isomer data are uncertain and potentially biased high because of the analytical interference from the presence of PCB congeners in the sample. The N qualifier indicates that the quantity is estimated because there is only presumptive evidence that the chemical compound exists. For individual isomers, the percentages of N-qualified sediment data range from zero (2,4´-DDE) to approximately 30 percent (2,4´-DDD) of both the surface and subsurface data.

DDx isomer patterns appeared to vary widely across the study area, as shown in Figures D1.5-8a–h (surface sediments) and D1.5-9a-e (subsurface sediments). Selected potential trends are summarized below. The bar charts in these figures include samples that may lack results for the 2,4´-isomers of a DDx compound if these were not analyzed. The DDx patterns are incomplete for these samples. The discussion of subsurface sediment trends is based on the evaluation of DDx patterns only for the depth interval with the highest concentration at each location, presented in Figures D1.5-9a-e. The DDx composition at other depths may differ from that at the depth of maximum concentration.

DDx concentrations exceeded 10,000 µg/kg in one area located near RM 7 in the western nearshore zone. The main constituent of the surface sediments in this area was the 4,4´-isomer of DDT (Figure D1.5-8g), while the 4,4´-isomers of DDT and DDD were the main constituents of the subsurface sediments (Figure D1.5-9e). This pattern may indicate degradation of DDT to DDD in anoxic sediments at depth.

The relative concentrations of the DDx isomers appear highly variable from station to station across the study area in both surface and subsurface sediment samples. However, a few general trends were observed:

- The 4,4´-isomer concentrations were greater than those for the 2,4´-isomers of the DDx constituents overall. In some locations, the 2,4´-isomers were more abundant than their 4,4´- counterparts, particularly 2,4´-DDD and, less frequently, 2,4´-DDT. 2,4´-DDE was rarely detected and was dominant only in samples with relatively low concentrations.
- Overall, samples with the highest concentrations tended to display a dominance of DDT and/or DDD isomers, particularly below RM 8.
- There was a broad potential trend observed in the western nearshore DDx patterns. Both surface and subsurface sediment samples collected upstream of RM 8 generally had relatively low DDx concentrations (typically between 10 and 100 µg/kg) and a large DDE component, whereas samples collected between RM 7.5 and 6.9 had relatively higher DDx concentrations (generally higher than 100 µg/kg) and were dominated by DDT, and samples downstream of RM 6.9 had relatively lower DDx concentrations (generally less than 100 µg/kg) and a larger apparent DDD component. These upstream/downstream trends were also evident in the navigation channel, which generally paralleled the western nearshore trends from RM 12 to about RM 4 (except where embayments such as Willbridge are crossed). In contrast, the eastern nearshore patterns were more like those of the western nearshore zone above RM 8.
- The DDx compounds in the RM 11–11.8 surface and subsurface sediments were variable, although generally the eastern nearshore zone exhibited more 4,4´-DDT and 2,4´-DDD isomers, and the western nearshore zone exhibited more 4,4´-DDE

### D1.5.5 Patterns and Trends of Total PAHs in Sediment

The distribution of detected PAHs at each location is presented in Figures D1.5-10a-j (surface sediment) and Figures D1.5-11a-f (subsurface sediment). In order to simplify the bar charts, PAHs were grouped according to the number of fused aromatic rings in the PAH. A list of individual PAHs included in the sum for each of these groups is provided in Table D1.5-1. Only PAHs analyzed for LWG samples are summed. Of these PAHs, two-ring PAHs include only naphthalenes (i.e., naphthalene and 2-methylnaphthalene). Low-molecular-weight polycyclic aromatic hydrocarbons (LPAHs) include PAHs with two or three rings (green and yellow segments), and high-molecular-weight polycyclic aromatic hydrocarbons (HPAHs) include PAHs with four to six rings (purple, red, and blue segments). Only the depth interval that contained the highest total PAHs concentration is shown in Figures D1.5-11a-f (i.e., the subsurface charts represent a variety of depths based on the interval of the maximum concentration) and evaluated below.

Surface sediments within the study area are generally dominated by HPAHs, primarily four-ring PAHs, with localized exceptions. Five-ring PAHs are the second most abundant HPAH, followed by six-ring PAHs. Three-ring PAHs are the principal LPAH in surface sediments, with two-ring PAHs generally being a minor component of the surface sediment PAH profile. Surface sediments from the western nearshore zone appeared to exhibit higher proportions of LPAHs than sediments from the eastern nearshore zone and the navigation channel, but follow the general trend of HPAH dominance. Some areas of high total PAH concentration have PAH profiles that appear to differ from the prevailing trend of HPAH dominance, the most notable between RM 6.2 and 6.9 in the western nearshore zone. In this area, increased contributions from two and three-ring PAHs, and a corresponding reduced six-ring PAH abundance is also observed. Similar high PAH profiles are observed between RM 6.4 and 7.2 in the eastern nearshore zone and between RM 5.6 and 7.4 in the navigation channel.

Subsurface sediments appear to have greater contributions from two- and three-ring PAHs than the surface sediments, but generally exhibit similar PAH profiles to the surface sediments.

The proportions of individual PAH compounds varied throughout the study area, reflecting PAH contributions from multiple types of hydrocarbon sources, as well as weathering and degradation. Hydrocarbon source types include pyrogenic (e.g., tars and creosote), petrogenic (e.g., fresh oil), and a variety of combustion processes and natural biological production processes. PAHs characteristic of these source types include alkylated PAH compounds, which are especially useful in distinguishing between pyrogenic and petrogenic source types. Alkylated PAH data are available for selected sediment and are presented in the SCRA database and summary statistics in Appendix D1.3; however, these data are not discussed in the RI report. Once again, detailed forensic analyses would be required to identify significant differences among the PAH patterns within the sediment data set and to distinguish contributions from potential source types.

### D1.5.6 References

Erickson, M.D. 1997. *Analytical chemistry of PCBs.* Second Edition. CRC/Lewis, Boca Raton, FL.

Frame, G.M., J.W. Cochran, and S.S. Boewadt. 1996. Complete PCB congener distributions for 17 Aroclor mixtures determined by 3 HRGC systems optimized for comprehensive, quantitative, congener-specific analysis. *J. High Resol. Chromatogr.* (19):657-668.

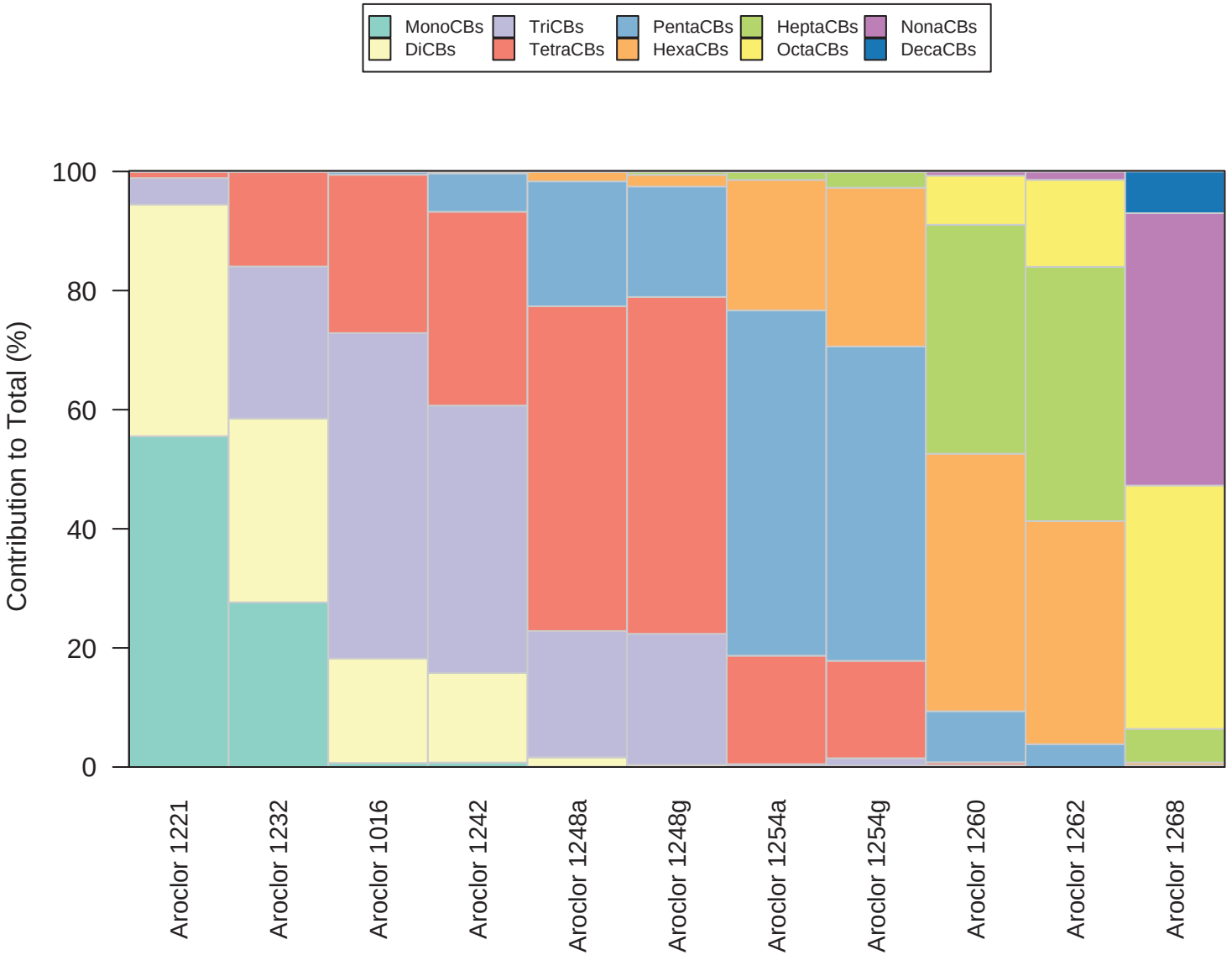
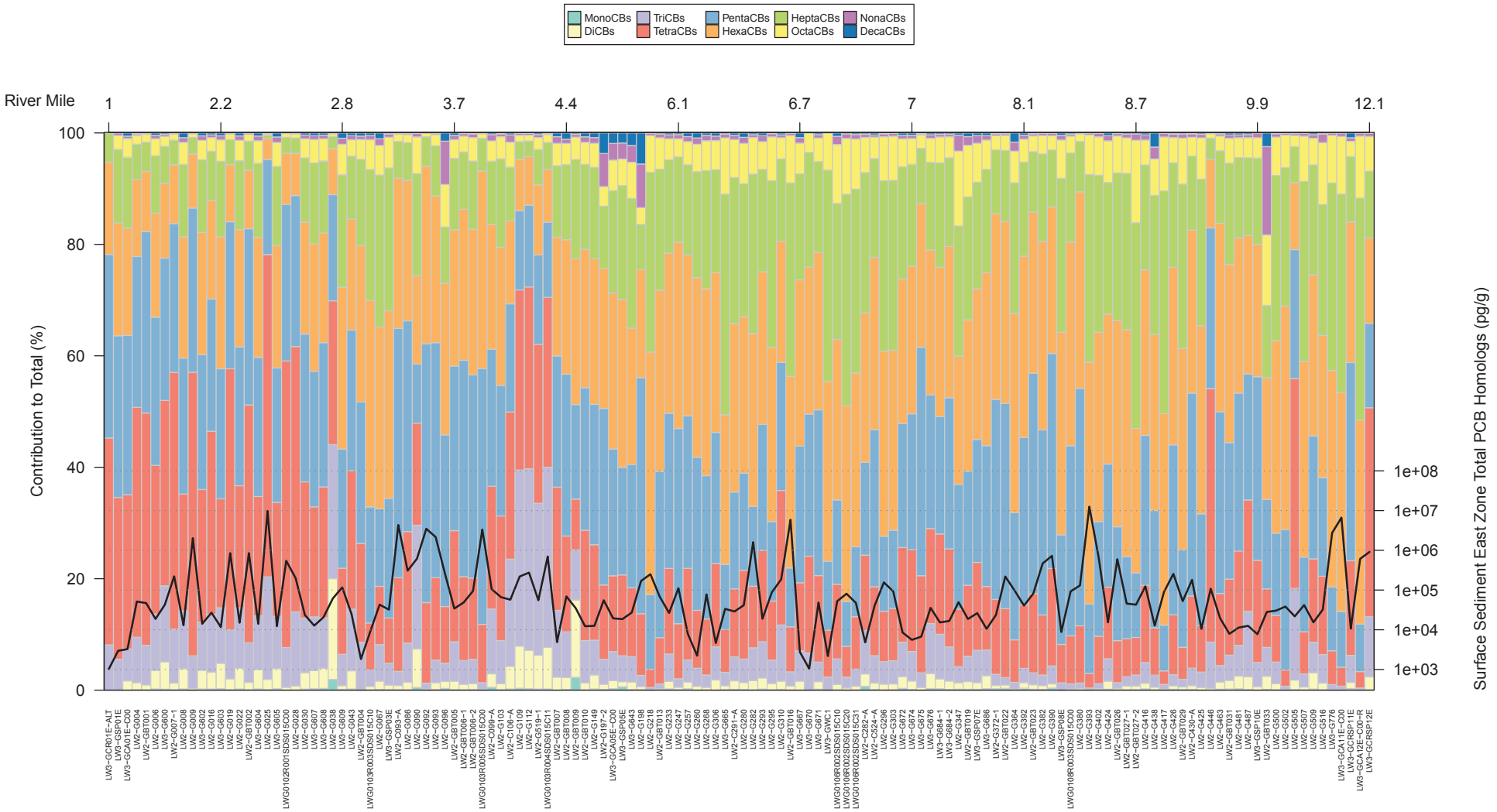
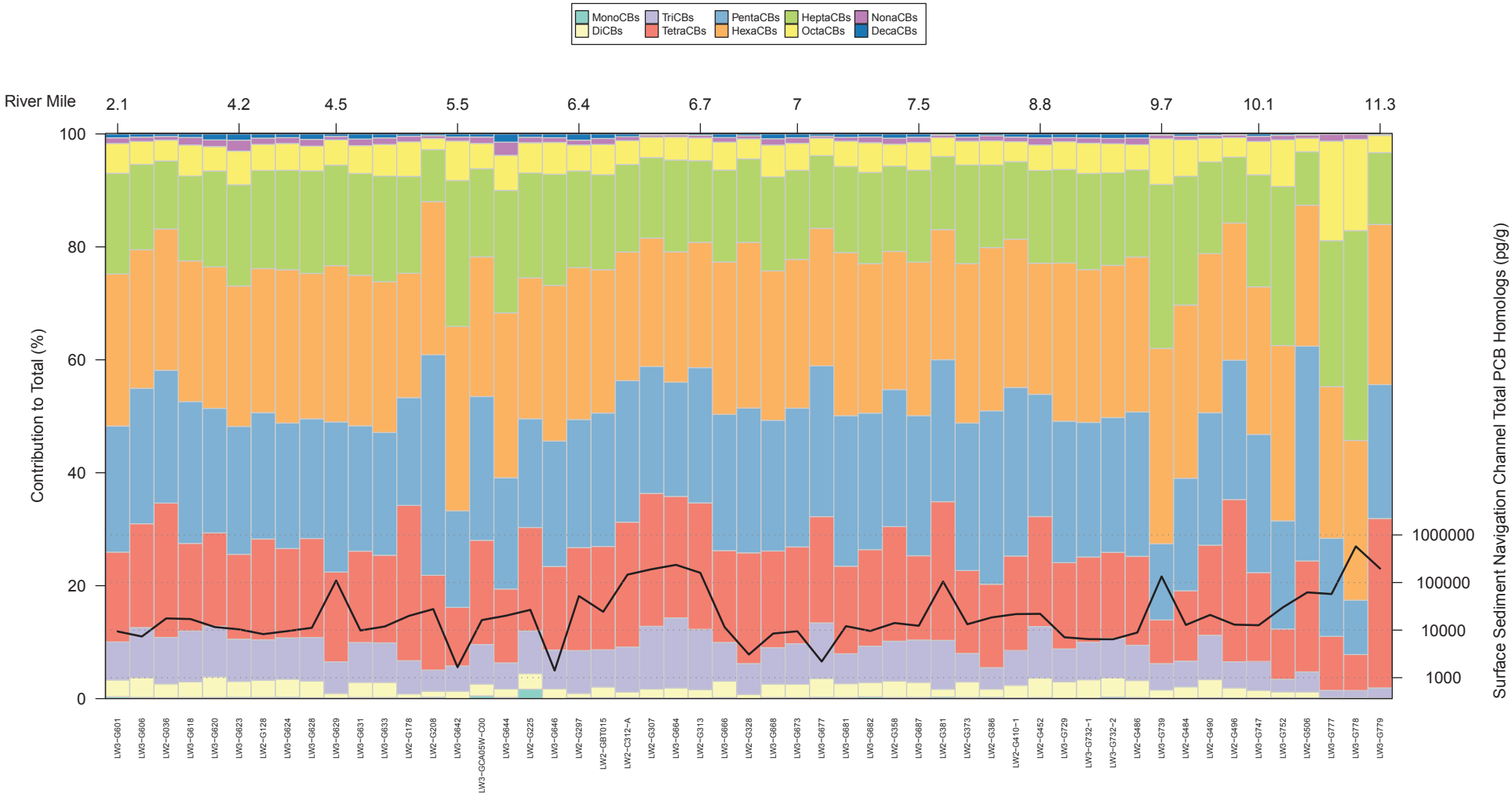



**Figure D1.5-1**
Portland Harbor RI/FS
Remedial Investigation Report
PCB Homolog Content of Aroclors



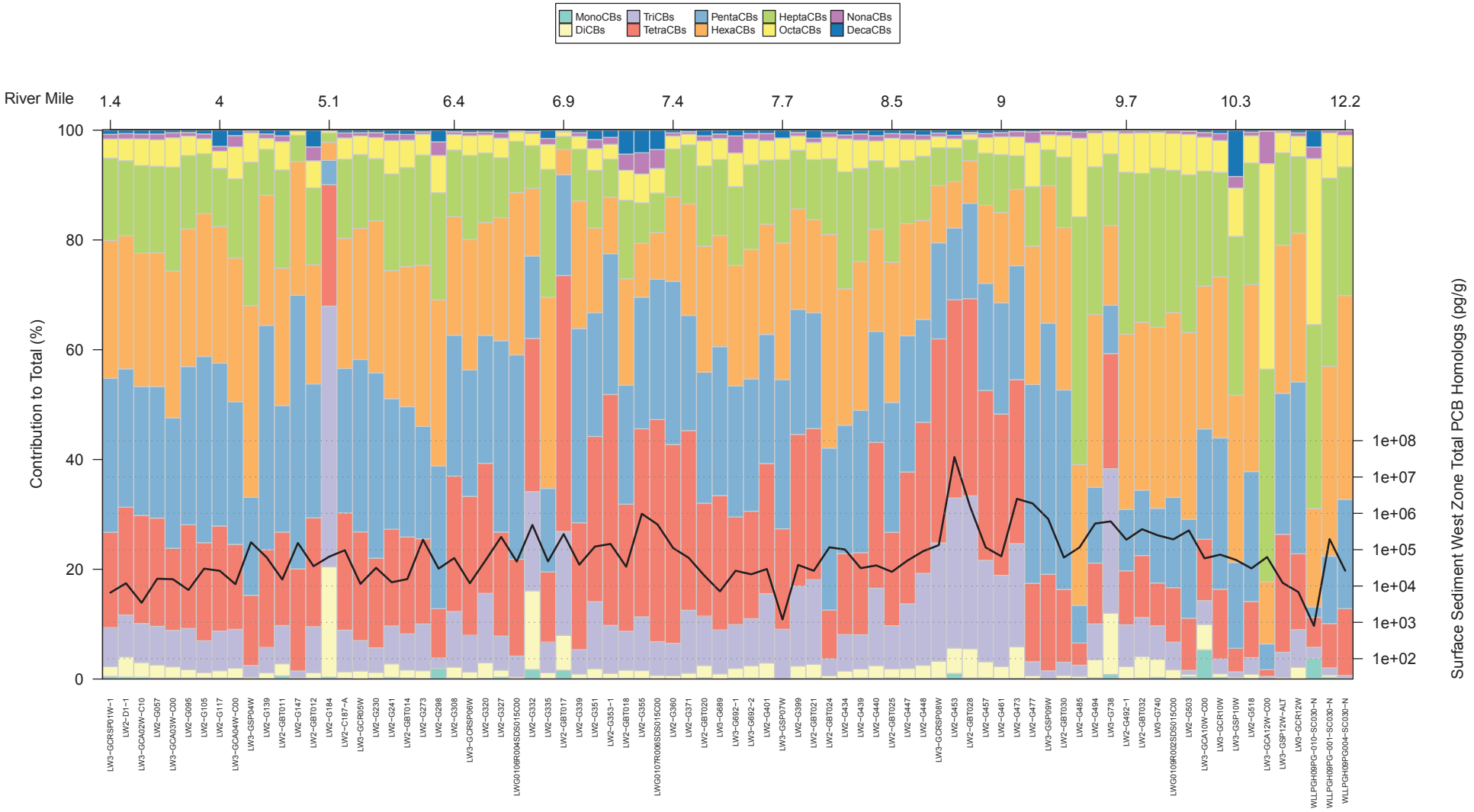

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−2a
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PCB Homolog Patterns in Surface Sediment,
Study Area (RM 1.0 to 12.1) Eastern Nearshore



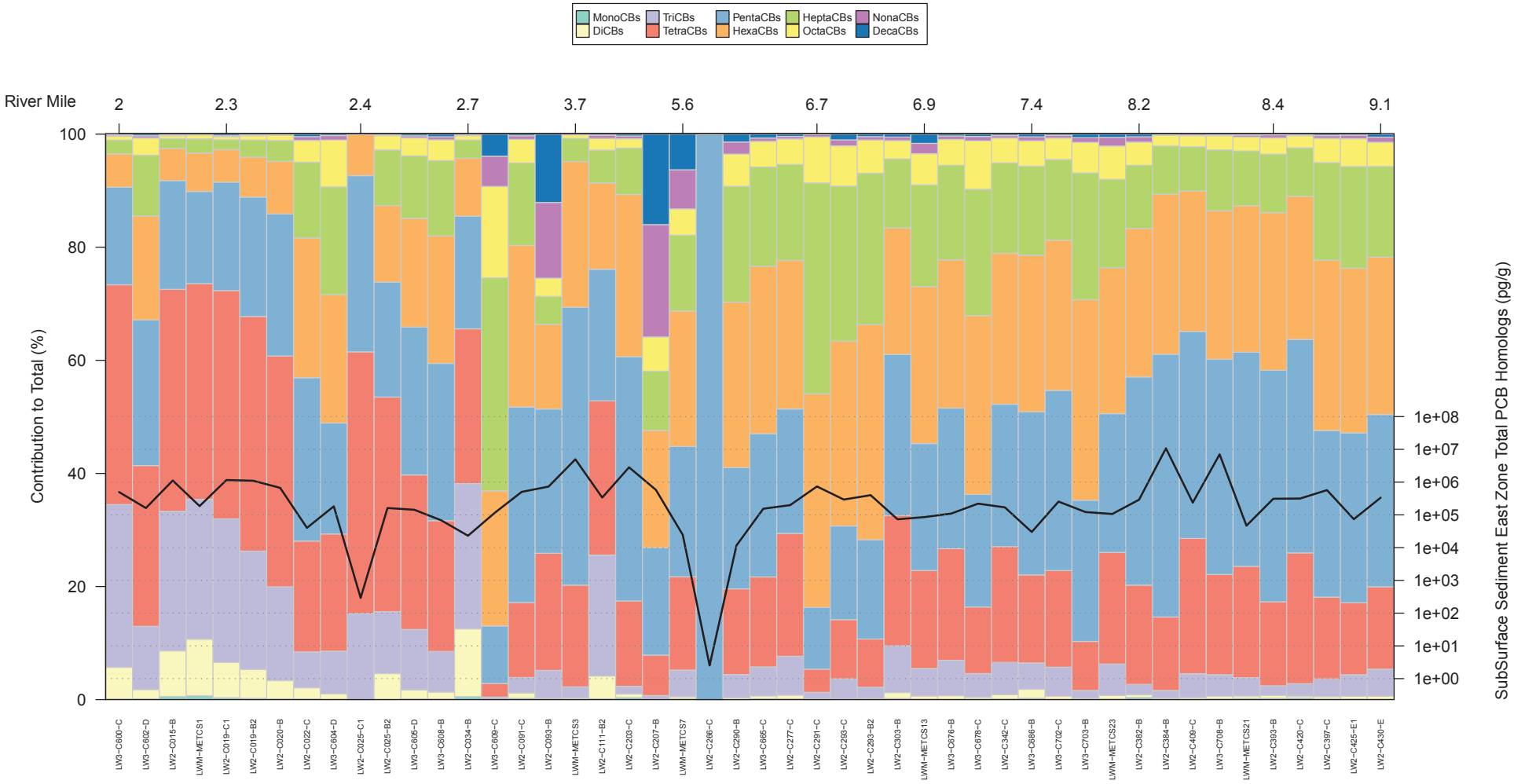

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−2b
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PCB Homolog Patterns in Surface Sediment,
Study Area (RM 2.1 to 11.3) Navigation Channel



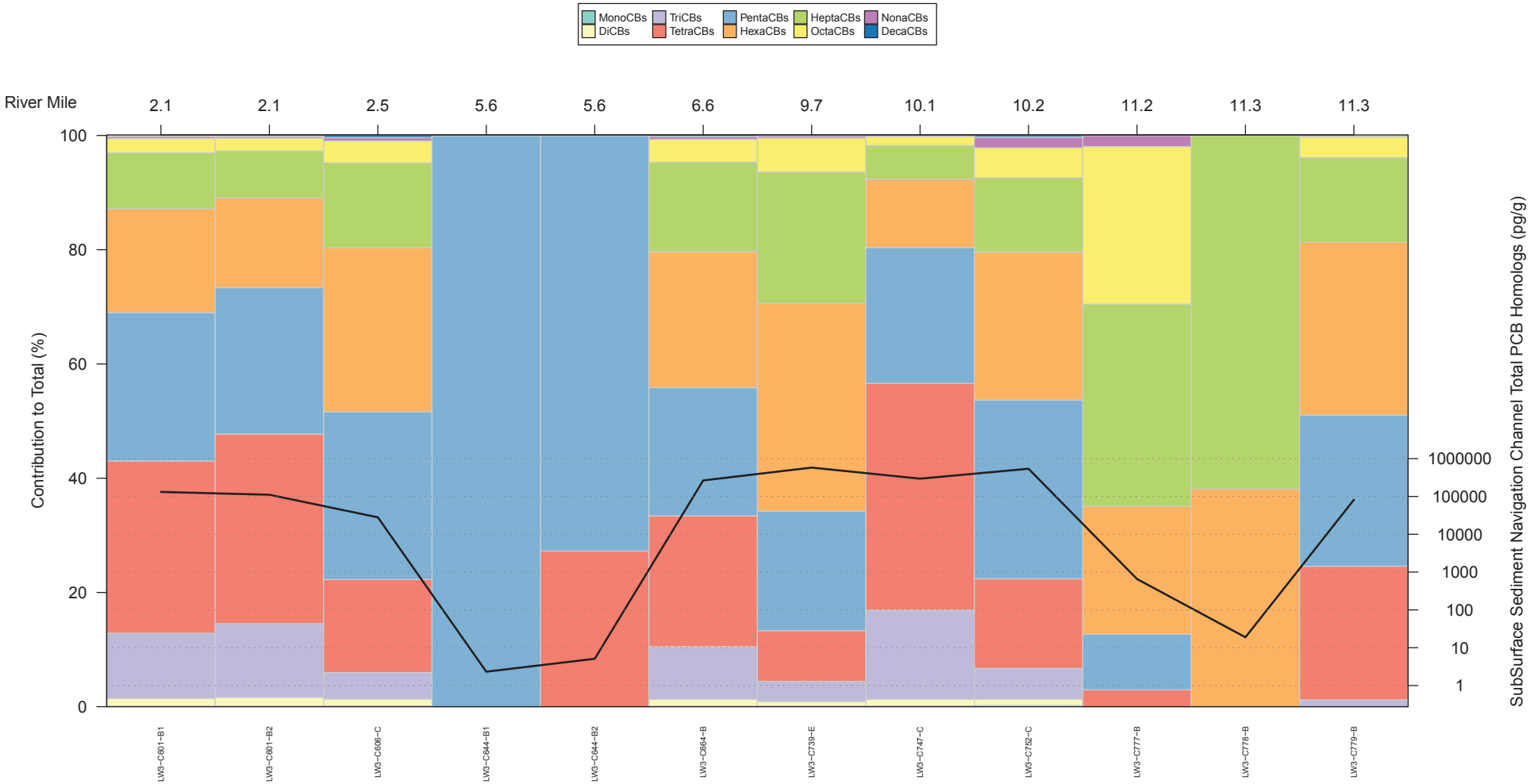

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−2c
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PCB Homolog Patterns in Surface Sediment,
Study Area (RM 1.4 to 12.0) Western Nearshore



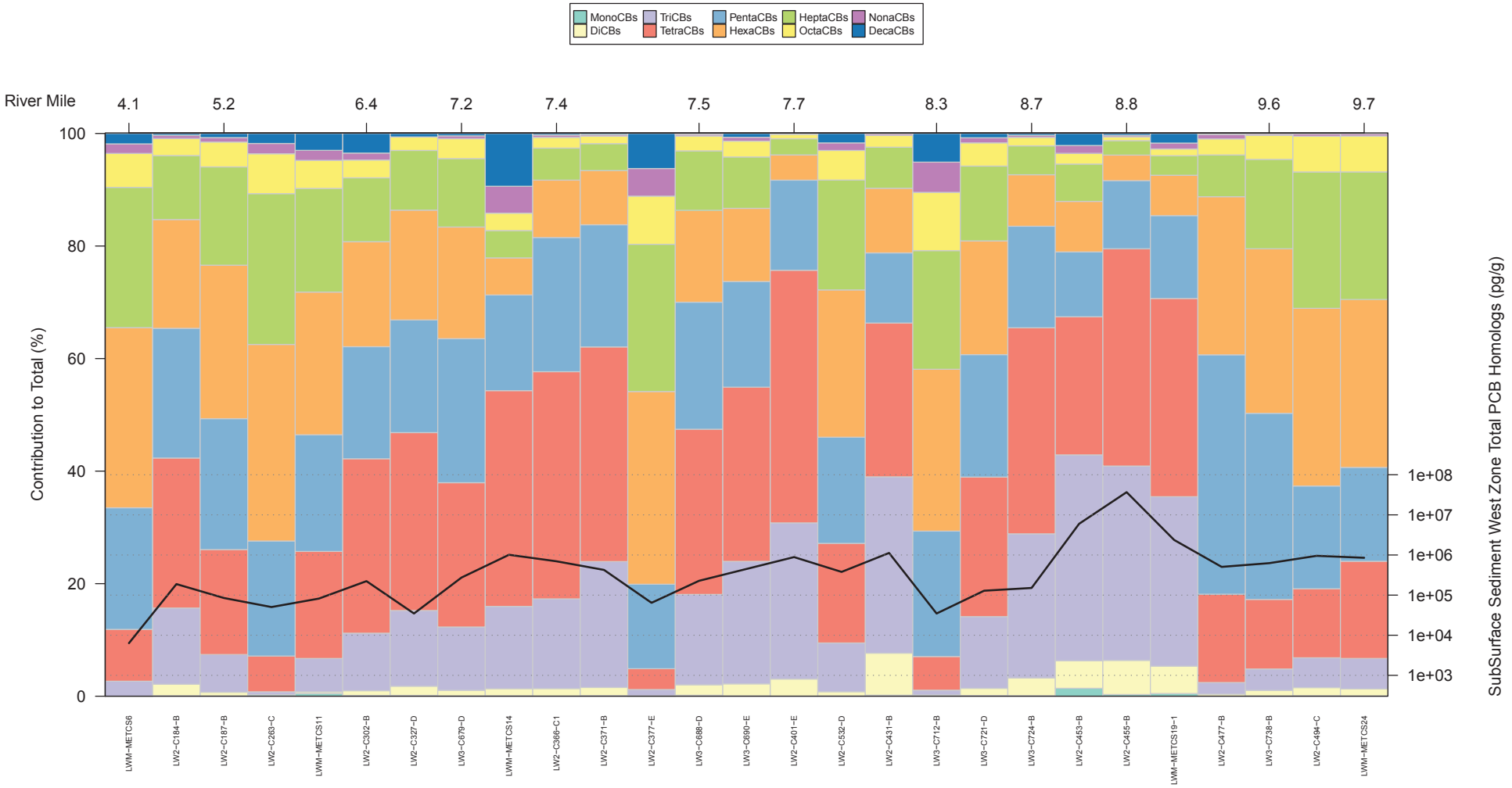

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−3a
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PCB Homolog Patterns in Subsurface Sediment,
Study Area (RM 2.0 to 9.1) Eastern Nearshore



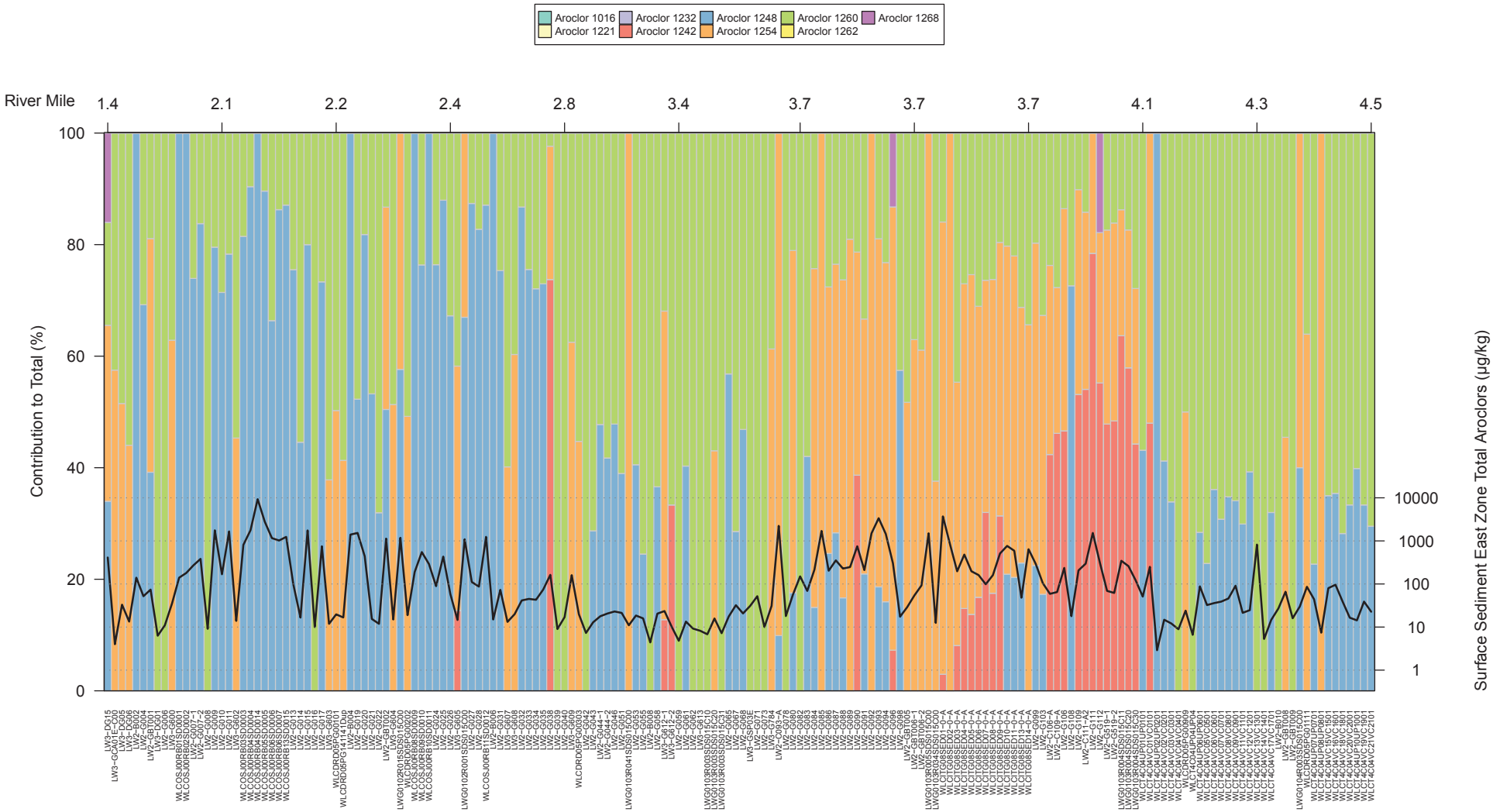

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−3b
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PCB Homolog Patterns in Subsurface Sediment,
Study Area (RM 2.1 to 11.3) Navigation Channel



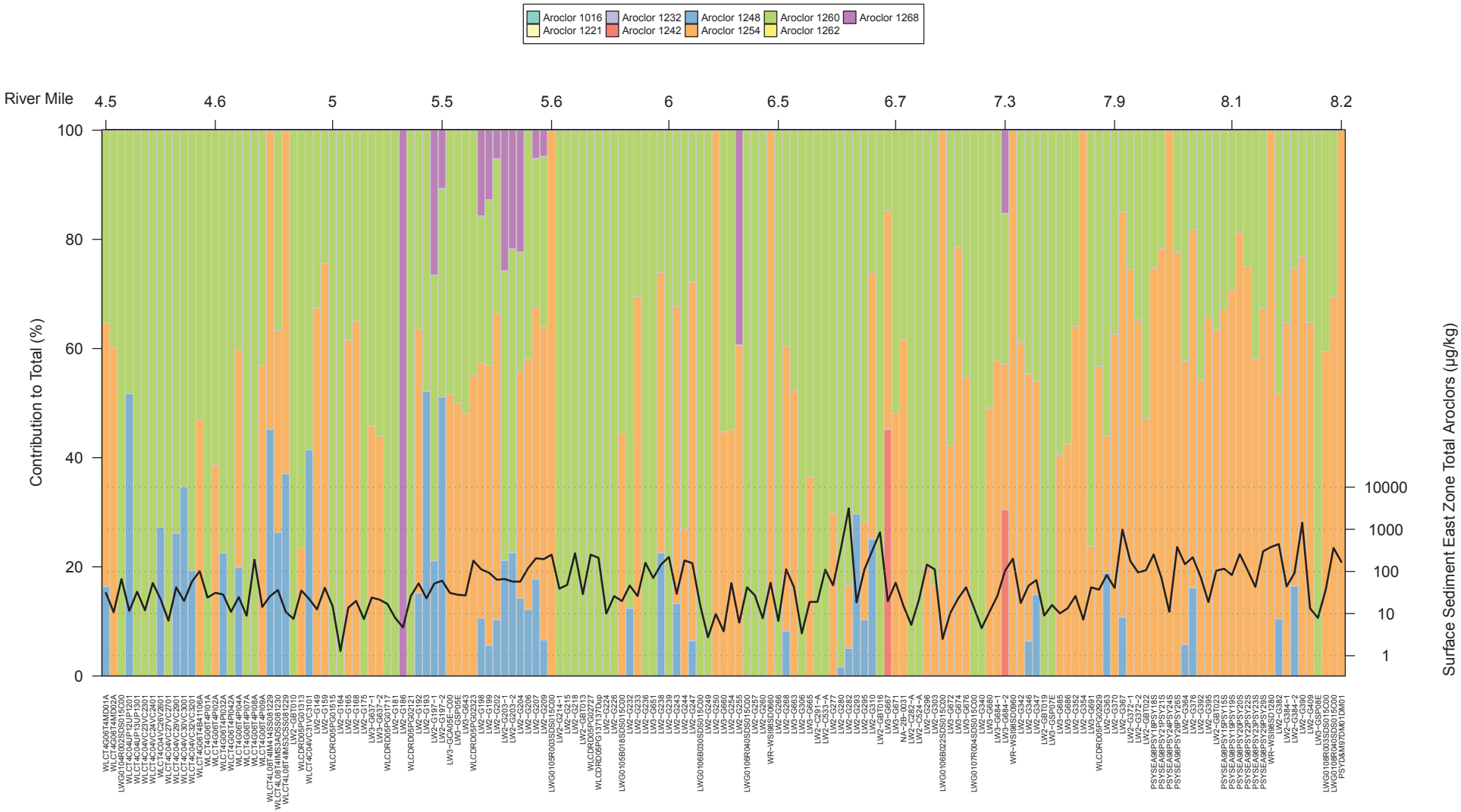

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5-3c
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PCB Homolog Patterns in Subsurface Sediment,
Study Area (RM 5.1 to 9.7) Western Nearshore



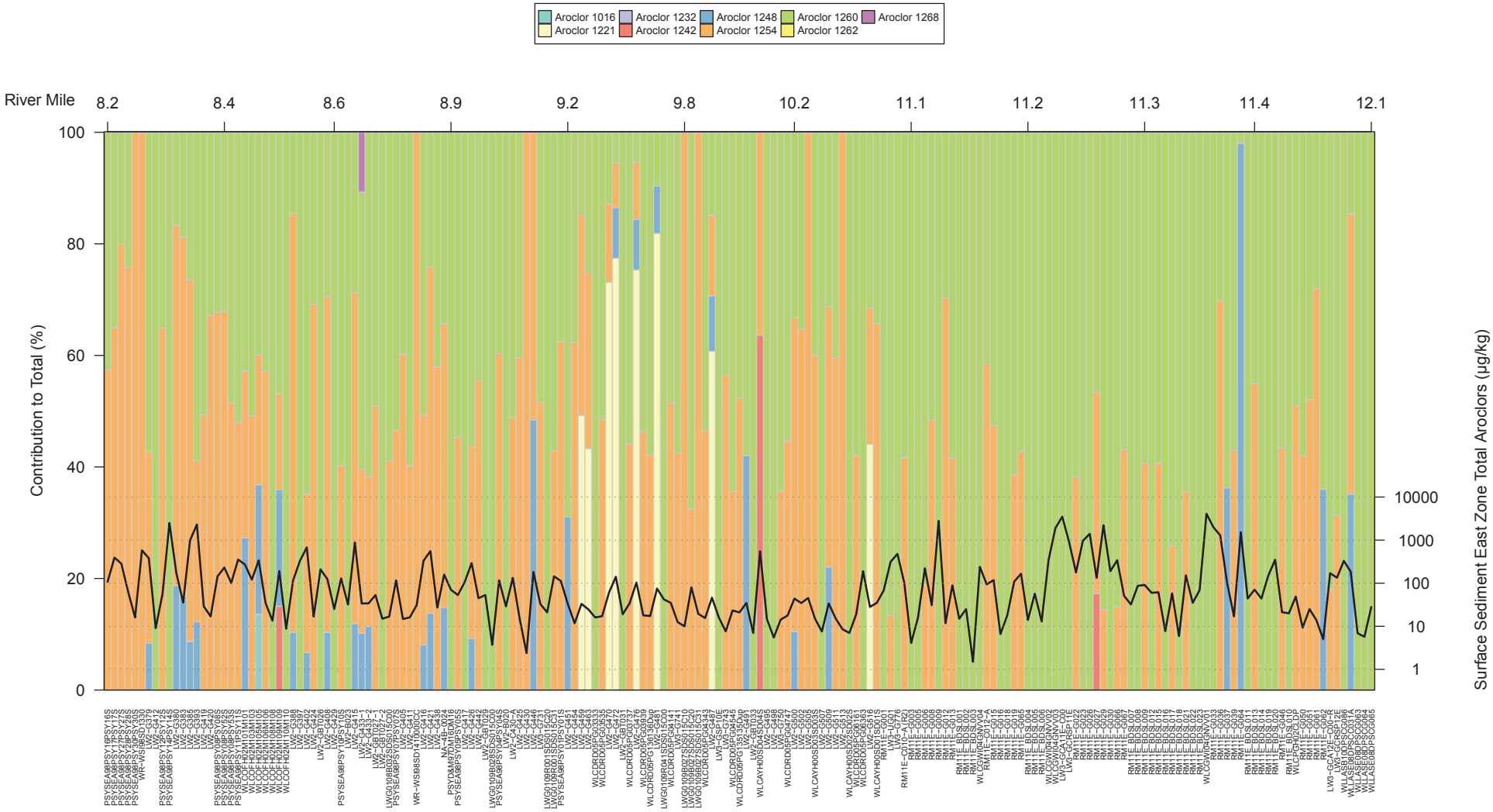

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−4a
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
Aroclor Patterns in Surface Sediment,
Study Area (RM 1.4 to 4.4) Eastern Nearshore



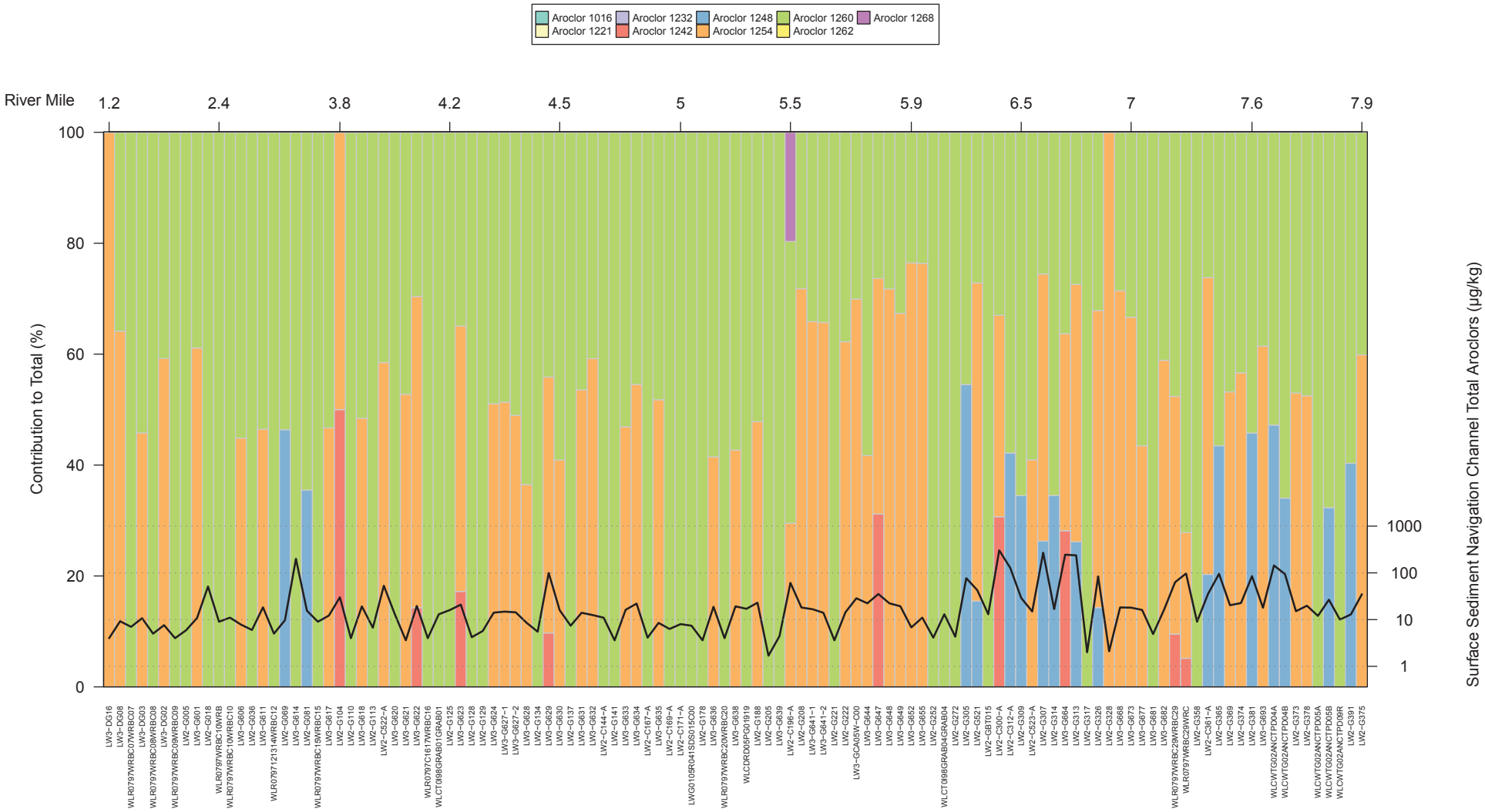

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−4b
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
Aroclor Patterns in Surface Sediment,
Study Area (RM 4.4 to 7.9) Eastern Nearshore



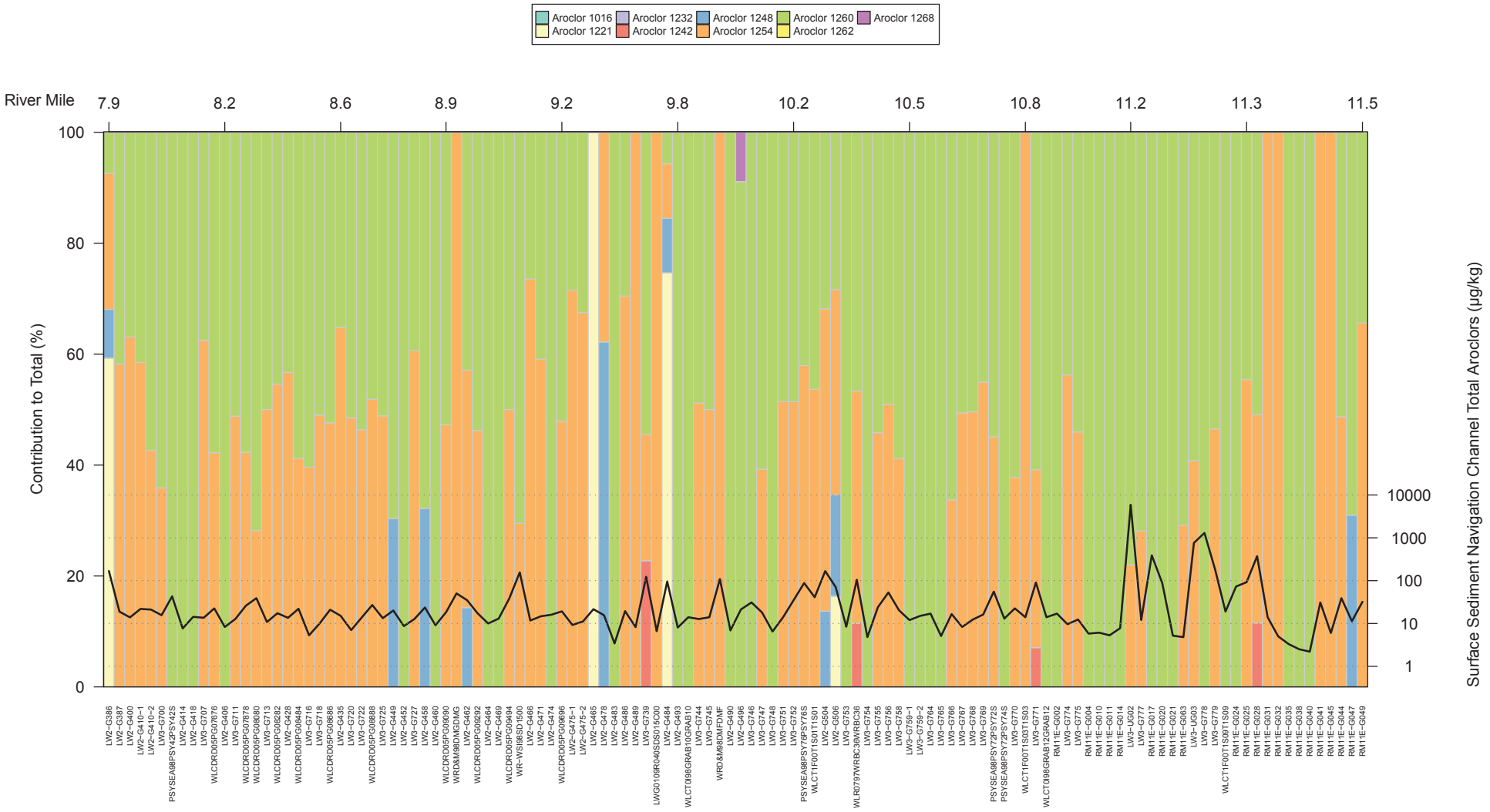

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−4c
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
Aroclor Patterns in Surface Sediment,
Study Area (RM 8.0 to 12.1) Eastern Nearshore



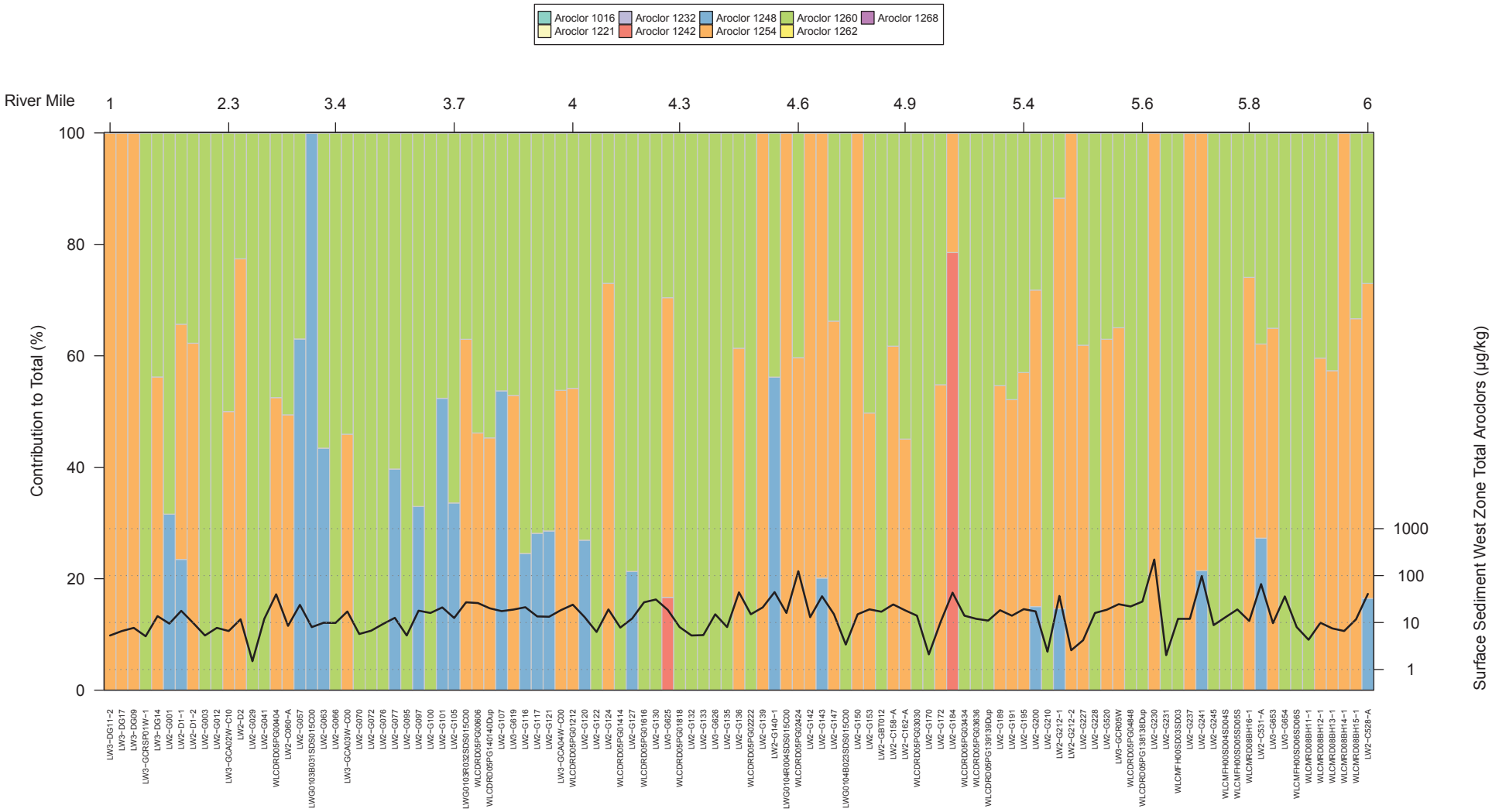

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−4d
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
Aroclor Patterns in Surface Sediment,
Study Area (RM 1.2 to 7.6) Navigation Channel



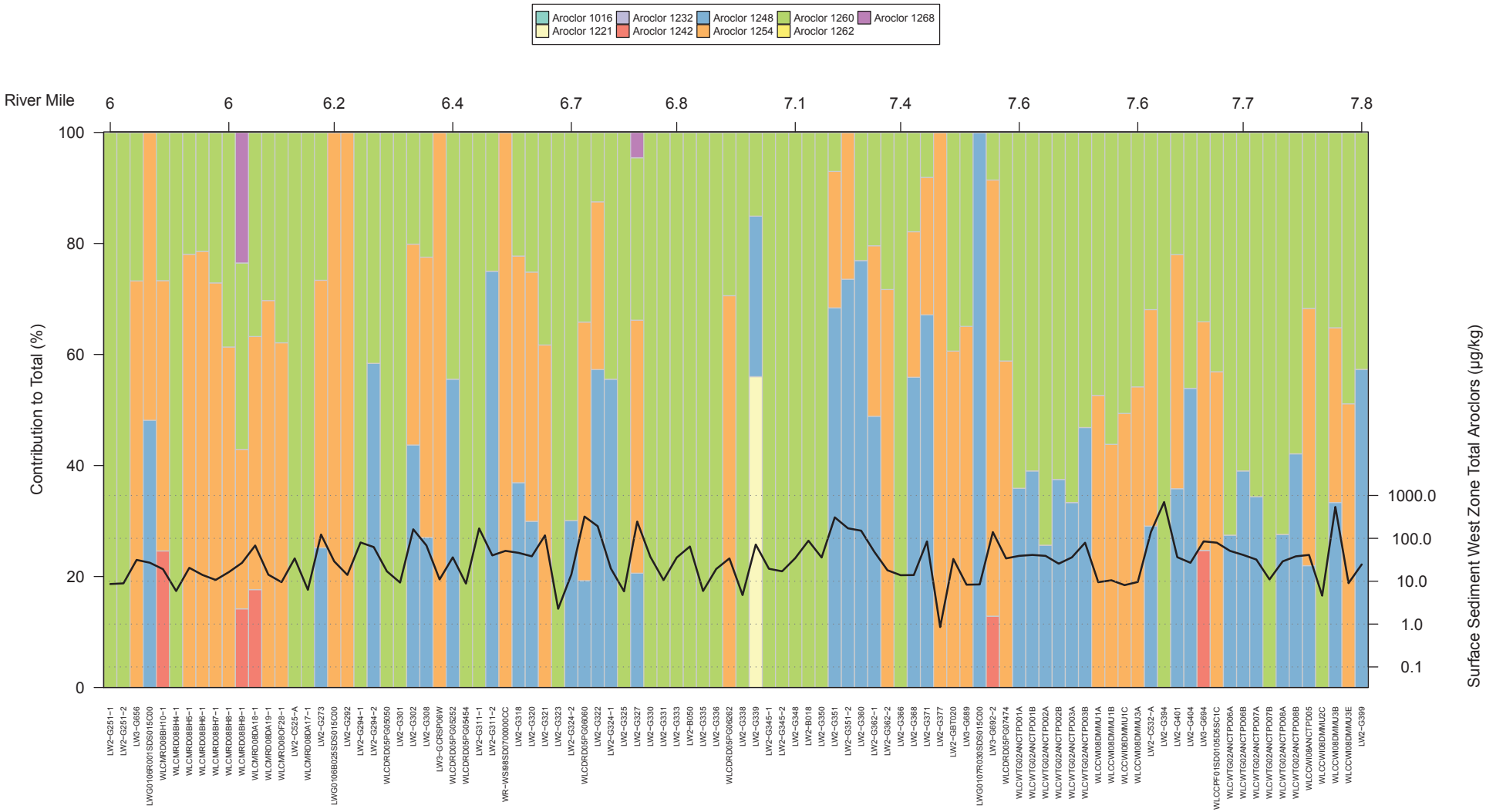

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−4e
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
Aroclor Patterns in Surface Sediment,
Study Area (RM 7.6 to 11.3) Navigation Channel



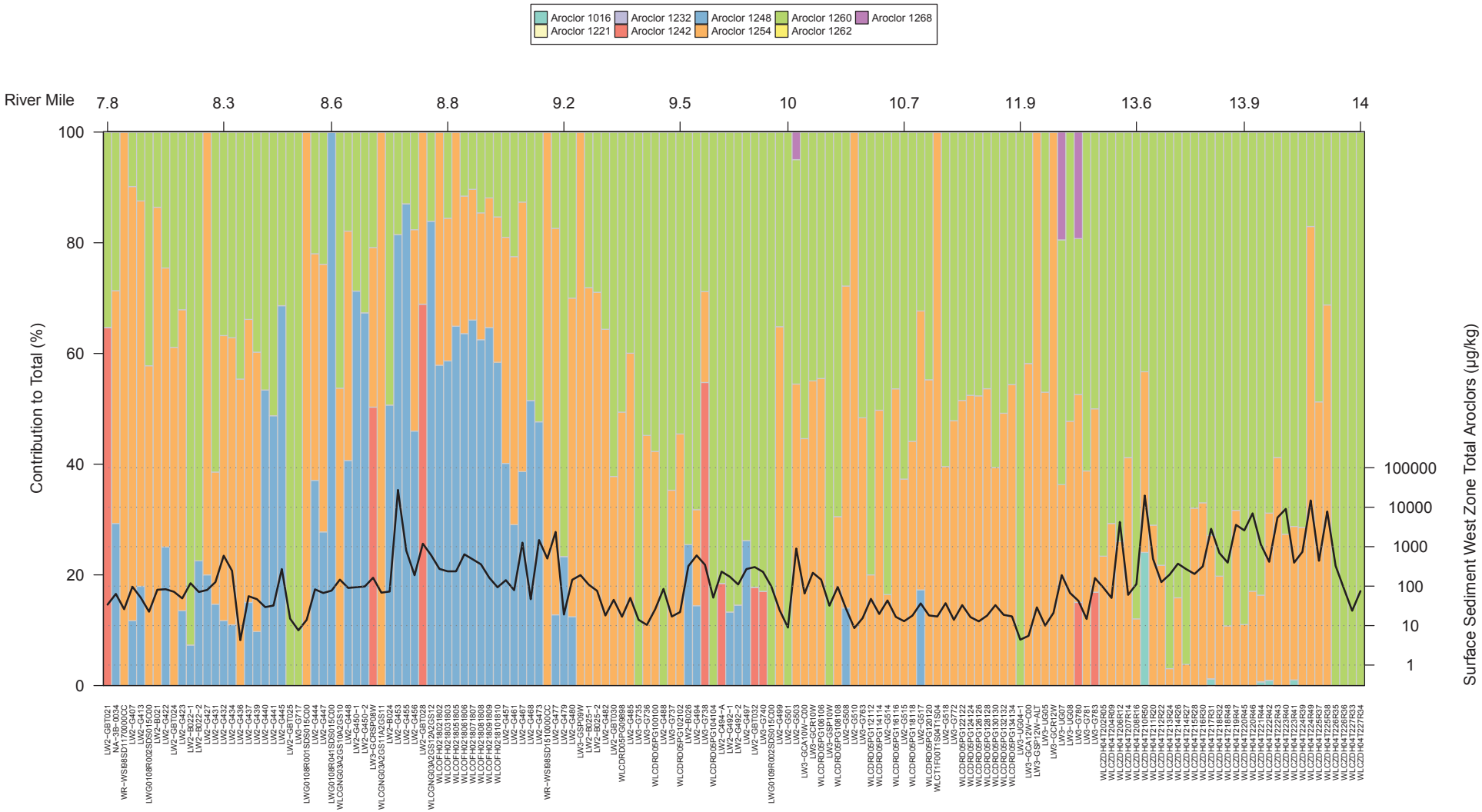

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−4f
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
Aroclor Patterns in Surface Sediment,
Study Area (RM 1.0 to 5.9) Western Nearshore



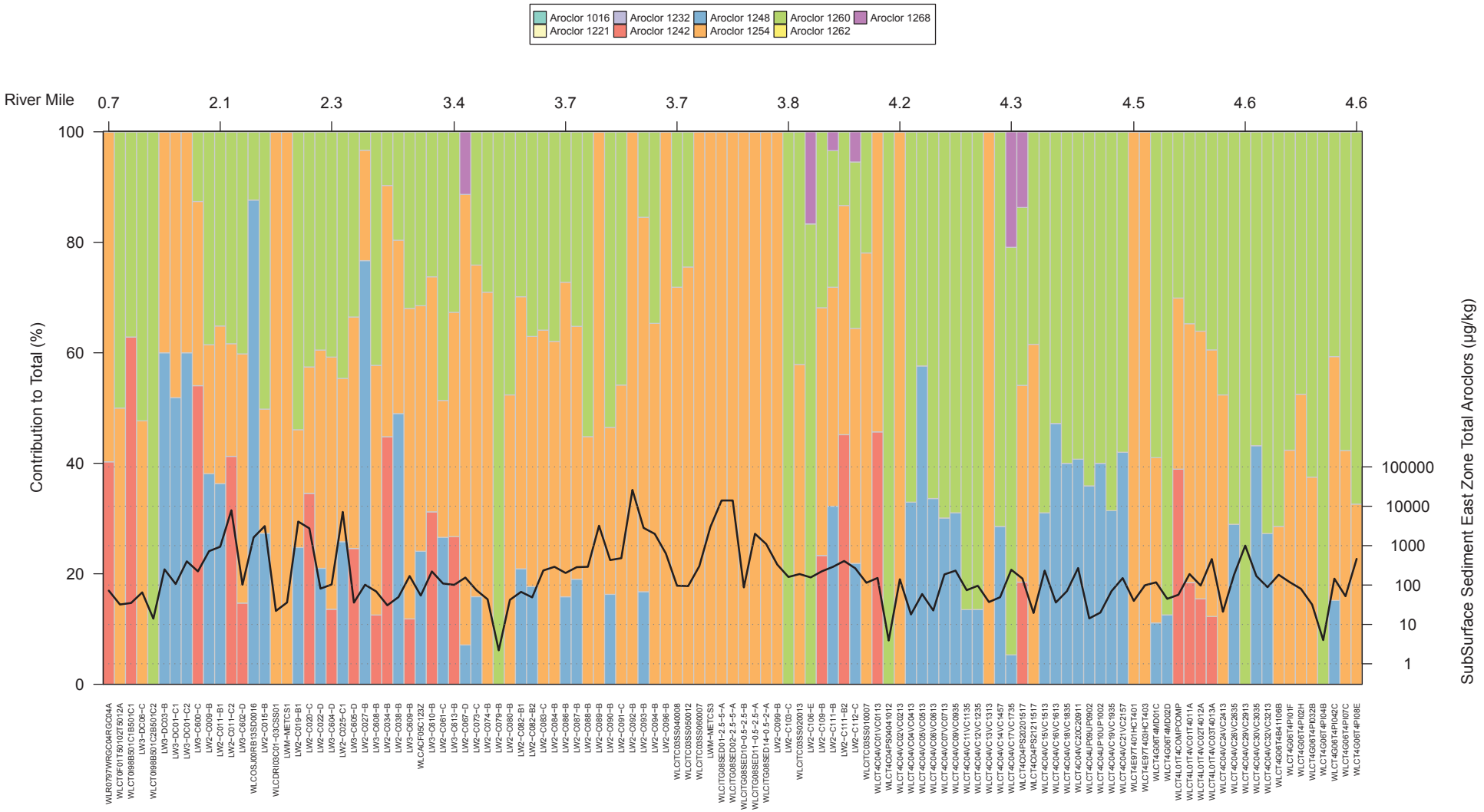

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−4g
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
Aroclor Patterns in Surface Sediment,
Study Area (RM 5.9 to 8.3) Western Nearshore



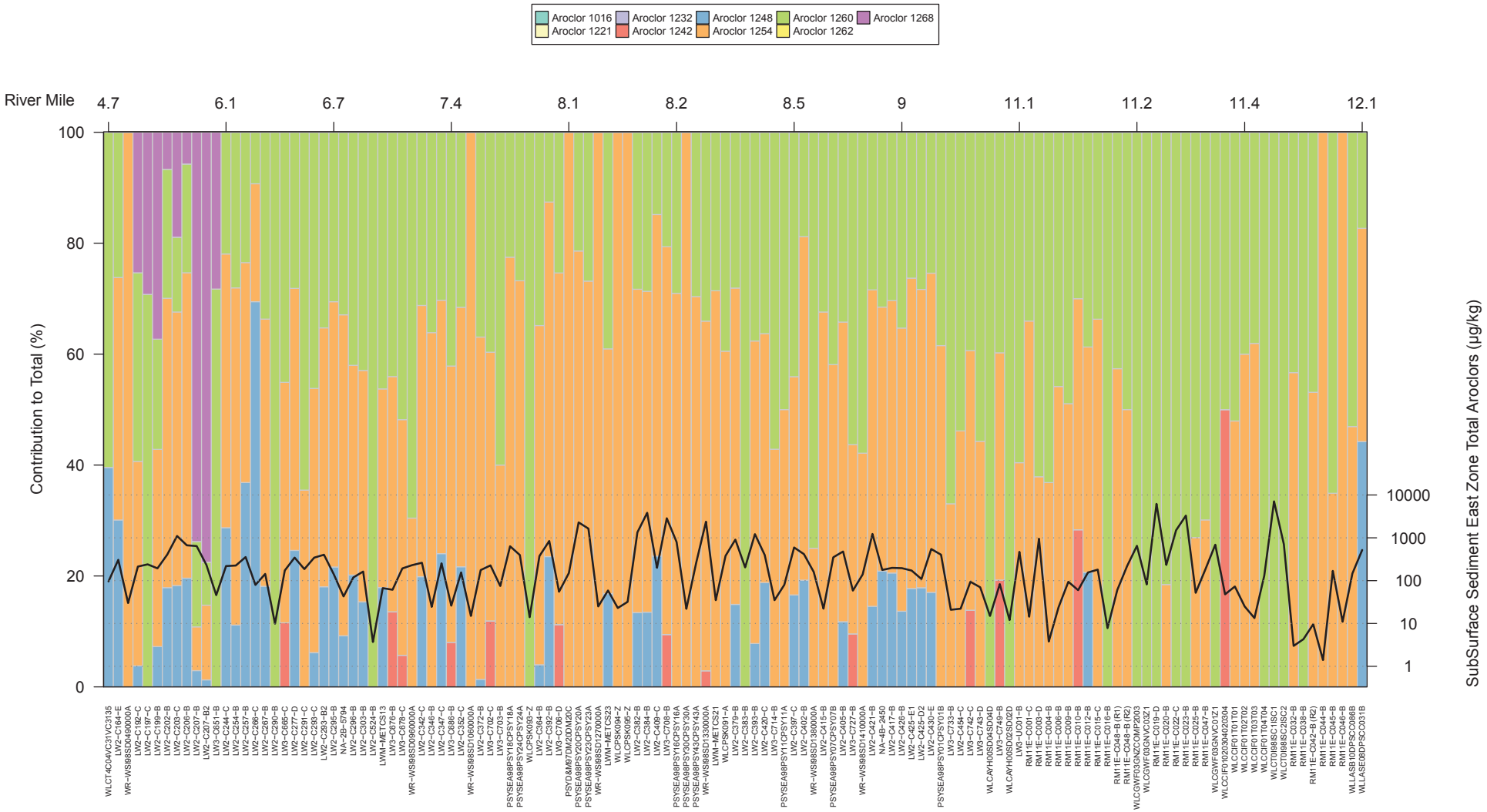

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−4h
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
Aroclor Patterns in Surface Sediment,
Study Area (RM 8.3 to 14.0) Western Nearshore



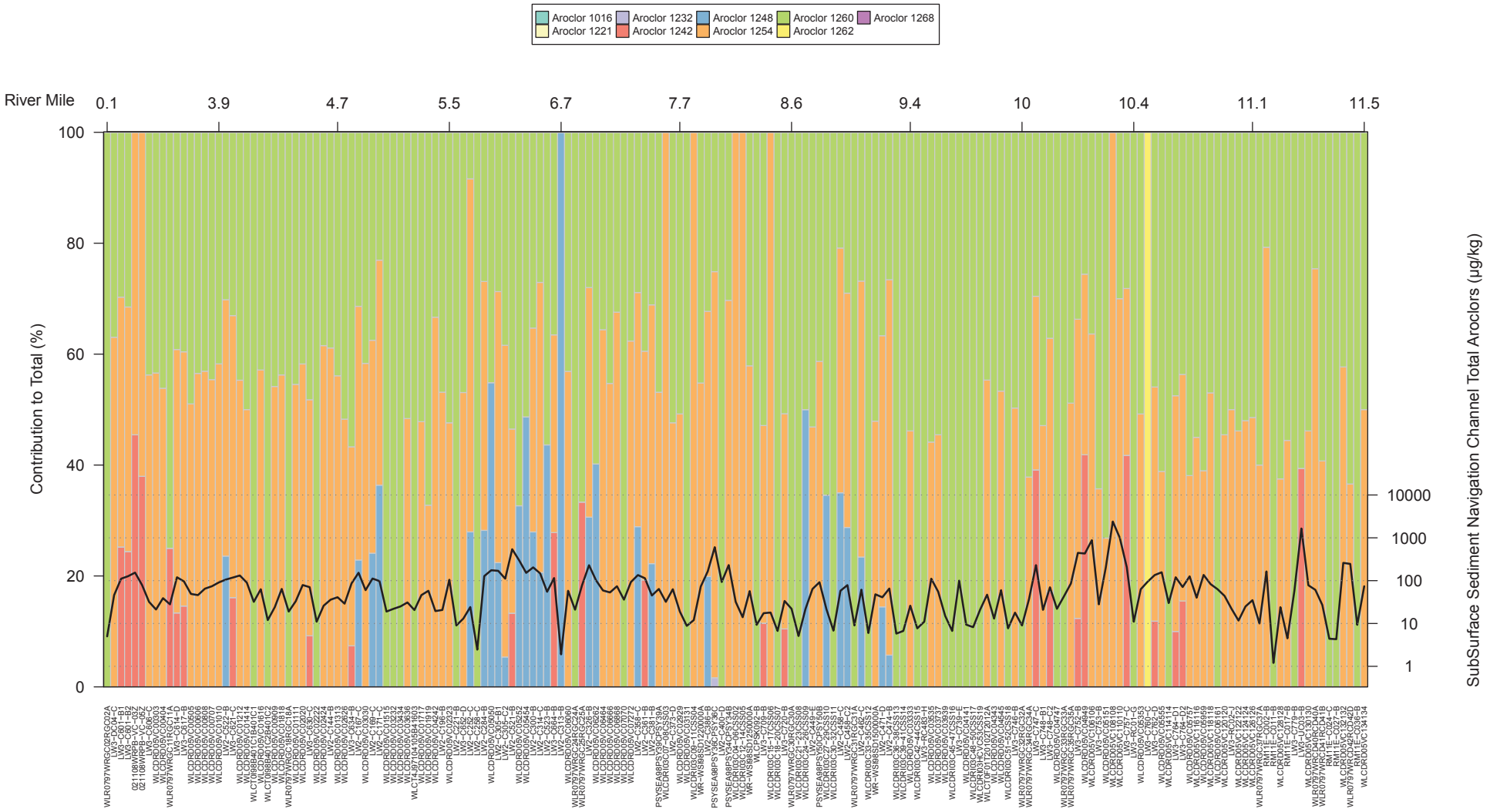

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−5a
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
Aroclor Patterns in Subsurface Sediment,
Study Area (RM 0.7 to 4.6) Eastern Nearshore



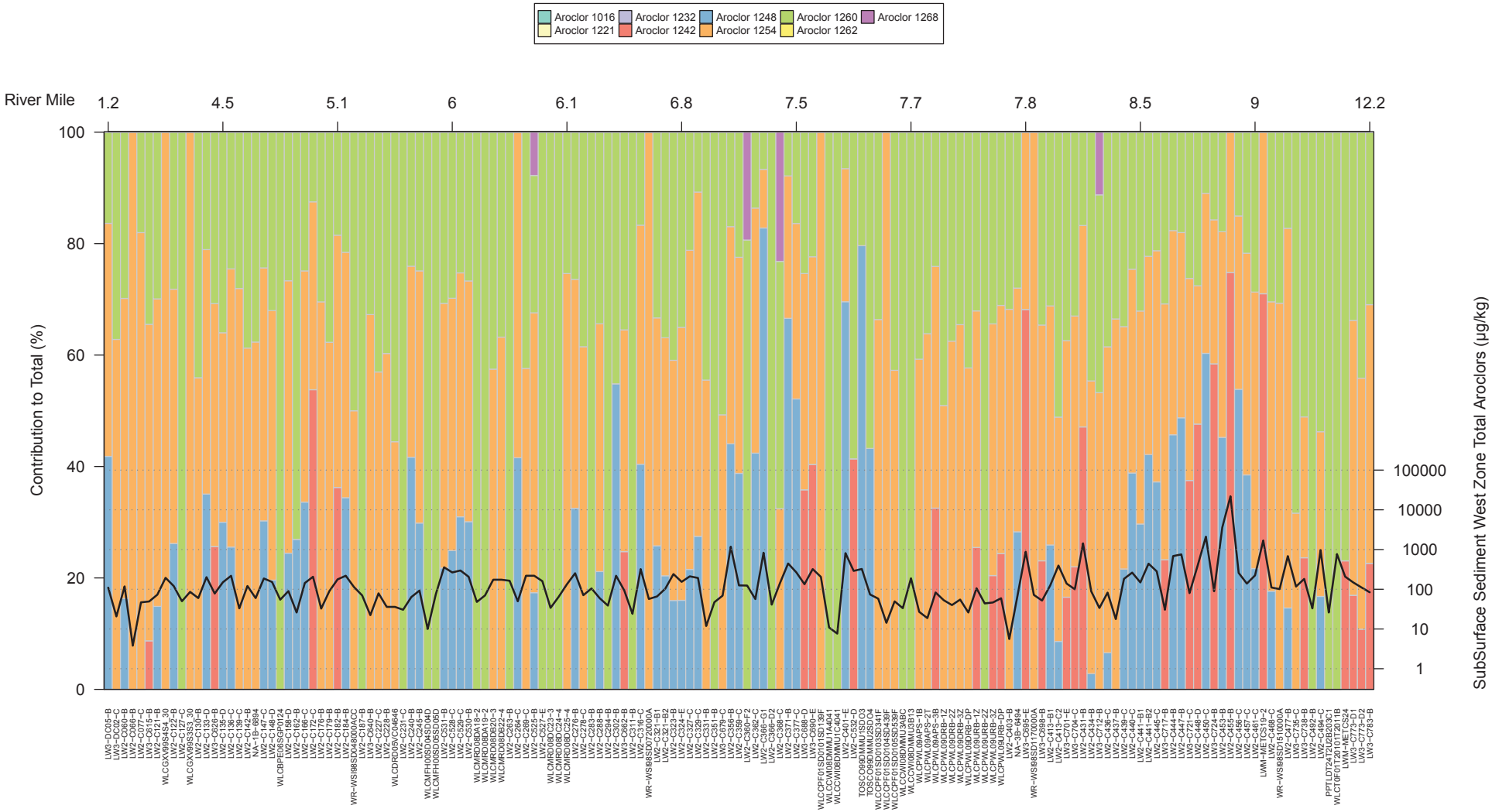

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−5b
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
Aroclor Patterns in Subsurface Sediment,
Study Area (RM 4.6 to 11.4) Eastern Nearshore



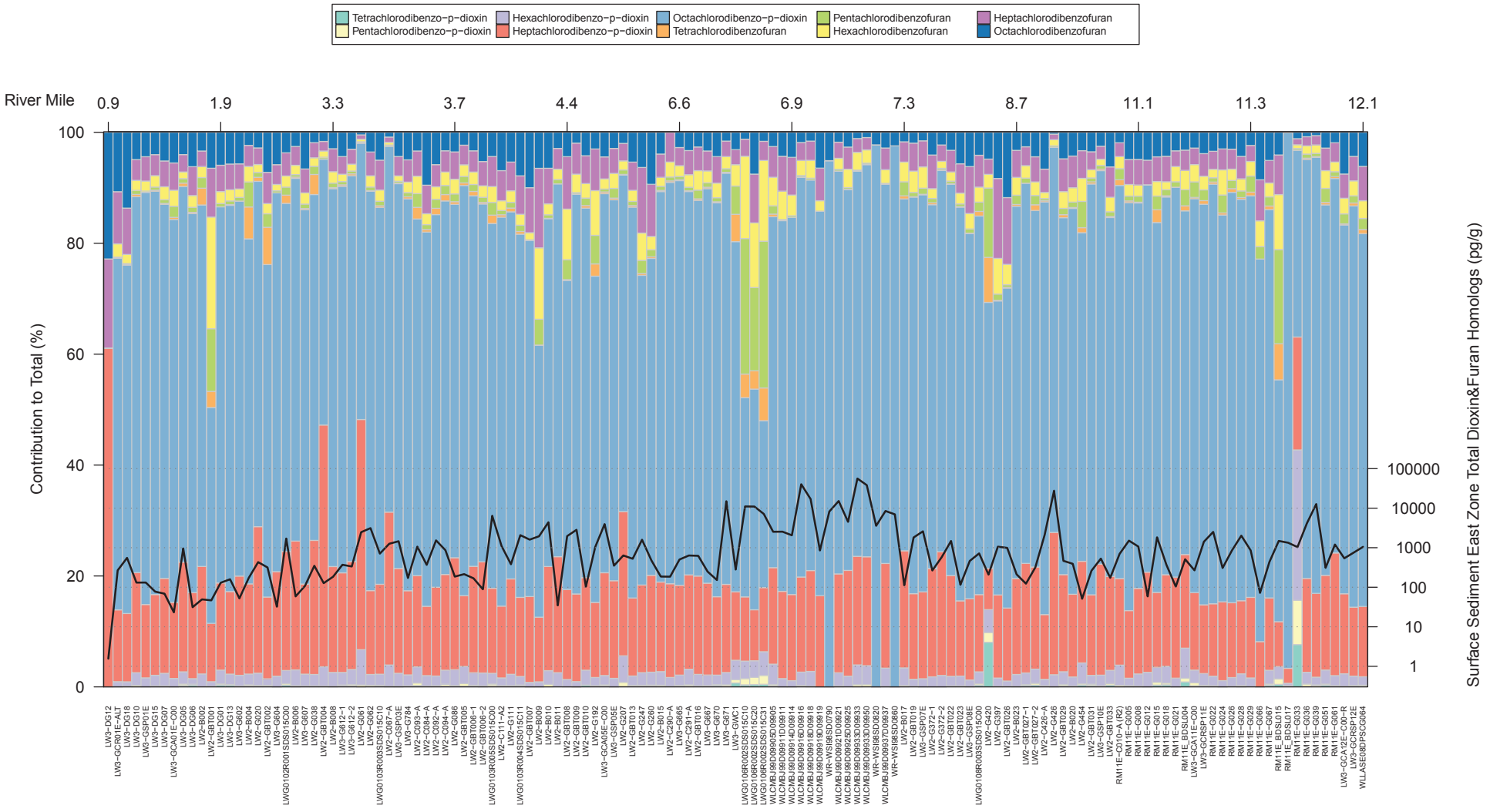

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−5c
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
Aroclor Patterns in Subsurface Sediment,
Study Area (RM 1.0 to 11.5) Navigation Channel



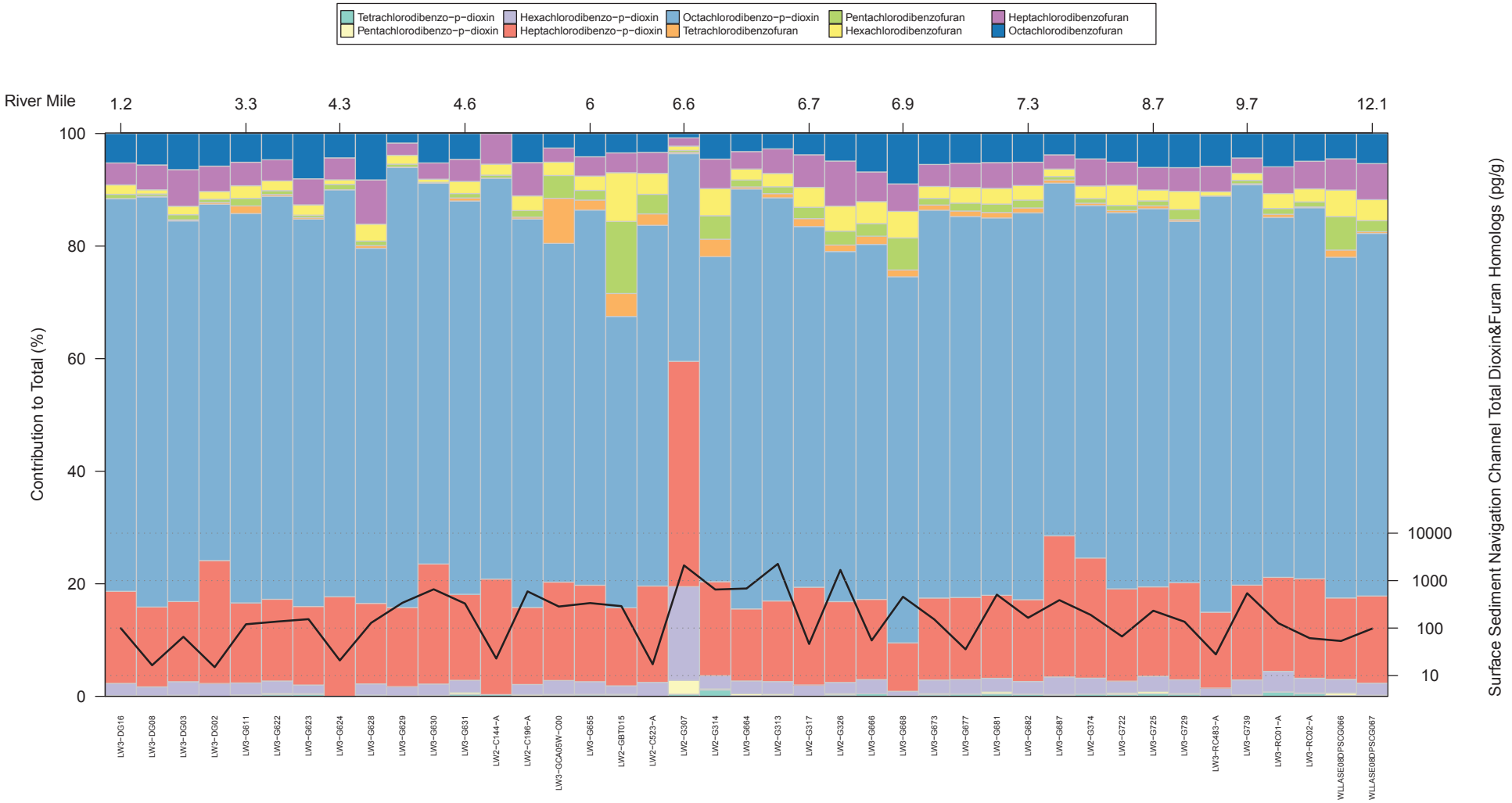

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−5d
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
Aroclor Patterns in Subsurface Sediment,
Study Area (RM 1.2 to 12.2) Western Nearshore



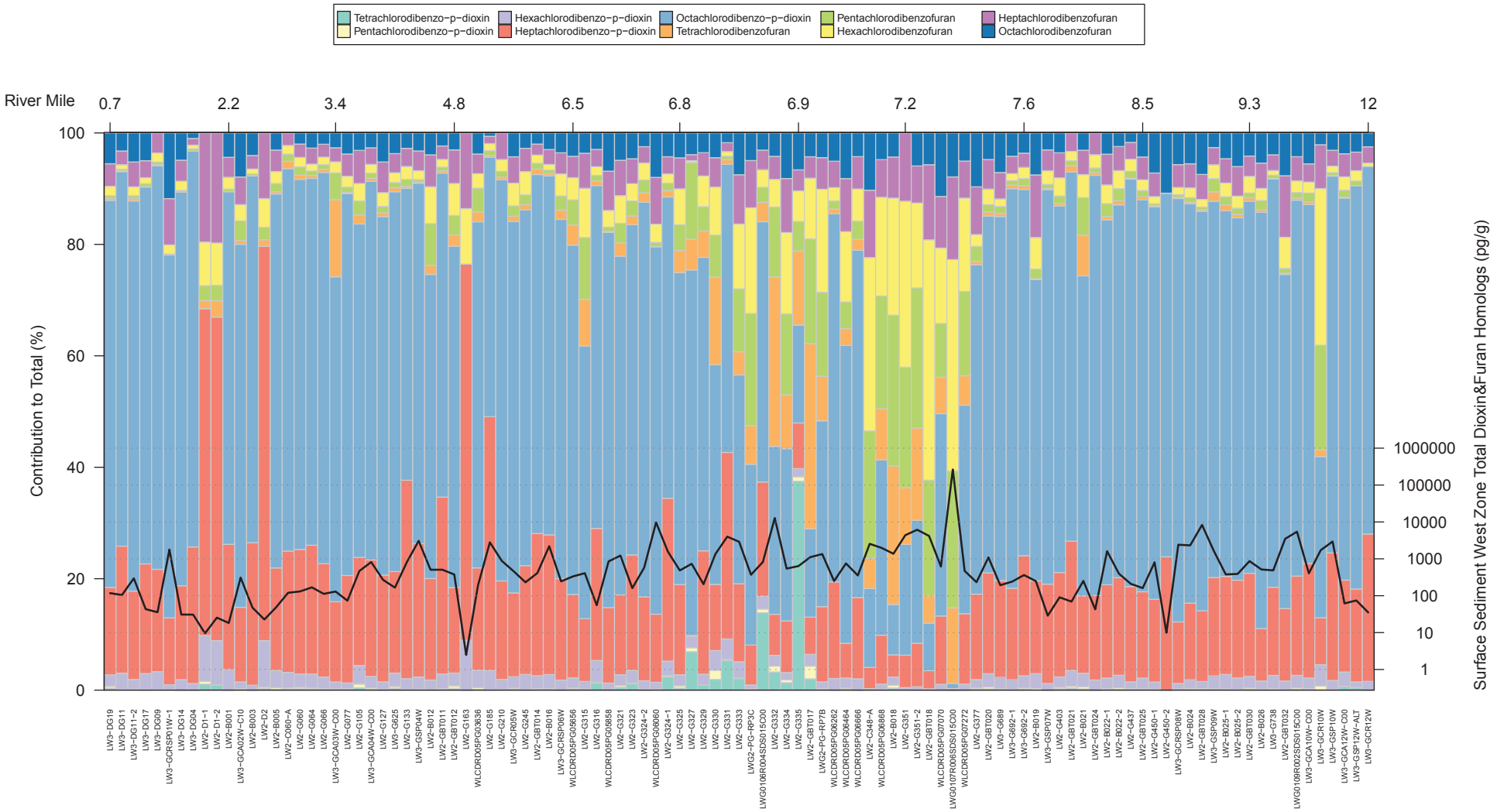

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−6a
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PCDD/F Homolog Patterns in Surface Sediment,
Study Area (RM 0.9 to 12.1) Eastern Nearshore



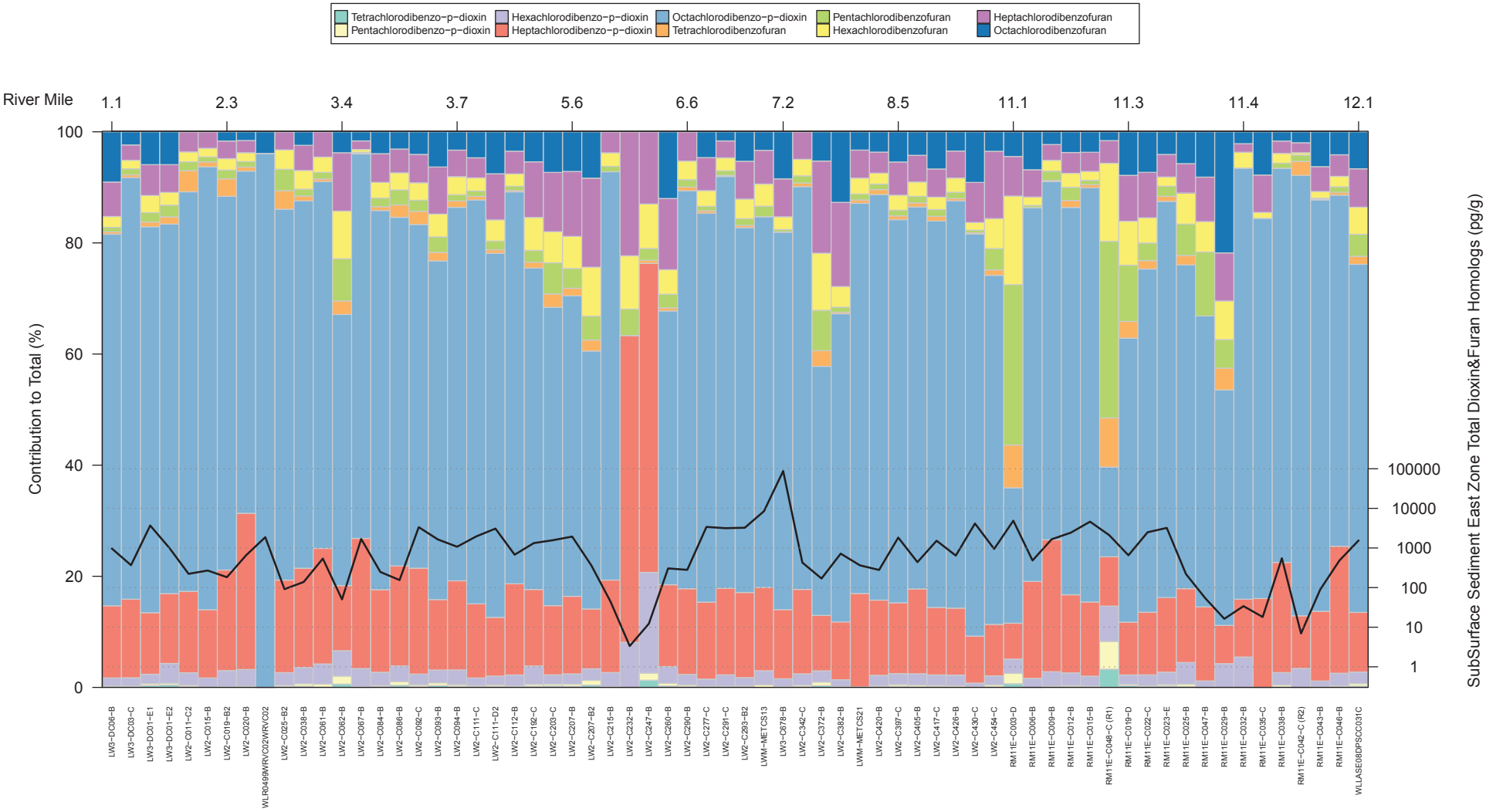

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−6b
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PCDD/F Homolog Patterns in Surface Sediment,
Study Area (RM 1.2 to 10.9) Navigation Channel



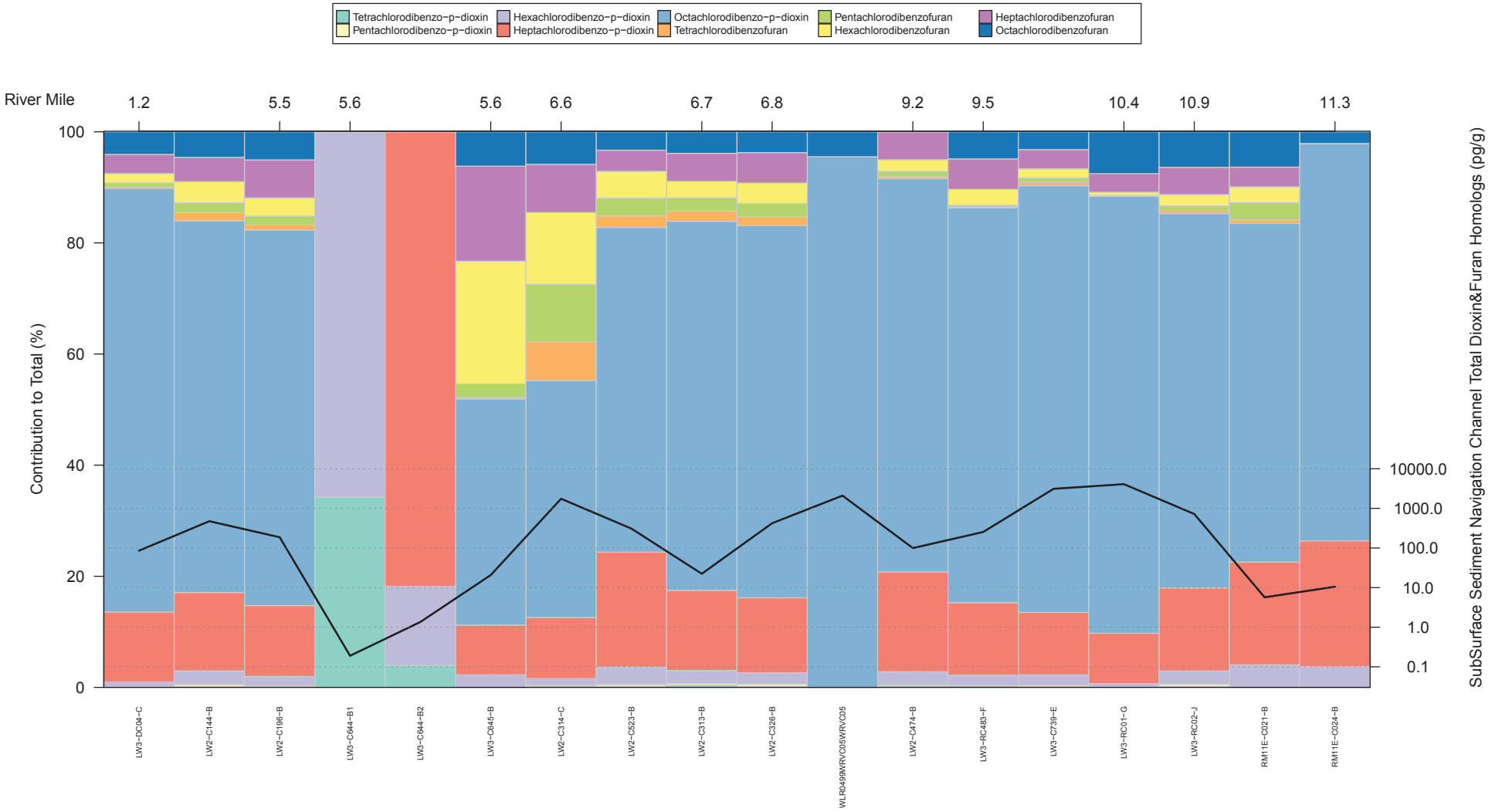

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−6c
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PCDD/F Homolog Patterns in Surface Sediment,
Study Area (RM 0.7 to 12.0) Western Nearshore



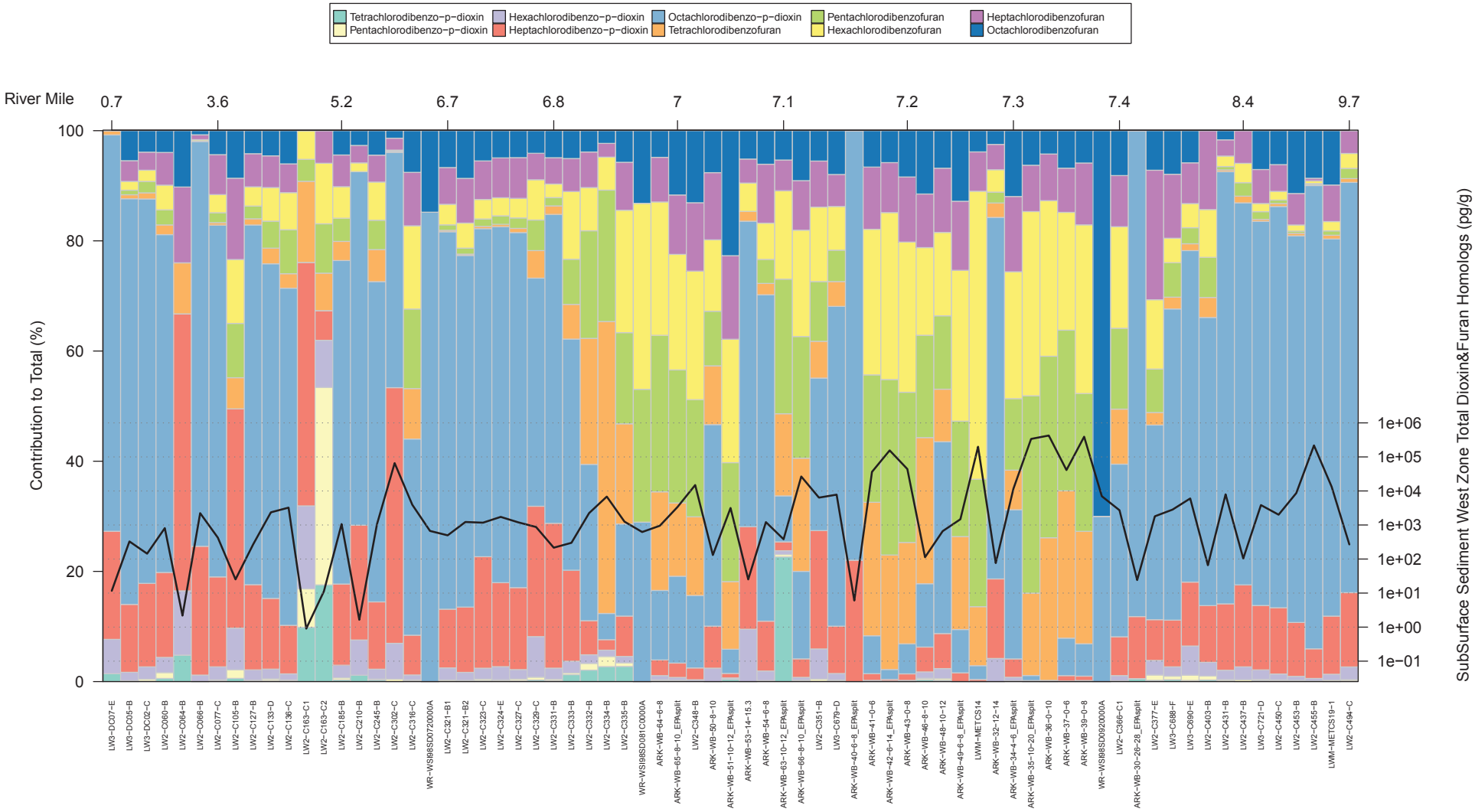

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−7a
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PCDD/F Homolog Patterns in Subsurface Sediment,
Study Area (RM 1.1 to 9.3) Eastern Nearshore



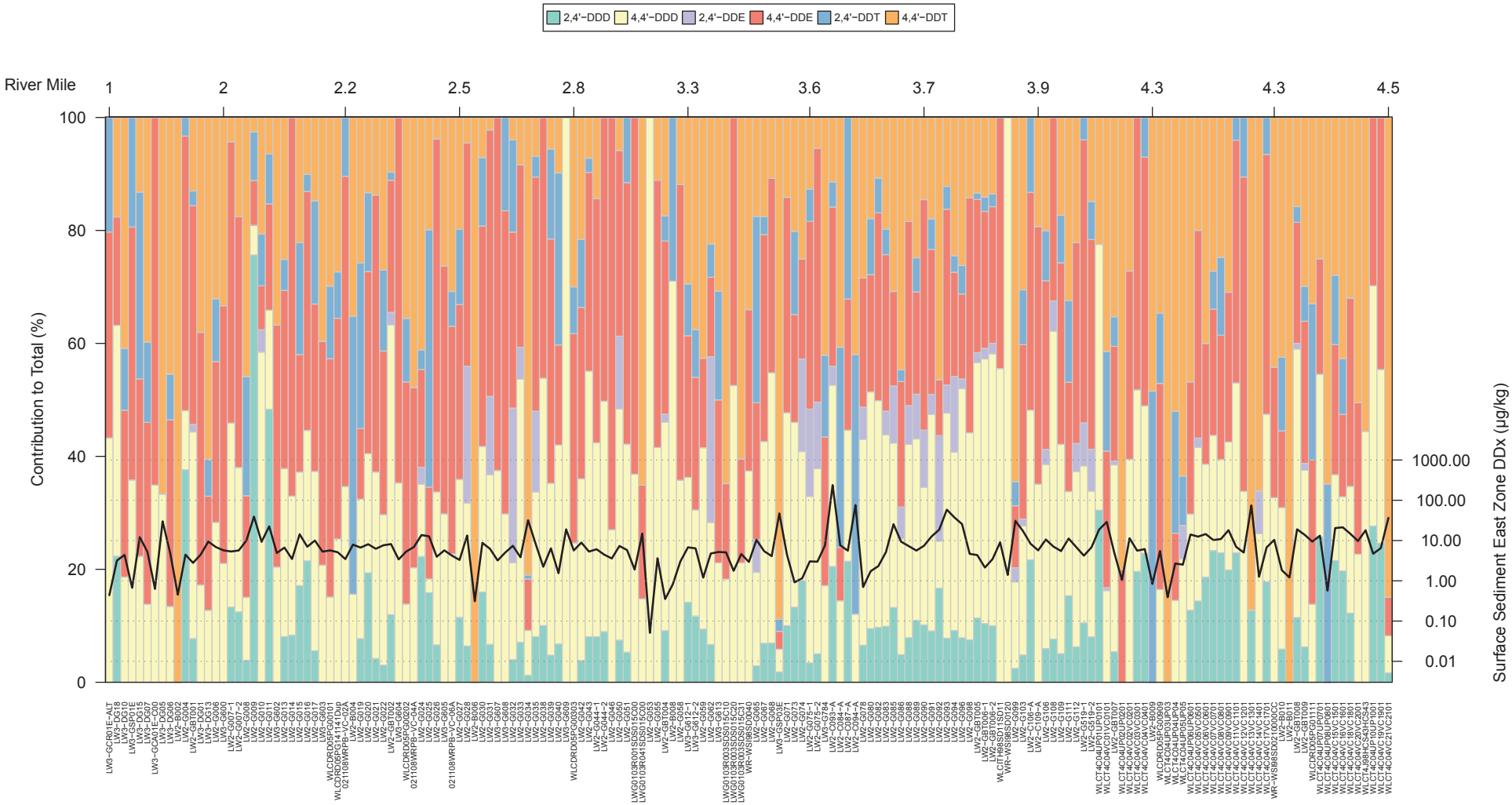

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−7b
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PCDD/F Homolog Patterns in Subsurface Sediment,
Study Area (RM 1.2 to 10.9) Navigation Channel



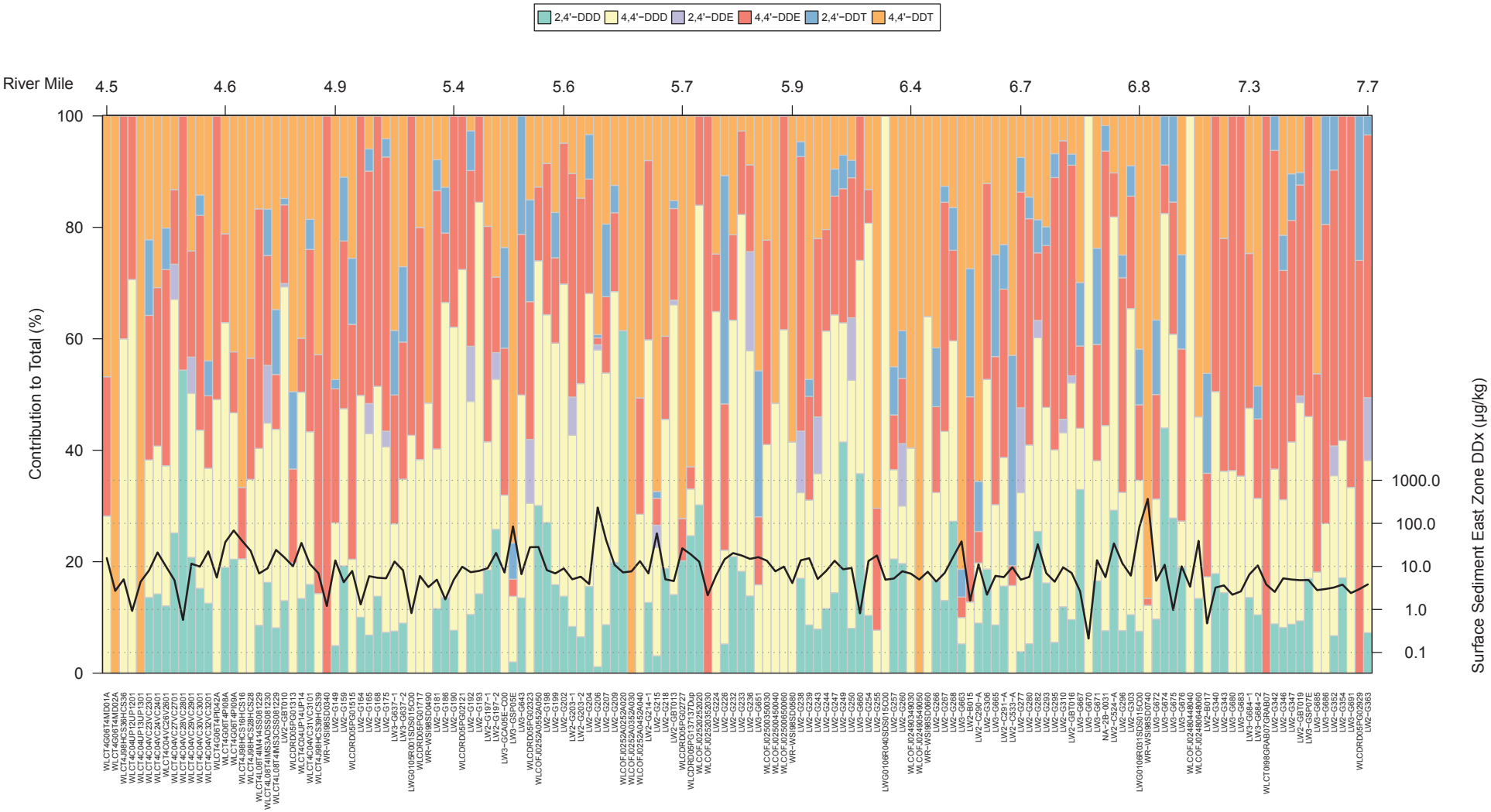

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−7c
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PCDD/F Homolog Patterns in Subsurface Sediment,
Study Area (RM 0.9 to 9.7) Western Nearshore



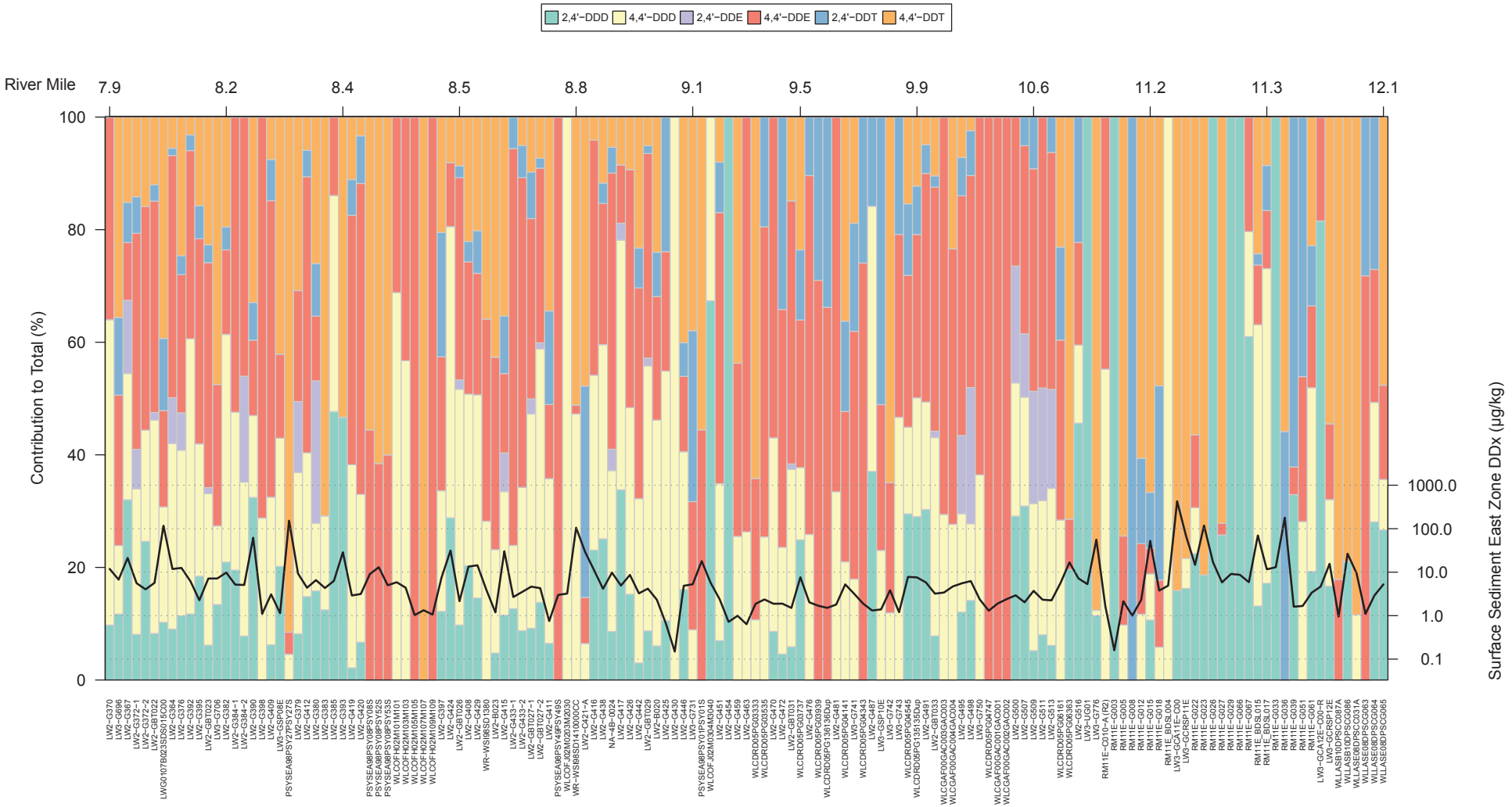

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−8a
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
DDx Patterns in Surface Sediment,
Study Area (RM 1.0 to 4.4) Eastern Nearshore



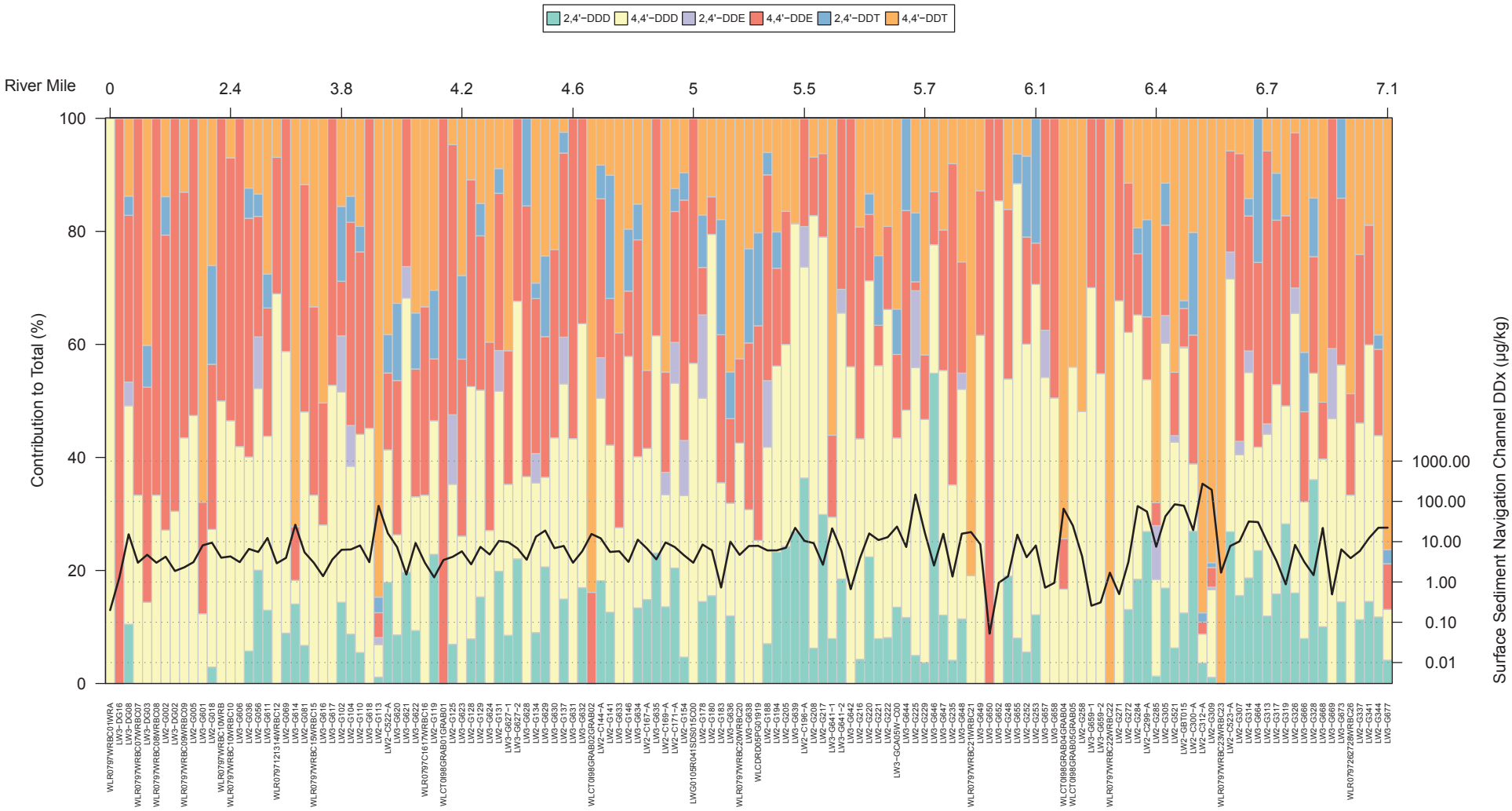

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−8b
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
DDx Patterns in Surface Sediment,
Study Area (RM 4.4 to 7.3) Eastern Nearshore



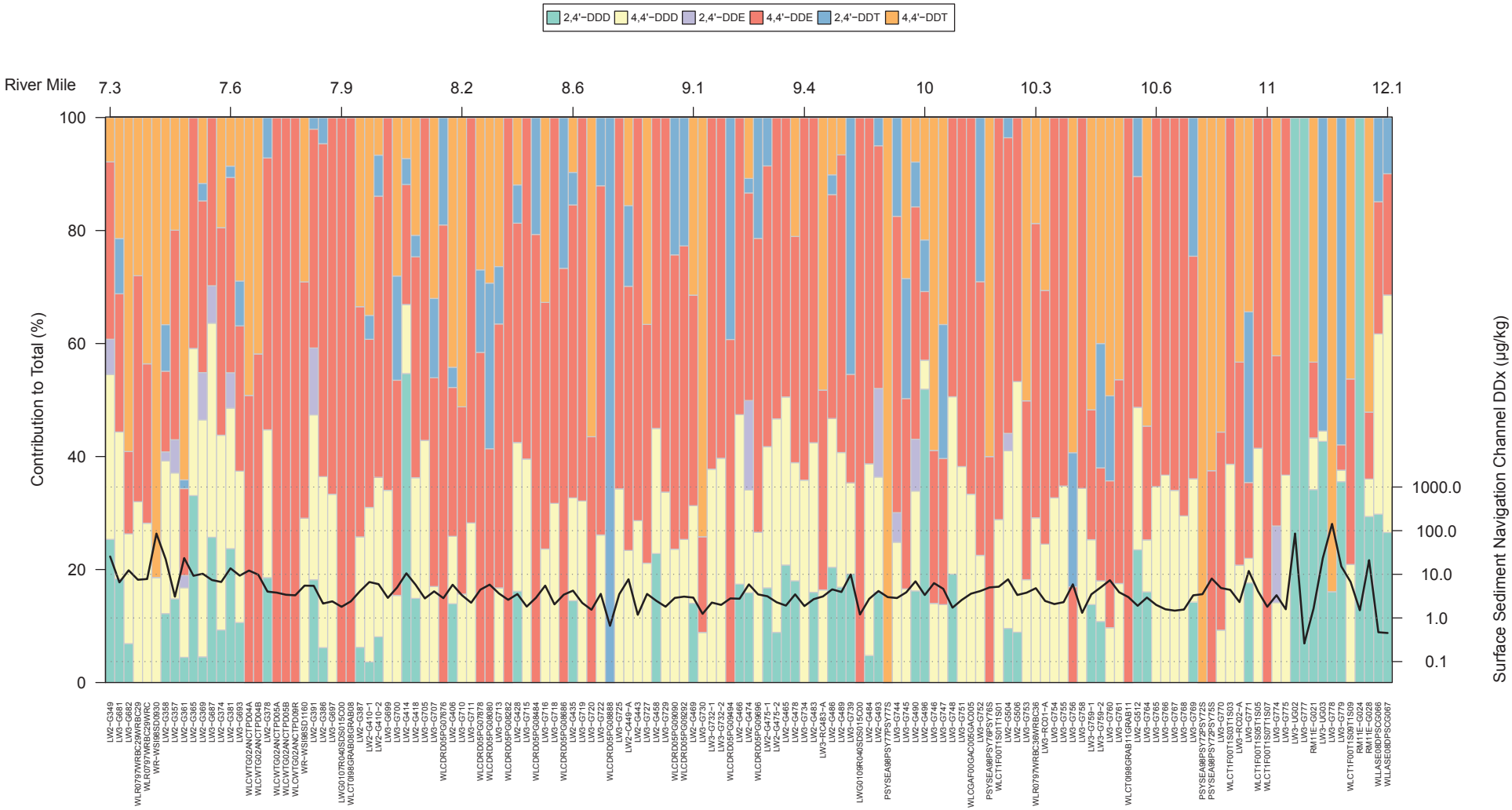

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−8c
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
DDx Patterns in Surface Sediment,
Study Area (RM 7.3 to 12.1) Eastern Nearshore



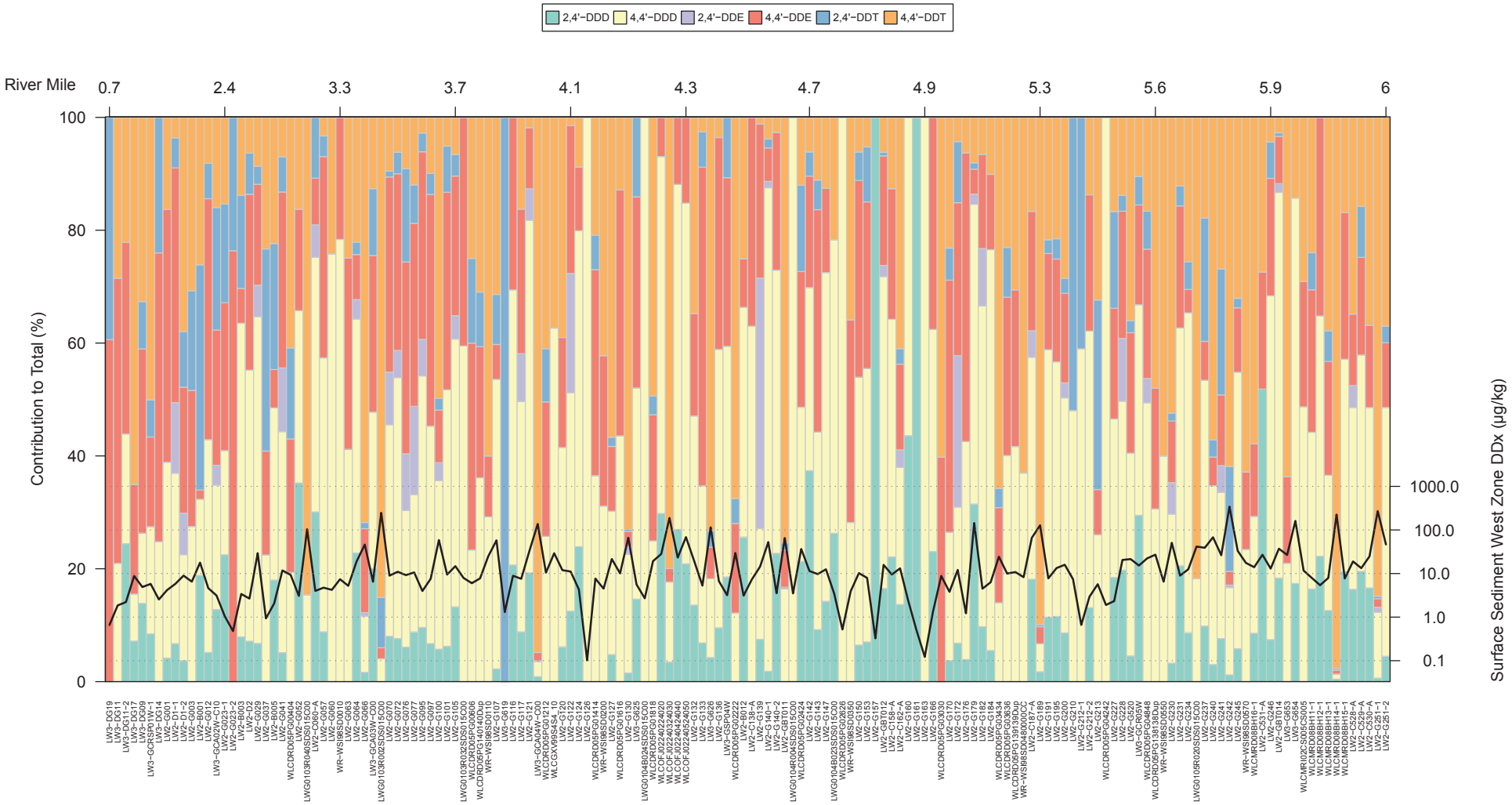

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−8d
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
DDx Patterns in Surface Sediment,
Study Area (RM 0.0 to 7.1) Navigation Channel



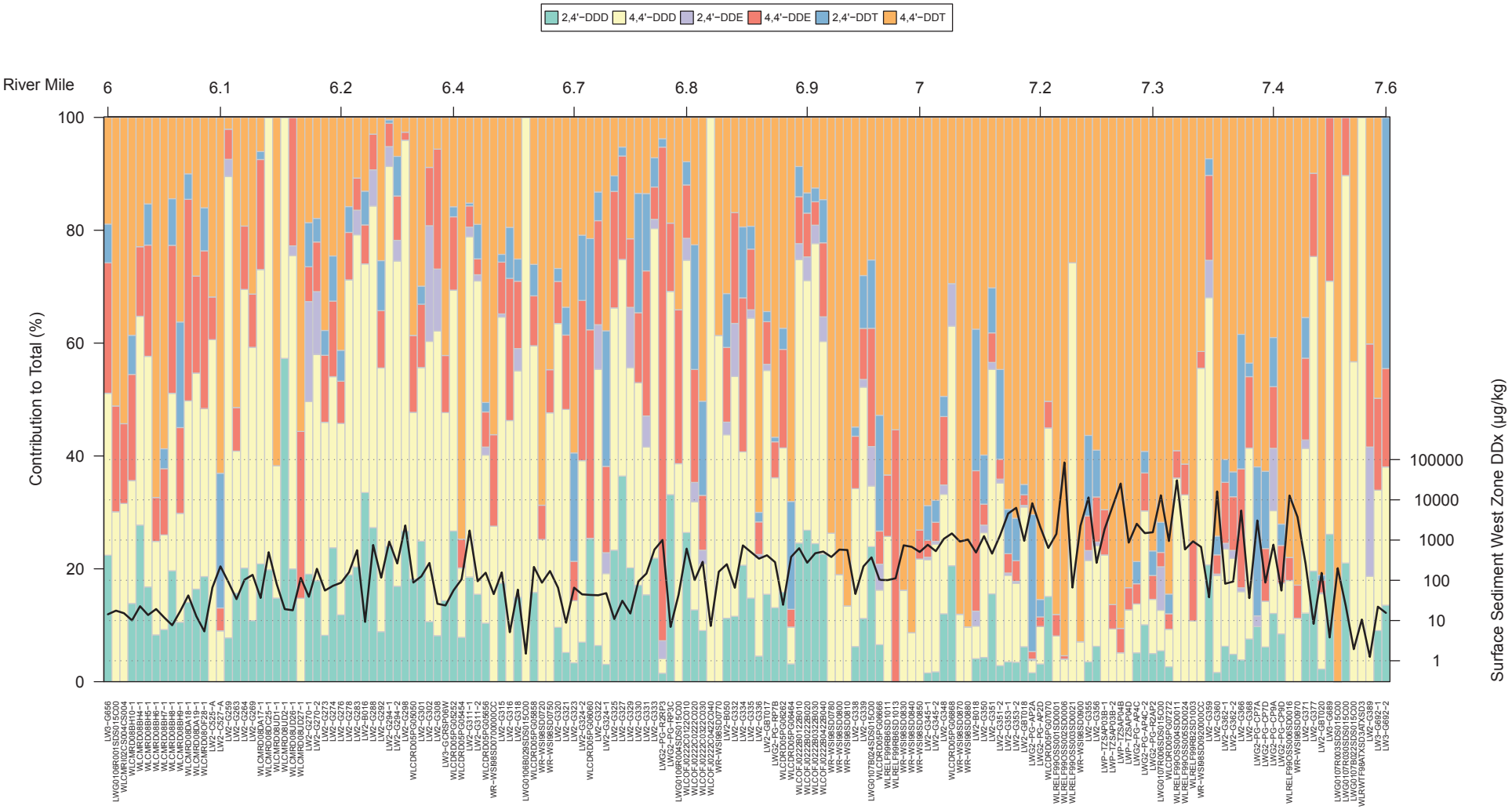

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−8e
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
DDx Patterns in Surface Sediment,
Study Area (RM 7.1 to 11.3) Navigation Channel



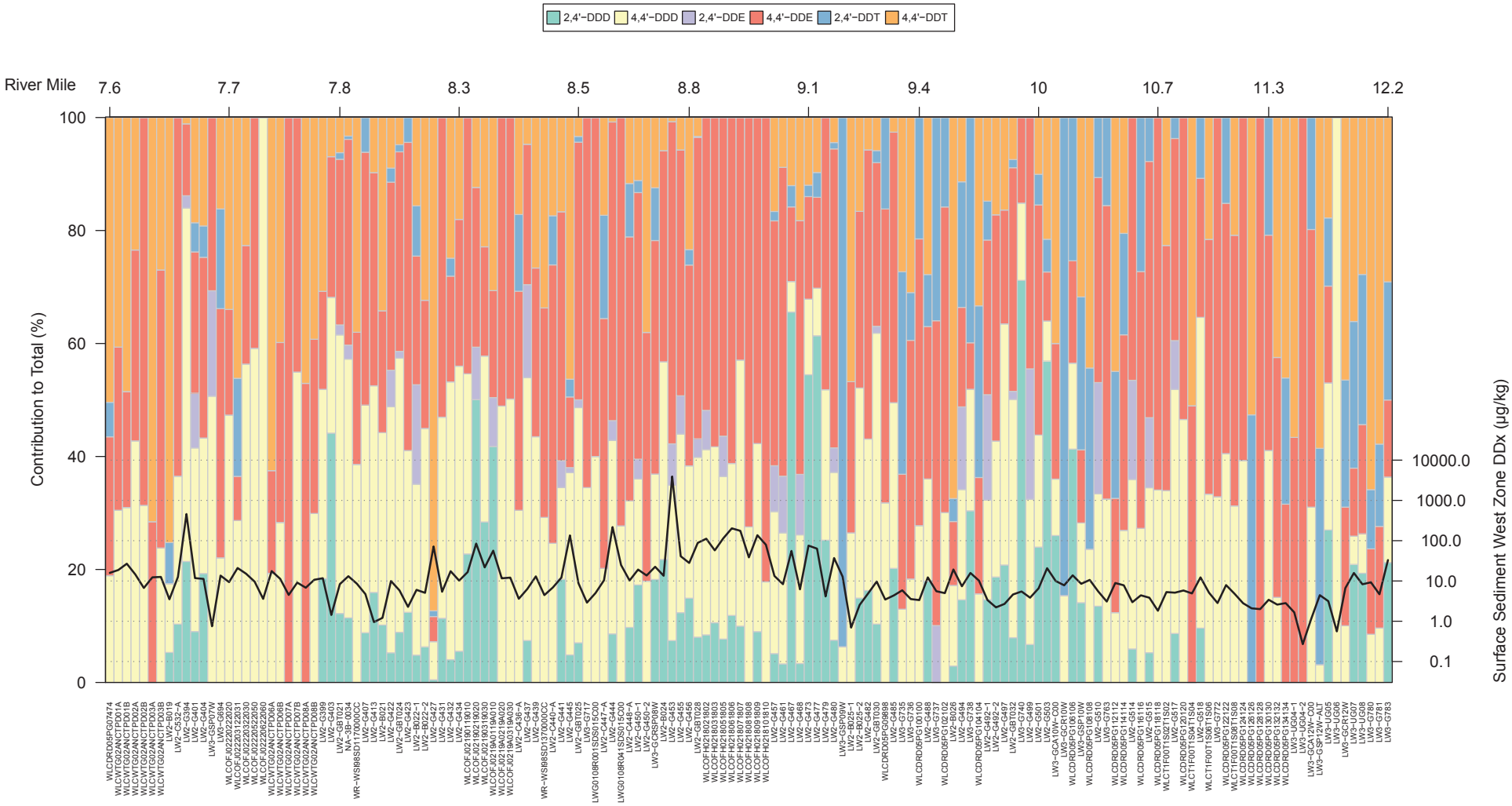

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−8f
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
DDx Patterns in Surface Sediment,
Study Area (RM 0.7 to 6.0) Western Nearshore



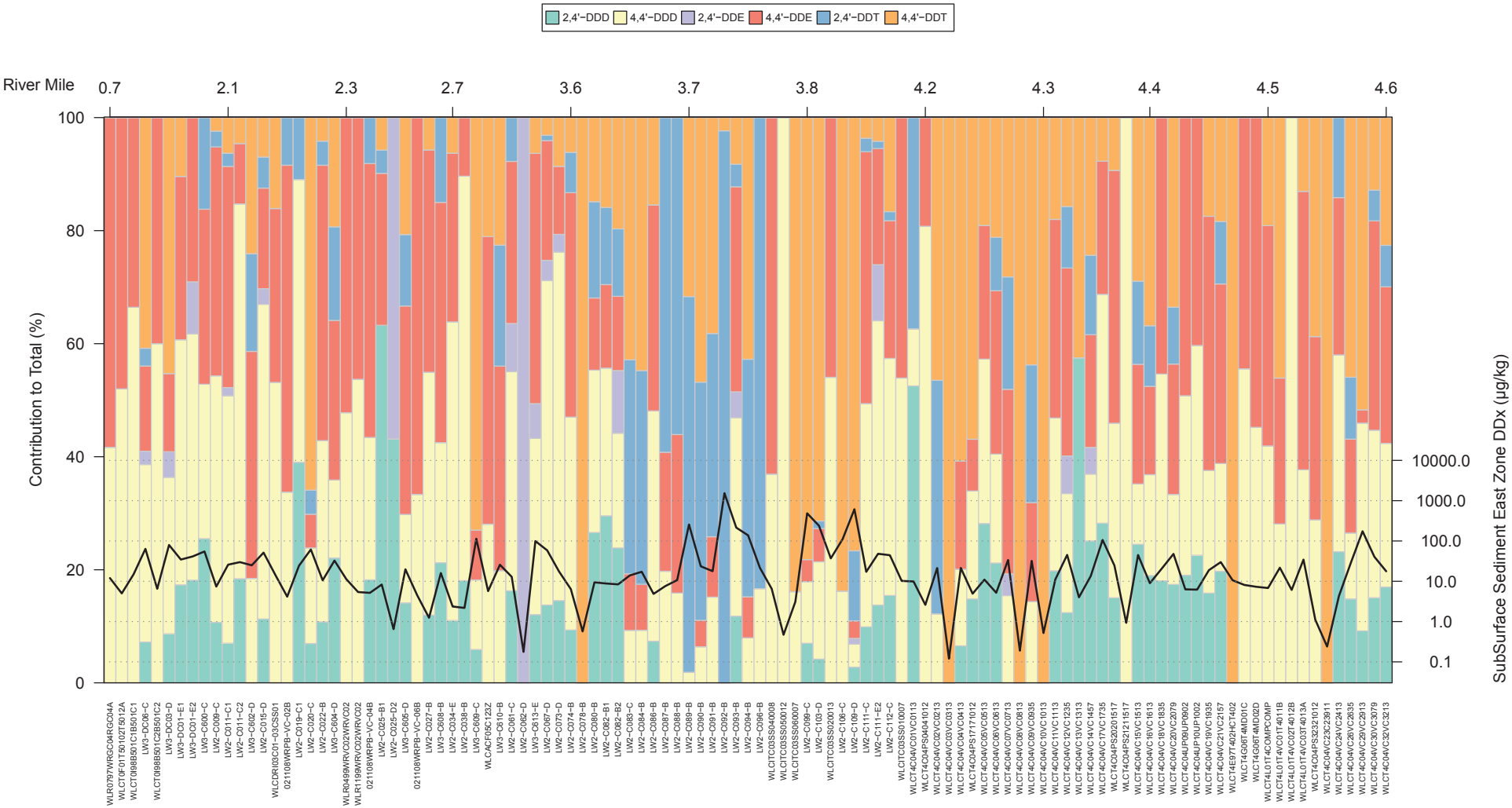

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−8g
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
DDx Patterns in Surface Sediment,
Study Area (RM 6.0 to 7.6) Western Nearshore



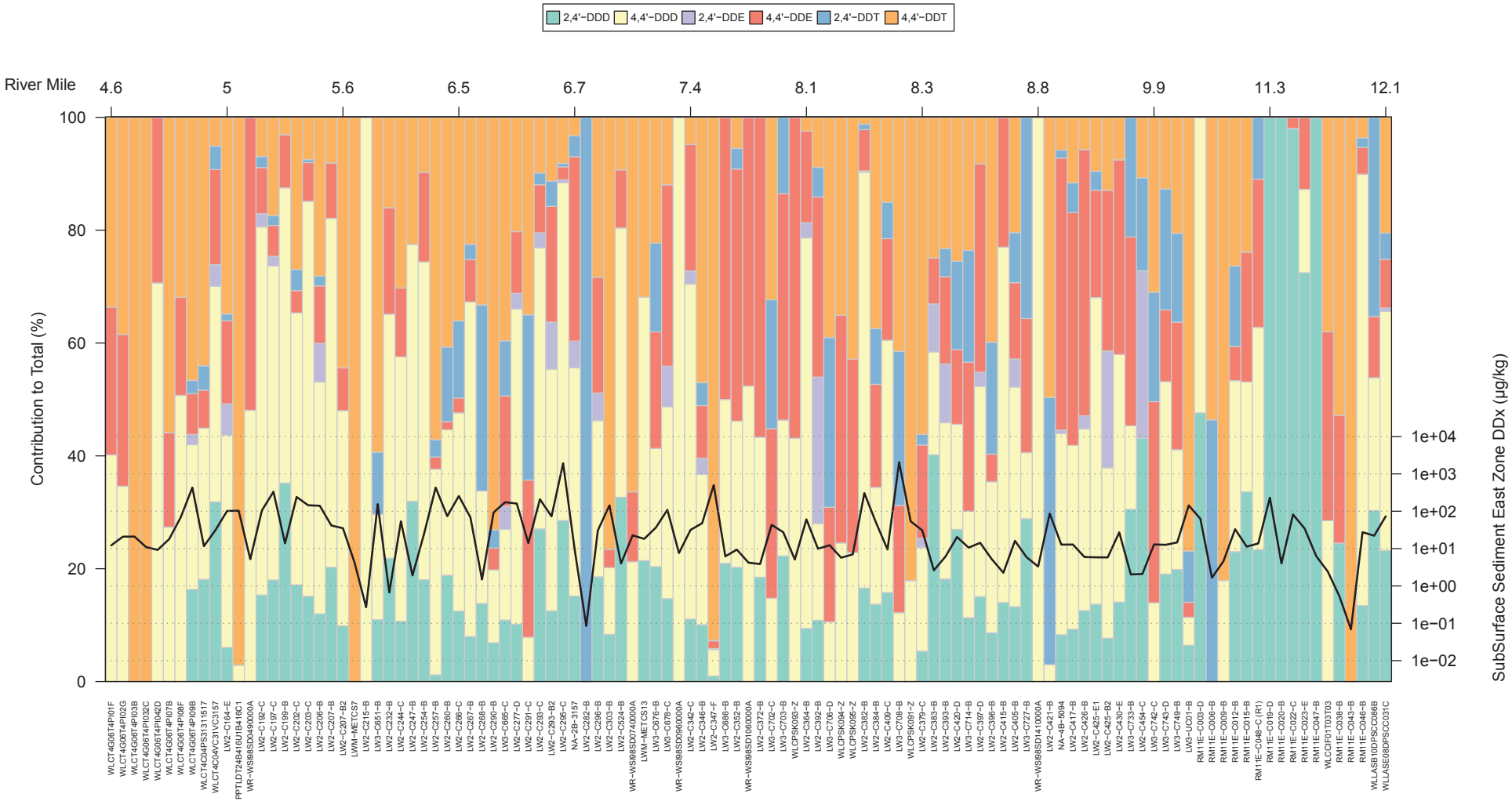

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−8h
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
DDx Patterns in Surface Sediment,
Study Area (RM 7.7 to 12.2) Western Nearshore



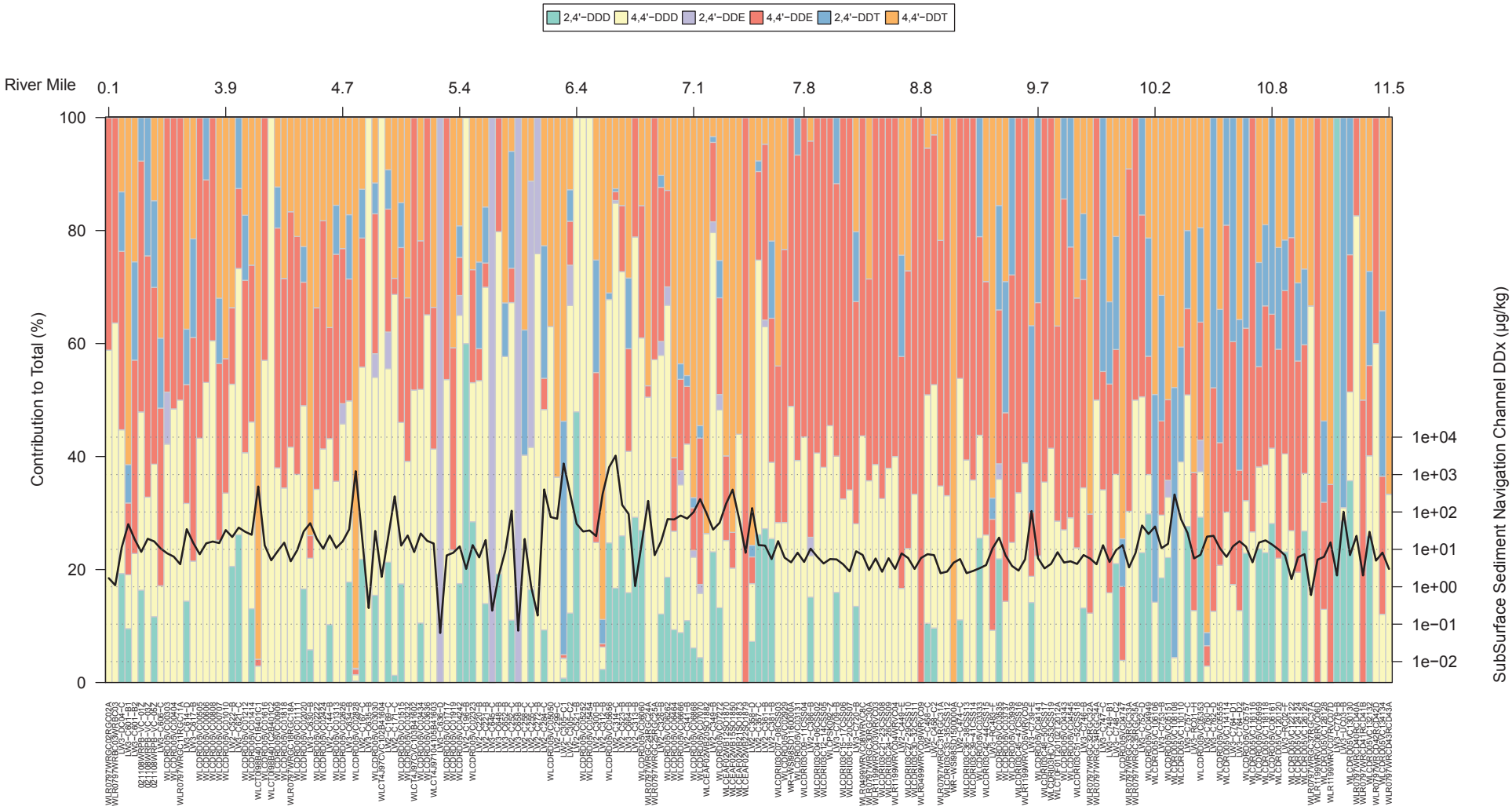

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−9a
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
DDx Patterns in Subsurface Sediment,
Study Area (RM 0.7 to 4.6) Eastern Nearshore



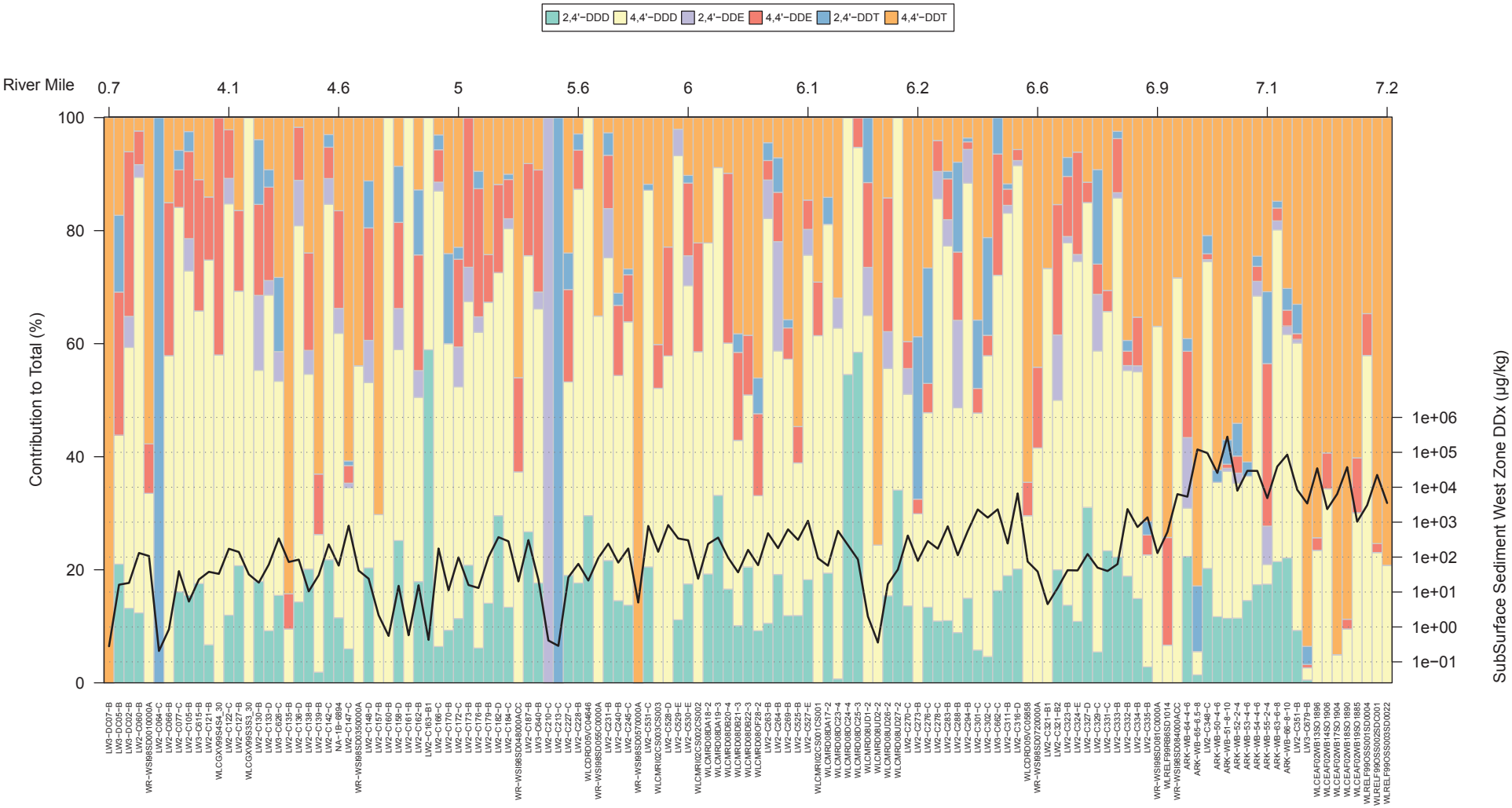

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−9b
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
DDx Patterns in Subsurface Sediment,
Study Area (RM 4.6 to 12.1) Eastern Nearshore



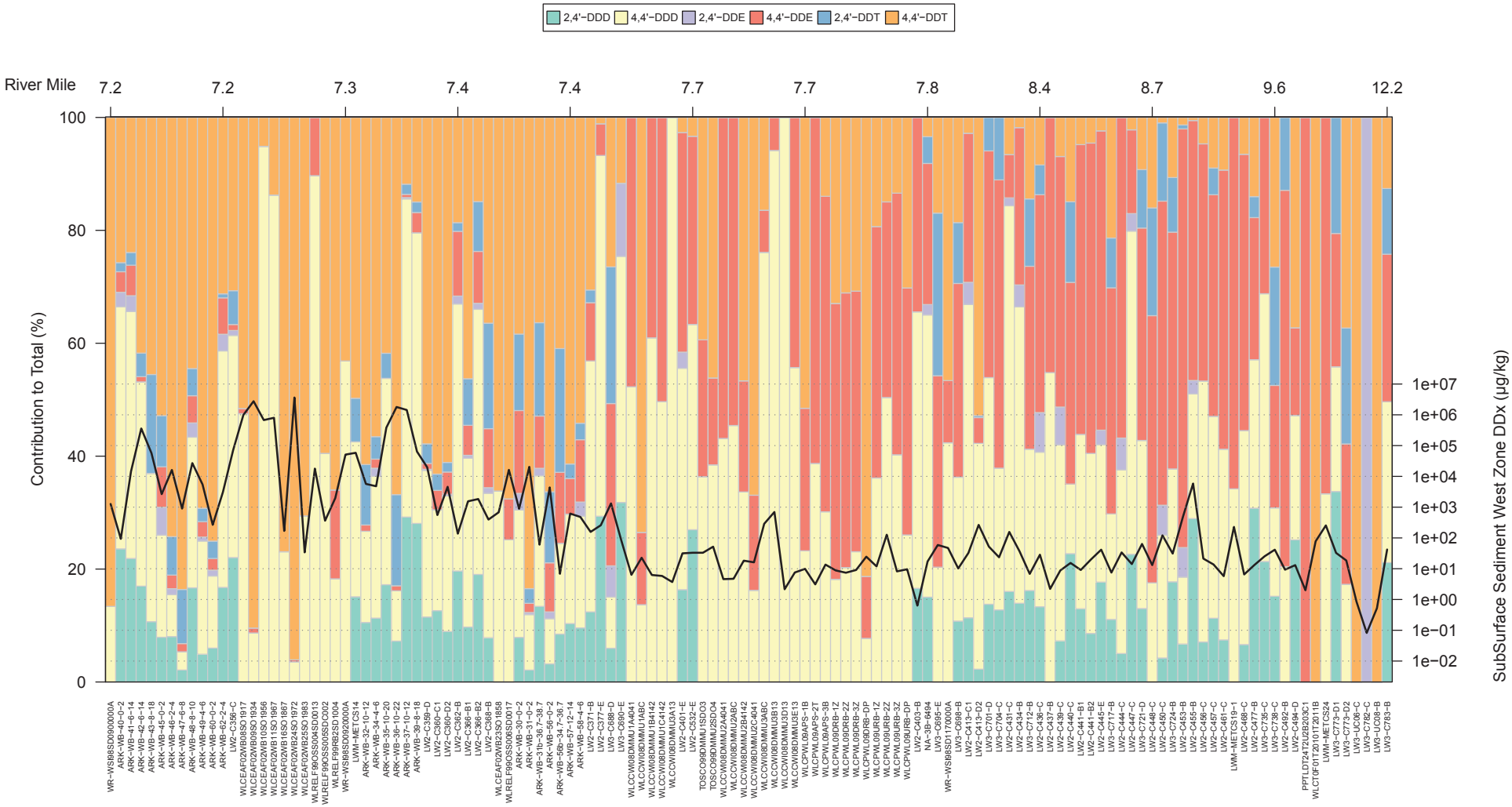

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−9c
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
DDx Patterns in Subsurface Sediment,
Study Area (RM 0.1 to 11.5) Navigation Channel



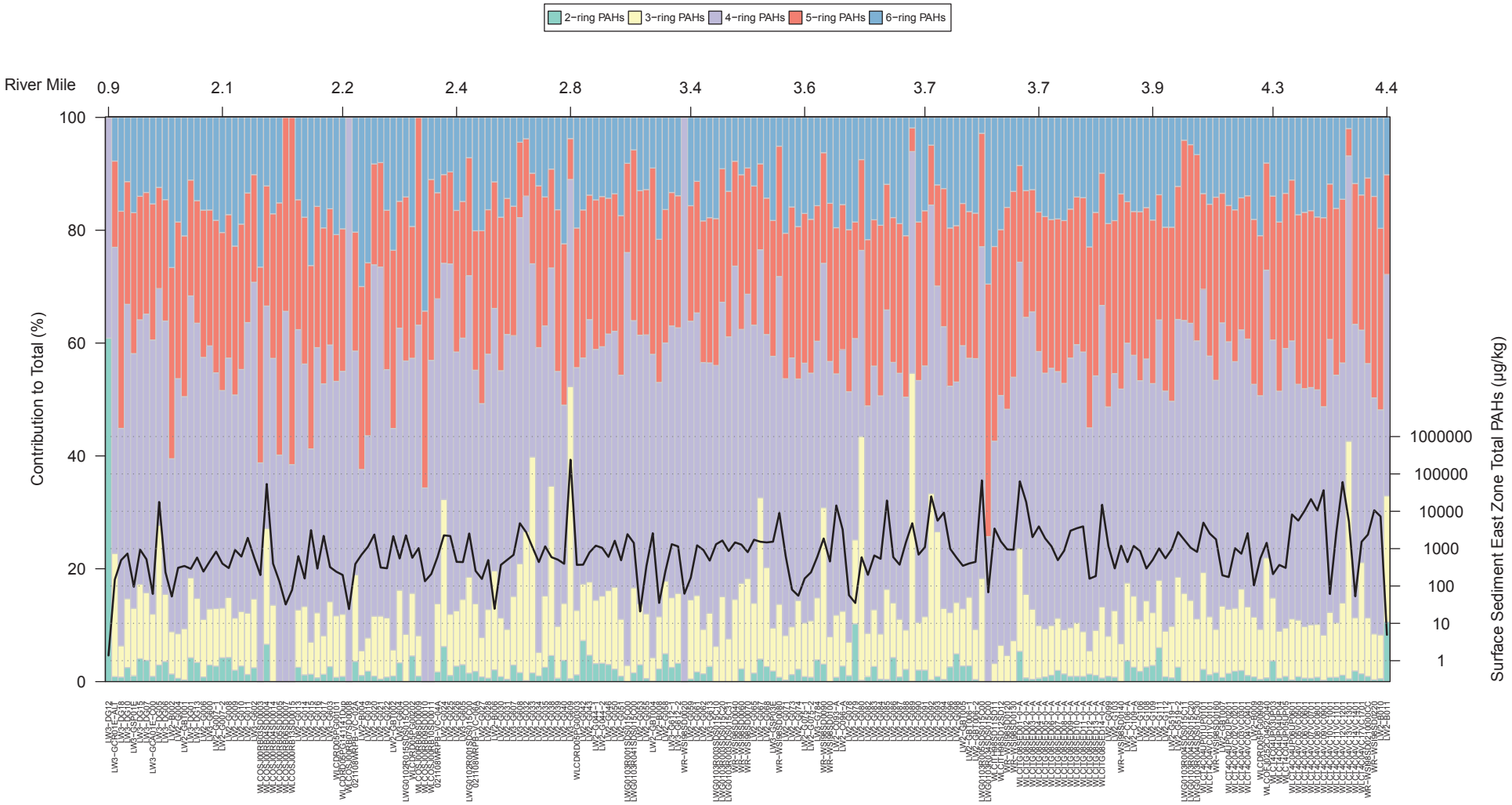

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−9d
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
DDx Patterns in Subsurface Sediment,
Study Area (RM 0.7 to 7.2) Western Nearshore




Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−9e
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
DDx Patterns in Subsurface Sediment,
Study Area (RM 7.2 to 12.2) Western Nearshore

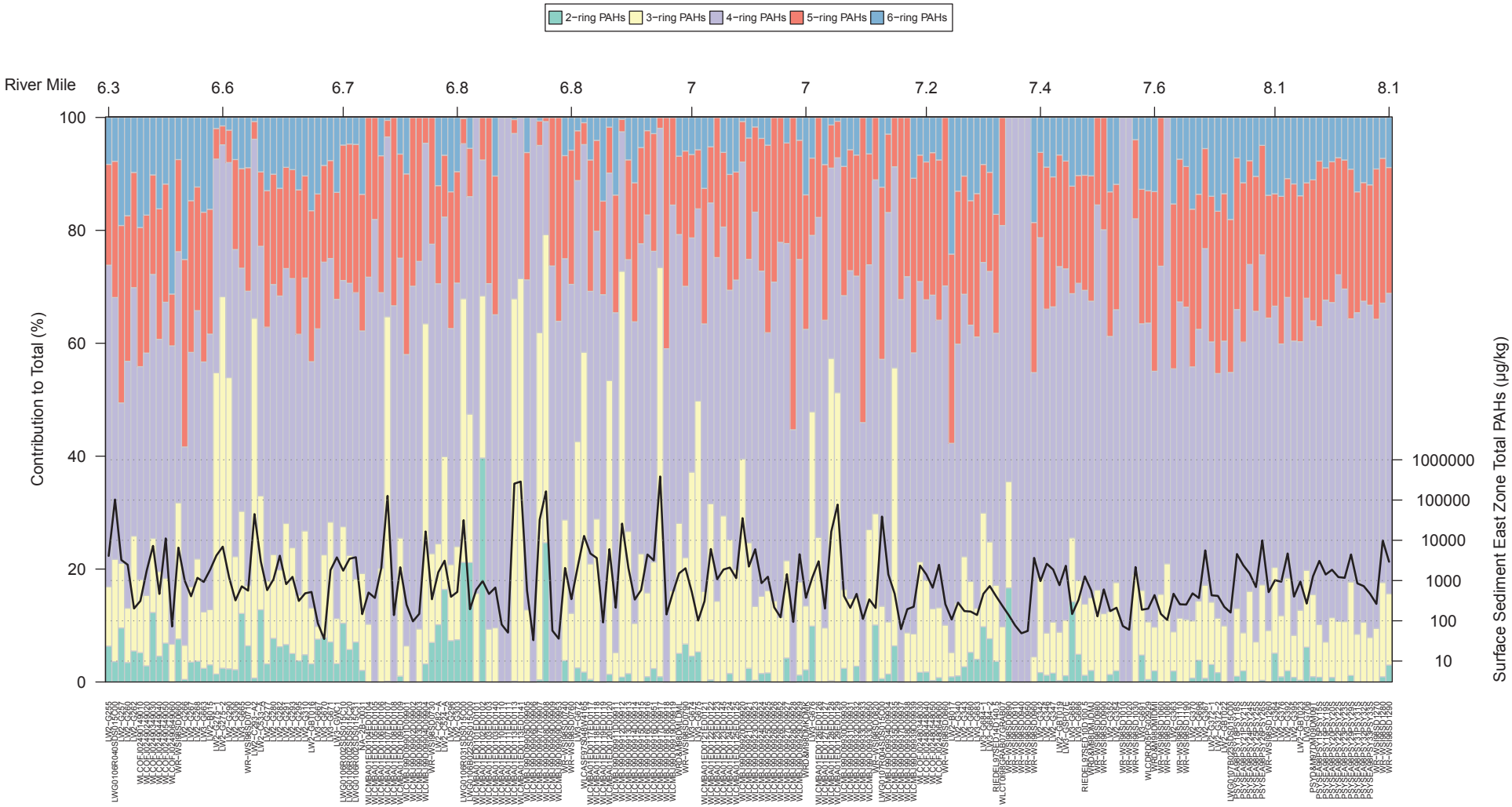



Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5-10a
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PAH Patterns in Surface Sediment,
Study Area (RM 0.7 to 4.4) Eastern Nearshore

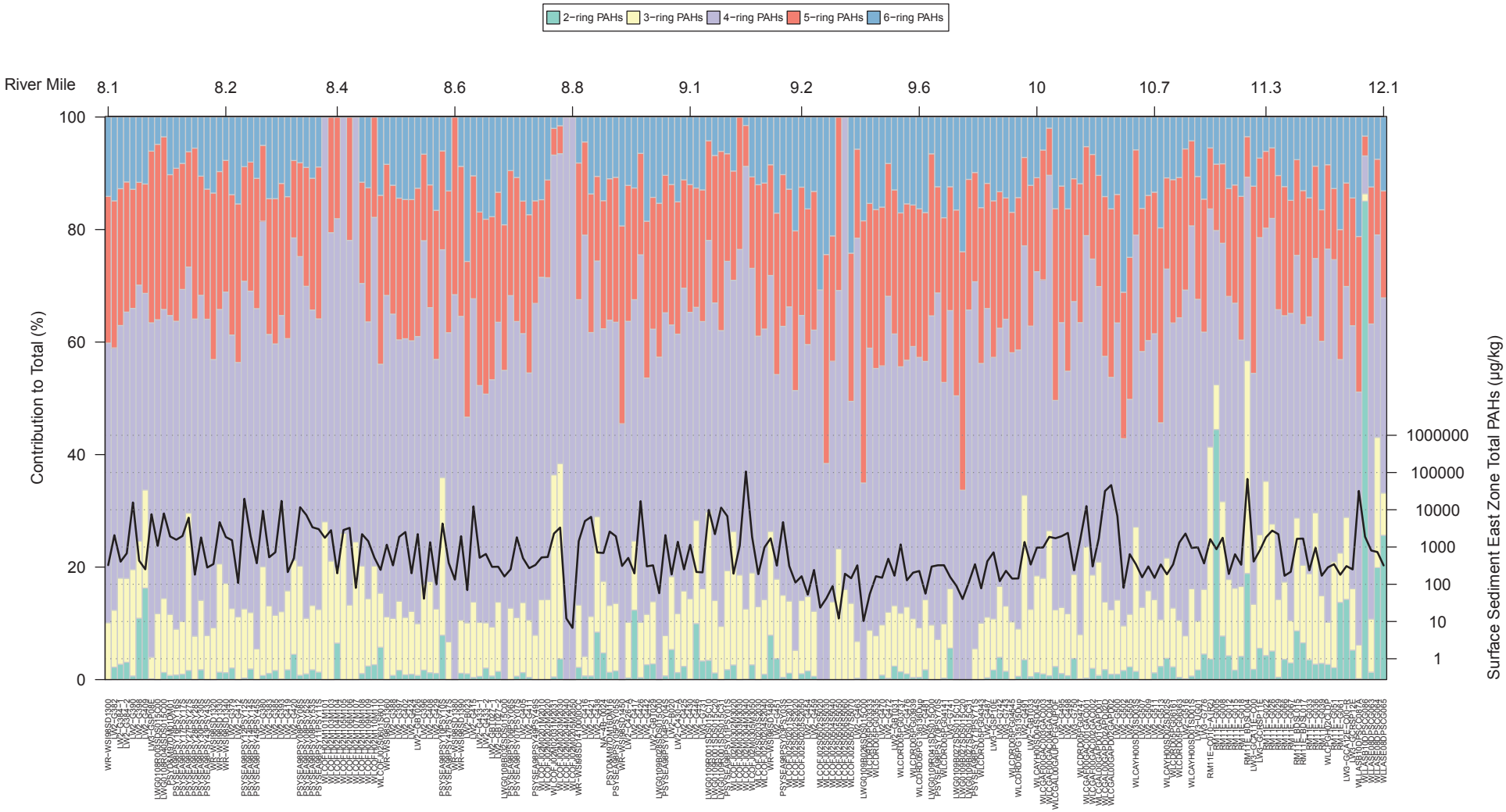
Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−10b
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PAH Patterns in Surface Sediment,
Study Area (RM 4.4 to 6.4) Eastern Nearshore



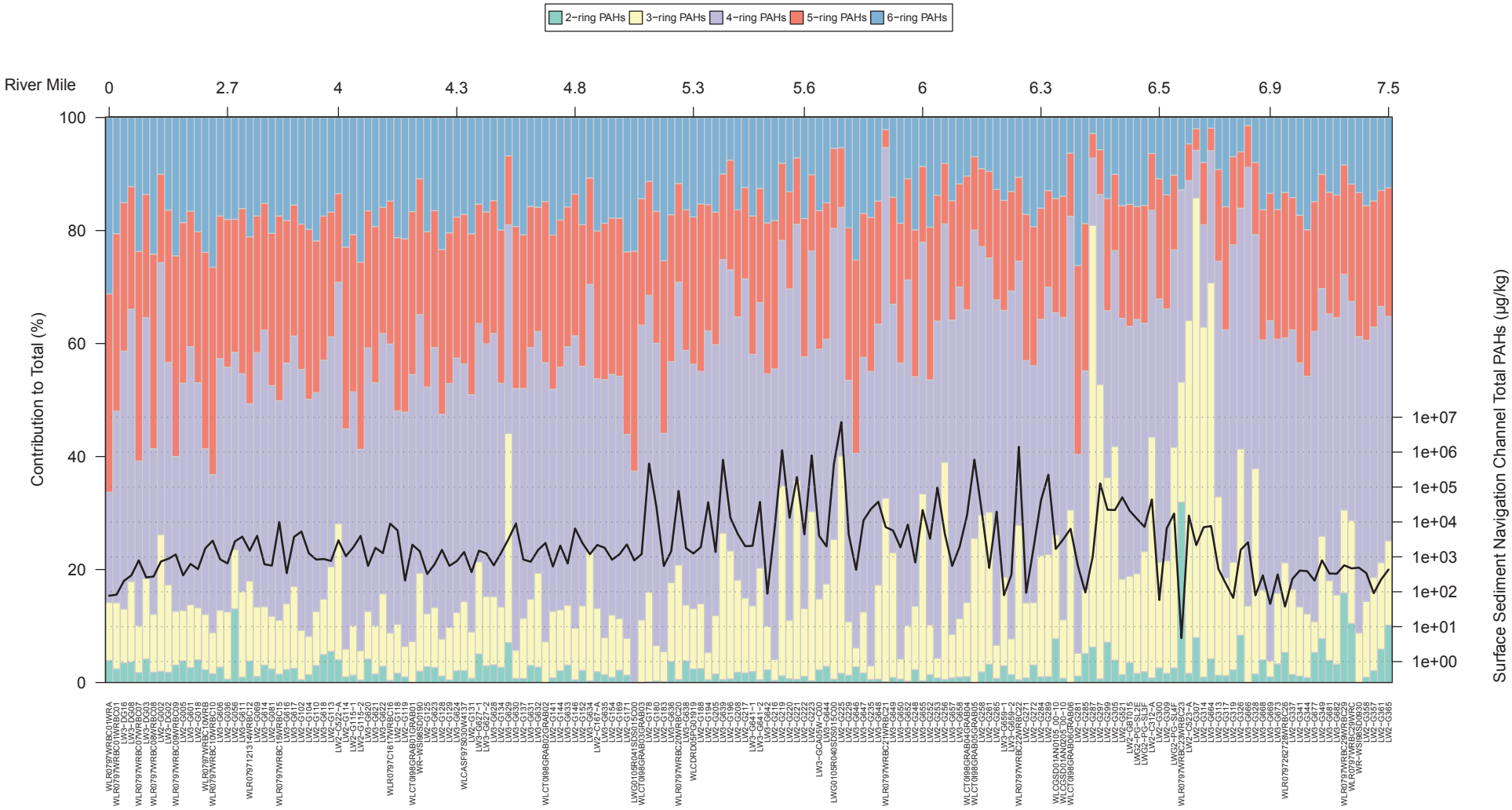

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−10c
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PAH Patterns in Surface Sediment,
Study Area (RM 6.4 to 8.1) Eastern Nearshore



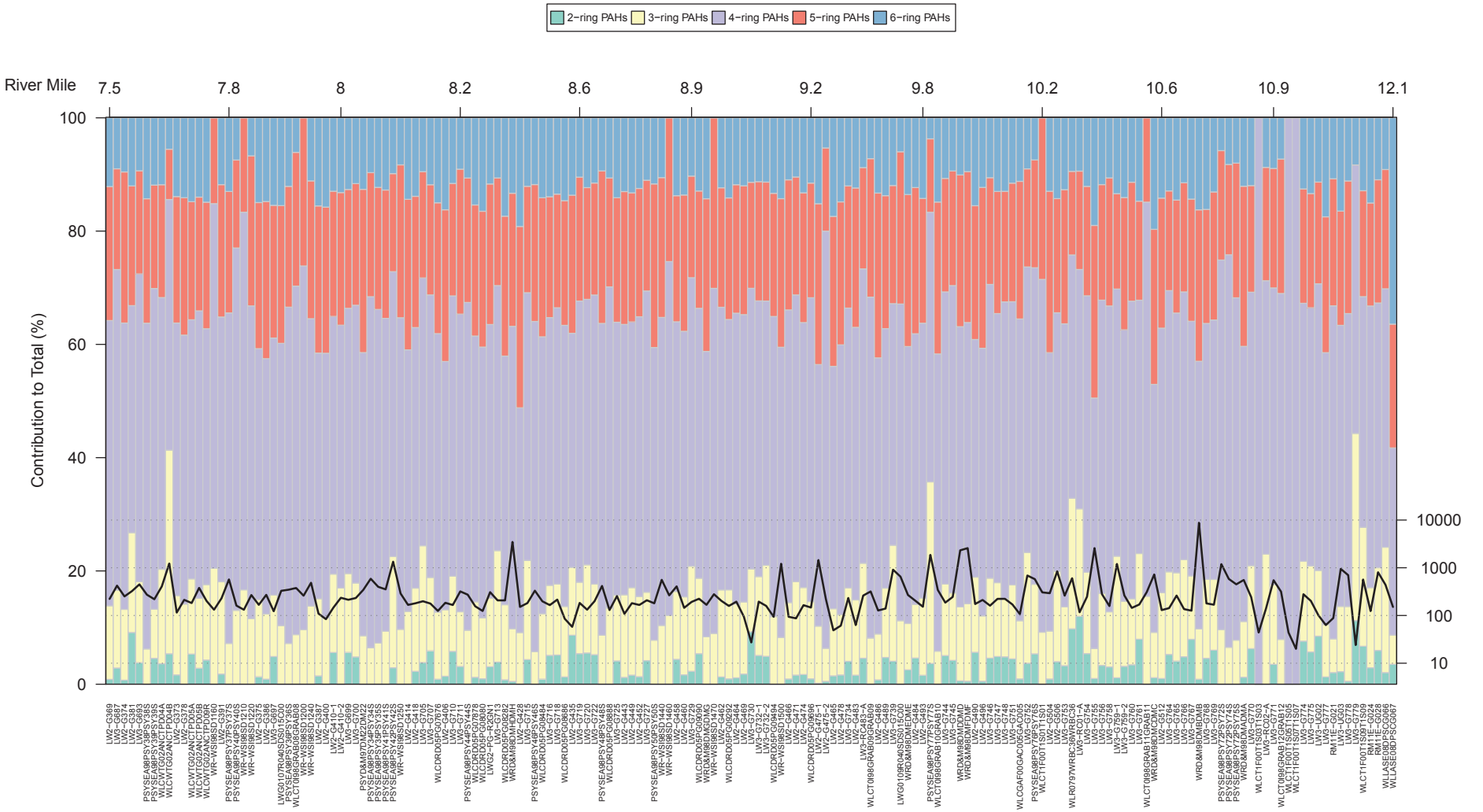

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−10d
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PAH Patterns in Surface Sediment,
Study Area (RM 8.1 to 12.1) Eastern Nearshore



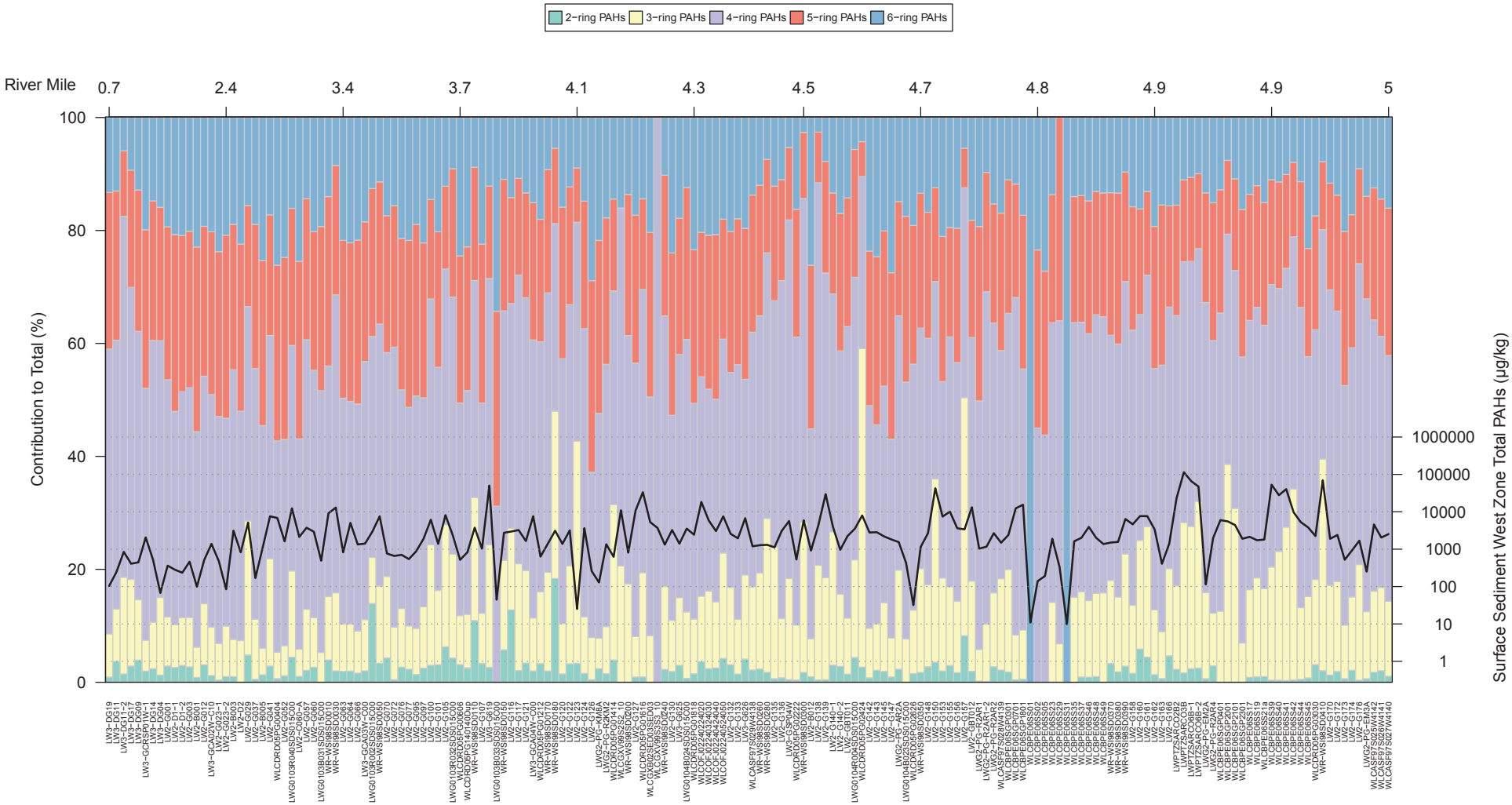

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−10e
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PAH Patterns in Surface Sediment,
Study Area (RM 0.0 to 7.4) Navigation Channel



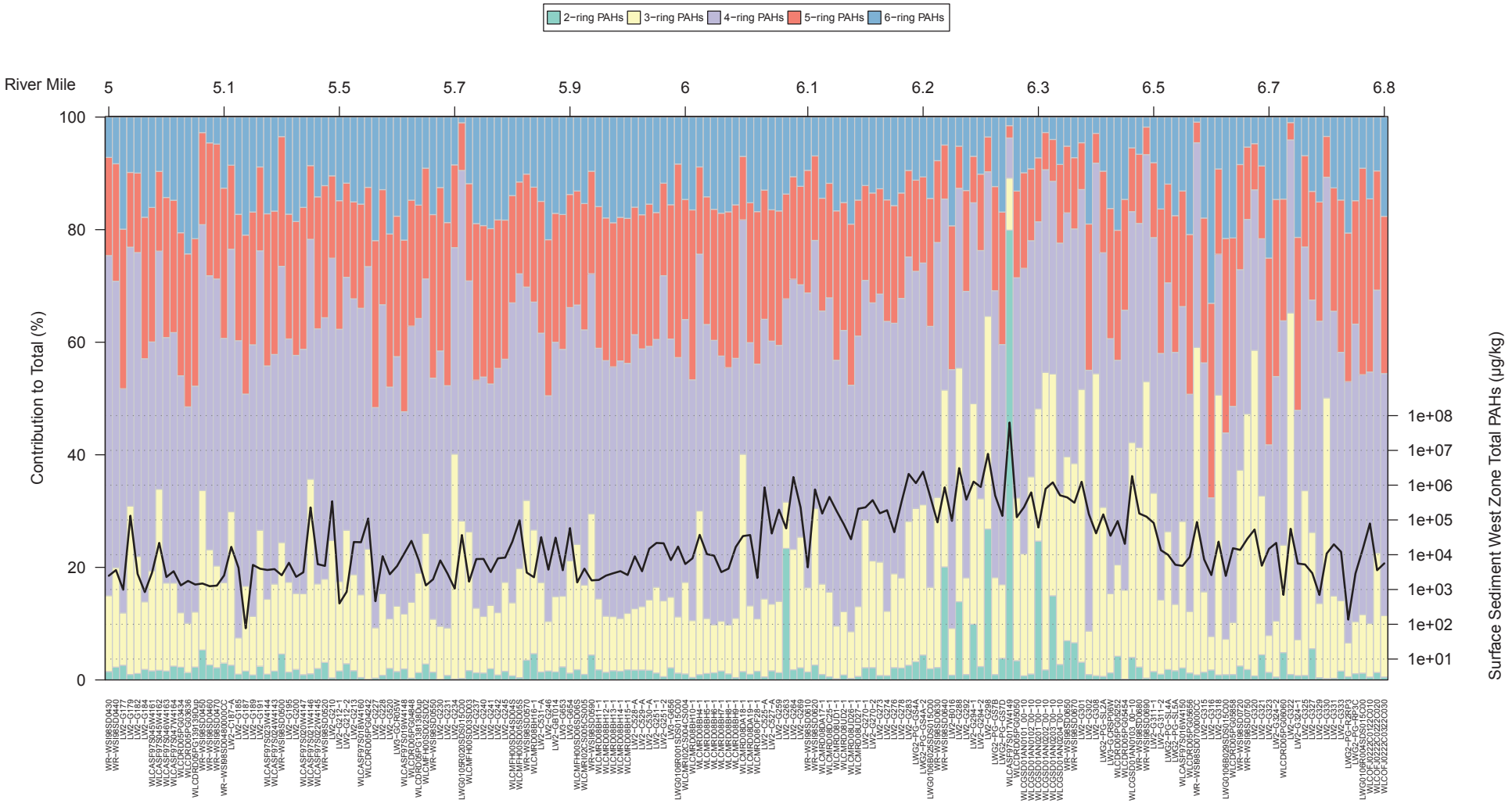

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−10f
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PAH Patterns in Surface Sediment,
Study Area (RM 7.5 to 11.3) Navigation Channel



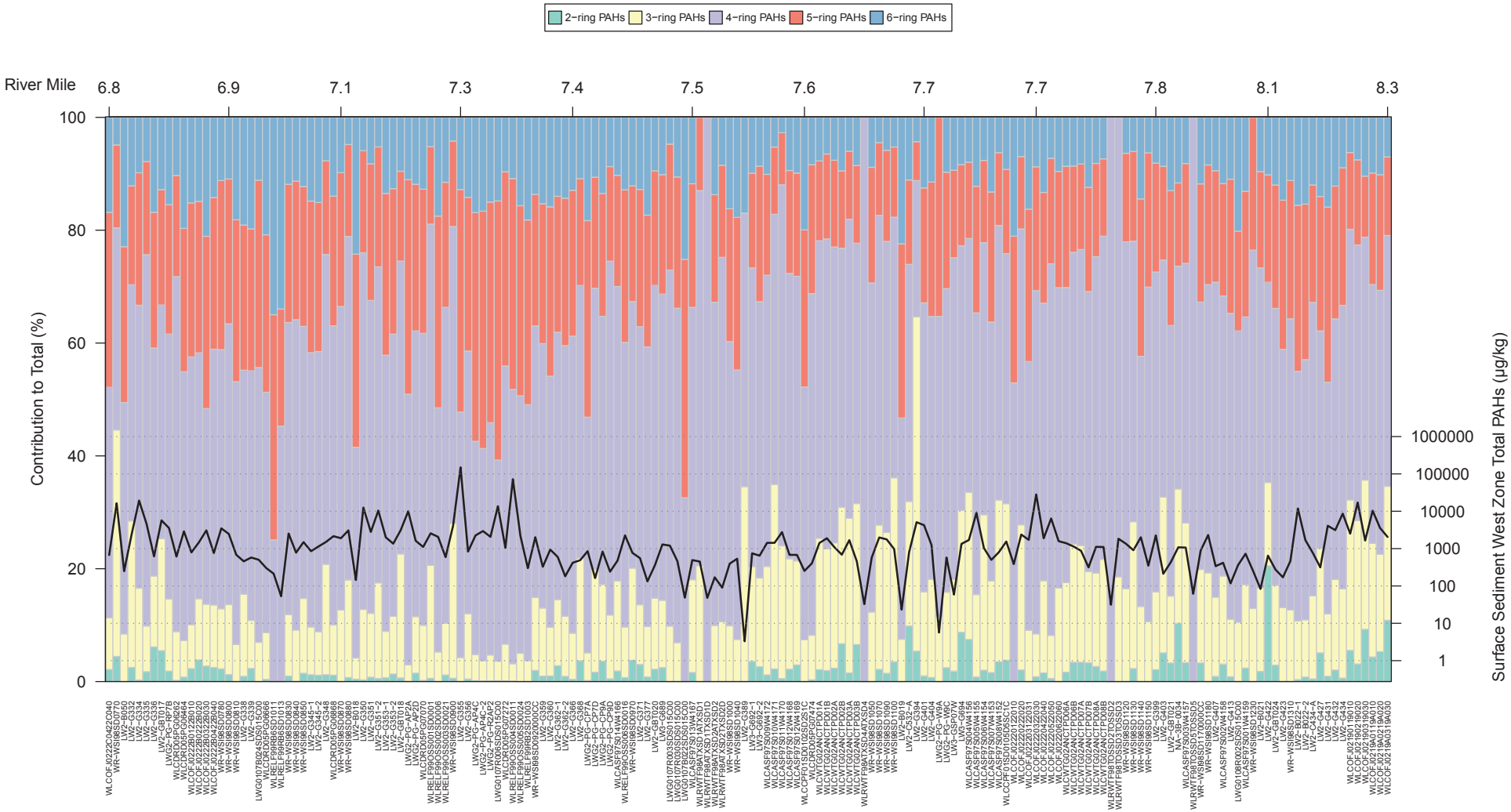

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−10g
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PAH Patterns in Surface Sediment,
Study Area (RM 0.7 to 4.9) Western Nearshore



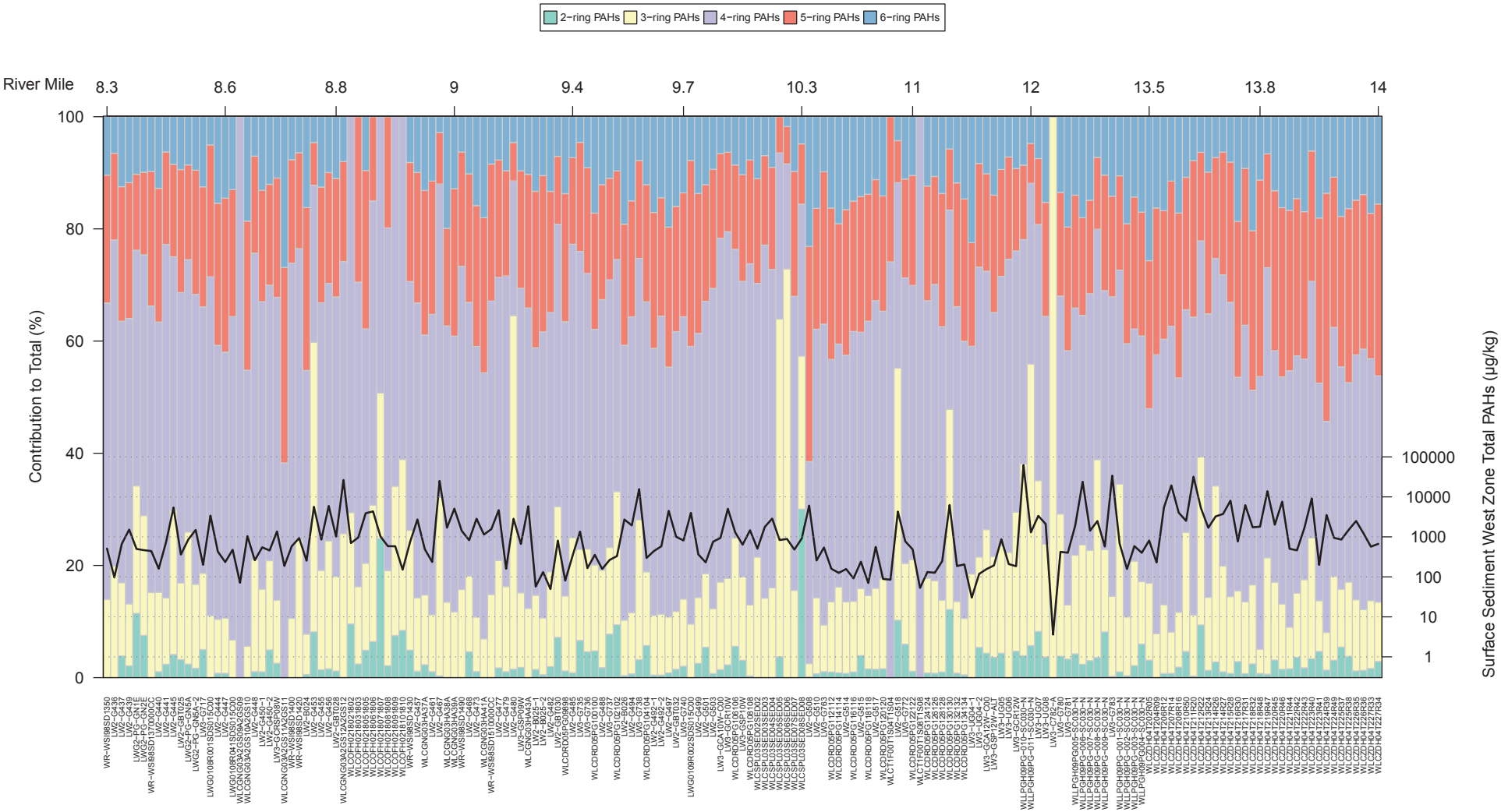

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−10h
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PAH Patterns in Surface Sediment,
Study Area (RM 5.0 to 6.9) Western Nearshore



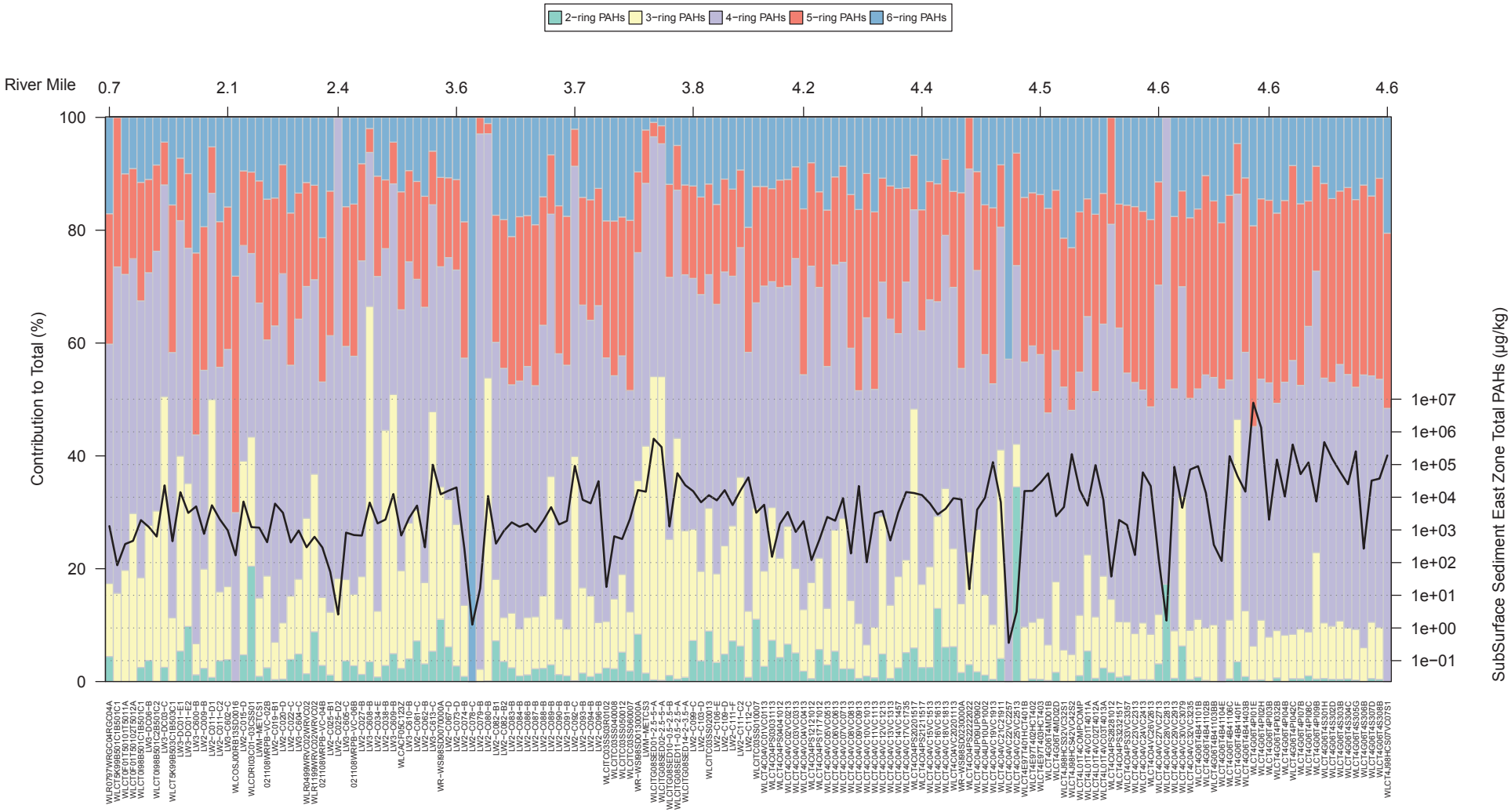

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−10i
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PAH Patterns in Surface Sediment,
Study Area (RM 6.9 to 8.3) Western Nearshore



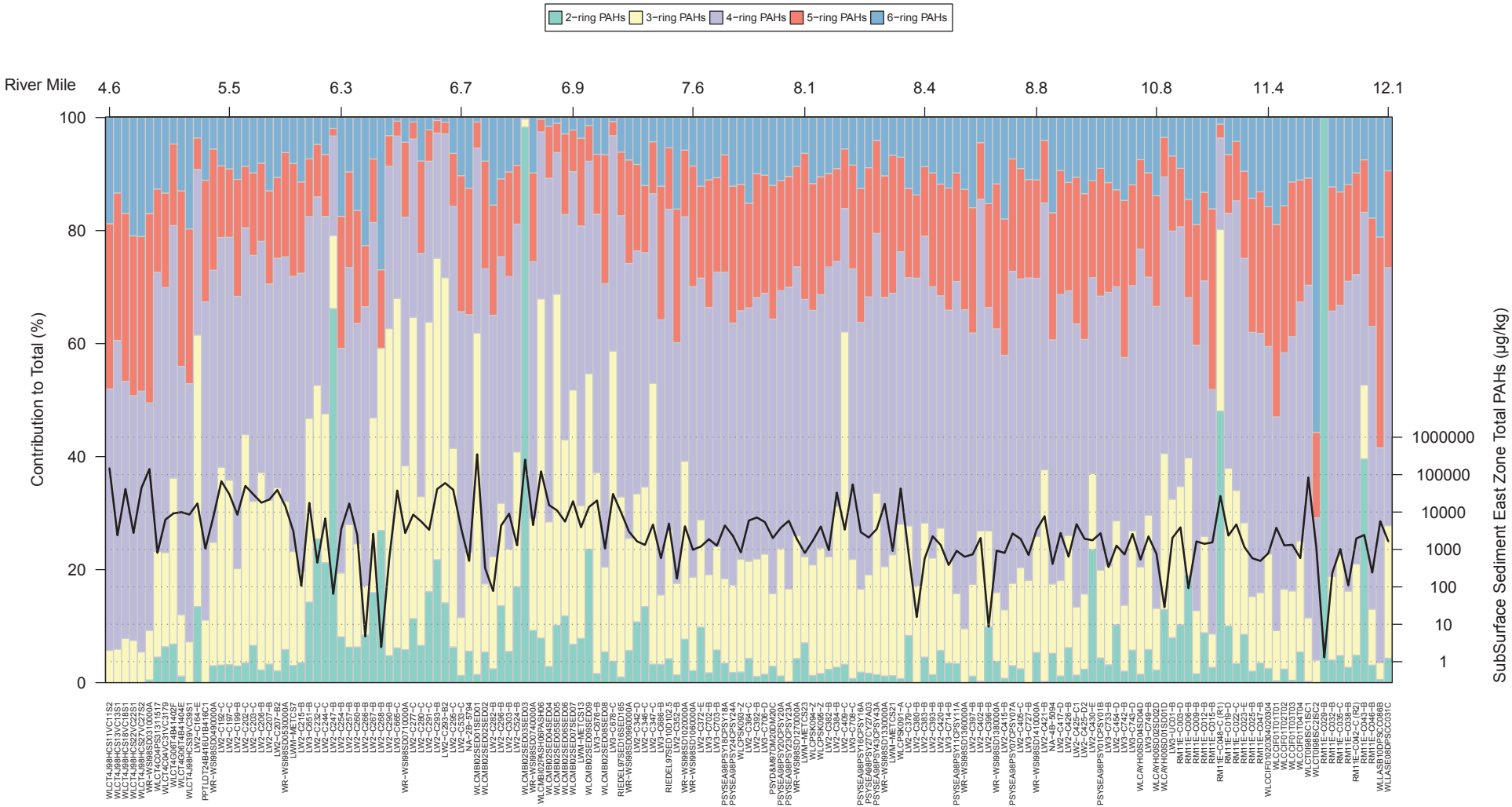

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−10j
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PAH Patterns in Surface Sediment,
Study Area (RM 8.3 to 14.0) Western Nearshore



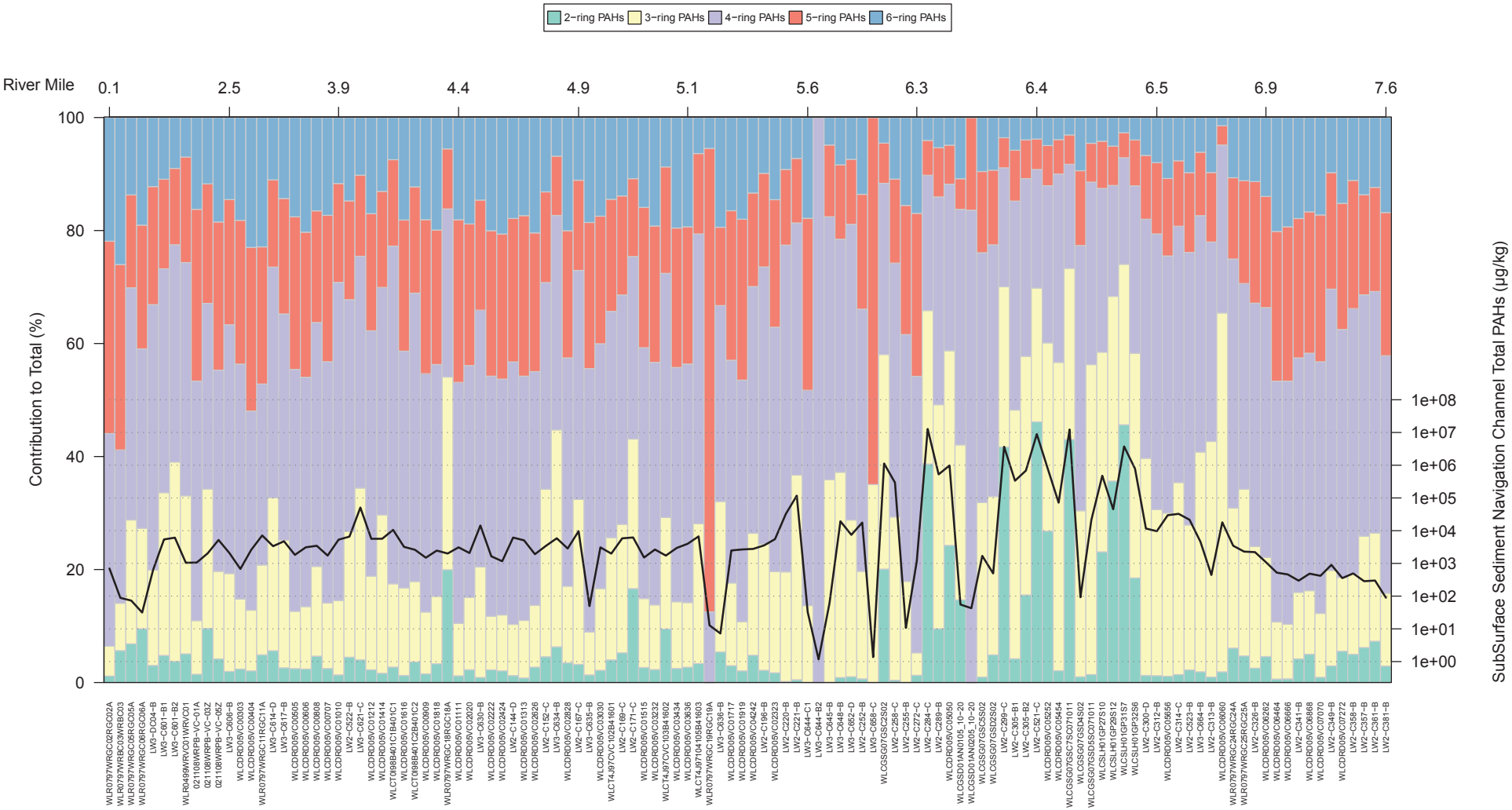

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−11a
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PAH Patterns in Subsurface Sediment,
Study Area (RM 0.7 to 4.6) Eastern Nearshore



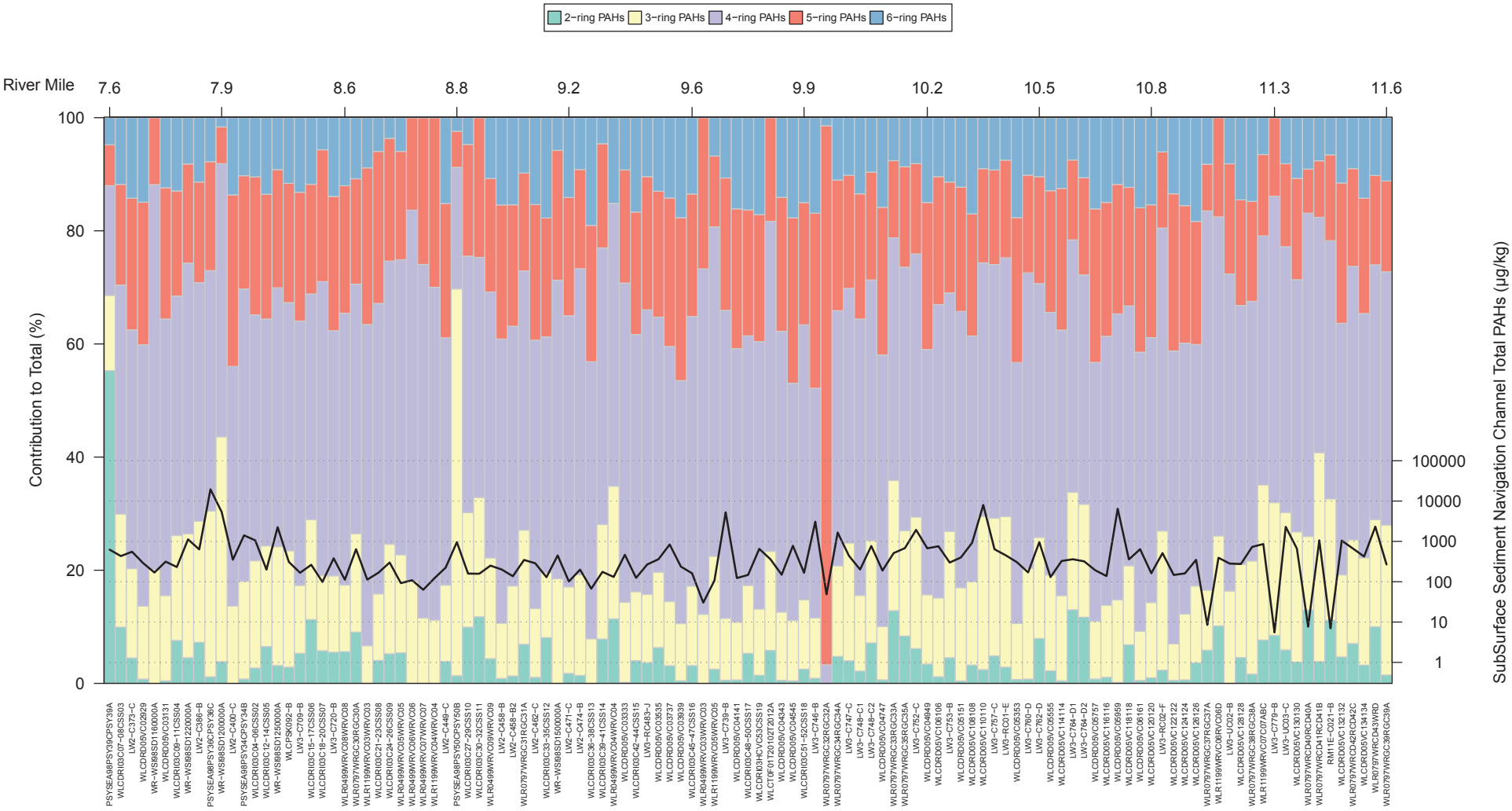

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−11b
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PAH Patterns in Subsurface Sediment,
Study Area (RM 4.6 to 11.4) Eastern Nearshore



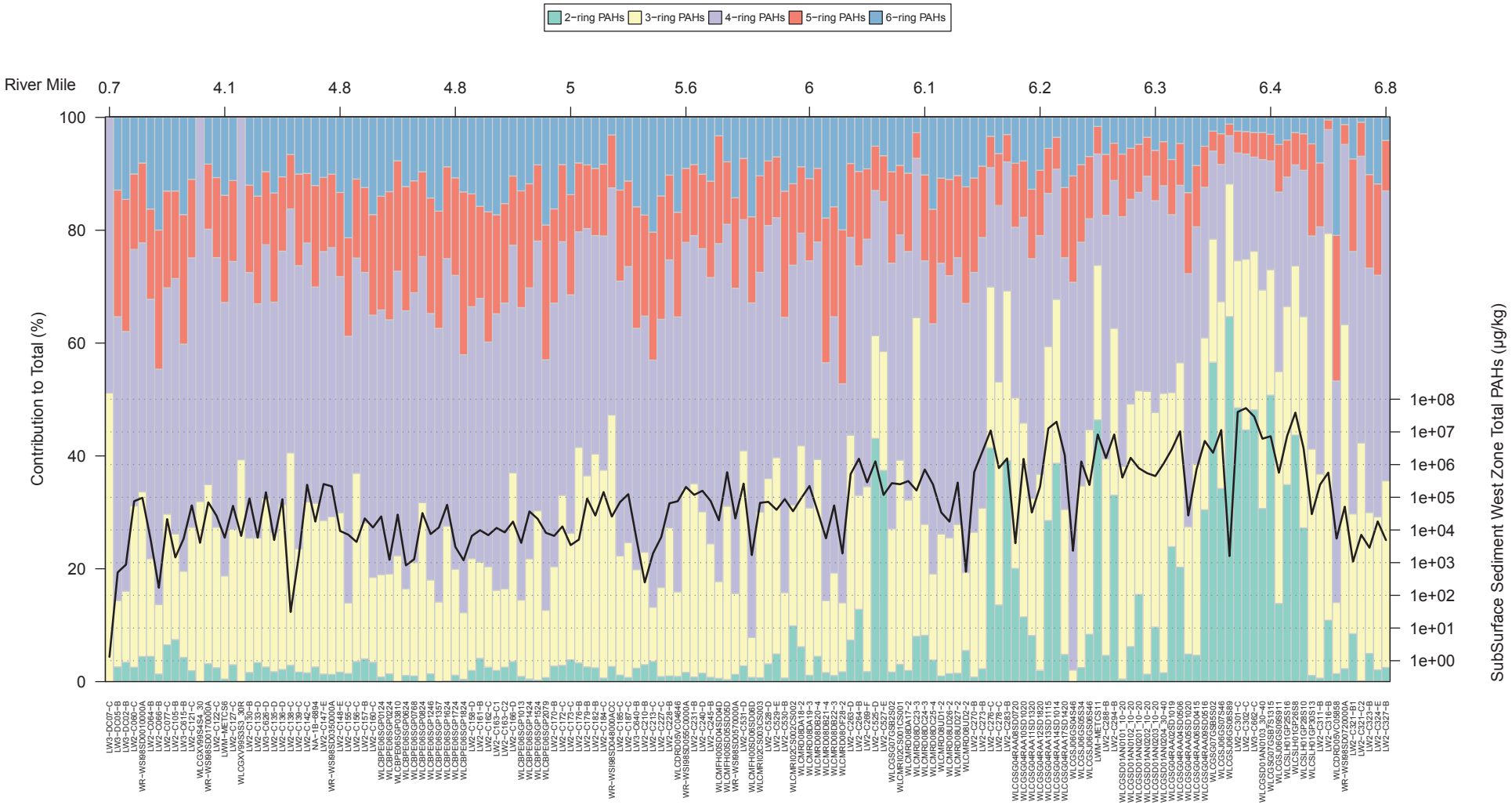

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5-11c
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PAH Patterns in Subsurface Sediment,
Study Area (RM 0.1 to 7.6) Navigation Channel



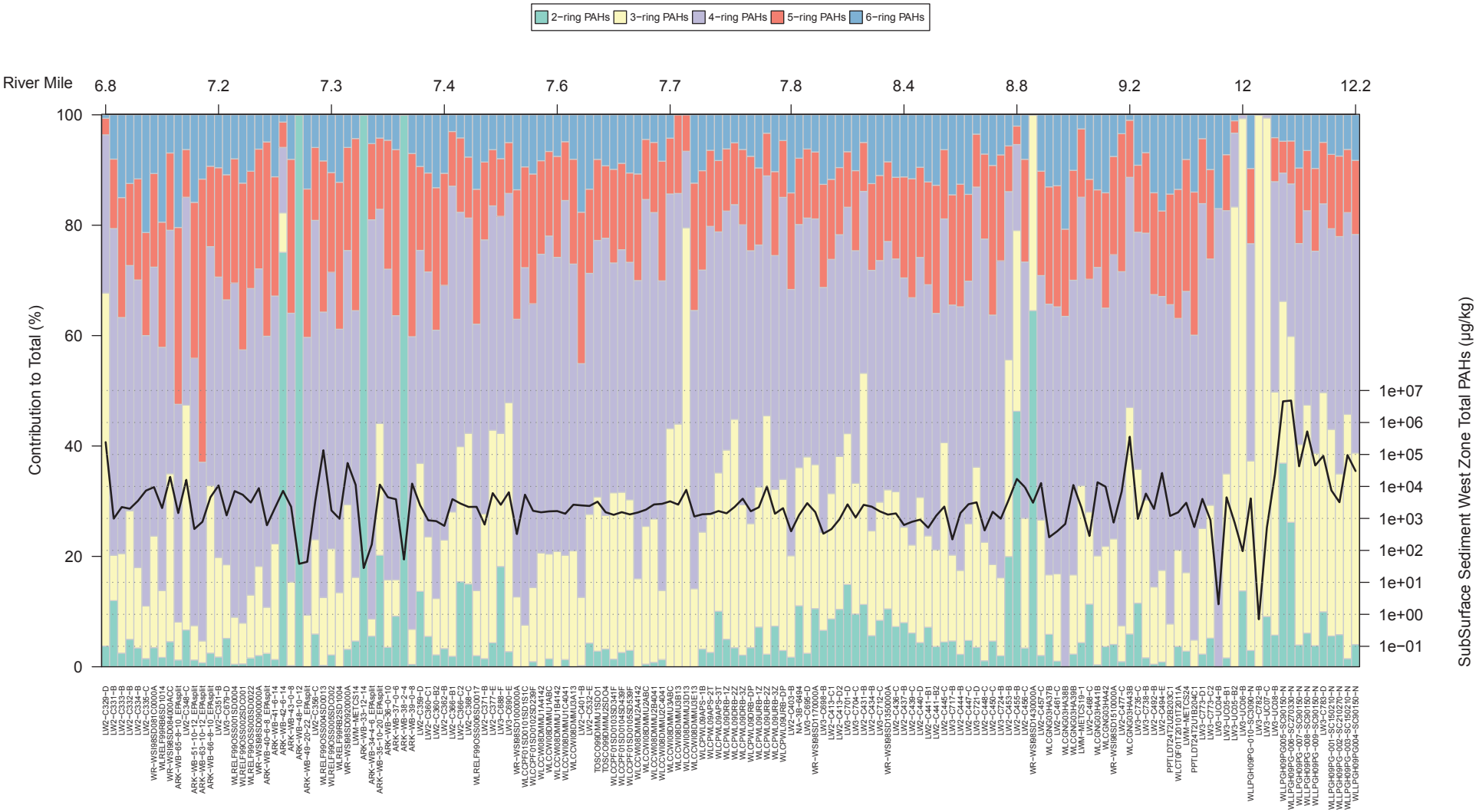

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−11d
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PAH Patterns in Subsurface Sediment,
Study Area (RM 7.7 to 11.6) Navigation Channel




Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−11e
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PAH Patterns in Subsurface Sediment,
Study Area (RM 0.7 to 6.3) Western Nearshore

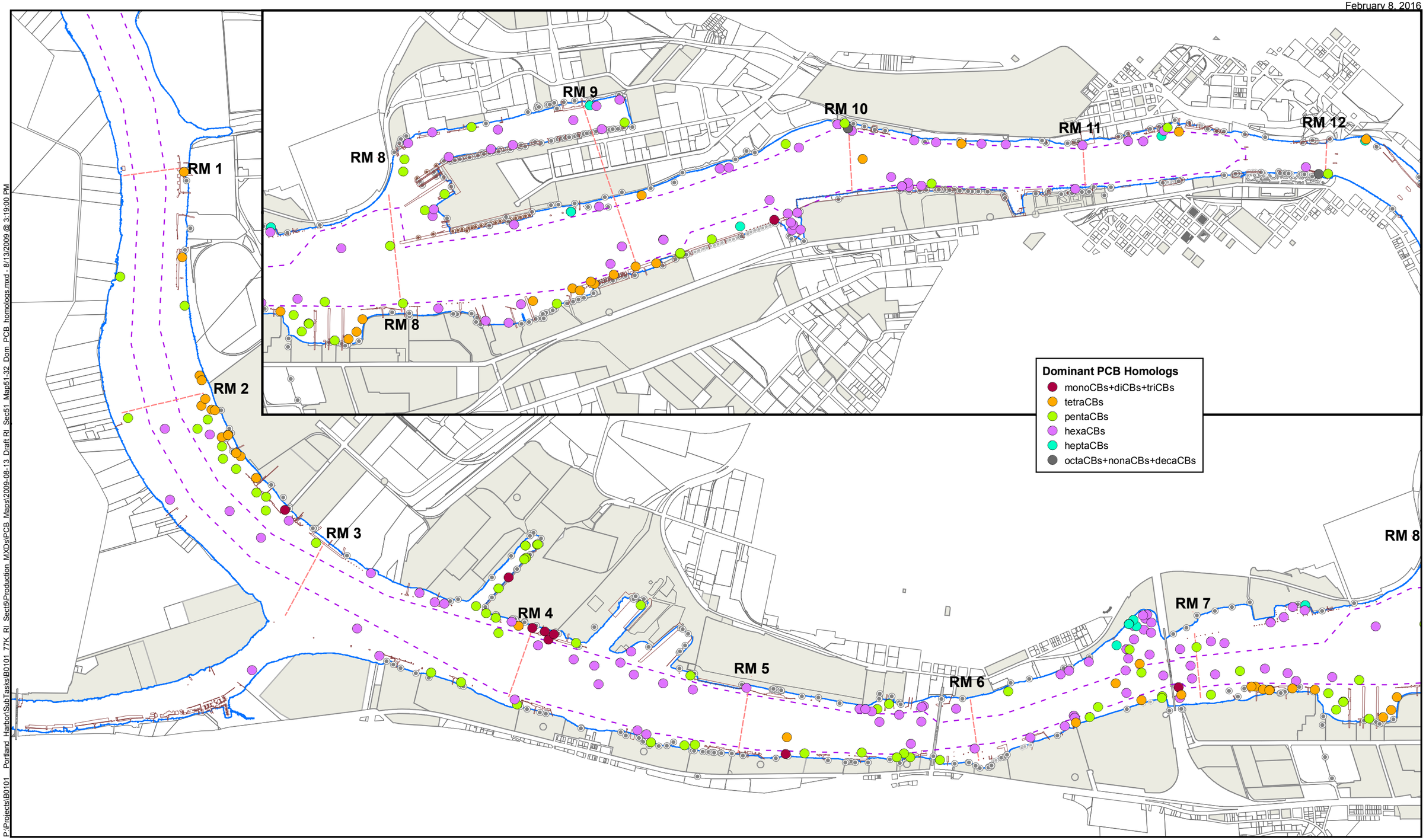



Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

Figure D1.5−11f
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart Showing
PAH Patterns in Subsurface Sediment,
Study Area (RM 6.3 to 12.2) Western Nearshore

Table D1.5-1. Polycyclic Aromatic Hydrocarbons by Number of Fused Aromatic Rings.

| Analyte | Number of Rings |
|---|---|
| Naphthalene | 2 |
| 2-Methylnaphthalene | 2 |
| Acenaphthylene | 3 |
| Acenaphthene | 3 |
| Fluorene | 3 |
| Phenanthrene | 3 |
| Anthracene | 3 |
| Fluoranthene | 4 |
| Pyrene | 4 |
| Benzo(a)anthracene | 4 |
| Chrysene | 4 |
| Benzo(b)fluoranthene | 5 |
| Benzo(k)fluoranthene | 5 |
| Benzo(a)pyrene | 5 |
| Dibenzo(a,h)anthracene | 5 |
| Indeno(1,2,3-cd)pyrene | 6 |
| Benzo(g,h,i)perylene | 6 |

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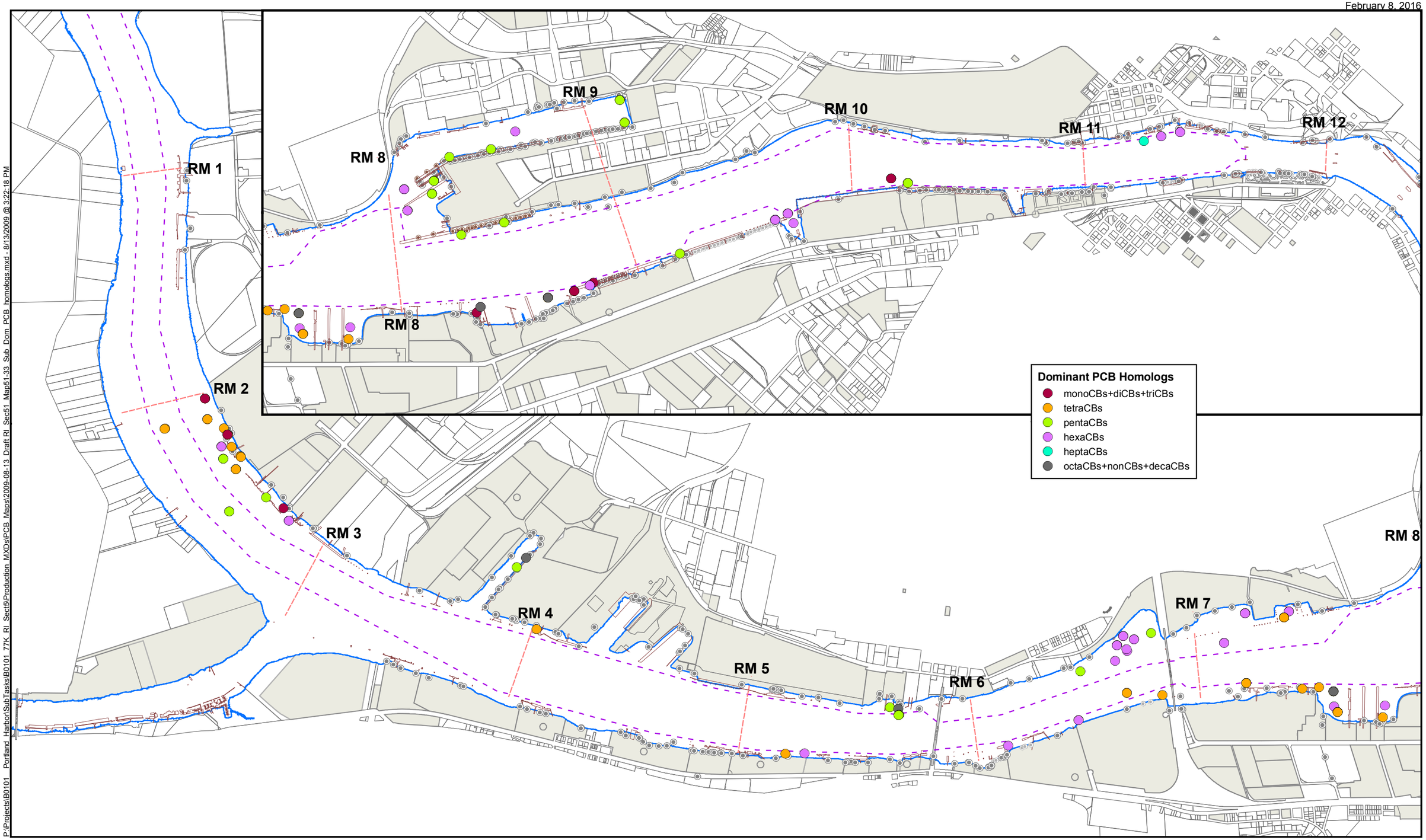
**Map D1.5-1**
Portland Harbor RI/FS
Remedial Investigation Report
Dominant PCB Homologs in Surface Sediment,
Study Area (RM 1.9-11.8)

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

0 1,000 2,000 3,000 4,000 5,000 Feet

**Map Features**

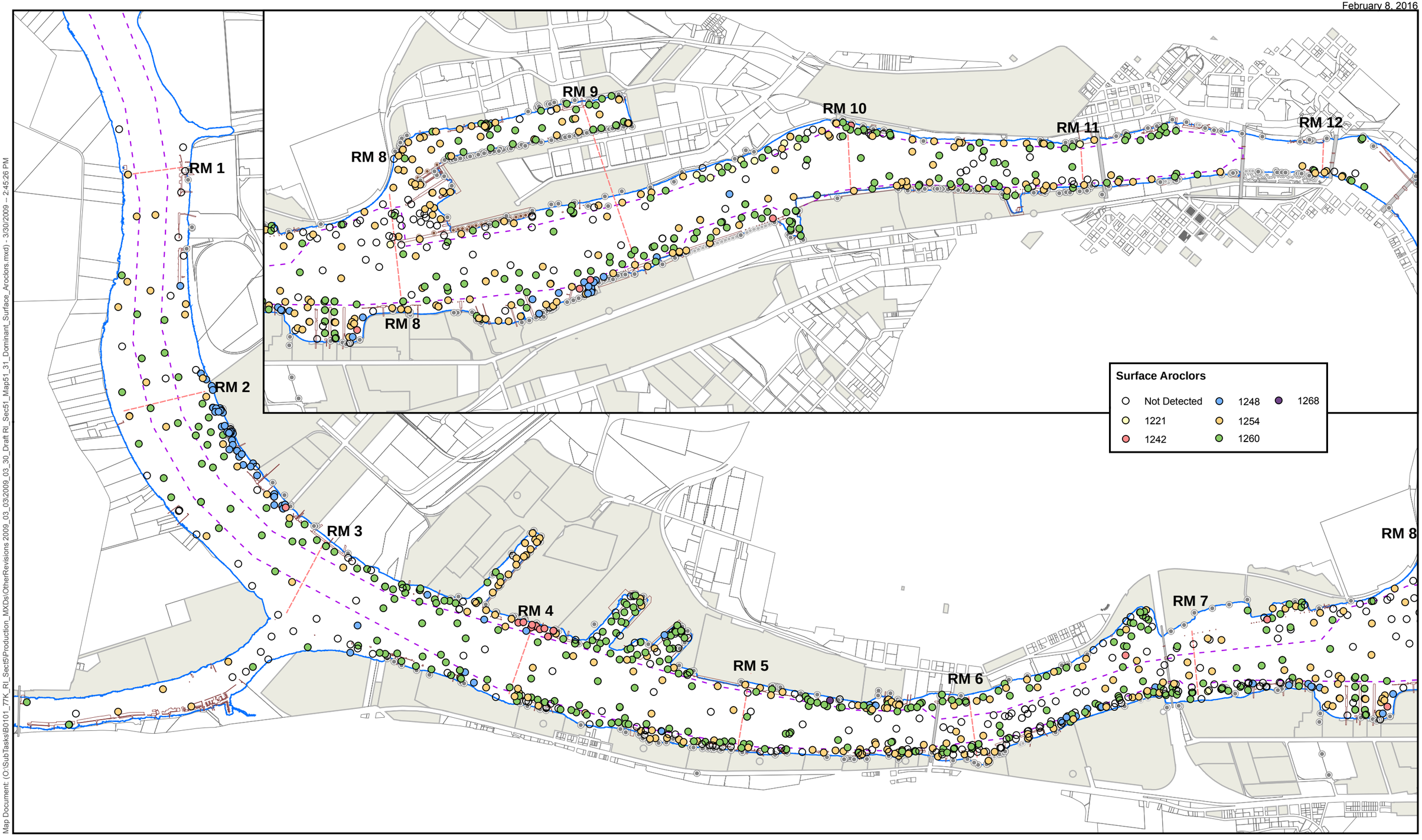
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge 13 ft NAVD

**Outfalls**

- Outfall
- Dock Drain
- Roof Drain

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.5-2**
Portland Harbor RI/FS
Remedial Investigation Report
Dominant PCB Homologs in Subsurface Sediment,
Study Area (RM 1.9-11.8)

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FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

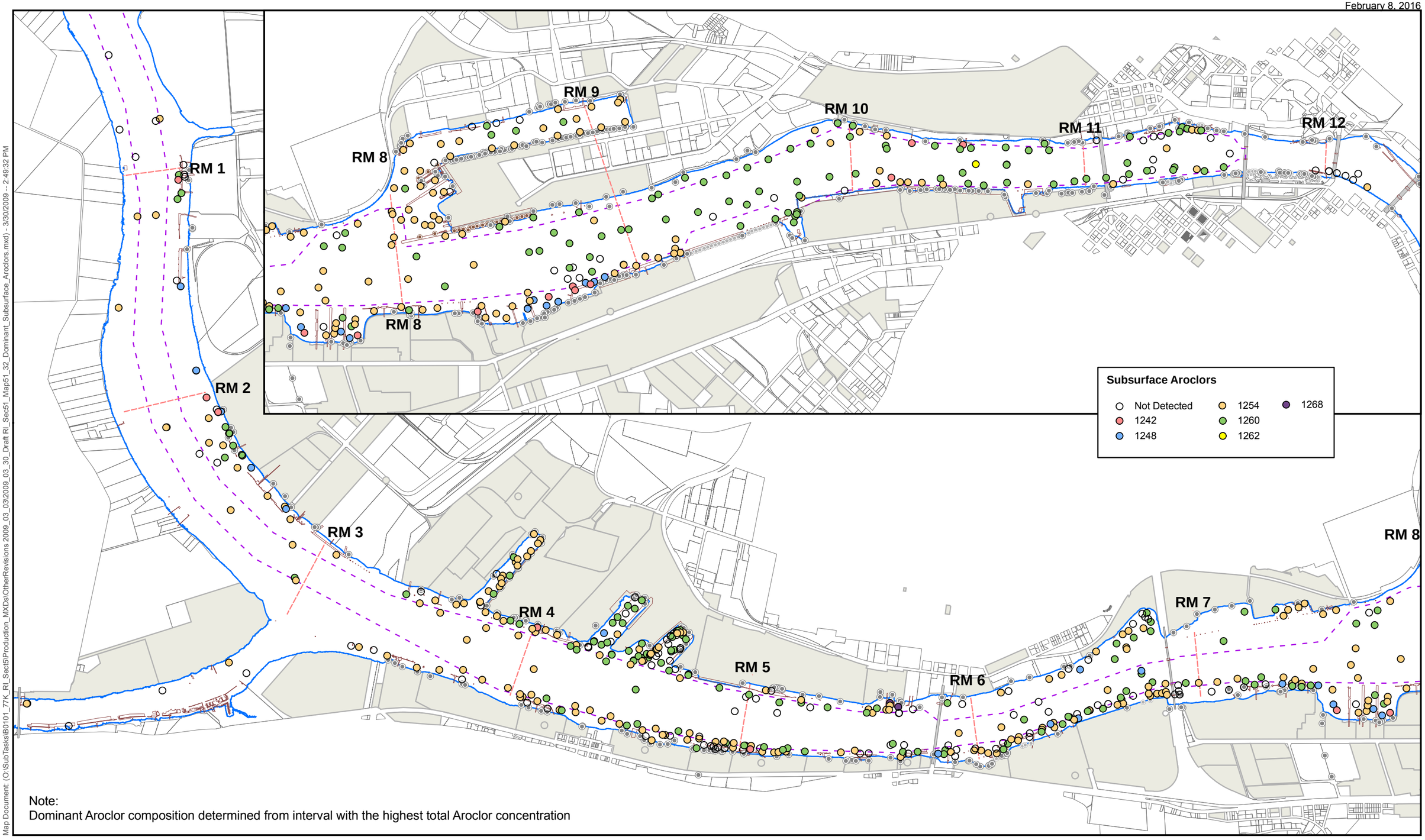
0 1,000 2,000 3,000 4,000 5,000 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.5-3**
Portland Harbor RI/FS
Remedial Investigation Report
Dominant Aroclors in Surface Sediment,
Study Area (RM 1.9-11.8)




Note:
Dominant Aroclor composition determined from interval with the highest total Aroclor concentration

FEATURE SOURCES:
Transportation, Property, or Boundaries: Metro RLIS .
Channel & River miles: US Army Corps of Engineers.
Bathymetric Information: David Evans and Associates, Inc.

0 1,000 2,000 3,000 4,000 5,000 Feet

**Map Features**
- River Miles
- Bridges
- Docks and Structures
- Navigation Channel
- River Edge +13 ft NAVD

**Outfalls**
- Outfall
- Dock Drain
- Roof Drain

- Upland ECSI Sites (2008)
- Waterfront Taxlots

**Map D1.5-4**
Portland Harbor RI/FS
Remedial Investigation Report
Dominant Aroclors in Subsurface Sediment,
Study Area (RM 1.9-11.8)

Map Document: (O:\SubTasks\B0101_77K_RI_Sect5\Production_MXDs\OtherRevisions 2009_03_03\2009_03_30_Draft RI_Sec51_Map51_32_Dominant_Subsurface_Aroclors.mxd) - 3/30/2009 -- 2:49:32 PM

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D2
# MOBILE SEDIMENT AS MEASURED IN SEDIMENT TRAPS

**FINAL**

February 8, 2016

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D2.1
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**FINAL**

February 8, 2016

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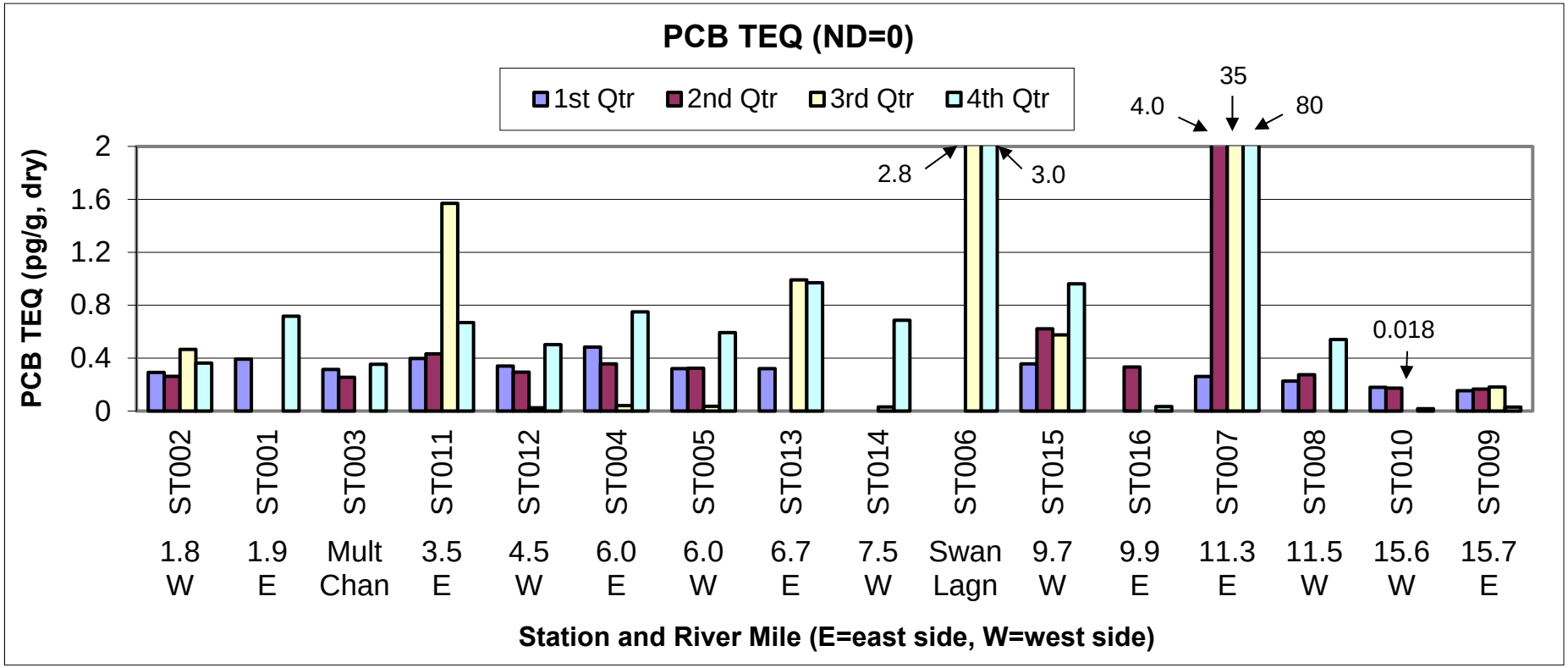
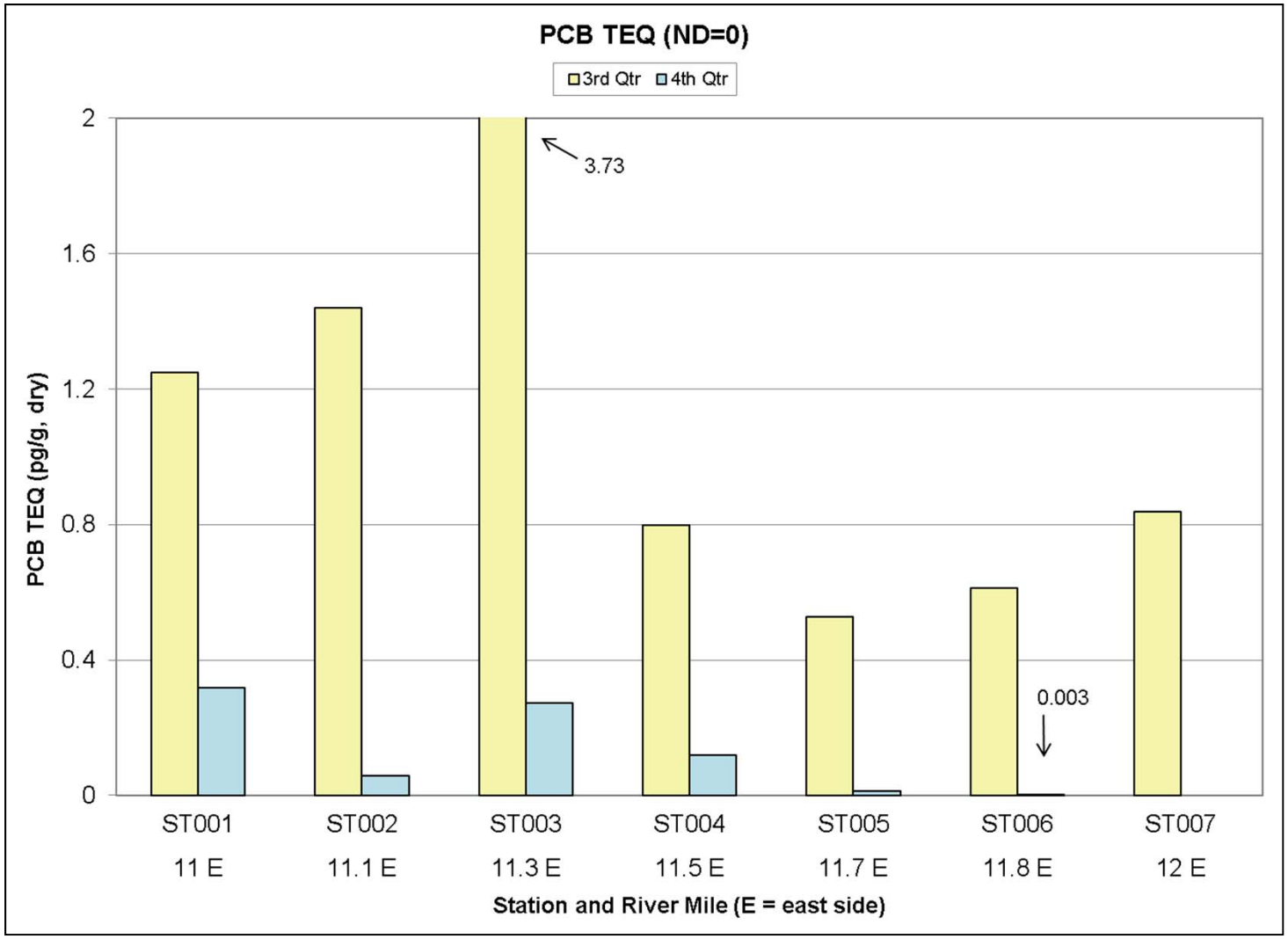


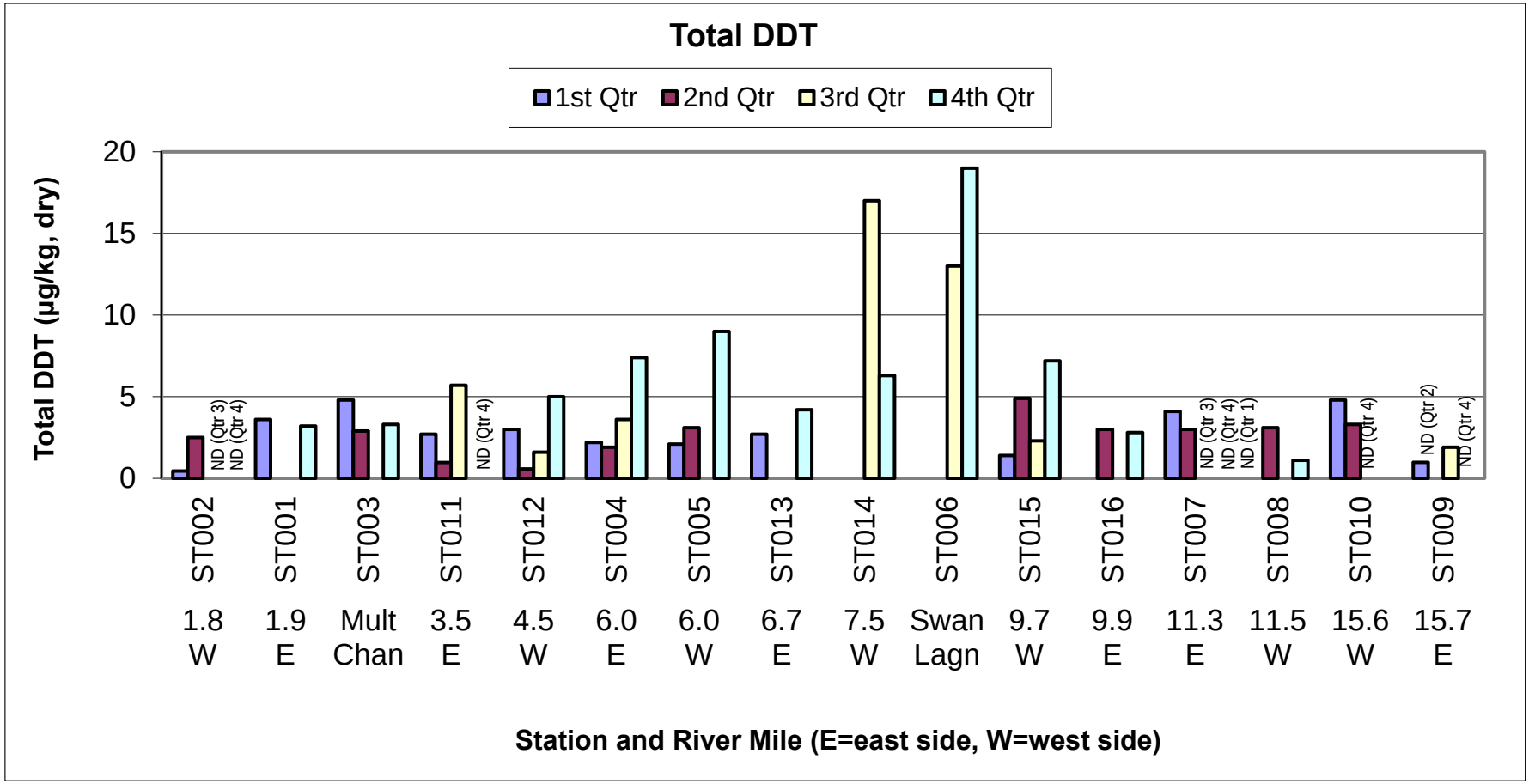

Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-1a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of PCB TEQ (ND=0)
Concentrations for In-River Sediment Traps, 2007




Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

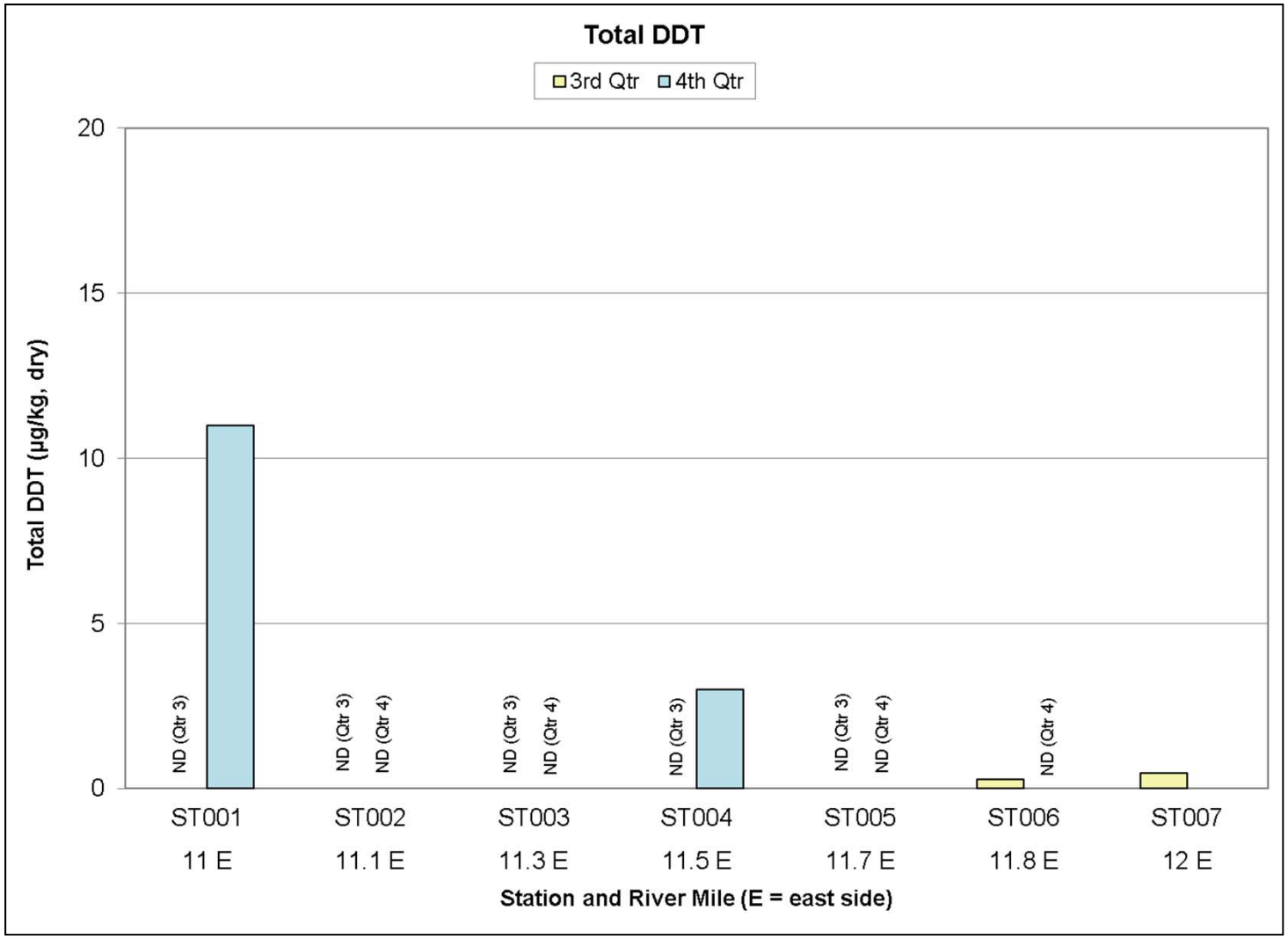
**Figure D2.1-1b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of PCB TEQ (ND=0)
Concentrations for In-River Sediment Traps, 2009




Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

ND = not detected at quarter shown

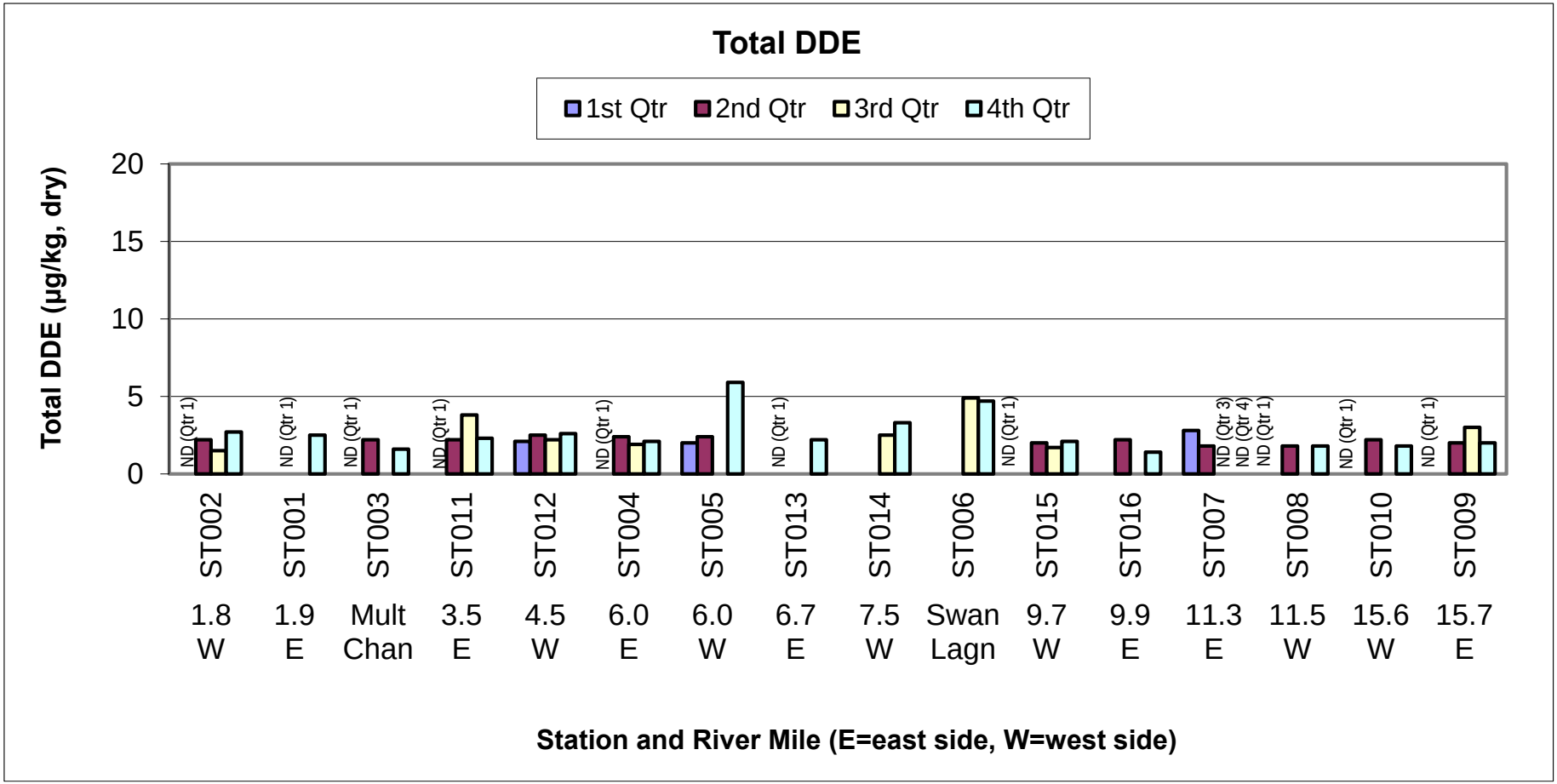
**Figure D2.1-2a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total DDT
Concentrations for In-River Sediment Traps, 2007




Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

ND = not detected at quarter shown

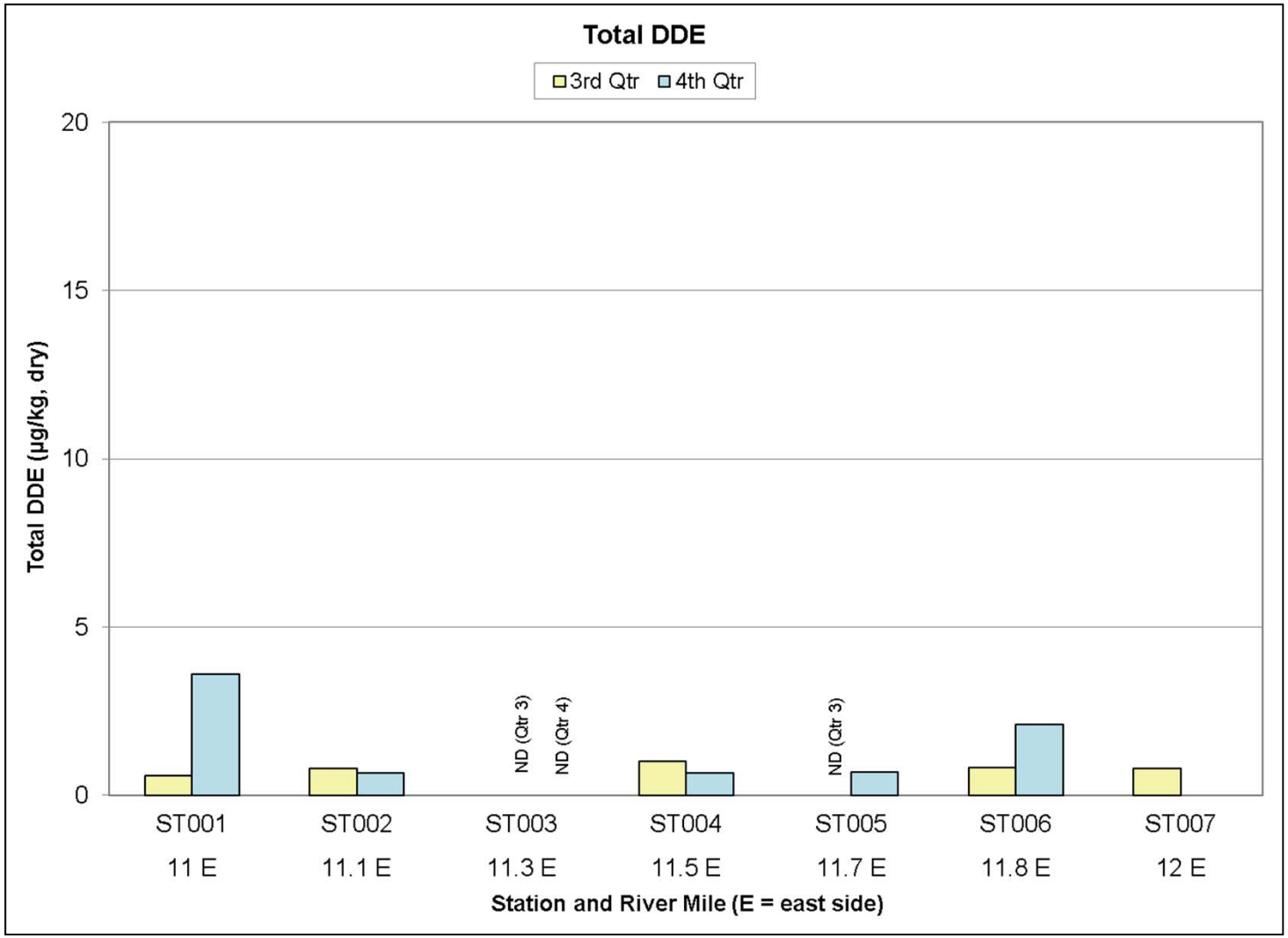
**Figure D2.1-2b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total DDT
Concentrations for In-River Sediment Traps, 2009




Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

ND = not detected at quarter shown

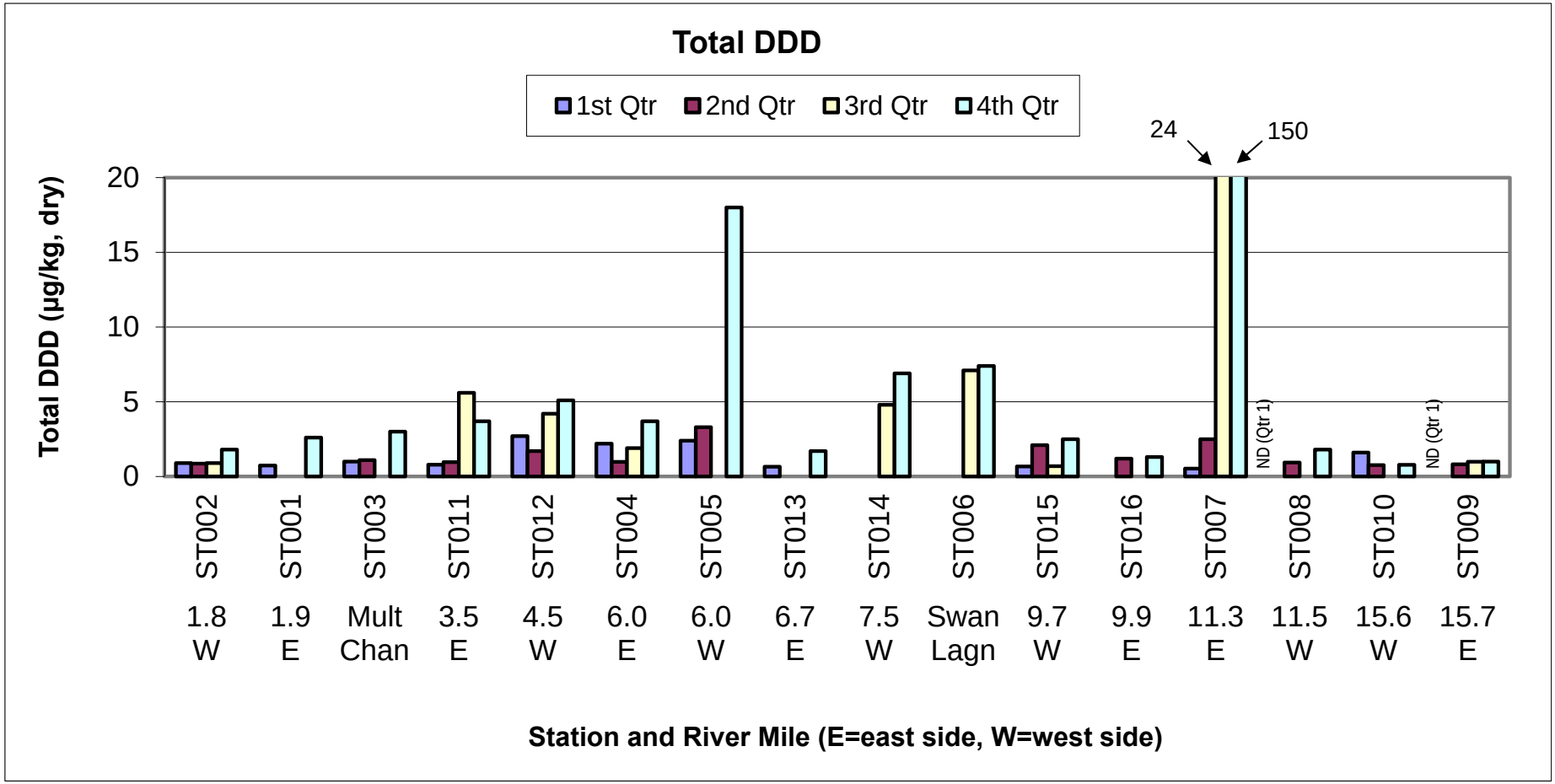
**Figure D2.1-3a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total DDE
Concentrations for In-River Sediment Traps, 2007




Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

ND = not detected at quarter shown

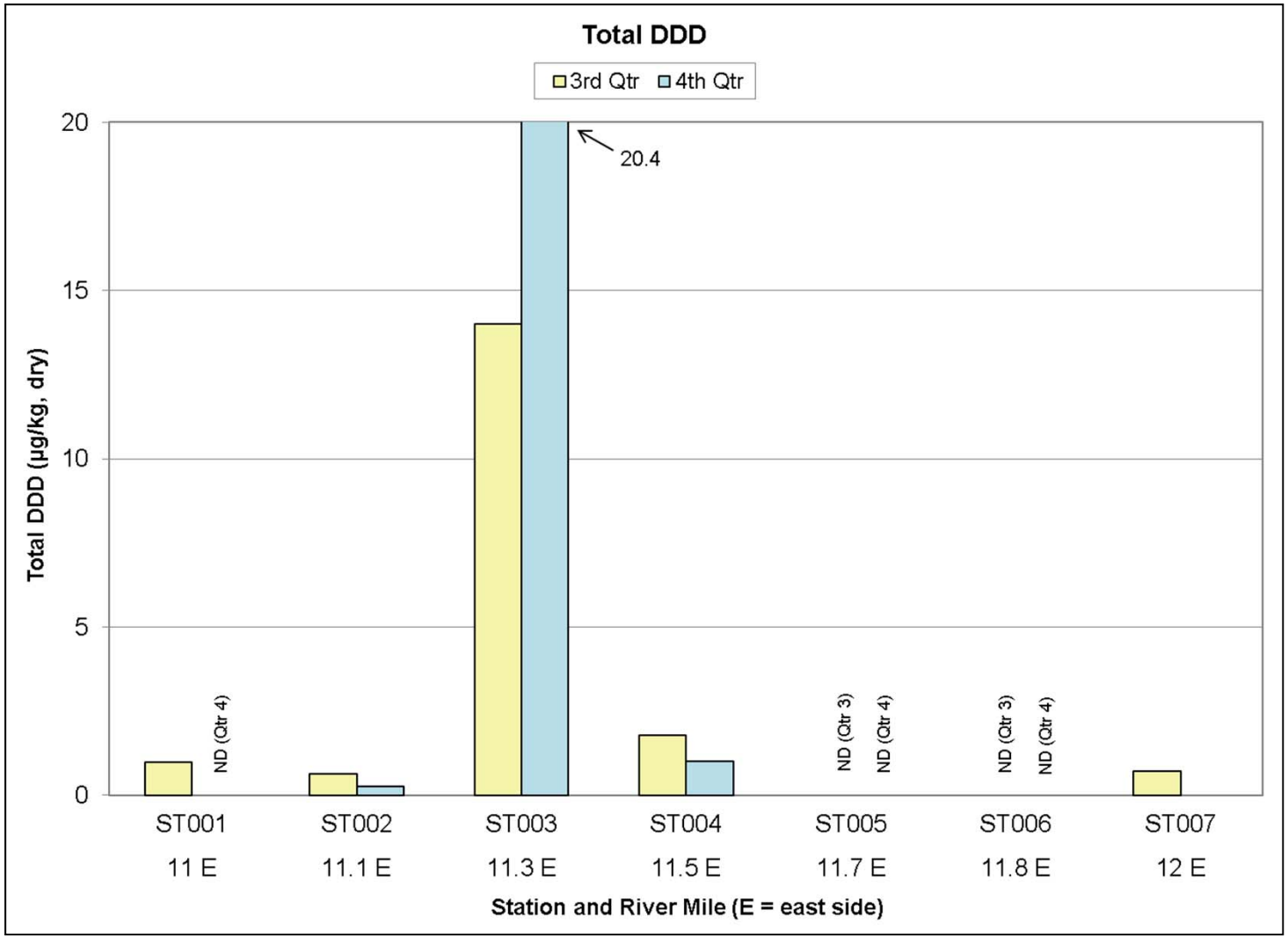
**Figure D2.1-3b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total DDE
Concentrations for In-River Sediment Traps, 2009




Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

ND = not detected at quarter shown

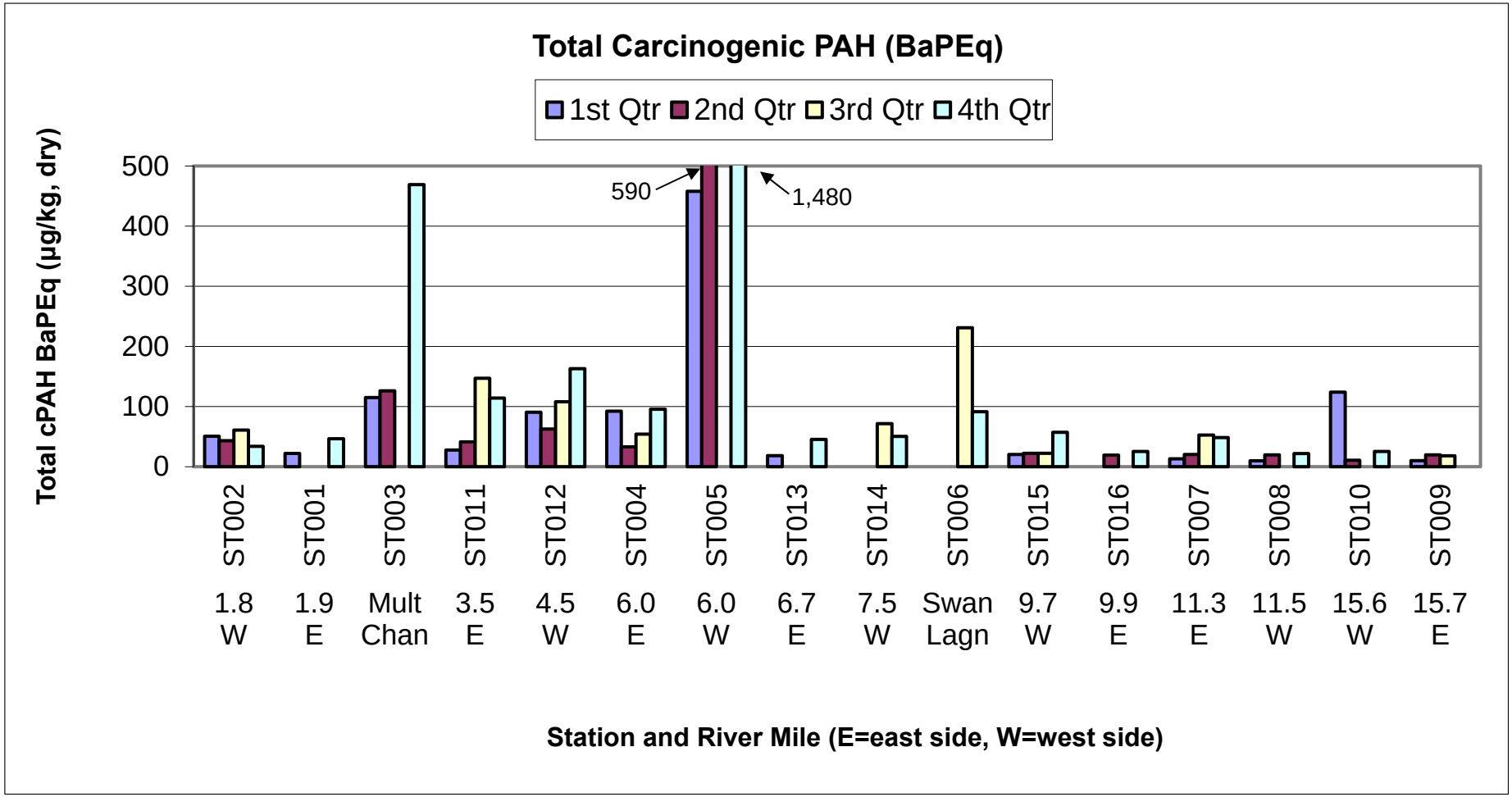
**Figure D2.1-4a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total DDD
Concentrations for In-River Sediment Traps, 2007




Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

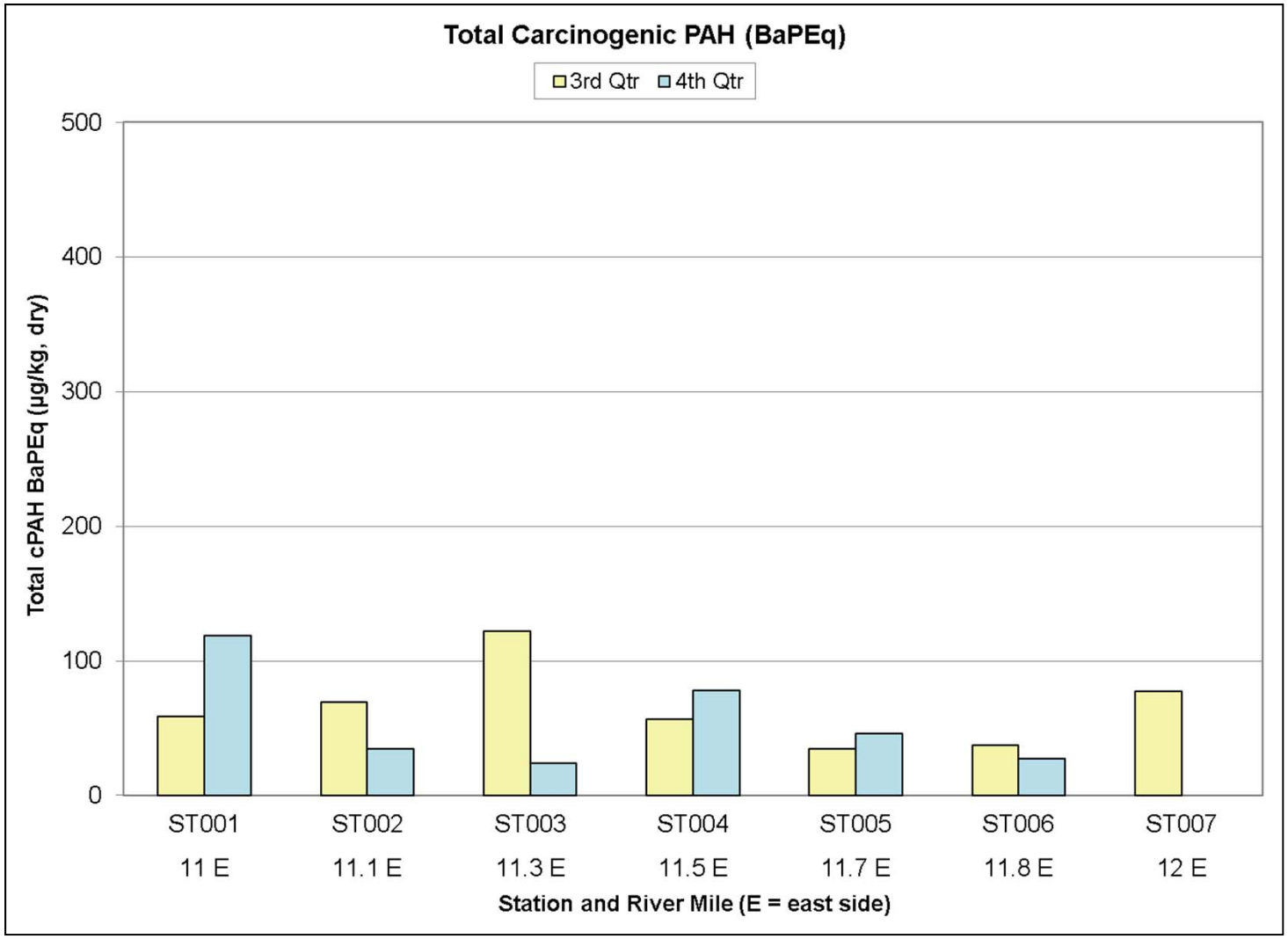
ND = not detected at quarter shown

**Figure D2.1-4b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total DDD
Concentrations for In-River Sediment Traps, 2009



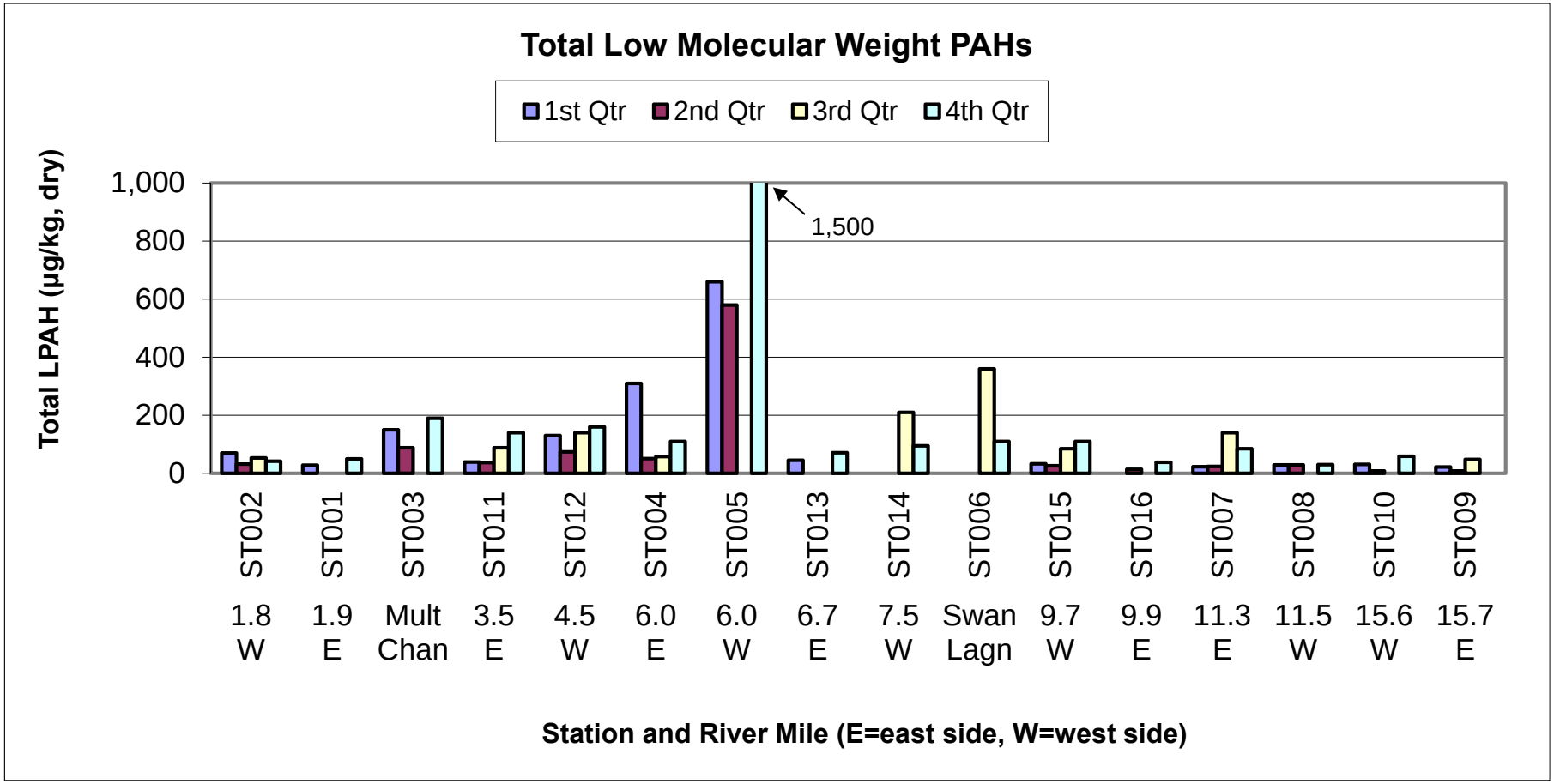

Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-5a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total Carcinogenic PAHs (BaPEq)
Concentrations for In-River Sediment Traps, 2007



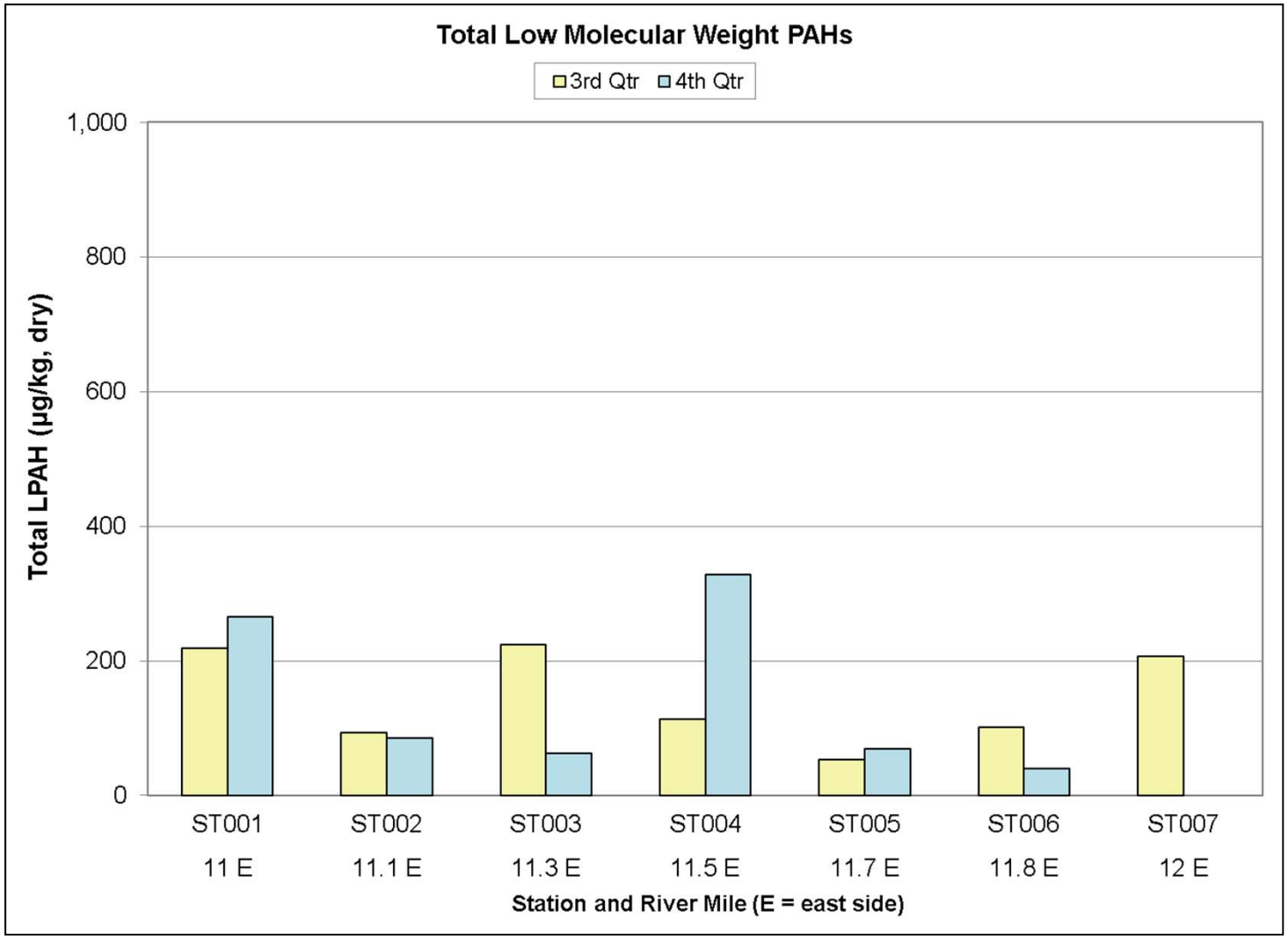

Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-5b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total Carcinogenic PAHs (BaPEq)
Concentrations for In-River Sediment Traps, 2009



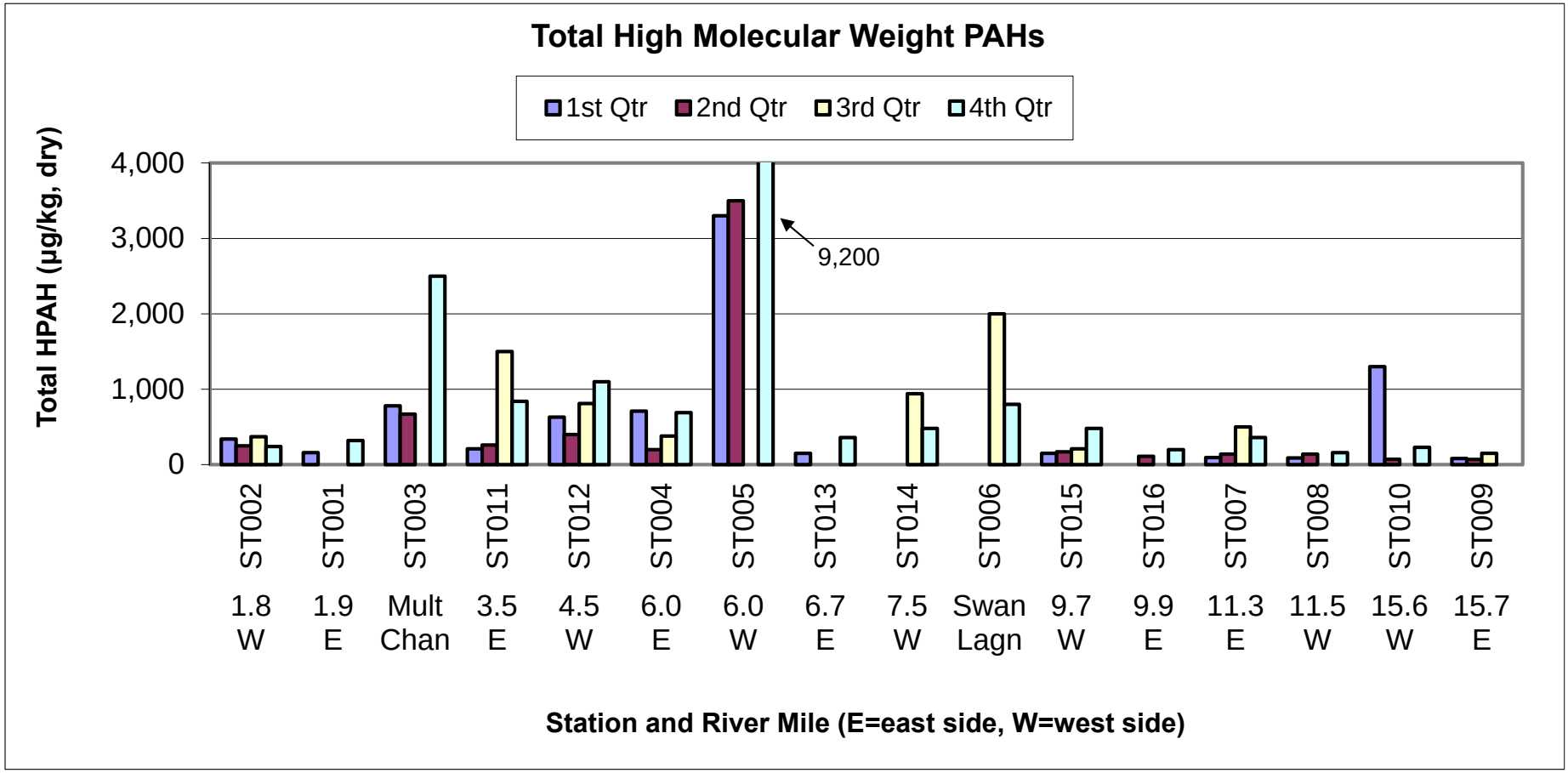

Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-6a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total Low Molecular Weight PAHs
Concentrations for In-River Sediment Traps, 2007



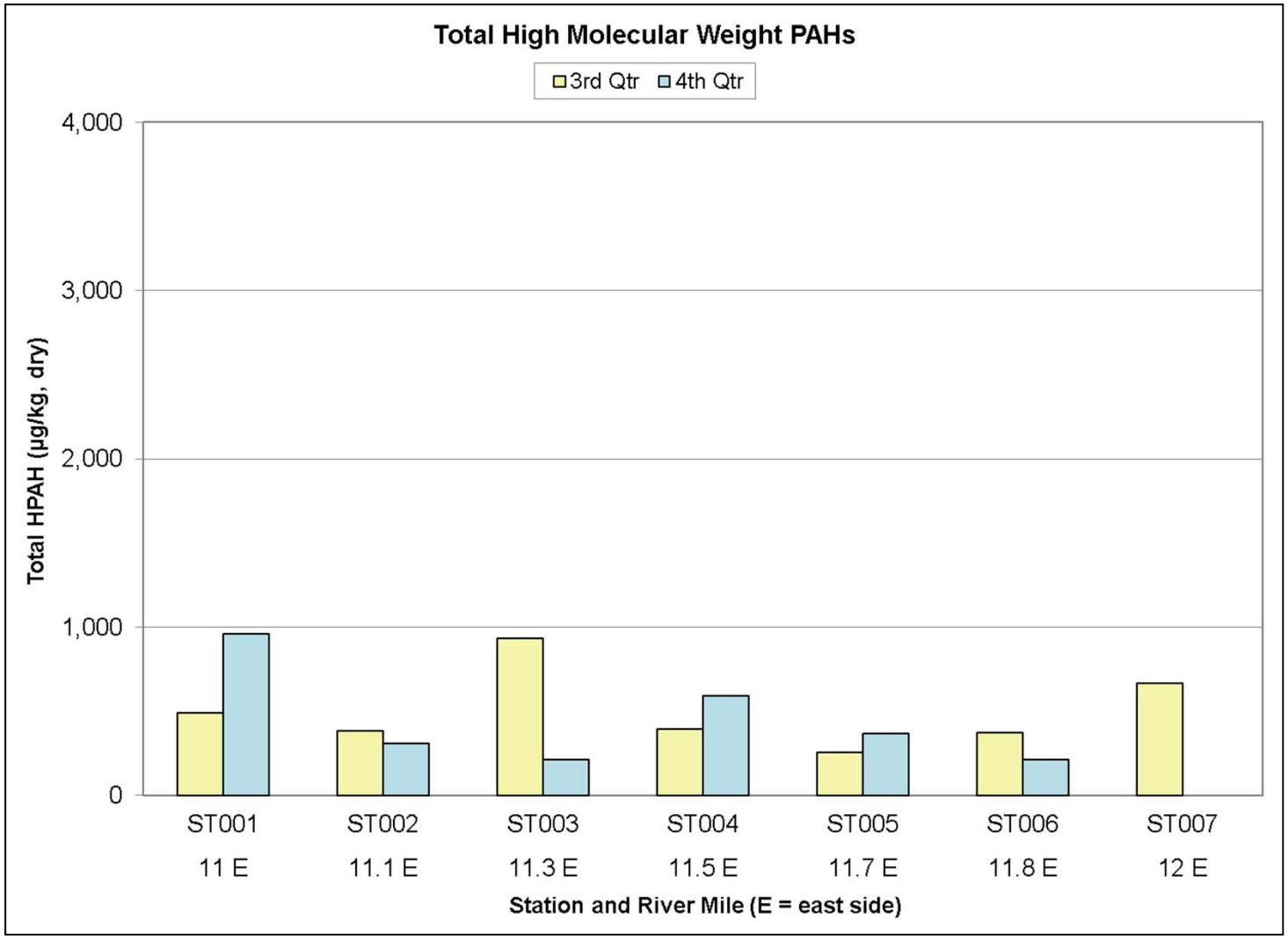

Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-6b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total Low Molecular Weight PAHs
Concentrations for In-River Sediment Traps, 2009



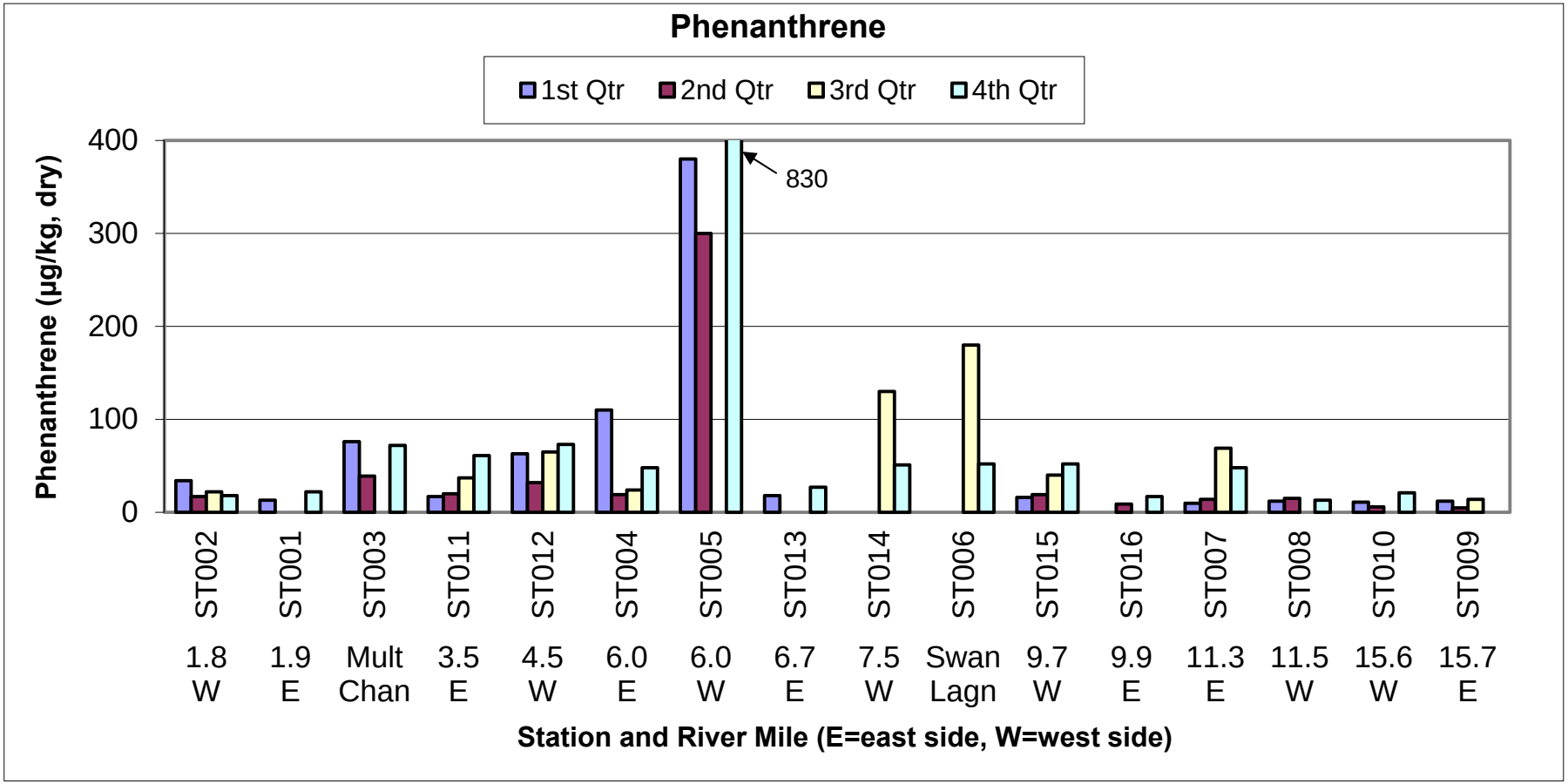

Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-7a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total High Molecular Weight PAHs
Concentrations for In-River Sediment Traps, 2007



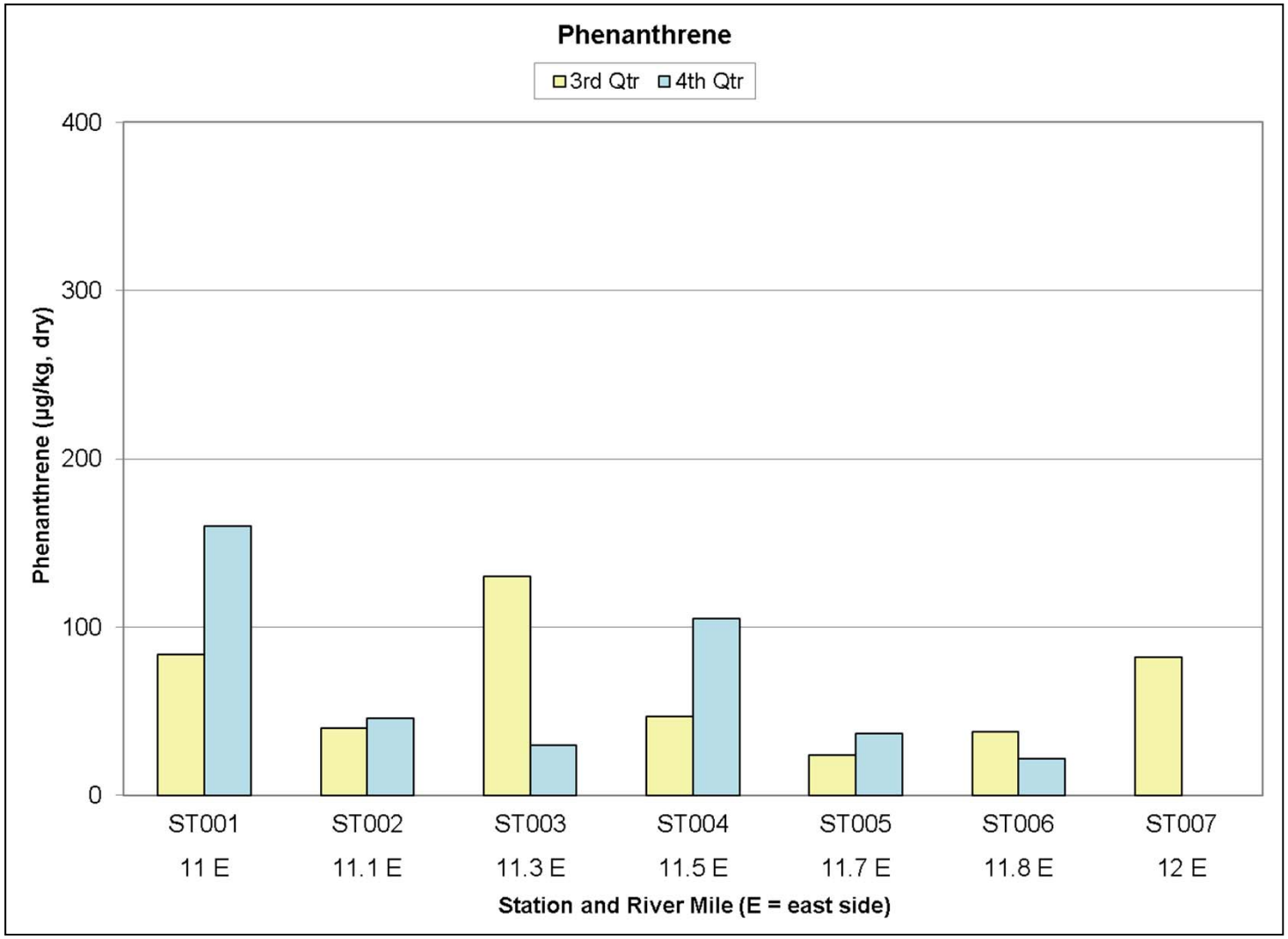

Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-7b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total High Molecular Weight PAHs
Concentrations for In-River Sediment Traps, 2009



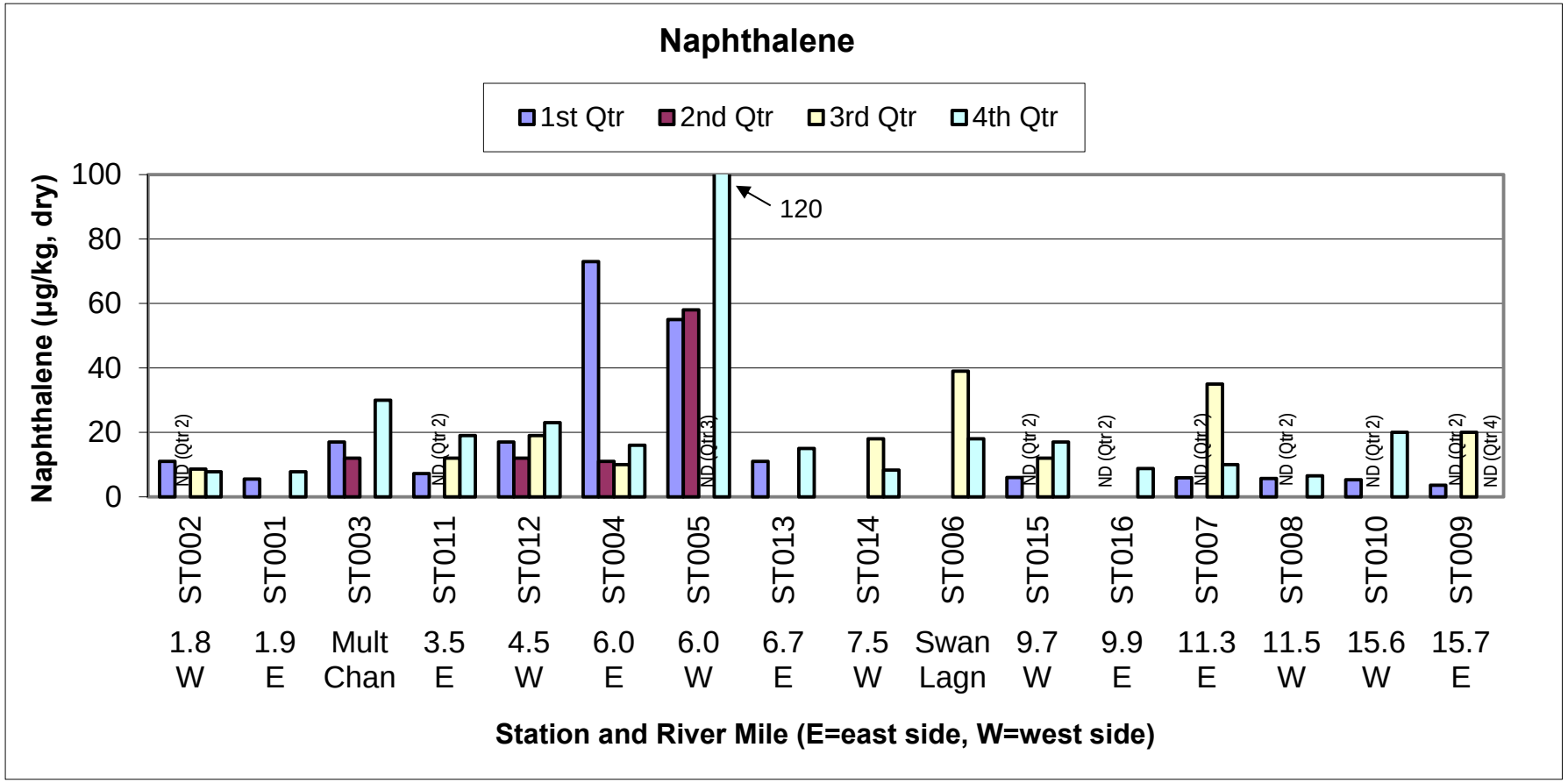

Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-8a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Phenanthrene
Concentrations for In-River Sediment Traps, 2007




Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

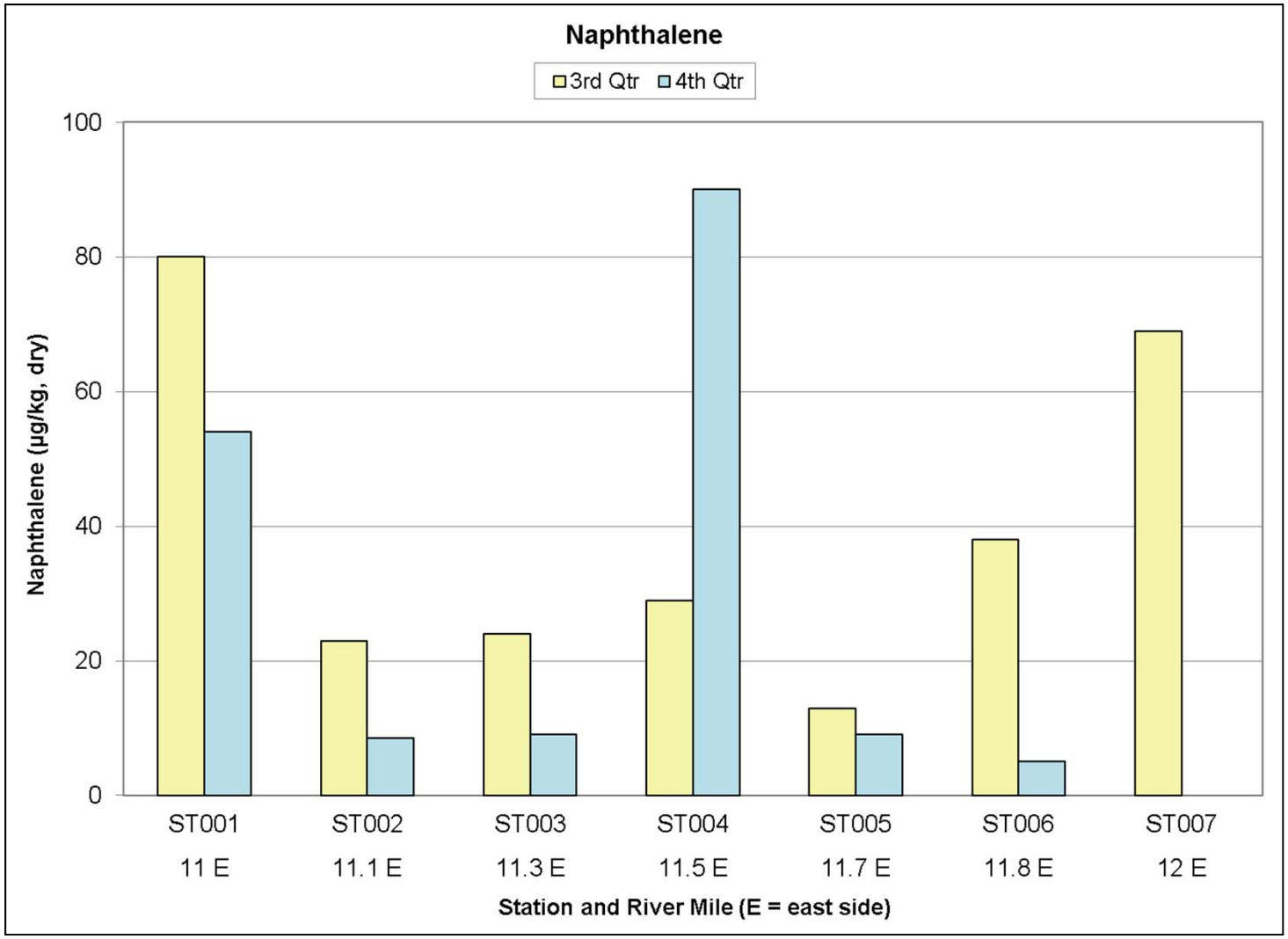
**Figure D2.1-8b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Phenanthrene
Concentrations for In-River Sediment Traps, 2009




Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

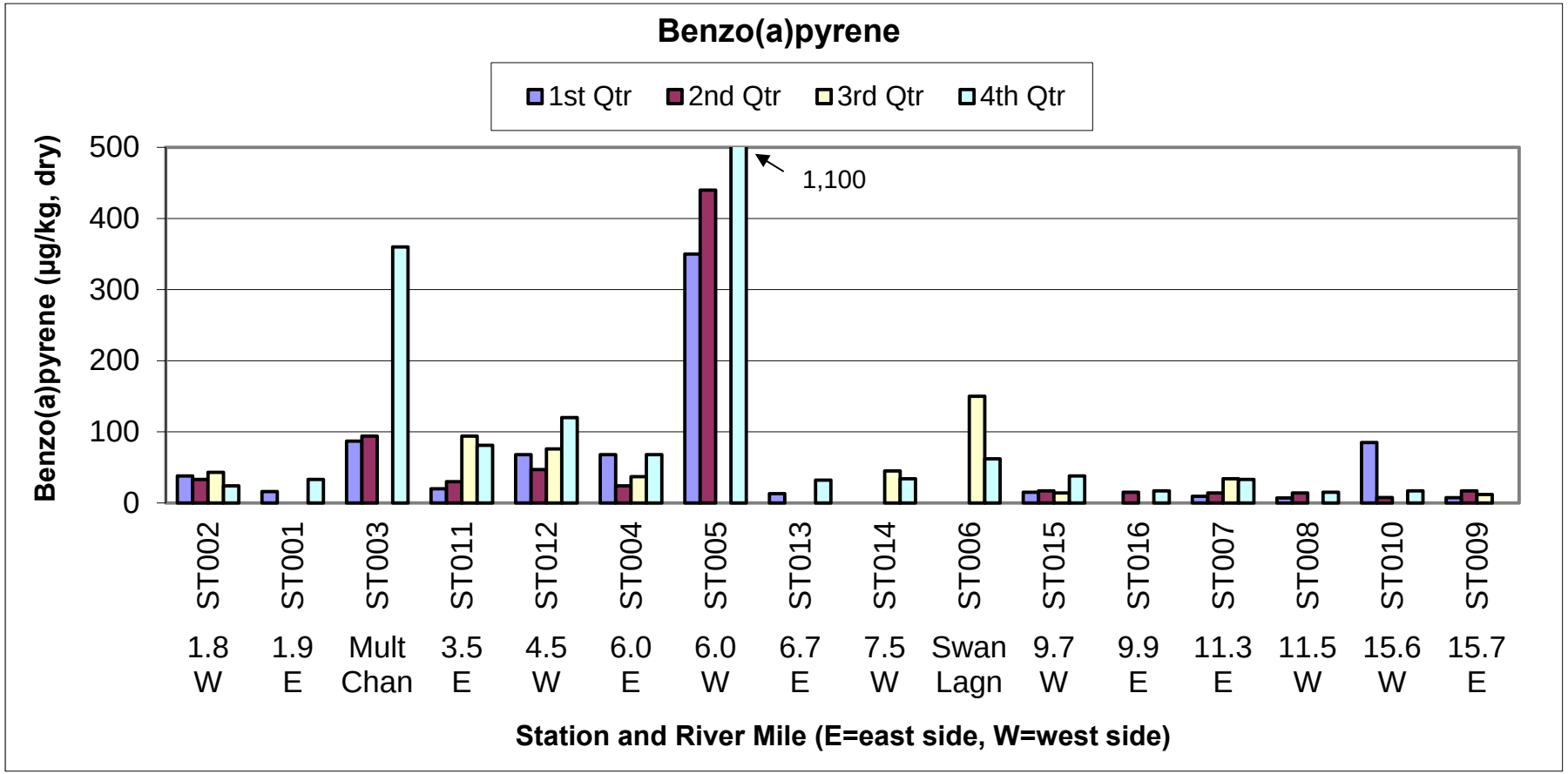
ND = not detected at quarter shown

**Figure D2.1-9a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Naphthalene
Concentrations for In-River Sediment Traps, 2007



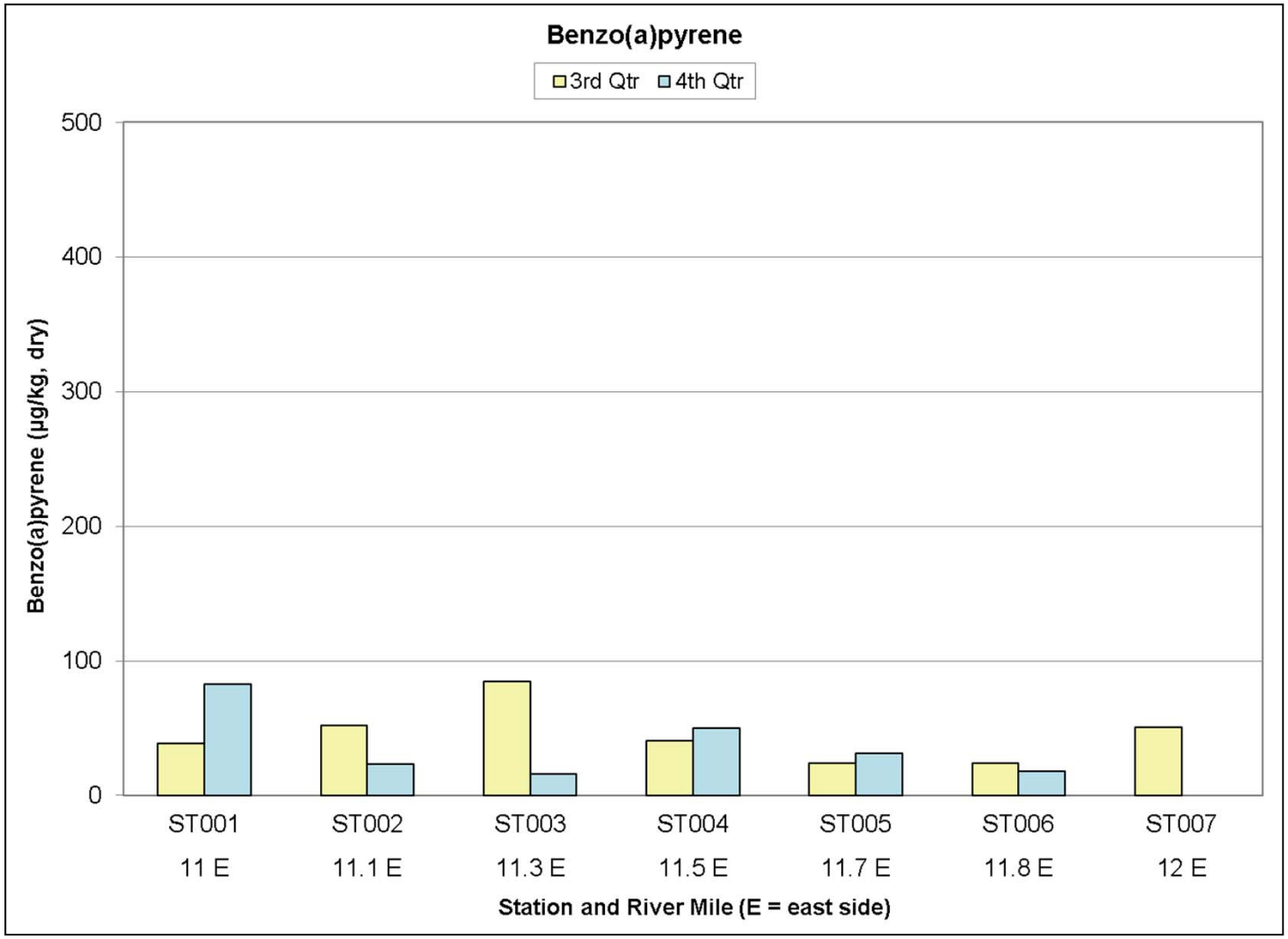

Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-9b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Naphthalene
Concentrations for In-River Sediment Traps, 2009



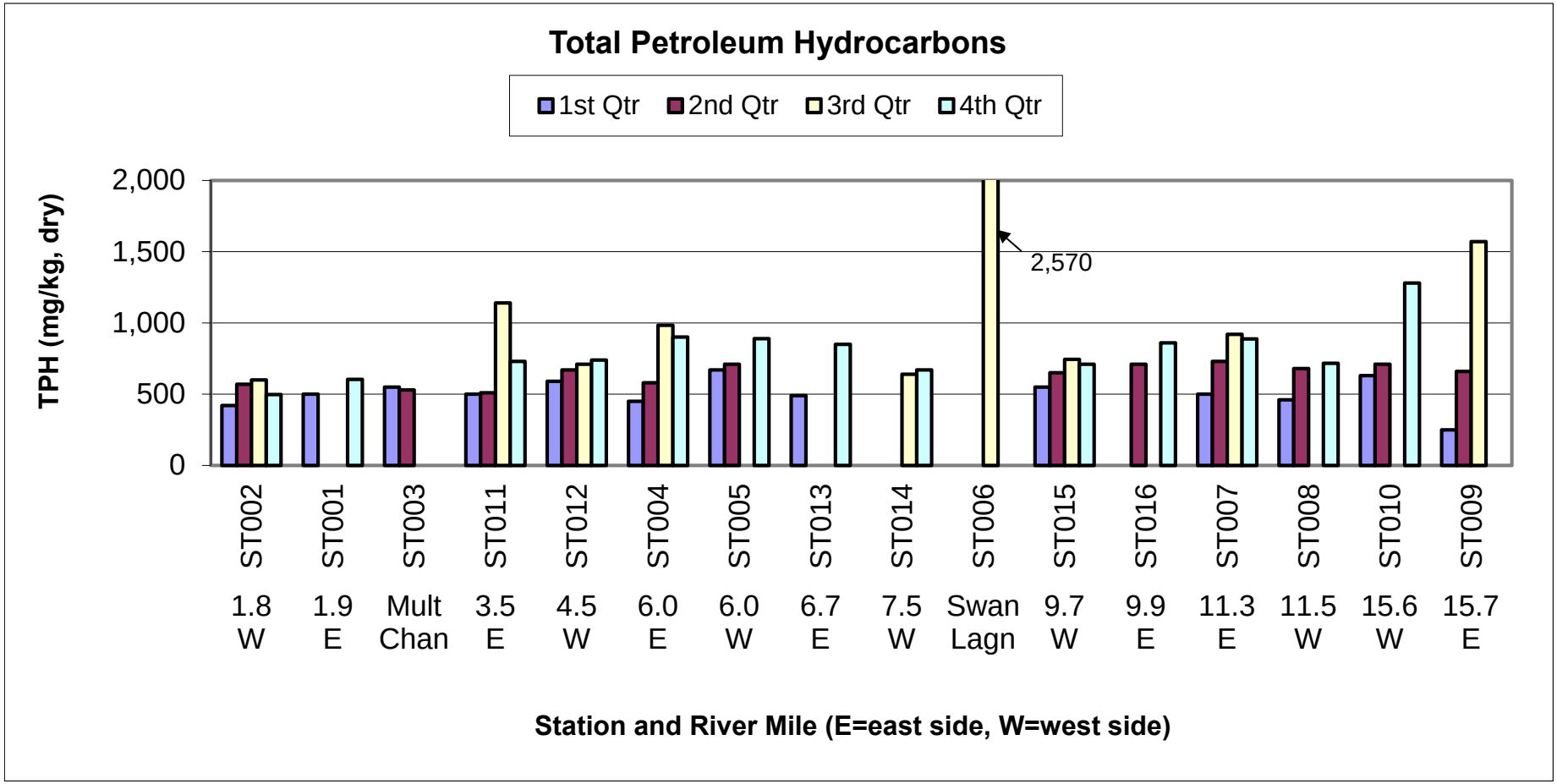

Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-10a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Benzo(a)pyrene
Concentrations for In-River Sediment Traps, 2007



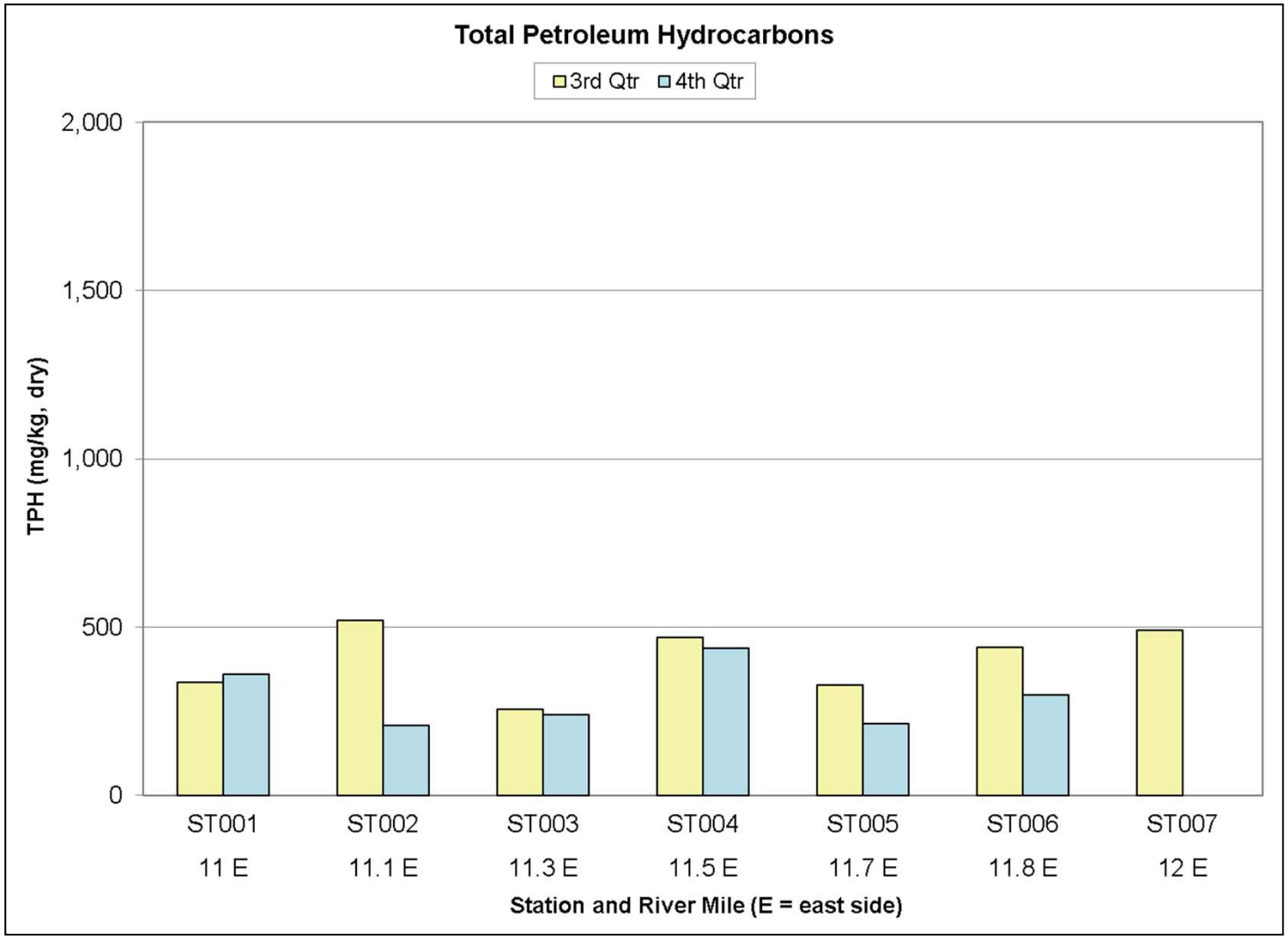

Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-10b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Benzo(a)pyrene
Concentrations for In-River Sediment Traps, 2009



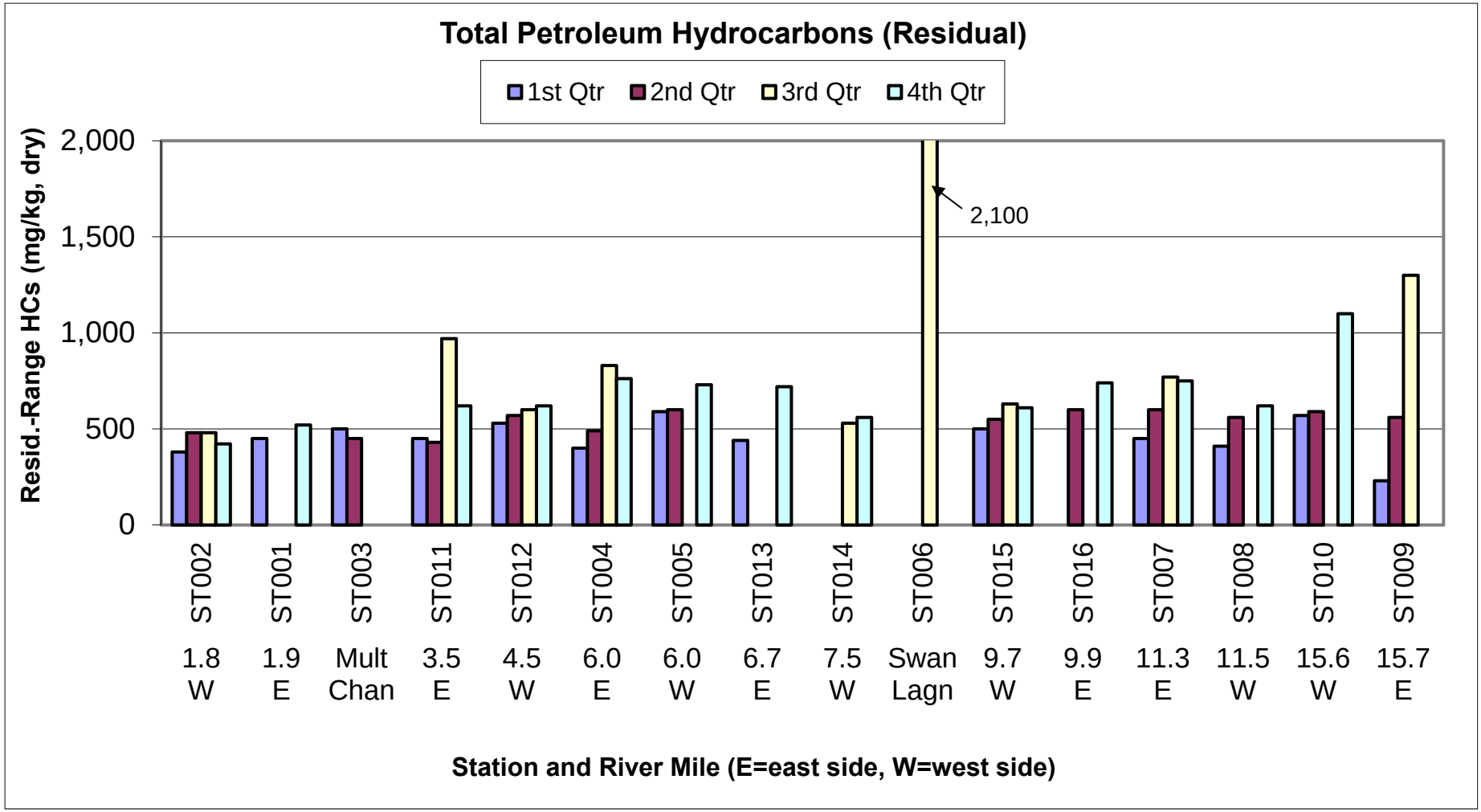

Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-11a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total Petroleum Hydrocarbon
Concentrations for In-River Sediment Traps, 2007



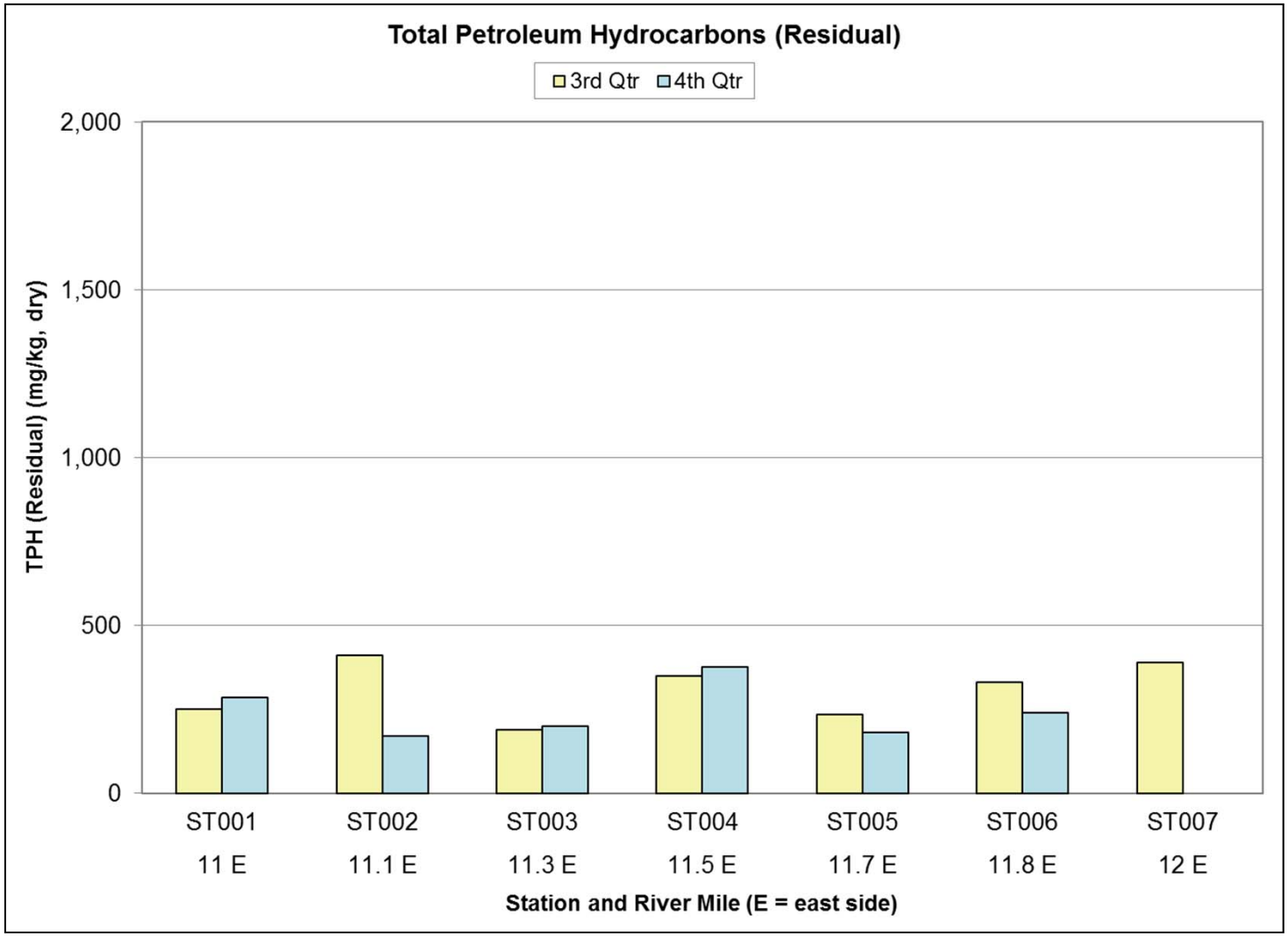

Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-11b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total Petroleum Hydrocarbon
Concentrations for In-River Sediment Traps, 2009



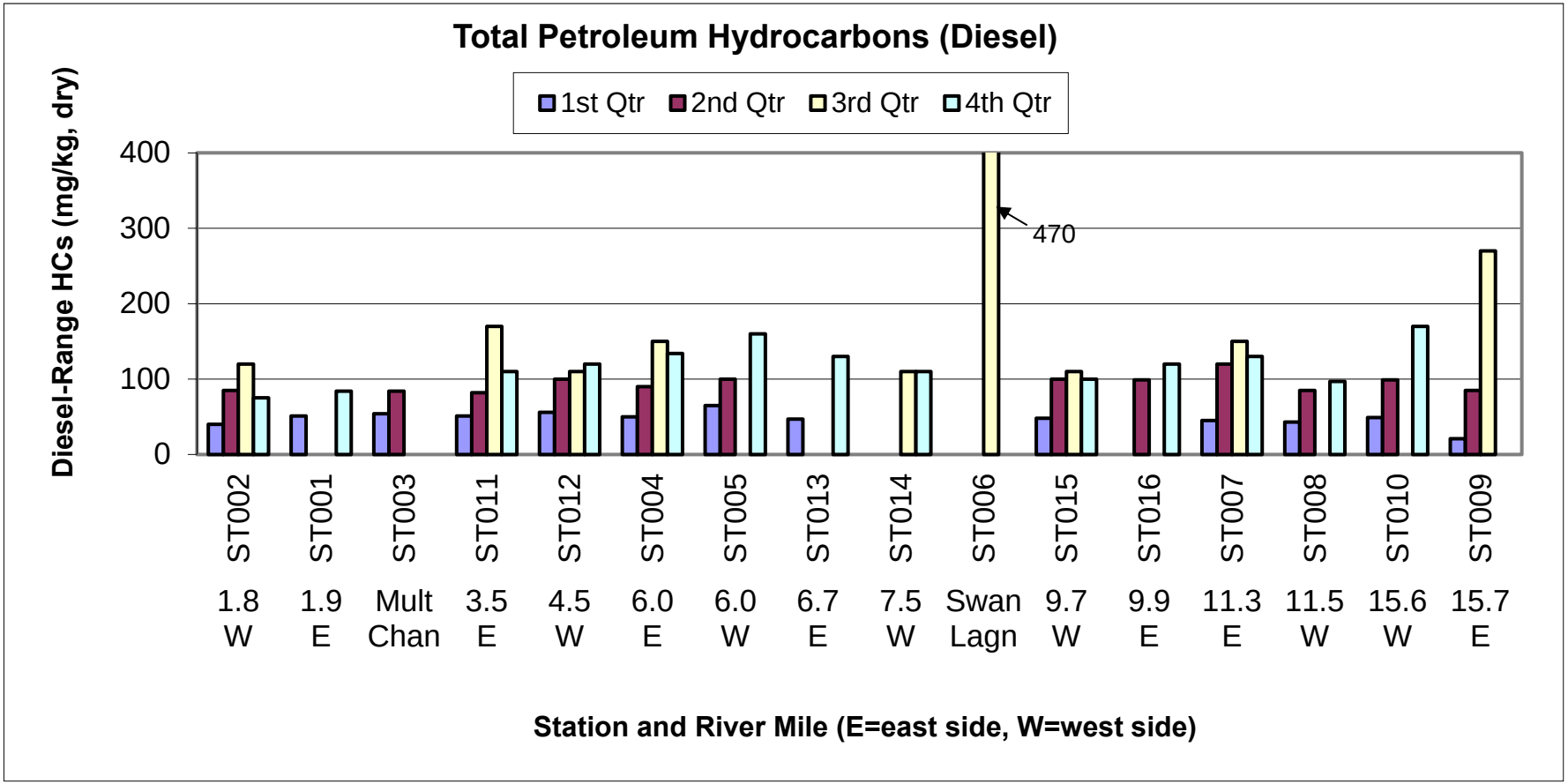

Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-12a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total Petroleum Hydrocarbon (Residual)
Concentrations for In-River Sediment Traps, 2007



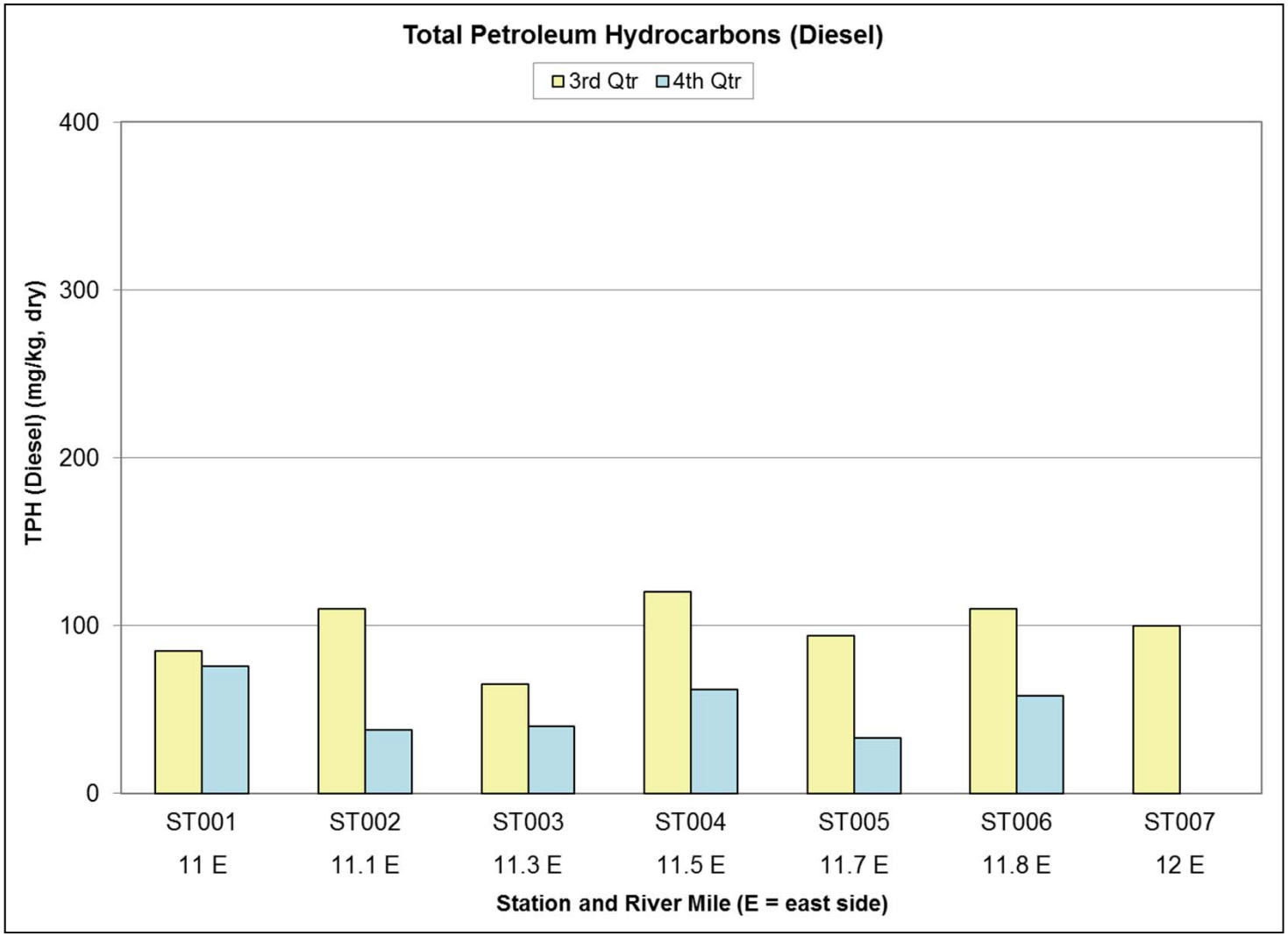

Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-12b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total Petroleum Hydrocarbon (Residual)
Concentrations for In-River Sediment Traps, 2009



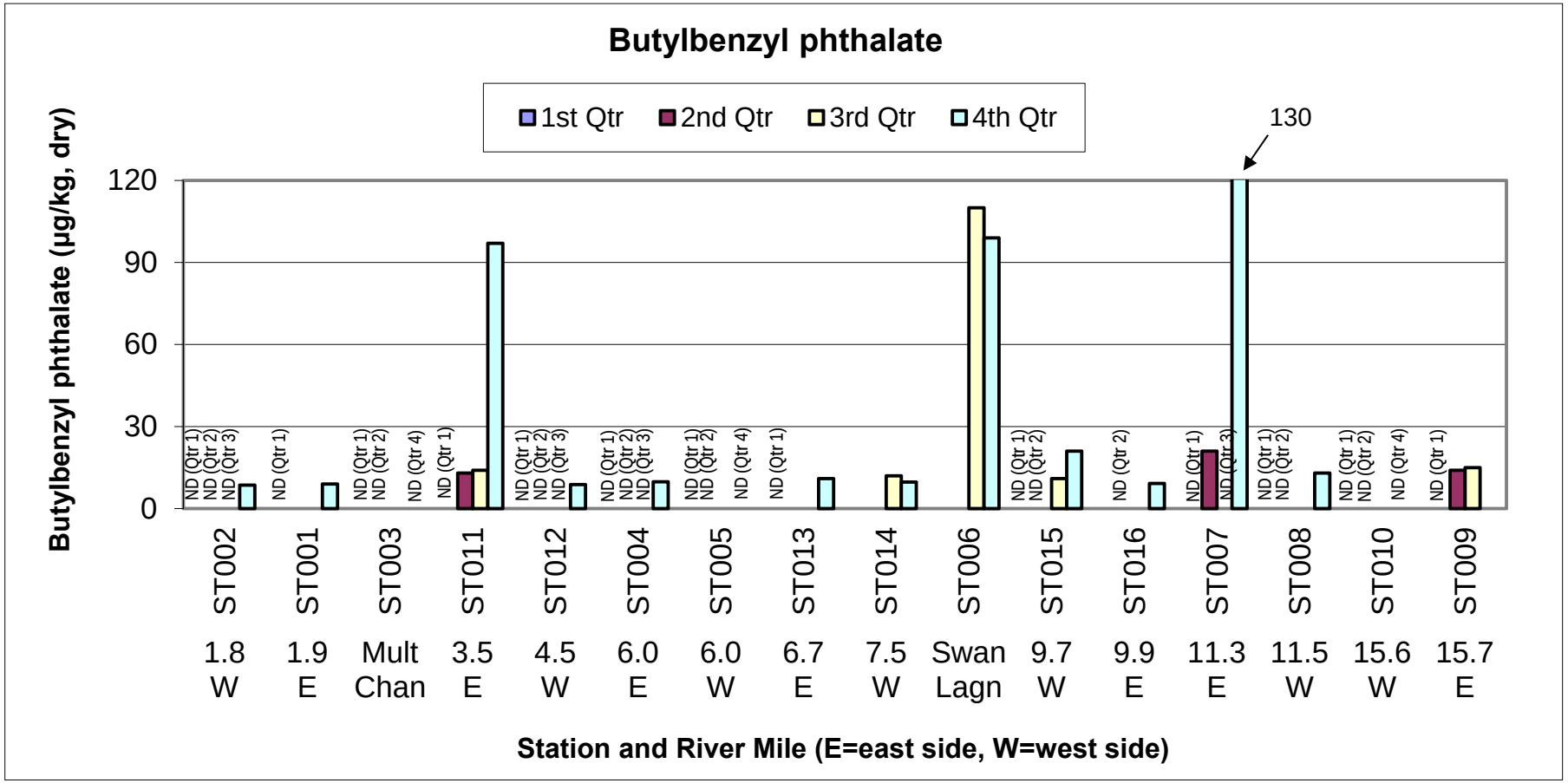

Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-13a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total Petroleum Hydrocarbon (Diesel)
Concentrations for In-River Sediment Traps, 2007




Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

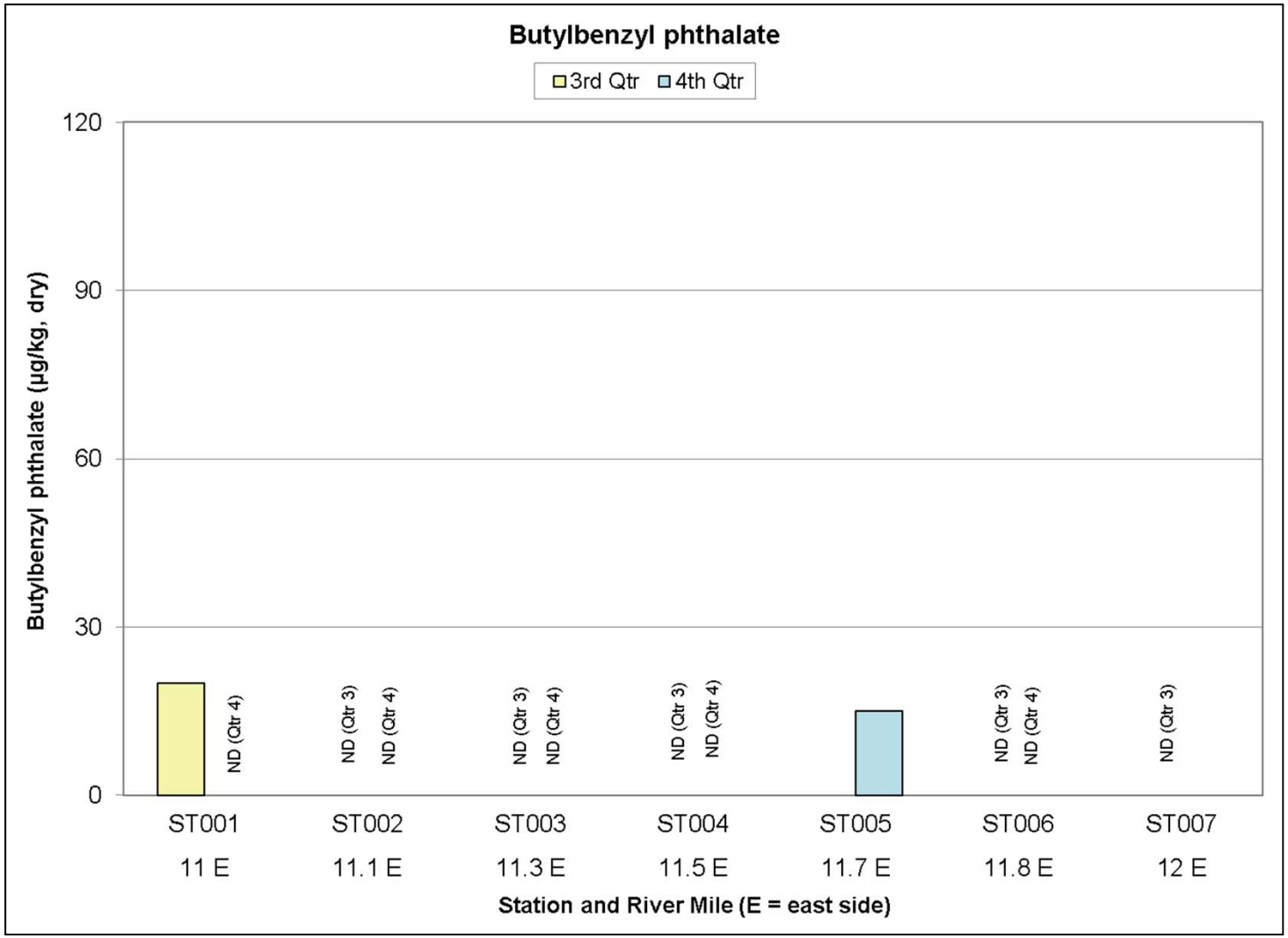
**Figure D2.1-13b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total Petroleum Hydrocarbon (Diesel)
Concentrations for In-River Sediment Traps, 2009




Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

ND = not detected at quarter shown

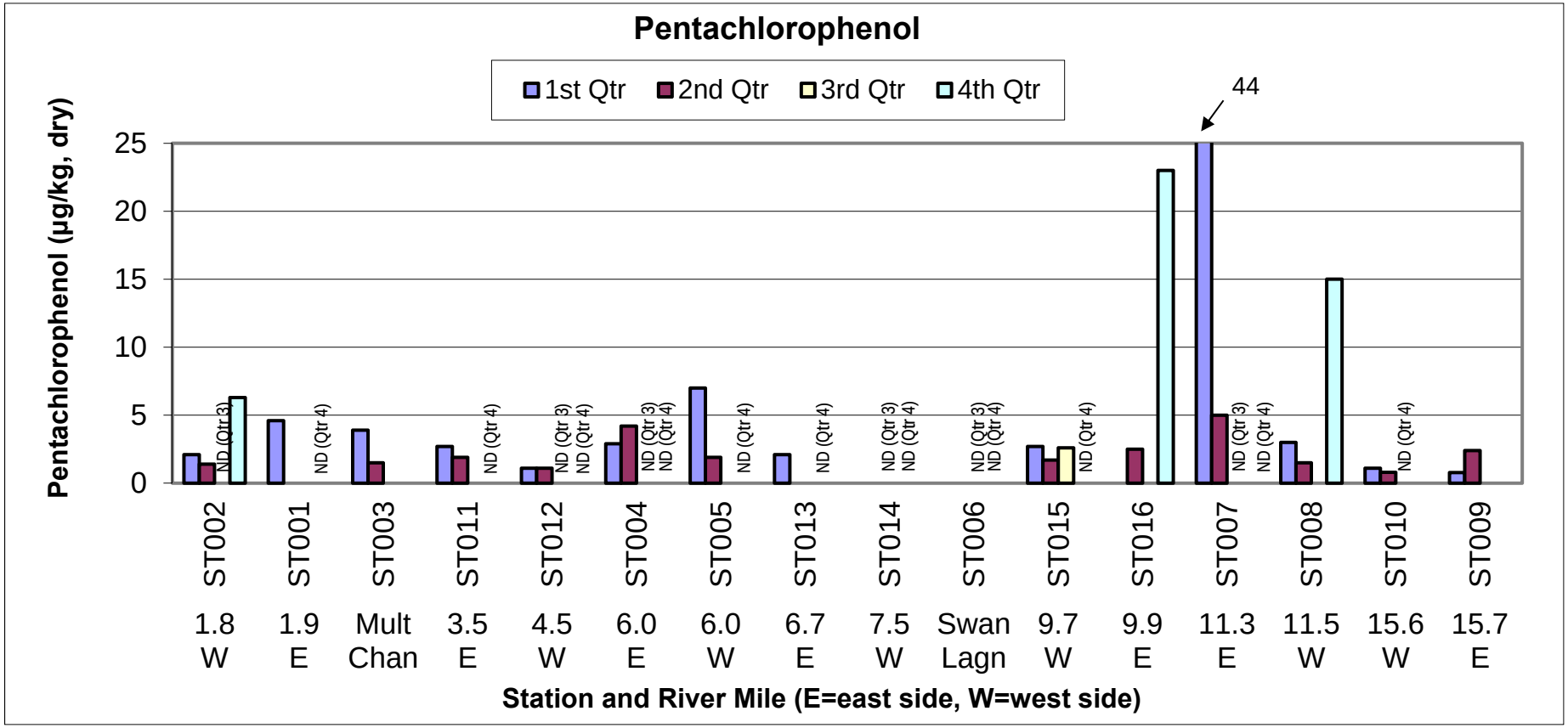
**Figure D2.1-14a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Butylbenzyl phthalate
Concentrations for In-River Sediment Traps, 2007




Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

ND = not detected at quarter shown

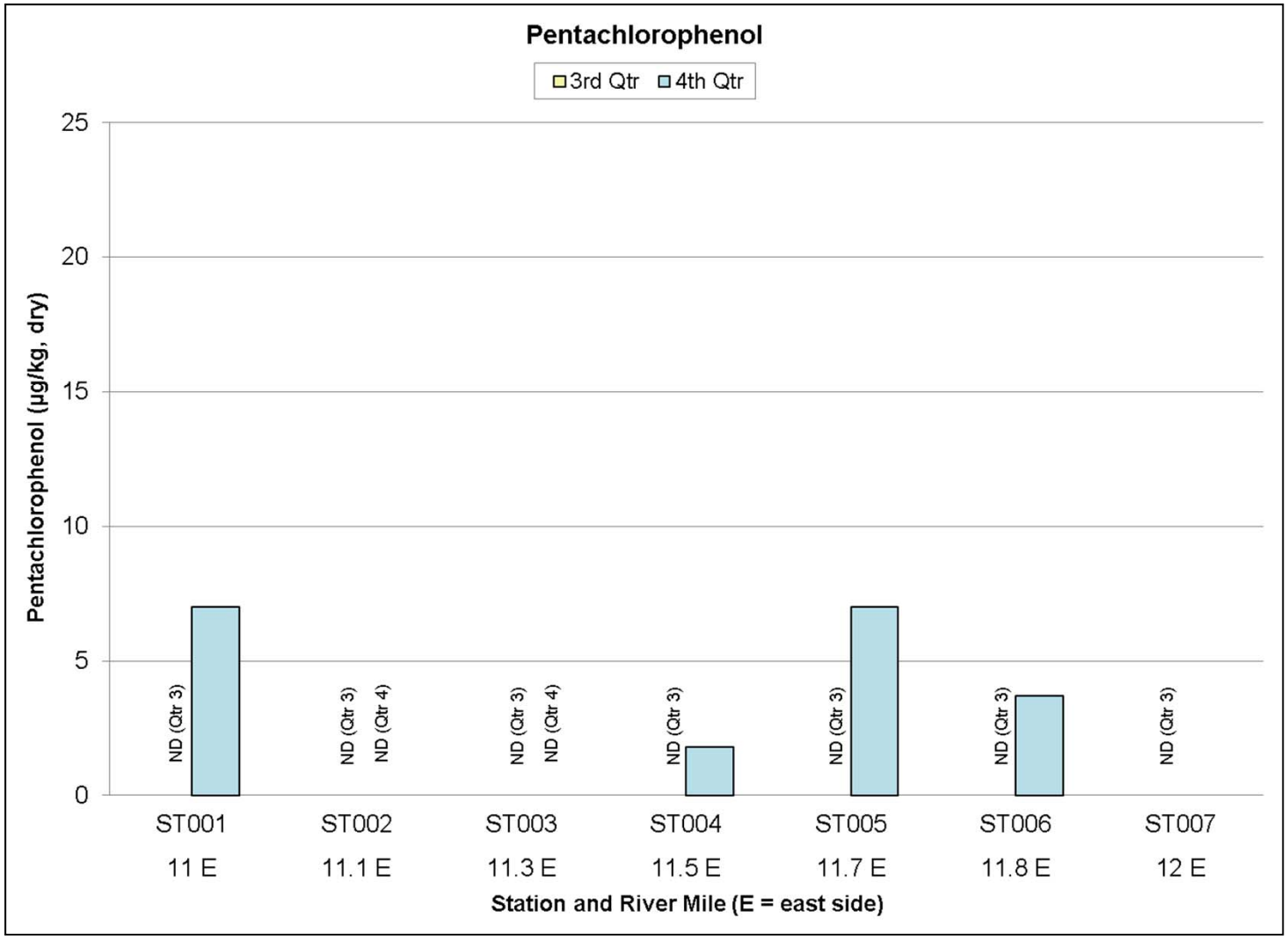
**Figure D2.1-14b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Butylbenzyl phthalate
Concentrations for In-River Sediment Traps, 2009




Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

ND = not detected at quarter shown

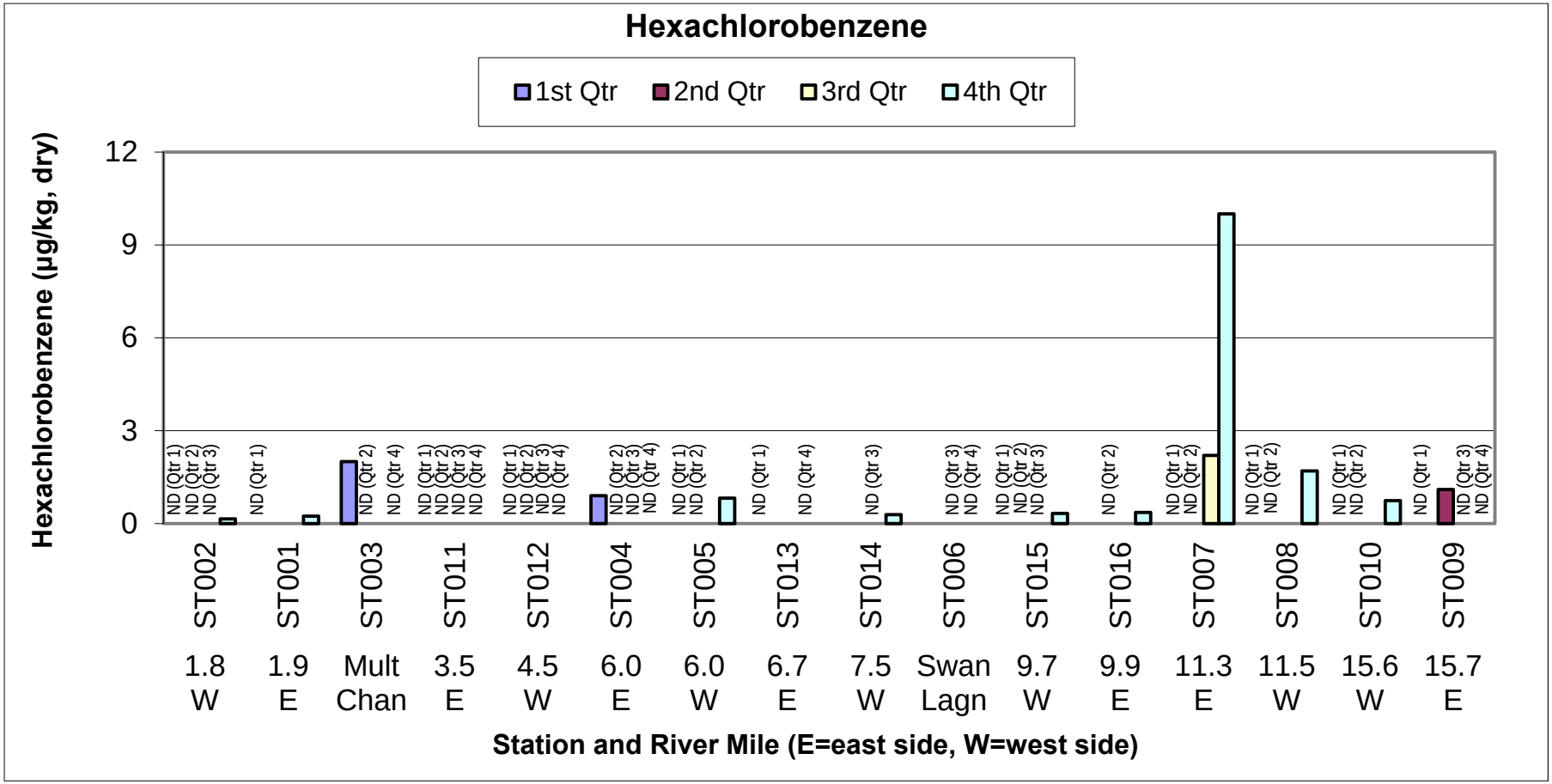
**Figure D2.1-15a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Pentachlorophenol
Concentrations for In-River Sediment Traps, 2007




Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

ND = not detected at quarter shown

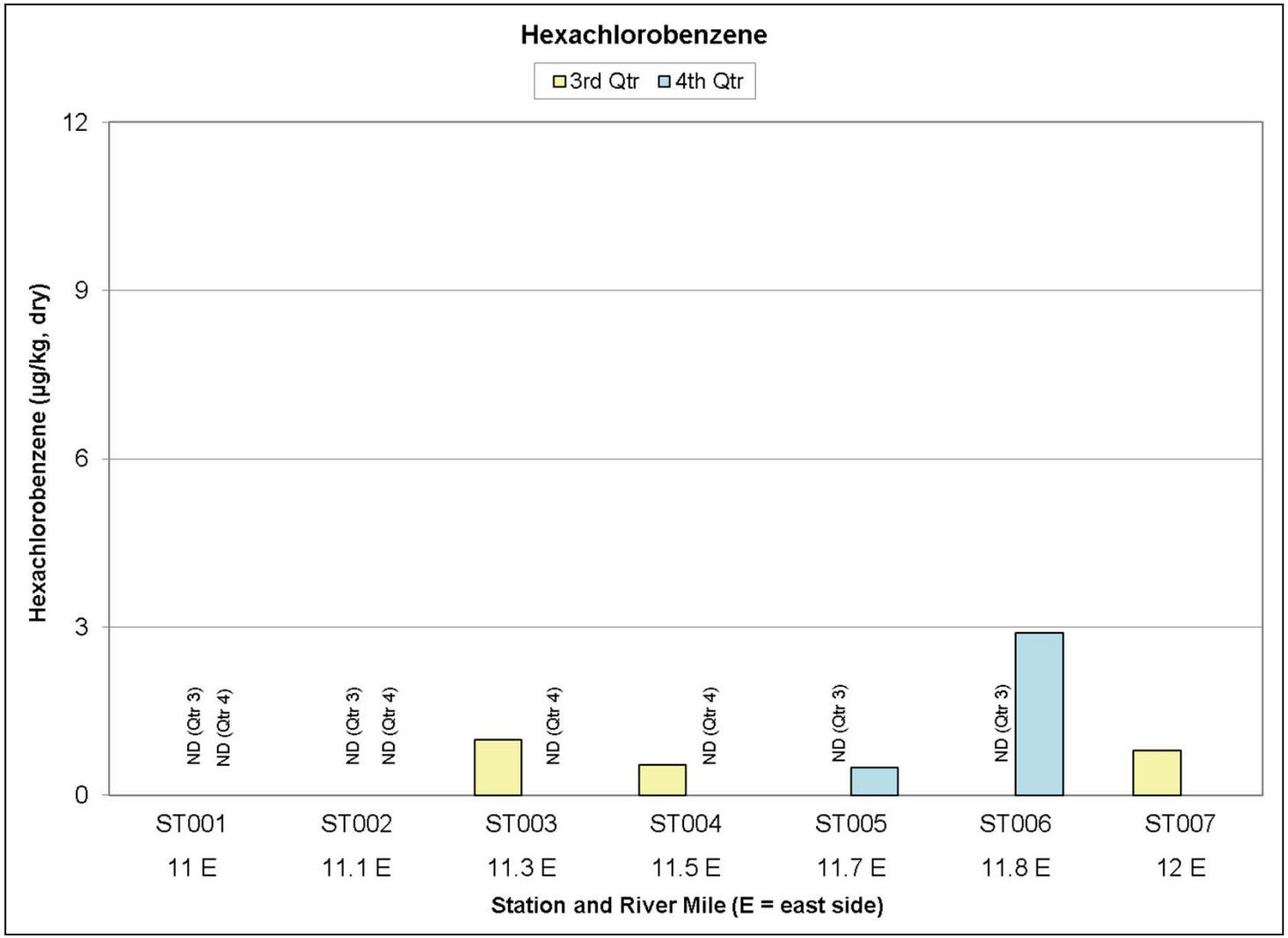
**Figure D2.1-15b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Pentachlorophenol
Concentrations for In-River Sediment Traps, 2009




Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

ND = not detected at quarter shown

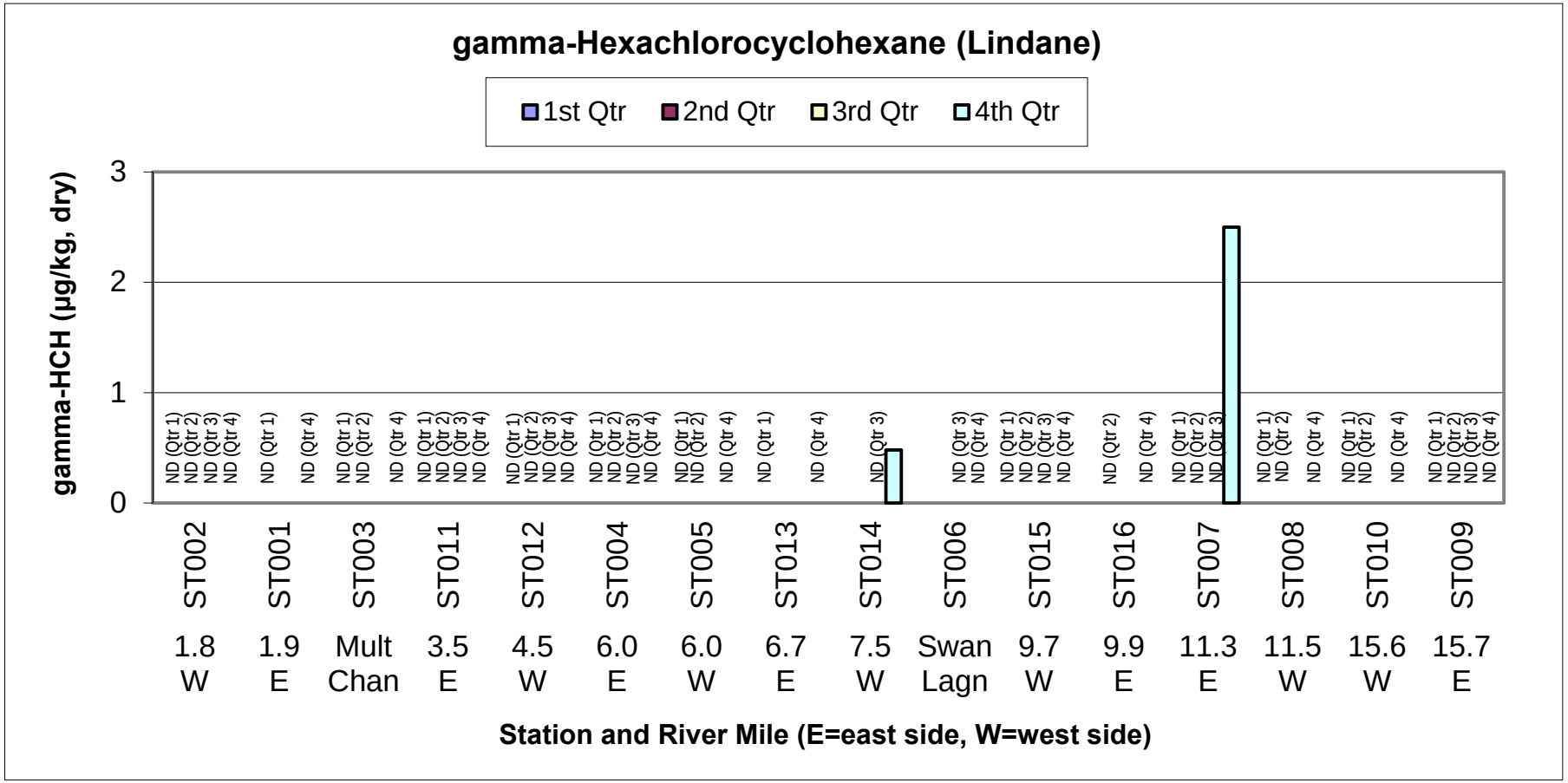
**Figure D2.1-16a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Hexachlorobenzene
Concentrations for In-River Sediment Traps, 2007




Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

ND = not detected at quarter shown

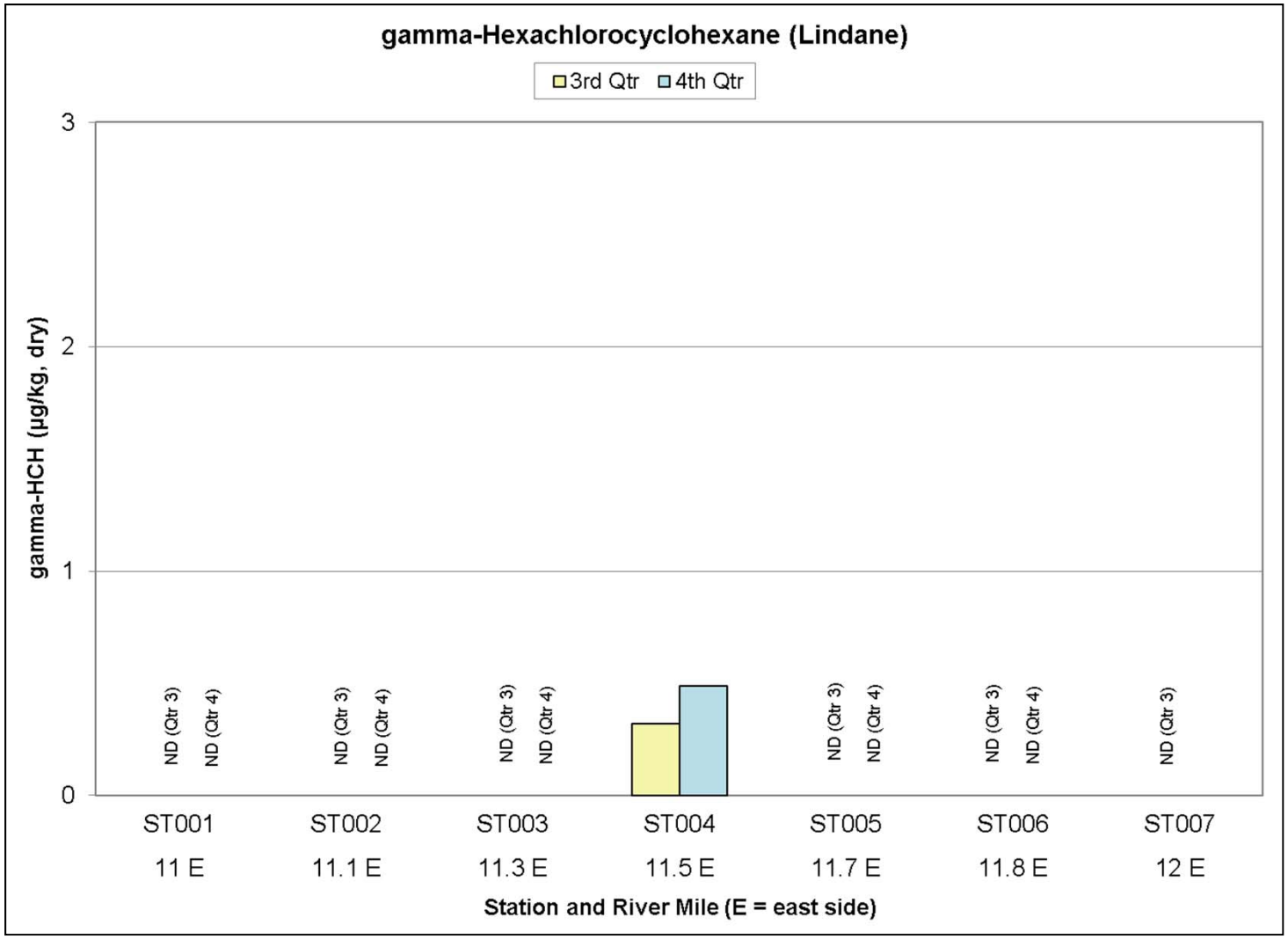
**Figure D2.1-16b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Hexachlorobenzene
Concentrations for In-River Sediment Traps, 2009




Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

ND = not detected at quarter shown

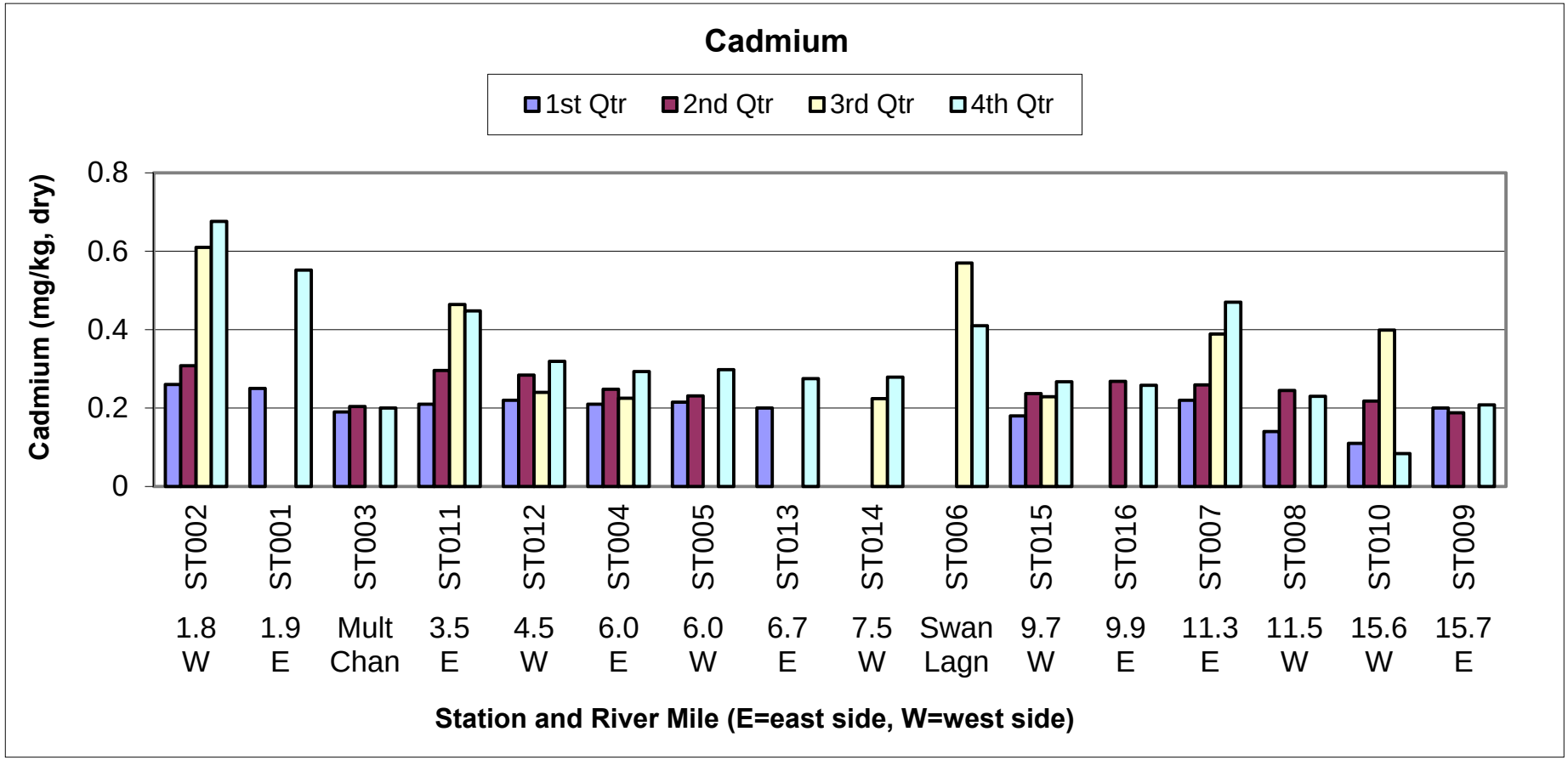
**Figure D2.1-17a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of gamma-Hexachlorocyclohexane (Lindane)
Concentrations for In-River Sediment Traps, 2007




Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

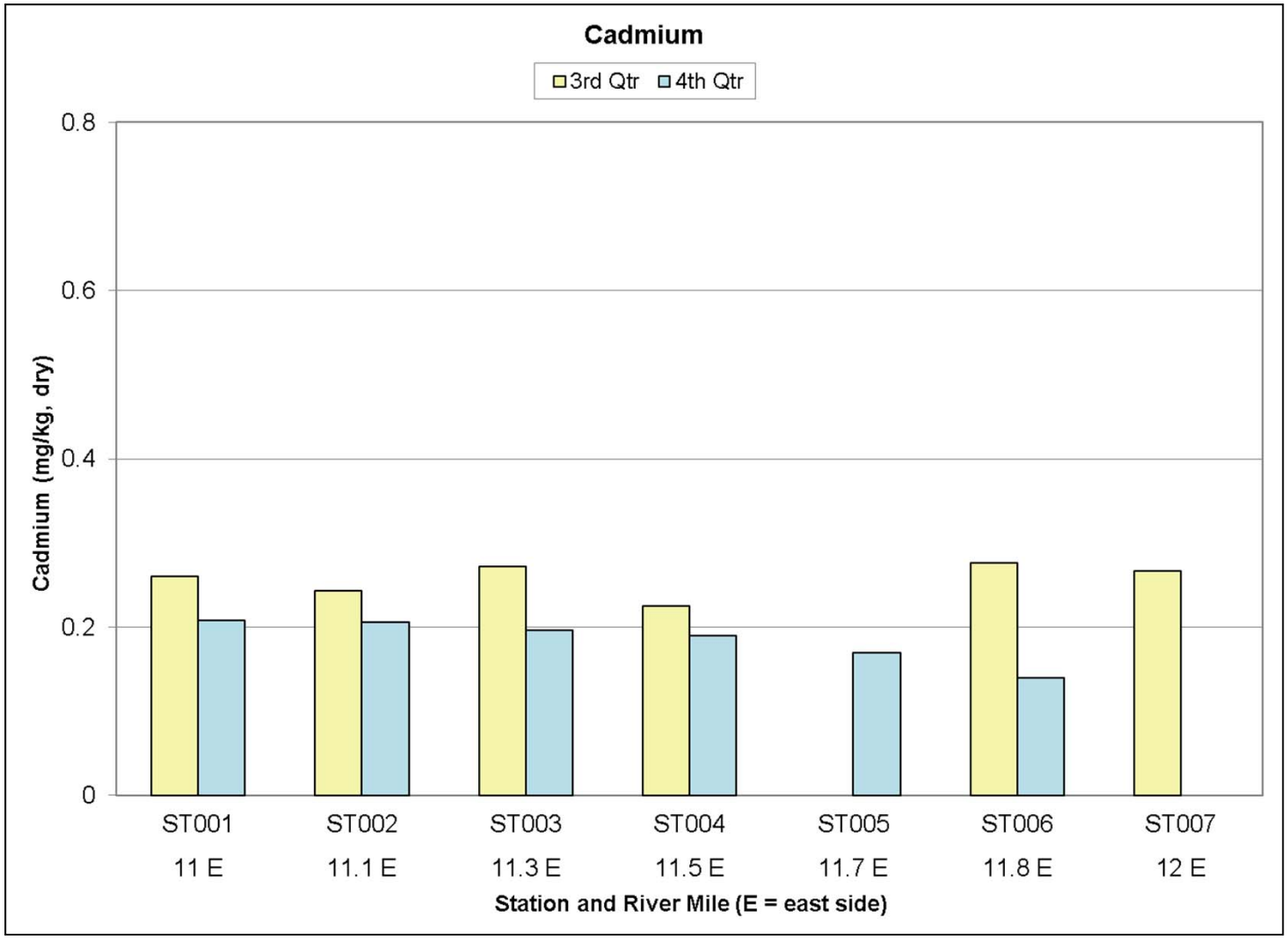
ND = not detected at quarter shown

**Figure D2.1-17b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of gamma-Hexachlorocyclohexane (Lindane)
Concentrations for In-River Sediment Traps, 2009



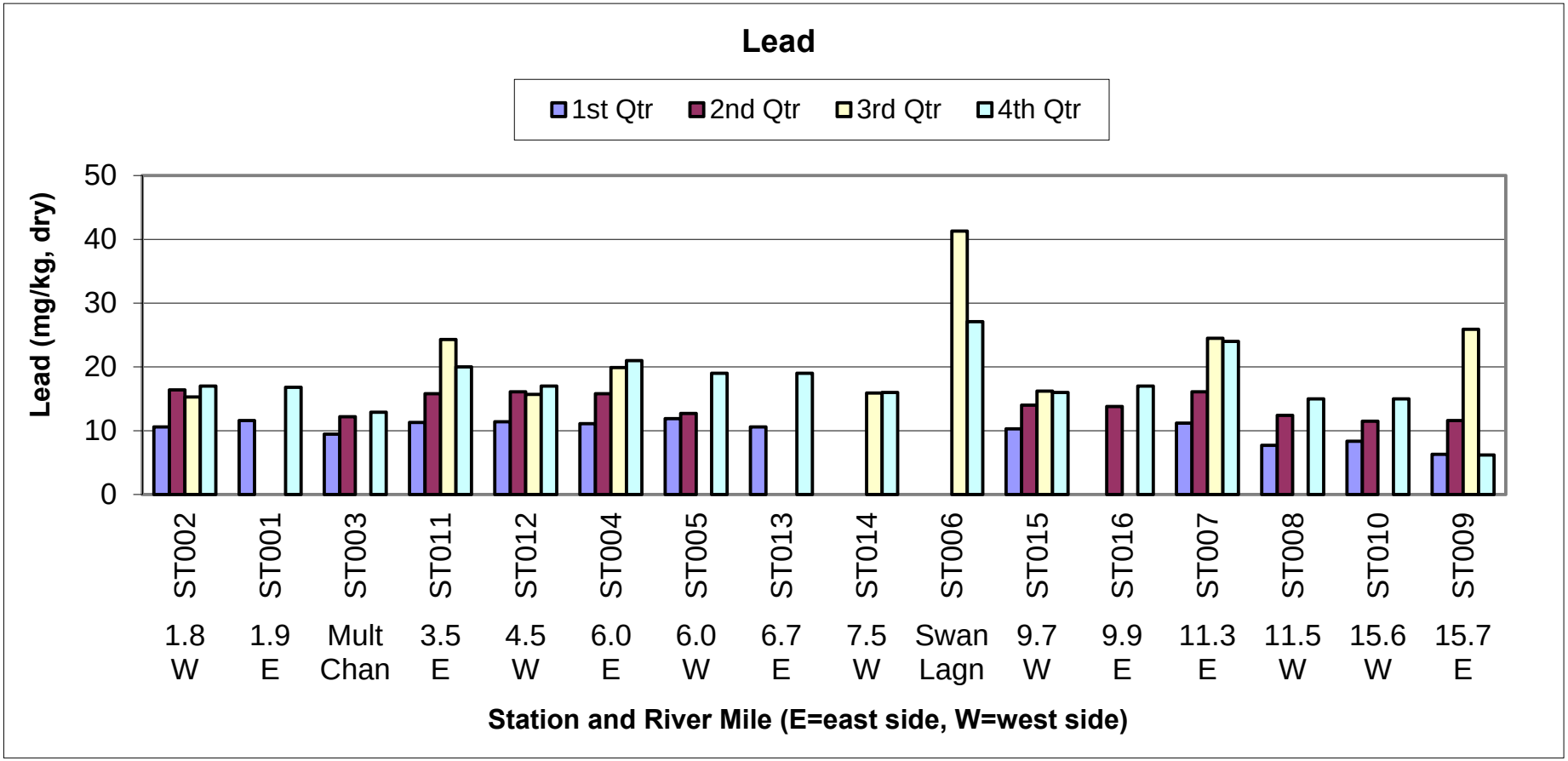

Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-18a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Cadmium
Concentrations for In-River Sediment Traps, 2007



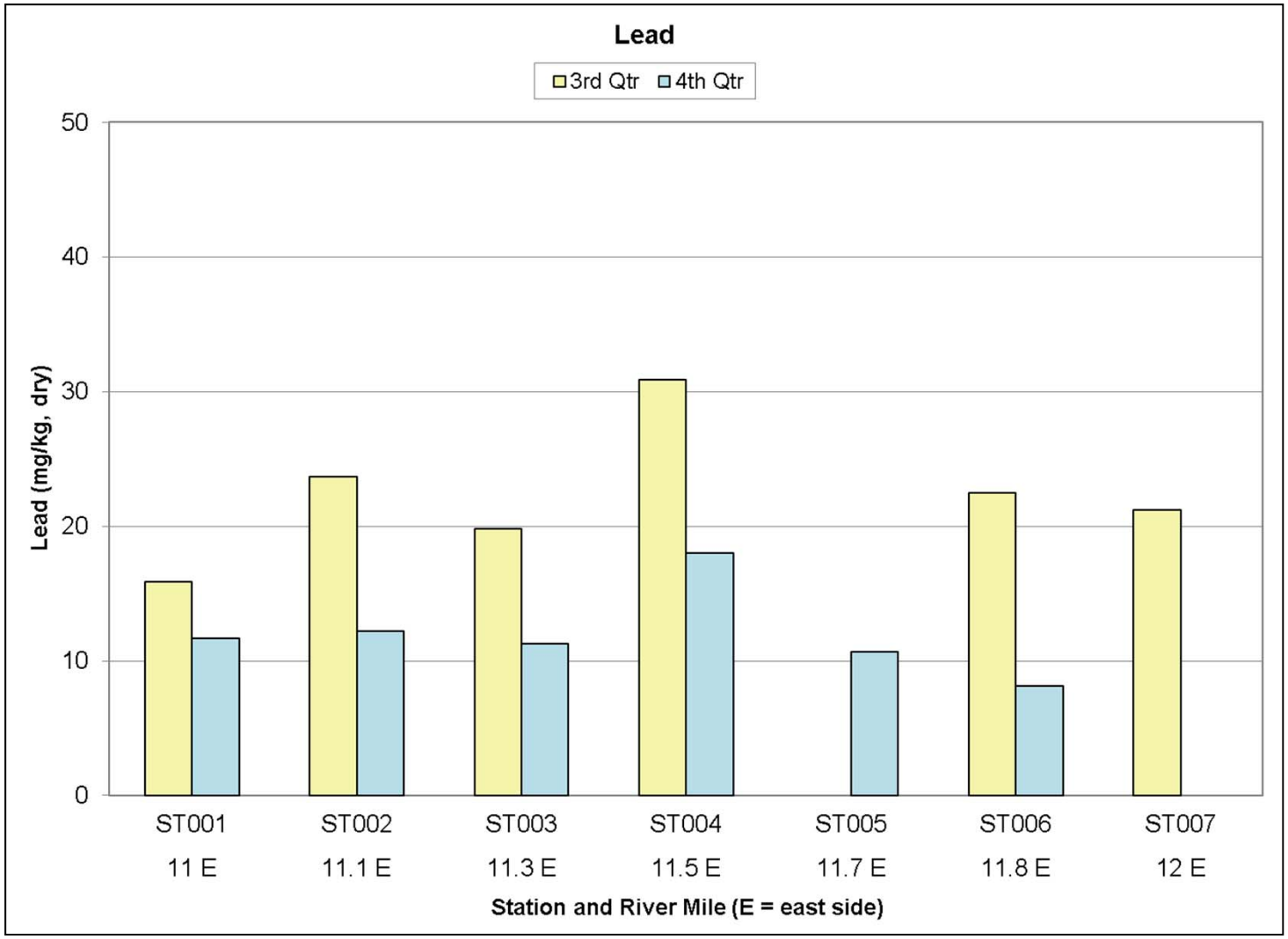

Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-18b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Cadmium
Concentrations for In-River Sediment Traps, 2009



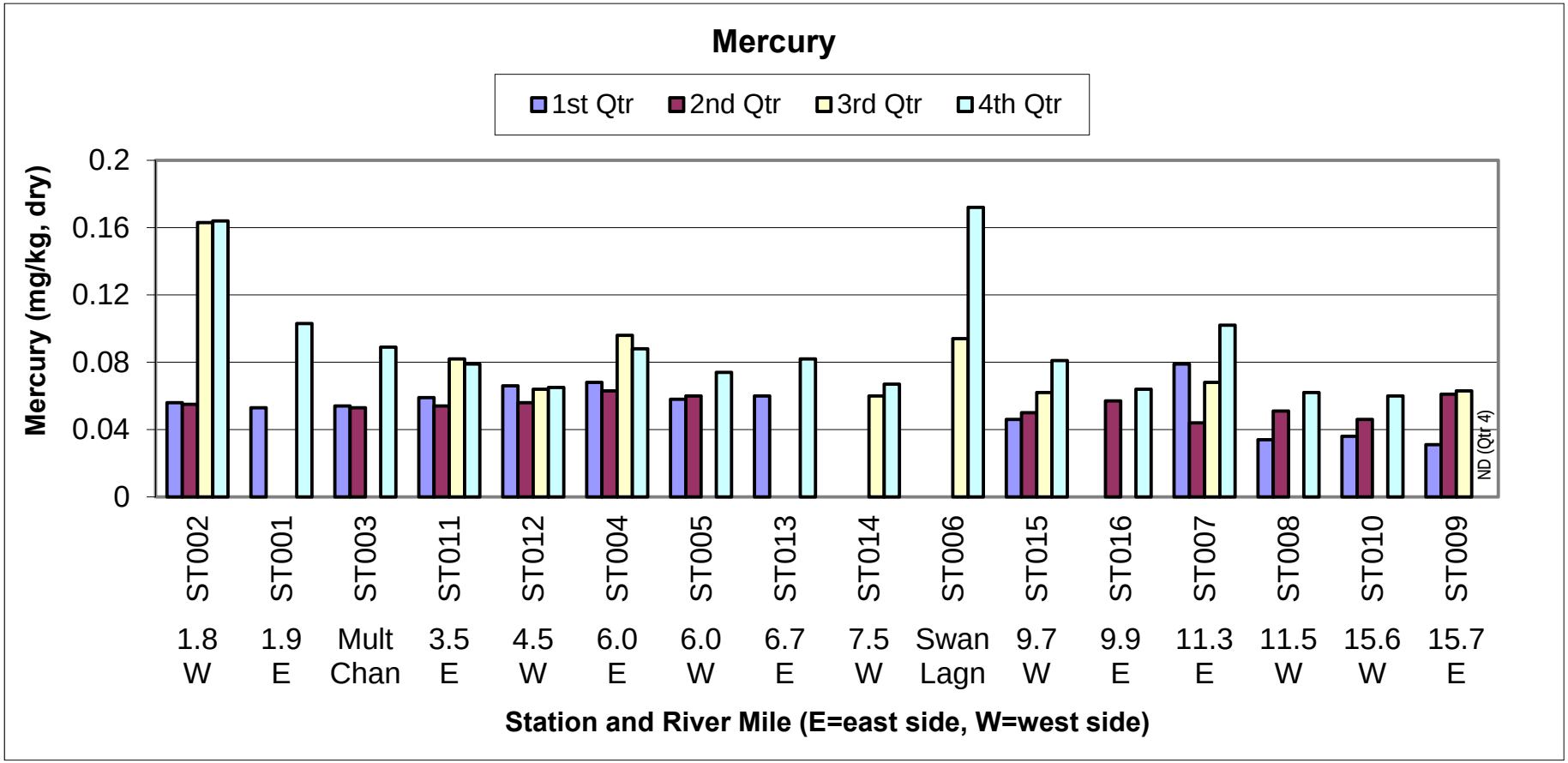

Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-19a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Lead
Concentrations for In-River Sediment Traps, 2007




Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

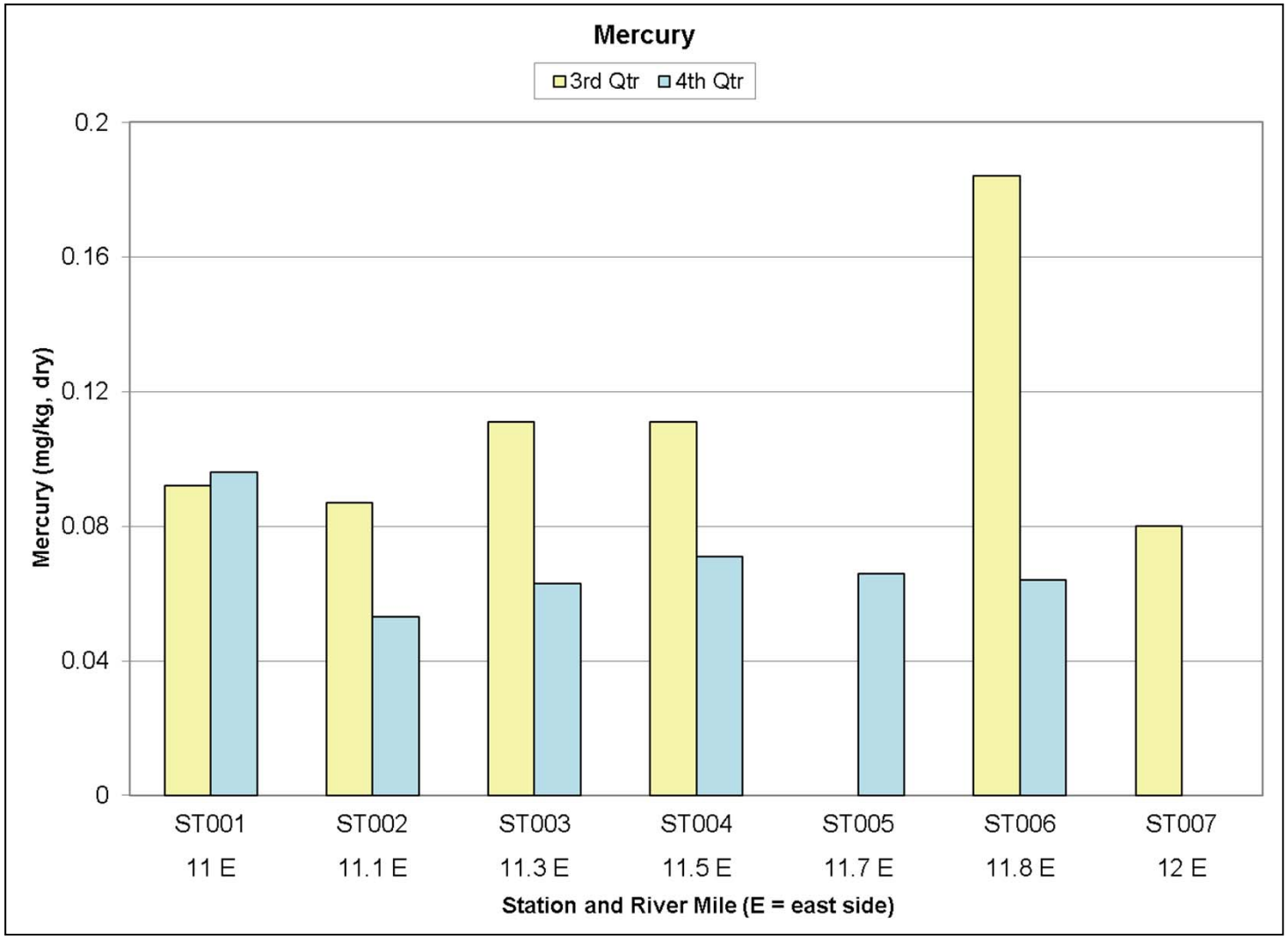
**Figure D2.1-19b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Lead
Concentrations for In-River Sediment Traps, 2009




Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

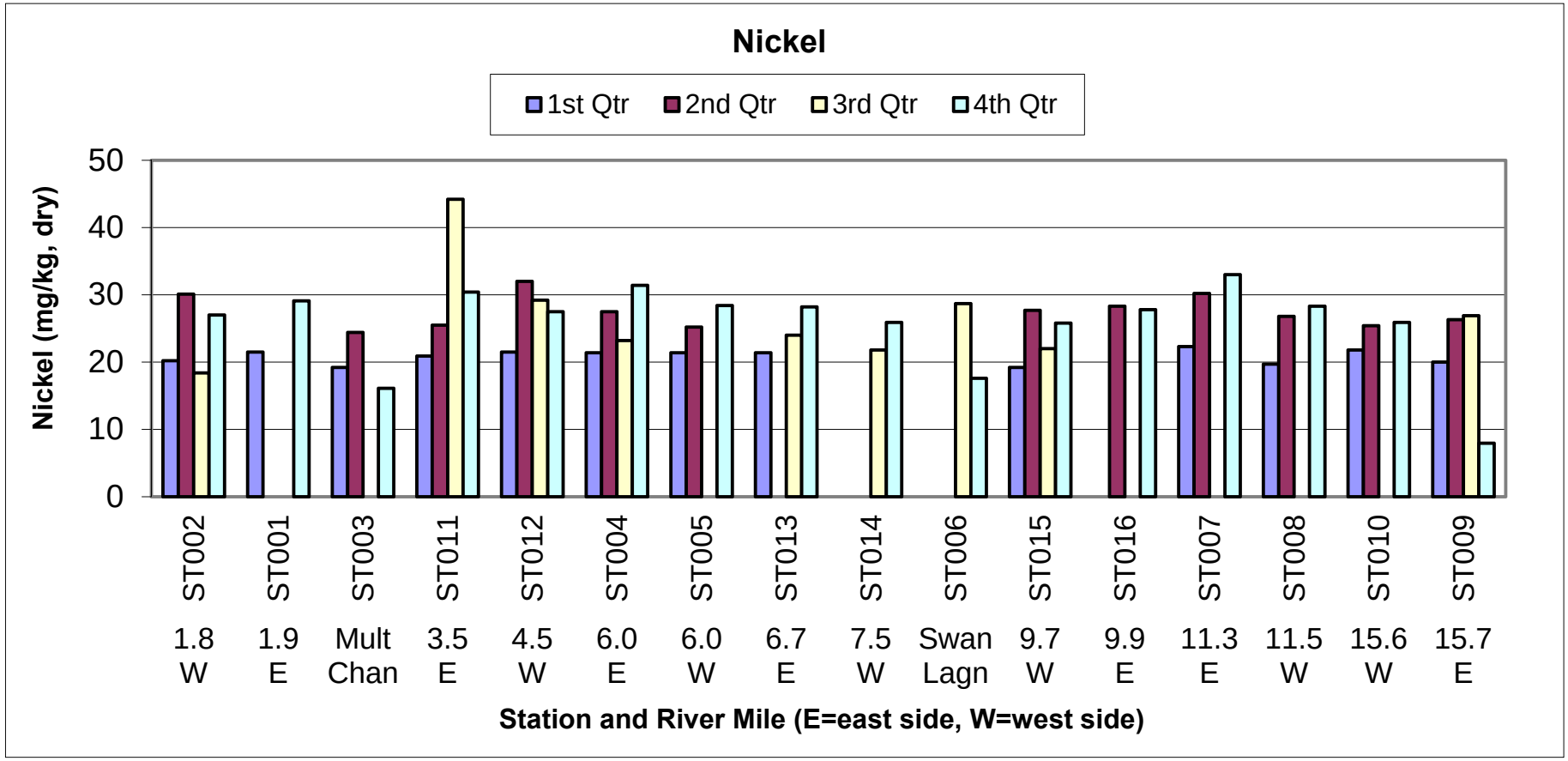
ND = not detected at quarter shown

**Figure D2.1-20a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mercury
Concentrations for In-River Sediment Traps, 2007



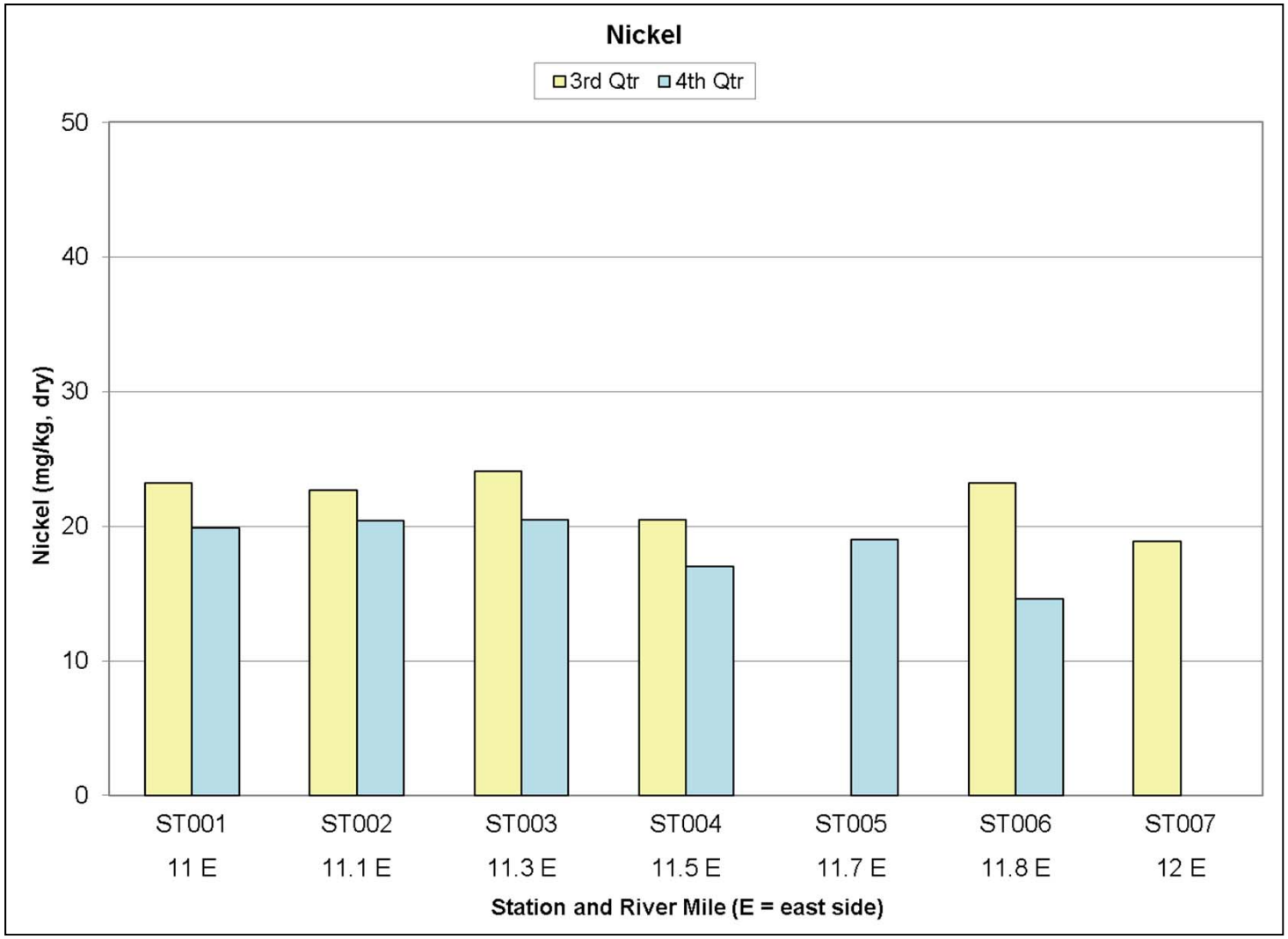

Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-20b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Mercury
Concentrations for In-River Sediment Traps, 2009



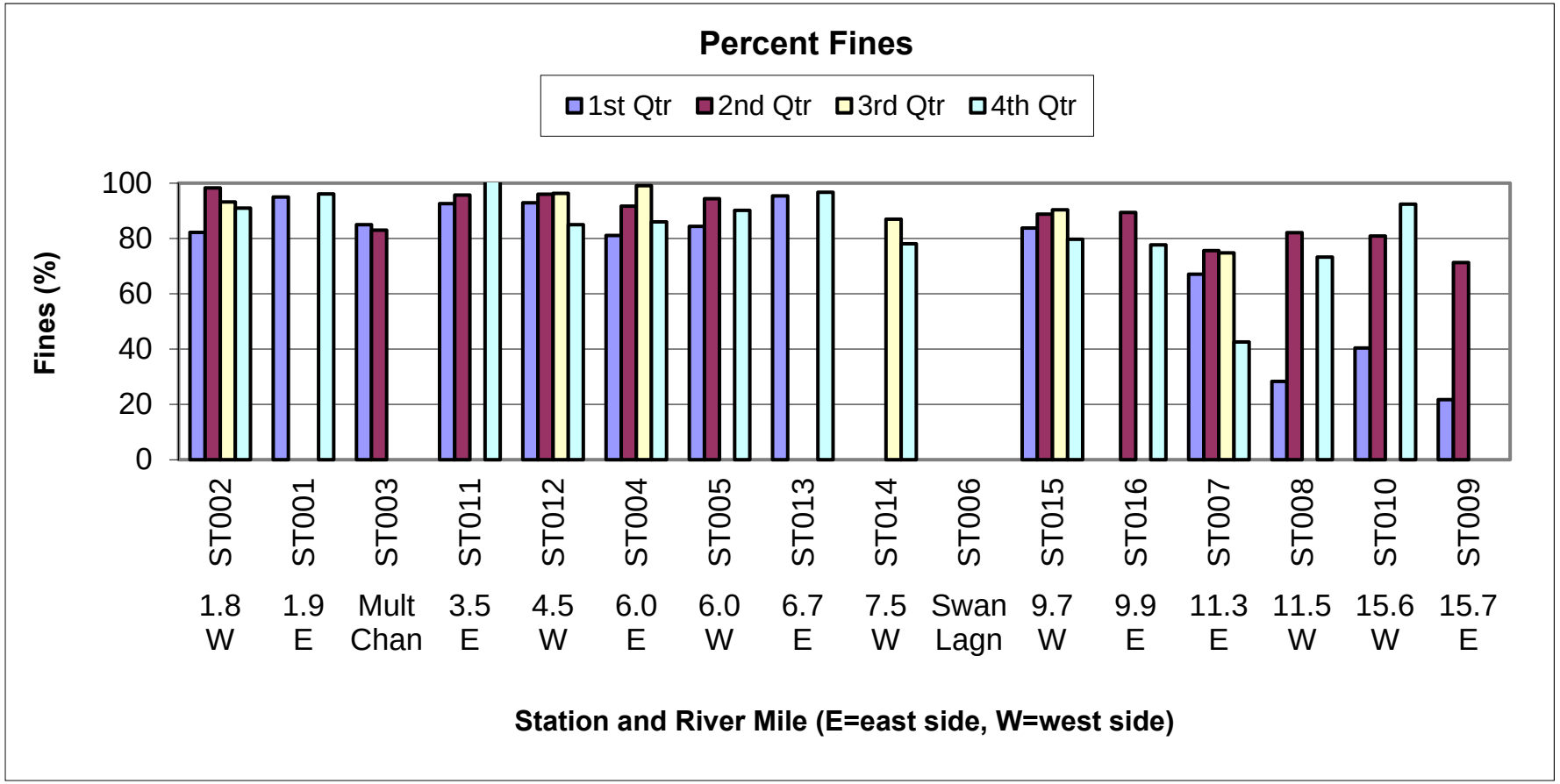

Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-21a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Nickel
Concentrations for In-River Sediment Traps, 2007



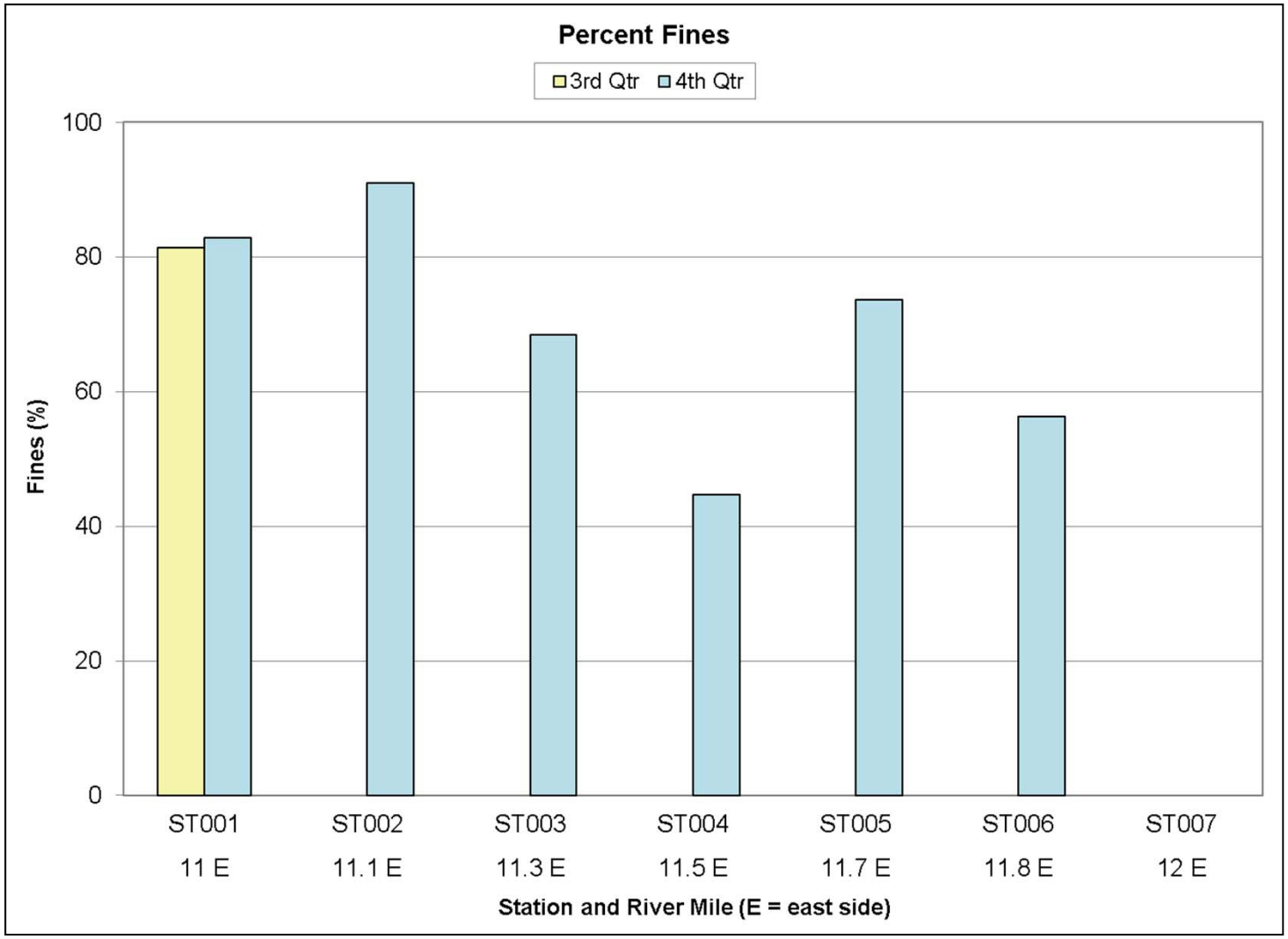

Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-21b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Nickel
Concentrations for In-River Sediment Traps, 2009



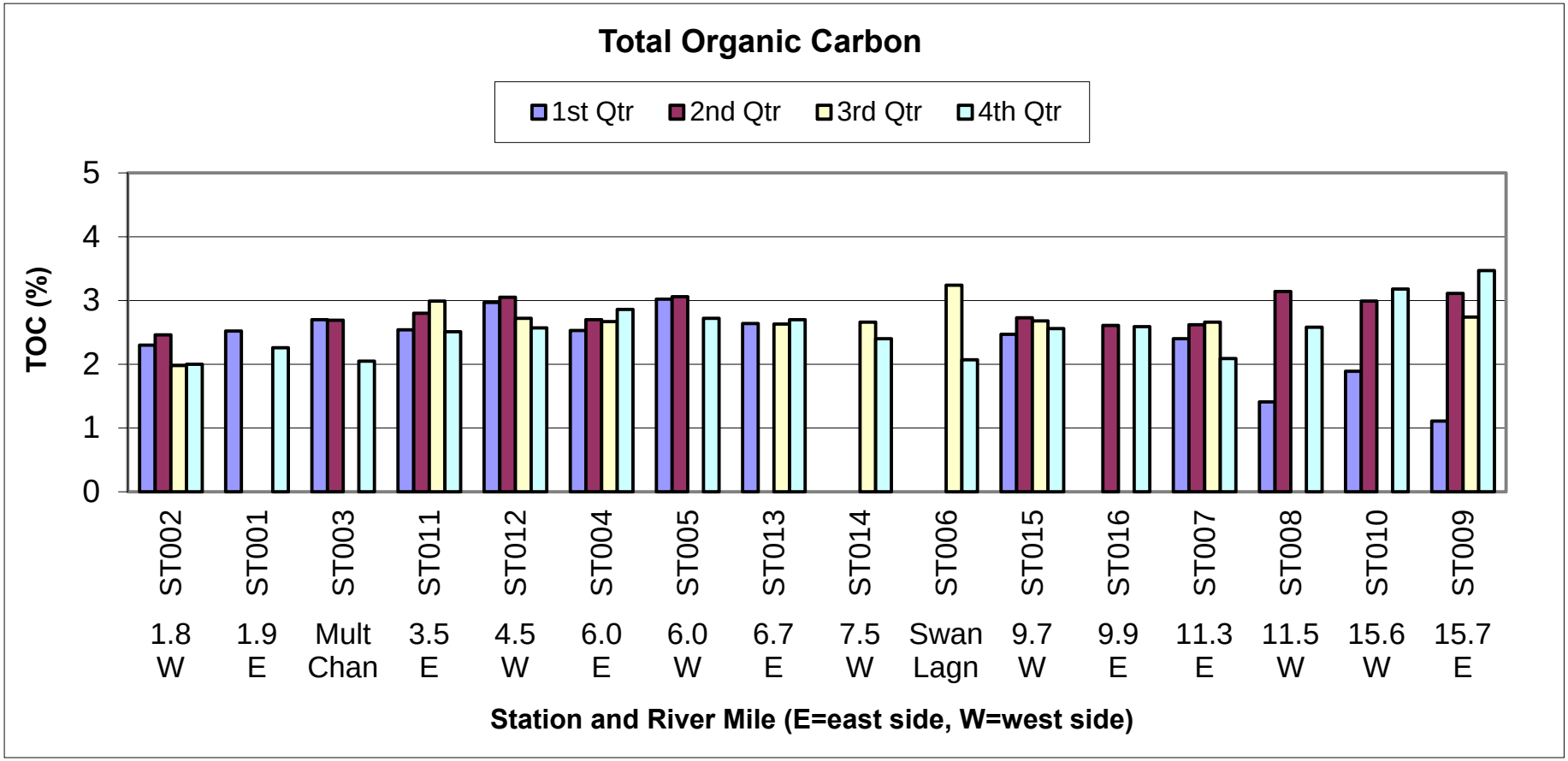

Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-22a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Percent Fines
Concentrations for In-River Sediment Traps, 2007



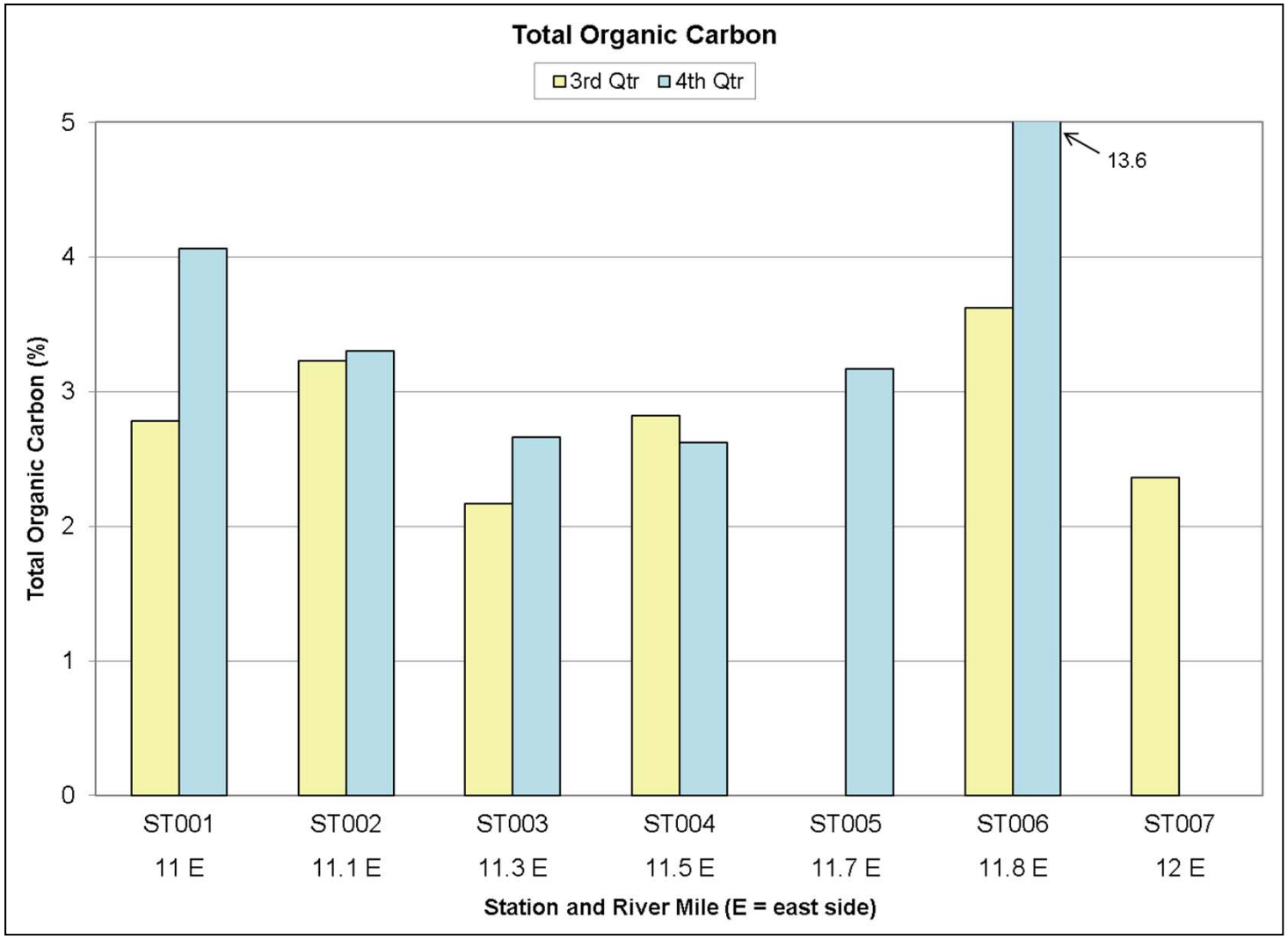

Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-22b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Percent Fines
Concentrations for In-River Sediment Traps, 2009




Note: Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-23a**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total Organic Carbon
Concentrations for In-River Sediment Traps, 2007




Note: Samples were not collected in the 1st and 2nd quarters. Blank spaces within station groupings indicate that traps were lost or the quarterly volume of material collected was not sufficient for analysis.

**Figure D2.1-23b**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Total Organic Carbon
Concentrations for In-River Sediment Traps, 2009

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D2.2
# CONTAMINANT SUMMARY STATISTICS IN SEDIMENT TRAPS—TABLES

**FINAL**

February 8, 2016

# LIST OF TABLES

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Table D2.2-3. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Third Quarter (Summer 2007)

Table D2.2-4. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Fourth Quarter (Fall 2007)

Table D2.2-5. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Third Quarter (Summer 2009)

Table D2.2-6. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Fourth Quarter (Fall 2009)

Table D2.2-1. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, First Quarter (Winter 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| **Grain Size** | | | | | | | | | | | | | | | | | | |
| >9 Phi clay | percent | 13 | 13 | 100 | 1.97 | 5.05 | ST013 | 3.43 | 3.26 | 0.927 | 4.92 | 1.97 | 5.05 | ST013 | 3.43 | 3.26 | 0.927 | 4.92 |
| 8-9 Phi clay | percent | 13 | 13 | 100 | 2.28 | 4.1 | ST013 | 3.11 | 3 | 0.645 | 4.02 | 2.28 | 4.1 | ST013 | 3.11 | 3 | 0.645 | 4.02 |
| Coarse sand | percent | 13 | 13 | 100 | 0.19 | 1.59 | ST010 | 0.629 | 0.57 | 0.416 | 1.34 | 0.19 | 1.59 | ST010 | 0.629 | 0.57 | 0.416 | 1.34 |
| Coarse silt | percent | 13 | 13 | 100 | 5.92 | 42.8 | ST012 | 29.4 | 35.4 | 13.1 | 40.3 | 5.92 | 42.8 | ST012 | 29.4 | 35.4 | 13.1 | 40.3 |
| Fine gravel | percent | 13 | 13 | 100 | 0.02 | 1.35 | ST010 | 0.437 | 0.38 | 0.361 | 1.03 | 0.02 | 1.35 | ST010 | 0.437 | 0.38 | 0.361 | 1.03 |
| Fine sand | percent | 13 | 13 | 100 | 0.45 | 46.3 | ST009 | 11.1 | 2.15 | 17.1 | 44.9 | 0.45 | 46.3 | ST009 | 11.1 | 2.15 | 17.1 | 44.9 |
| Fine silt | percent | 13 | 13 | 100 | 4.04 | 16.2 | ST001 | 11.6 | 12.6 T | 3.89 | 15.7 | 4.04 | 16.2 | ST001 | 11.6 | 12.6 T | 3.89 | 15.7 |
| Fines | percent | 13 | 13 | 100 | 21.7 T | 95.4 T | ST013 | 73.1 | 83.8 T | 25.9 | 95.2 | 21.7 T | 95.4 T | ST013 | 73.1 | 83.8 T | 25.9 | 95.2 |
| Medium gravel | percent | 13 | 13 | 100 | 0 T | 1.15 | ST010 | 0.147 | 0 | 0.316 | 0.628 | 0 T | 1.15 | ST010 | 0.147 | 0 | 0.316 | 0.628 |
| Medium sand | percent | 13 | 13 | 100 | 0.23 | 21.4 | ST009 | 2.76 | 0.69 | 5.74 | 11.1 | 0.23 | 21.4 | ST009 | 2.76 | 0.69 | 5.74 | 11.1 |
| Medium silt | percent | 13 | 13 | 100 | 4.52 | 26.4 | ST001 | 18.5 | 20.2 T | 6.51 | 25 | 4.52 | 26.4 | ST001 | 18.5 | 20.2 T | 6.51 | 25 |
| Very coarse sand | percent | 13 | 13 | 100 | 0.16 | 1.81 | ST010 | 0.594 | 0.495 T | 0.462 | 1.38 | 0.16 | 1.81 | ST010 | 0.594 | 0.495 T | 0.462 | 1.38 |
| Very fine sand | percent | 13 | 13 | 100 | 2.19 | 27.7 | ST010 | 12.7 | 12.7 | 6.56 | 22.7 | 2.19 | 27.7 | ST010 | 12.7 | 12.7 | 6.56 | 22.7 |
| Very fine silt | percent | 13 | 13 | 100 | 2.52 | 9.62 | ST013 | 7.1 | 7.33 | 1.95 | 9.27 | 2.52 | 9.62 | ST013 | 7.1 | 7.33 | 1.95 | 9.27 |
| **Conventionals** | | | | | | | | | | | | | | | | | | |
| Specific Gravity | NA | 13 | 13 | 100 | 1.18 T | 1.57 | ST009 | 1.31 | 1.29 | 0.107 | 1.48 | 1.18 T | 1.57 | ST009 | 1.31 | 1.29 | 0.107 | 1.48 |
| Total organic carbon | percent | 13 | 13 | 100 | 1.11 | 3.02 T | ST005 | 2.35 | 2.52 | 0.562 | 2.99 | 1.11 | 3.02 T | ST005 | 2.35 | 2.52 | 0.562 | 2.99 |
| Total solids | percent | 13 | 13 | 100 | 32.4 | 56 | ST009 | 39.6 | 37 | 6.9 | 52.2 | 32.4 | 56 | ST009 | 39.6 | 37 | 6.9 | 52.2 |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/kg | 13 | 13 | 100 | 22700 | 43800 | ST013 | 32100 | 32100 | 4910 | 38600 | 22700 | 43800 | ST013 | 32100 | 32100 | 4910 | 38600 |
| Antimony | mg/kg | 13 | 13 | 100 | 0.09 J | 0.18 JT | ST005; ST013 | 0.145 | 0.15 J | 0.0283 | 0.18 J | 0.09 J | 0.18 JT | ST005; ST013 | 0.145 | 0.15 J | 0.0283 | 0.18 J |
| Arsenic | mg/kg | 13 | 13 | 100 | 2.82 | 4.38 | ST001 | 3.81 | 3.87 | 0.473 | 4.31 | 2.82 | 4.38 | ST001 | 3.81 | 3.87 | 0.473 | 4.31 |
| Cadmium | mg/kg | 13 | 13 | 100 | 0.11 | 0.26 | ST002 | 0.2 | 0.21 | 0.0403 | 0.254 | 0.11 | 0.26 | ST002 | 0.2 | 0.21 | 0.0403 | 0.254 |
| Chromium | mg/kg | 13 | 13 | 100 | 31.2 | 47.1 | ST013 | 38.3 | 38.1 T | 3.92 | 43.6 | 31.2 | 47.1 | ST013 | 38.3 | 38.1 T | 3.92 | 43.6 |
| Chromium hexavalent | mg/kg | 13 | 5 | 38 | 0.09 JT | 0.34 J | ST013 | 0.152 | 0.11 J | 0.106 | 0.296 J | 0.09 JT | 0.34 J | ST013 | 0.172 | 0.18 UJ | 0.0632 | 0.25 J |
| Copper | mg/kg | 13 | 13 | 100 | 26.4 | 52.5 | ST013 | 43.1 | 46 | 7.36 | 50.1 | 26.4 | 52.5 | ST013 | 43.1 | 46 | 7.36 | 50.1 |
| Lead | mg/kg | 13 | 13 | 100 | 6.3 | 11.9 T | ST005 | 10.1 | 10.6 | 1.71 | 11.7 | 6.3 | 11.9 T | ST005 | 10.1 | 10.6 | 1.71 | 11.7 |
| Mercury | mg/kg | 13 | 13 | 100 | 0.031 | 0.079 | ST007 | 0.0538 | 0.056 | 0.014 | 0.0724 | 0.031 | 0.079 | ST007 | 0.0538 | 0.056 | 0.014 | 0.0724 |
| Nickel | mg/kg | 13 | 13 | 100 | 19.2 J | 22.3 JT | ST007 | 20.8 | 21.4 JT | 1.03 | 22 J | 19.2 J | 22.3 JT | ST007 | 20.8 | 21.4 JT | 1.03 | 22 J |
| Selenium | mg/kg | 13 | 13 | 100 | 0.07 J | 0.25 | ST001 | 0.197 | 0.22 | 0.0578 | 0.244 | 0.07 J | 0.25 | ST001 | 0.197 | 0.22 | 0.0578 | 0.244 |
| Silver | mg/kg | 13 | 13 | 100 | 0.39 | 0.565 T | ST005 | 0.478 | 0.47 | 0.0547 | 0.562 | 0.39 | 0.565 T | ST005 | 0.478 | 0.47 | 0.0547 | 0.562 |
| Zinc | mg/kg | 13 | 13 | 100 | 78 | 114 | ST013 | 102 | 105 | 10.8 | 112 | 78 | 114 | ST013 | 102 | 105 | 10.8 | 112 |
| **Butyltins** | | | | | | | | | | | | | | | | | | |
| Butyltin ion | µg/kg | 13 | 3 | 23 | 1.1 J | 1.3 J | ST015 | 1.2 | 1.2 J | 0.1 | 1.29 J | 0.085 UJ | 1.3 J | ST015 | 0.704 | 0.72 U | 0.404 | 1.24 J |
| Dibutyltin ion | µg/kg | 13 | 5 | 38 | 1.4 J | 3.4 | ST004 | 2.3 | 2.1 J | 0.748 | 3.24 J | 0.31 U | 3.4 | ST004 | 1.68 | 1.7 U | 0.852 | 2.92 J |
| Tetrabutyltin | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.13 U | 0.22 U | ST001 | 0.186 | 0.19 U | 0.0263 | 0.214 U |
| Tributyltin ion | µg/kg | 13 | 9 | 69 | 1.8 J | 4.6 | ST004 | 3.13 | 3.2 | 0.954 | 4.44 | 0.12 U | 4.6 | ST004 | 2.3 | 2.6 J | 1.52 | 4.36 |
| **PCB Aroclors** | | | | | | | | | | | | | | | | | | |
| Aroclor 1016 | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.1 U | 11 U | ST010 | 5 | 4.7 U | 1.91 | 7.58 U |
| Aroclor 1221 | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.1 U | 17 U | ST010 | 5.46 | 4.7 U | 3.52 | 9.98 U |
| Aroclor 1232 | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.1 U | 25 U | ST010 | 6.08 | 4.7 U | 5.72 | 13.2 U |
| Aroclor 1242 | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.1 U | 12 U | ST010 | 5.08 | 4.7 U | 2.17 | 7.98 U |
| Aroclor 1248 | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.1 U | 5.8 U | ST010 | 4.6 | 4.7 U | 0.715 | 5.5 U |
| Aroclor 1254 | µg/kg | 13 | 5 | 38 | 6.6 J | 97 | ST007 | 27.8 | 13 J | 38.8 | 80.2 | 3.1 U | 97 | ST007 | 14.6 | 6.6 J | 25 | 46.6 |
| Aroclor 1260 | µg/kg | 13 | 4 | 31 | 9.4 J | 55 | ST007 | 25.1 | 18 J | 20.7 | 50.2 J | 3.1 U | 55 | ST007 | 11.6 | 5.6 U | 14 | 35.8 J |
| Aroclor 1262 | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.1 U | 5.3 U | ST001 | 4.45 | 4.6 U | 0.64 | 5.12 U |
| Aroclor 1268 | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.1 U | 5.3 U | ST001 | 4.45 | 4.6 U | 0.64 | 5.12 U |
| Aroclors | µg/kg | 13 | 6 | 46 | 13 JT | 150 T | ST007 | 39.5 | 14.5 J | 54.6 | 121 J | 3.1 UT | 150 T | ST007 | 21.8 | 12 UT | 39.2 | 79.2 J |
| **PCB Congeners** | | | | | | | | | | | | | | | | | | |
| PCB001 | pg/g | 13 | 8 | 62 | 4.2 | 11.4 | ST015 | 7.39 | 7.79 | 2.34 | 10.4 | 2.45 U | 11.4 | ST015 | 5.89 | 5.32 UJ | 2.76 | 9.75 |
| PCB002 | pg/g | 13 | 13 | 100 | 2.74 | 9.07 T | ST004 | 6.38 | 6.88 | 1.76 | 8.61 | 2.74 | 9.07 T | ST004 | 6.38 | 6.88 | 1.76 | 8.61 |
| PCB003 | pg/g | 13 | 8 | 62 | 4.27 | 11.7 | ST015 | 7.11 | 7.53 | 2.41 | 10.5 | 2.41 U | 11.7 | ST015 | 5.96 | 5.4 UJ | 2.56 | 9.66 |
| PCB004 & 010 | pg/g | 13 | 9 | 69 | 13.3 | 410 | ST007 | 78 | 39.3 | 127 | 280 | 4.9 U | 410 | ST007 | 56.8 | 16.6 T | 109 | 215 |
| PCB005 & 008 | pg/g | 13 | 13 | 100 | 10.9 | 160 | ST011 | 45.1 | 29 | 40.3 | 116 | 10.9 | 160 | ST011 | 45.1 | 29 | 40.3 | 116 |
| PCB006 | pg/g | 13 | 7 | 54 | 7.27 | 35.1 | ST011 | 17.2 | 11 | 11 | 32.9 | 4.86 UT | 35.1 | ST011 | 12 | 7.27 | 9.69 | 30.7 |
| PCB007 & 009 | pg/g | 13 | 1 | 8 | 18.1 | 18.1 | ST011 | 18.1 | 18.1 | -- | 18.1 | 4.82 U | 18.1 | ST011 | 6.07 | 5 U | 3.63 | 10.9 J |
| PCB011 | pg/g | 13 | 13 | 100 | 59.5 | 237 T | ST005 | 127 | 126 | 39.7 | 178 | 59.5 | 237 T | ST005 | 127 | 126 | 39.7 | 178 |
| PCB012 & 013 | pg/g | 13 | 2 | 15 | 10.3 | 16.1 | ST011 | 13.2 | 13.2 | 4.1 | 15.8 | 4.82 U | 16.1 | ST011 | 6.74 | 5.06 U | 3.38 | 12.6 |
| PCB014 | pg/g | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.82 U | 5.06 U | ST007 | 4.95 | 5 U | 0.0933 | 5.05 U |

Table D2.2-1. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, First Quarter (Winter 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| PCB015 | pg/g | 13 | 13 | 100 | 11.6 | 143 | ST011 | 45.7 | 38 | 35.5 | 112 | 11.6 | 143 | ST011 | 45.7 | 38 | 35.5 | 112 |
| PCB016 & 032 | pg/g | 13 | 13 | 100 | 16.2 | 243 | ST011 | 77.1 | 54.8 | 66.1 | 208 | 16.2 | 243 | ST011 | 77.1 | 54.8 | 66.1 | 208 |
| PCB017 | pg/g | 13 | 13 | 100 | 11.5 | 326 | ST007 | 72.7 | 44.3 T | 85.4 | 228 | 11.5 | 326 | ST007 | 72.7 | 44.3 T | 85.4 | 228 |
| PCB018 | pg/g | 13 | 13 | 100 | 26.2 | 372 | ST011 | 101 | 69 T | 89.1 | 246 | 26.2 | 372 | ST011 | 101 | 69 T | 89.1 | 246 |
| PCB019 | pg/g | 13 | 13 | 100 | 3.16 | 1170 | ST007 | 130 | 19.4 T | 320 | 631 | 3.16 | 1170 | ST007 | 130 | 19.4 T | 320 | 631 |
| PCB020 & 021 & 033 | pg/g | 13 | 13 | 100 | 14.6 | 295 | ST011 | 72.6 | 46.8 T | 72.8 | 197 | 14.6 | 295 | ST011 | 72.6 | 46.8 T | 72.8 | 197 |
| PCB022 | pg/g | 13 | 13 | 100 | 10.5 | 182 | ST011 | 49.3 | 34.7 T | 44.4 | 127 | 10.5 | 182 | ST011 | 49.3 | 34.7 T | 44.4 | 127 |
| PCB023 | pg/g | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.41 U | 2.53 U | ST007 | 2.47 | 2.5 U | 0.0461 | 2.52 U |
| PCB024 & 027 | pg/g | 13 | 13 | 100 | 2.66 | 111 | ST007 | 21.6 | 9.73 T | 29.6 | 72.1 | 2.66 | 111 | ST007 | 21.6 | 9.73 T | 29.6 | 72.1 |
| PCB025 | pg/g | 13 | 13 | 100 | 4.92 | 45.2 | ST011 | 17.5 | 15.7 T | 10.1 | 34.5 | 4.92 | 45.2 | ST011 | 17.5 | 15.7 T | 10.1 | 34.5 |
| PCB026 | pg/g | 13 | 13 | 100 | 8.39 | 82.2 | ST011 | 29 | 23.4 T | 18.8 | 61 | 8.39 | 82.2 | ST011 | 29 | 23.4 T | 18.8 | 61 |
| PCB028 | pg/g | 13 | 13 | 100 | 35.4 | 448 | ST011 | 139 | 111 | 107 | 338 | 35.4 | 448 | ST011 | 139 | 111 | 107 | 338 |
| PCB029 | pg/g | 13 | 1 | 8 | 3.85 | 3.85 | ST011 | 3.85 | 3.85 | -- | 3.85 | 2.41 U | 3.85 | ST011 | 2.58 | 2.5 U | 0.385 | 3.06 |
| PCB030 | pg/g | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.41 U | 2.53 U | ST007 | 2.47 | 2.5 U | 0.0461 | 2.52 U |
| PCB031 | pg/g | 13 | 13 | 100 | 30.2 | 455 | ST011 | 127 | 91.2 | 111 | 328 | 30.2 | 455 | ST011 | 127 | 91.2 | 111 | 328 |
| PCB034 | pg/g | 13 | 1 | 8 | 4.06 | 4.06 | ST007 | 4.06 | 4.06 | -- | 4.06 | 2.41 U | 4.06 | ST007 | 2.59 | 2.5 U | 0.443 | 3.14 |
| PCB035 | pg/g | 13 | 9 | 69 | 2.59 | 8.36 | ST011 | 4.1 | 3.35 | 1.79 | 7.14 | 2.41 U | 8.36 | ST011 | 3.59 | 3.04 | 1.66 | 6.52 |
| PCB036 | pg/g | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.41 U | 2.53 U | ST007 | 2.47 | 2.5 U | 0.0461 | 2.52 U |
| PCB037 | pg/g | 13 | 13 | 100 | 9.48 | 139 | ST011 | 43.3 | 35.4 | 34.4 | 106 | 9.48 | 139 | ST011 | 43.3 | 35.4 | 34.4 | 106 |
| PCB038 | pg/g | 13 | 6 | 46 | 2.9 | 23.3 | ST007 | 8.89 | 4.64 | 8.24 | 21.1 | 2.41 U | 23.3 | ST007 | 5.43 | 2.52 U | 6.28 | 18 |
| PCB039 | pg/g | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.41 U | 2.53 U | ST007 | 2.47 | 2.5 U | 0.0461 | 2.52 U |
| PCB040 | pg/g | 13 | 13 | 100 | 10.9 | 80.8 | ST011 | 28.4 | 22.5 | 19.8 | 67.2 | 10.9 | 80.8 | ST011 | 28.4 | 22.5 | 19.8 | 67.2 |
| PCB041 & 064 & 071 & 072 | pg/g | 13 | 13 | 100 | 63.7 | 441 | ST011 | 186 | 151 | 110 | 379 | 63.7 | 441 | ST011 | 186 | 151 | 110 | 379 |
| PCB042 & 059 | pg/g | 13 | 13 | 100 | 18.5 | 161 | ST011 | 60 | 49.5 | 38.3 | 132 | 18.5 | 161 | ST011 | 60 | 49.5 | 38.3 | 132 |
| PCB043 & 049 | pg/g | 13 | 13 | 100 | 67.8 | 1150 | ST007 | 267 | 200 | 281 | 697 | 67.8 | 1150 | ST007 | 267 | 200 | 281 | 697 |
| PCB044 | pg/g | 13 | 13 | 100 | 89.5 | 470 | ST011 | 192 | 162 | 105 | 391 | 89.5 | 470 | ST011 | 192 | 162 | 105 | 391 |
| PCB045 | pg/g | 13 | 13 | 100 | 7.31 | 79.4 | ST011 | 24.3 | 19.1 T | 19.6 | 61.3 | 7.31 | 79.4 | ST011 | 24.3 | 19.1 T | 19.6 | 61.3 |
| PCB046 | pg/g | 13 | 13 | 100 | 3.58 | 54.1 | ST007 | 16.2 | 12 T | 14.1 | 42.9 | 3.58 | 54.1 | ST007 | 16.2 | 12 T | 14.1 | 42.9 |
| PCB047 | pg/g | 13 | 13 | 100 | 23.7 | 1330 | ST007 | 244 | 94.5 T | 375 | 971 | 23.7 | 1330 | ST007 | 244 | 94.5 T | 375 | 971 |
| PCB048 & 075 | pg/g | 13 | 13 | 100 | 9.31 | 119 | ST011 | 39.1 | 33 T | 28.9 | 86.6 | 9.31 | 119 | ST011 | 39.1 | 33 T | 28.9 | 86.6 |
| PCB050 | pg/g | 13 | 4 | 31 | 3.1 | 54.9 | ST007 | 19.9 | 10.9 | 24.2 | 49.3 | 2.41 U | 54.9 | ST007 | 7.84 | 2.5 UT | 14.7 | 32.4 |
| PCB051 | pg/g | 13 | 13 | 100 | 3.03 | 756 | ST007 | 100 | 18.7 T | 210 | 469 | 3.03 | 756 | ST007 | 100 | 18.7 T | 210 | 469 |
| PCB052 & 069 | pg/g | 13 | 13 | 100 | 158 | 1310 | ST007 | 356 | 263 T | 304 | 844 | 158 | 1310 | ST007 | 356 | 263 T | 304 | 844 |
| PCB053 | pg/g | 13 | 13 | 100 | 10.6 | 1120 | ST007 | 136 | 40.1 T | 299 | 561 | 10.6 | 1120 | ST007 | 136 | 40.1 T | 299 | 561 |
| PCB054 | pg/g | 13 | 9 | 69 | 2.88 | 251 | ST007 | 43.5 | 6.27 | 83.1 | 188 | 2.41 U | 251 | ST007 | 30.9 | 3.45 | 70.6 | 157 |
| PCB055 | pg/g | 13 | 10 | 77 | 2.43 | 13.4 | ST007 | 5.06 | 3.85 | 3.26 | 10.7 | 2.41 U | 13.4 | ST007 | 4.46 | 3.79 | 3.04 | 9.79 |
| PCB056 & 060 | pg/g | 13 | 13 | 100 | 29.9 | 191 | ST011 | 90.2 | 82.1 | 50.1 | 190 | 29.9 | 191 | ST011 | 90.2 | 82.1 | 50.1 | 190 |
| PCB057 | pg/g | 13 | 3 | 23 | 2.93 | 7.12 | ST007 | 4.74 | 4.16 | 2.15 | 6.82 | 2.41 U | 7.12 | ST007 | 2.99 | 2.5 U | 1.33 | 5.34 |
| PCB058 | pg/g | 13 | 2 | 15 | 4.96 | 5.79 | ST007 | 5.38 | 5.38 | 0.587 | 5.75 | 2.41 U | 5.79 | ST007 | 2.91 | 2.5 U | 1.11 | 5.29 |
| PCB061 & 070 | pg/g | 13 | 13 | 100 | 78.6 | 388 | ST011 | 205 | 180 | 91 | 357 | 78.6 | 388 | ST011 | 205 | 180 | 91 | 357 |
| PCB062 | pg/g | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.41 U | 2.53 U | ST007 | 2.47 | 2.5 U | 0.0461 | 2.52 U |
| PCB063 | pg/g | 13 | 12 | 92 | 2.64 | 14.6 | ST011 | 6.79 | 6.18 | 3.16 | 12.3 | 2.45 U | 14.6 | ST011 | 6.46 | 5.77 | 3.25 | 12.1 |
| PCB065 | pg/g | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.41 U | 2.53 U | ST007 | 2.47 | 2.5 U | 0.0461 | 2.52 U |
| PCB066 & 076 | pg/g | 13 | 13 | 100 | 49.7 | 286 | ST001; ST011 | 159 | 141 | 72 | 286 | 49.7 | 286 | ST001; ST011 | 159 | 141 | 72 | 286 |
| PCB067 | pg/g | 13 | 11 | 85 | 2.84 | 14.3 | ST011 | 6.15 | 5.11 | 3.32 | 12.3 | 2.41 U | 14.3 | ST011 | 5.58 | 5.11 | 3.34 | 11.8 |
| PCB068 | pg/g | 13 | 10 | 77 | 2.81 | 15 | ST007 | 5.67 | 3.75 | 4.06 | 13.1 | 2.41 U | 15 | ST007 | 4.92 | 3.25 | 3.79 | 12.5 |
| PCB073 | pg/g | 13 | 5 | 38 | 6.87 | 50.5 | ST007 | 18.4 | 7.26 | 18.8 | 44.5 | 2.41 U | 50.5 | ST007 | 8.6 | 2.52 U | 13.5 | 32.4 |
| PCB074 | pg/g | 13 | 13 | 100 | 25.4 | 157 | ST011 | 74.4 | 66.4 | 38.9 | 146 | 25.4 | 157 | ST011 | 74.4 | 66.4 | 38.9 | 146 |
| PCB077 | pg/g | 13 | 13 | 100 | 6.5 | 34.5 | ST011 | 18.7 | 17.4 | 8.23 | 33.7 | 6.5 | 34.5 | ST011 | 18.7 | 17.4 | 8.23 | 33.7 |
| PCB078 | pg/g | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.41 U | 2.53 U | ST007 | 2.47 | 2.5 U | 0.0461 | 2.52 U |
| PCB079 | pg/g | 13 | 13 | 100 | 3.19 | 8.12 | ST007 | 5.31 | 5.35 T | 1.46 | 7.36 | 3.19 | 8.12 | ST007 | 5.31 | 5.35 T | 1.46 | 7.36 |
| PCB080 | pg/g | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.41 U | 2.53 U | ST007 | 2.47 | 2.5 U | 0.0461 | 2.52 U |
| PCB081 | pg/g | 13 | 4 | 31 | 0.789 JT | 2.47 J | ST011 | 1.31 | 0.999 J | 0.777 | 2.25 J | 0.497 U | 2.47 J | ST011 | 1.13 | 0.967 U | 0.572 | 2.27 J |
| PCB082 | pg/g | 13 | 13 | 100 | 23.5 | 66.1 | ST012 | 39.8 | 37 | 13.9 | 62.1 | 23.5 | 66.1 | ST012 | 39.8 | 37 | 13.9 | 62.1 |
| PCB083 | pg/g | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.41 U | 2.53 U | ST007 | 2.47 | 2.5 U | 0.0461 | 2.52 U |
| PCB084 & 092 | pg/g | 13 | 13 | 100 | 104 | 401 | ST007 | 187 | 183 | 74.7 | 292 | 104 | 401 | ST007 | 187 | 183 | 74.7 | 292 |
| PCB085 & 116 | pg/g | 13 | 13 | 100 | 41.6 | 117 | ST012 | 64.4 | 56.7 | 22.2 | 101 | 41.6 | 117 | ST012 | 64.4 | 56.7 | 22.2 | 101 |
| PCB086 | pg/g | 13 | 2 | 15 | 3.35 | 3.48 | ST011 | 3.42 | 3.42 | 0.0919 | 3.47 | 2.41 U | 3.48 | ST011 | 2.62 | 2.5 U | 0.356 | 3.4 |
| PCB087 & 117 & 125 | pg/g | 13 | 13 | 100 | 88.8 | 228 | ST012 | 143 | 142 T | 39.7 | 210 | 88.8 | 228 | ST012 | 143 | 142 T | 39.7 | 210 |
| PCB088 & 091 | pg/g | 13 | 13 | 100 | 42.6 | 479 | ST007 | 97.9 | 71 | 116 | 260 | 42.6 | 479 | ST007 | 97.9 | 71 | 116 | 260 |

Table D2.2-1. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, First Quarter (Winter 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Units | # Analyzed | # Detected | % Detected | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | Standard Deviation | 95th Percentile[b] | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (full DL) | Median (full DL)[b] | Standard Deviation (full DL) | 95th Percentile (full DL)[b] |
| PCB089 | pg/g | 13 | 13 | 100 | 2.9 | 7.13 | ST001 | 4.34 | 4.14 T | 1.31 | 6.78 | 2.9 | 7.13 | ST001 | 4.34 | 4.14 T | 1.31 | 6.78 |
| PCB090 & 101 | pg/g | 13 | 13 | 100 | 272 | 986 | ST007 | 500 | 459 | 189 | 767 | 272 | 986 | ST007 | 500 | 459 | 189 | 767 |
| PCB093 | pg/g | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.41 U | 2.53 U | ST007 | 2.47 | 2.5 U | 0.0461 | 2.52 U |
| PCB094 | pg/g | 13 | 10 | 77 | 2.79 | 86.9 | ST007 | 17.1 | 4.98 | 27.4 | 67.2 | 2.41 U | 86.9 | ST007 | 13.7 | 3.14 T | 24.6 | 60.7 |
| PCB095 & 098 & 102 | pg/g | 13 | 13 | 100 | 206 | 1370 | ST007 | 437 | 405 | 296 | 852 J | 206 | 1370 | ST007 | 437 | 405 | 296 | 852 J |
| PCB096 | pg/g | 13 | 12 | 92 | 2.81 | 102 | ST007 | 14.7 | 5.41 | 28.1 | 59 | 2.41 U | 102 | ST007 | 13.8 | 4.78 T | 27.1 | 55.1 |
| PCB097 | pg/g | 13 | 13 | 100 | 68.4 | 170 | ST012 | 107 | 93.3 | 31.1 | 159 | 68.4 | 170 | ST012 | 107 | 93.3 | 31.1 | 159 |
| PCB099 | pg/g | 13 | 13 | 100 | 120 | 363 | ST007 | 208 | 193 T | 75.2 | 329 | 120 | 363 | ST007 | 208 | 193 T | 75.2 | 329 |
| PCB100 | pg/g | 13 | 11 | 85 | 2.69 | 206 | ST007 | 41.1 | 9.68 | 70.3 | 181 | 2.41 U | 206 | ST007 | 35.1 | 6.5 T | 65.8 | 175 |
| PCB103 | pg/g | 13 | 13 | 100 | 2.52 | 211 | ST007 | 25.9 | 7.5 | 56.7 | 111 | 2.52 | 211 | ST007 | 25.9 | 7.5 | 56.7 | 111 |
| PCB104 | pg/g | 13 | 3 | 23 | 3.17 T | 26.3 | ST007 | 15.4 | 16.6 | 11.6 | 25.3 | 2.41 U | 26.3 | ST007 | 5.44 | 2.5 UT | 7.38 | 20.5 |
| PCB105 | pg/g | 13 | 13 | 100 | 76.8 | 239 | ST012 | 124 | 99.8 | 49.3 | 205 | 76.8 | 239 | ST012 | 124 | 99.8 | 49.3 | 205 |
| PCB106 & 118 | pg/g | 13 | 13 | 100 | 205 | 600 | ST012 | 338 | 311 | 113 | 525 | 205 | 600 | ST012 | 338 | 311 | 113 | 525 |
| PCB107 & 109 | pg/g | 13 | 13 | 100 | 15.9 | 40.8 | ST012 | 26.8 | 26.8 | 7.79 | 37.4 | 15.9 | 40.8 | ST012 | 26.8 | 26.8 | 7.79 | 37.4 |
| PCB108 & 112 | pg/g | 13 | 13 | 100 | 12.8 | 40.5 | ST013 | 20.2 | 18.8 | 7.56 | 31.9 | 12.8 | 40.5 | ST013 | 20.2 | 18.8 | 7.56 | 31.9 |
| PCB110 | pg/g | 13 | 13 | 100 | 302 | 696 | ST012 | 484 | 504 T | 130 | 688 | 302 | 696 | ST012 | 484 | 504 T | 130 | 688 |
| PCB111 & 115 | pg/g | 13 | 13 | 100 | 5.47 | 12 | ST011; ST012 | 8.01 | 6.92 | 2.35 | 12 | 5.47 | 12 | ST011; ST012 | 8.01 | 6.92 | 2.35 | 12 |
| PCB113 | pg/g | 13 | 5 | 38 | 3.11 | 18.3 | ST007 | 6.5 | 3.35 | 6.62 | 15.5 | 2.41 U | 18.3 | ST007 | 4.02 | 2.52 U | 4.33 | 9.98 |
| PCB114 | pg/g | 13 | 13 | 100 | 3.46 | 13.4 | ST012 | 7.15 | 6 | 3.18 | 11.7 | 3.46 | 13.4 | ST012 | 7.15 | 6 | 3.18 | 11.7 |
| PCB119 | pg/g | 13 | 13 | 100 | 6.54 | 105 | ST007 | 21 | 13.2 | 26.7 | 66.1 | 6.54 | 105 | ST007 | 21 | 13.2 | 26.7 | 66.1 |
| PCB120 | pg/g | 13 | 3 | 23 | 2.92 | 5.7 JT | ST004 | 4.62 | 5.24 | 1.49 | 5.65 J | 2.41 U | 5.7 JT | ST004 | 2.97 | 2.5 U | 1.12 | 5.42 J |
| PCB121 | pg/g | 13 | 2 | 15 | 3.89 | 16.7 | ST007 | 10.3 | 10.3 | 9.06 | 16.1 | 2.41 U | 16.7 | ST007 | 3.67 | 2.5 U | 3.93 | 9.01 |
| PCB122 | pg/g | 13 | 13 | 100 | 2.5 | 6.49 | ST012 | 4.26 | 3.49 | 1.44 | 6.33 | 2.5 | 6.49 | ST012 | 4.26 | 3.49 | 1.44 | 6.33 |
| PCB123 | pg/g | 13 | 13 | 100 | 4.6 | 11.2 | ST012 | 6.43 | 5.98 | 2.11 | 10.1 | 4.6 | 11.2 | ST012 | 6.43 | 5.98 | 2.11 | 10.1 |
| PCB124 | pg/g | 13 | 13 | 100 | 9.85 | 23.6 JT | ST004 | 15.6 | 16.2 | 4.89 | 22.4 J | 9.85 | 23.6 JT | ST004 | 15.6 | 16.2 | 4.89 | 22.4 J |
| PCB126 | pg/g | 13 | 13 | 100 | 1.43 J | 4.6 JT | ST004 | 2.91 | 3 | 0.86 | 4.06 J | 1.43 J | 4.6 JT | ST004 | 2.91 | 3 | 0.86 | 4.06 J |
| PCB127 | pg/g | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.41 U | 2.53 U | ST007 | 2.47 | 2.5 U | 0.0461 | 2.52 U |
| PCB128 & 162 | pg/g | 13 | 13 | 100 | 43.9 | 122 T | ST004 | 80.1 | 79.5 T | 25.6 | 118 | 43.9 | 122 T | ST004 | 80.1 | 79.5 T | 25.6 | 118 |
| PCB129 | pg/g | 13 | 13 | 100 | 13.5 | 33.8 | ST013 | 23 | 20.9 T | 7.57 | 32.9 | 13.5 | 33.8 | ST013 | 23 | 20.9 T | 7.57 | 32.9 |
| PCB130 | pg/g | 13 | 13 | 100 | 20.5 | 68.4 JT | ST004 | 37.2 | 37.2 | 13.7 | 58.6 J | 20.5 | 68.4 JT | ST004 | 37.2 | 37.2 | 13.7 | 58.6 J |
| PCB131 | pg/g | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.41 U | 2.53 U | ST007 | 2.47 | 2.5 U | 0.0461 | 2.52 U |
| PCB132 & 161 | pg/g | 13 | 13 | 100 | 89.8 | 397 JT | ST004 | 189 | 166 | 92.4 | 338 J | 89.8 | 397 JT | ST004 | 189 | 166 | 92.4 | 338 J |
| PCB133 & 142 | pg/g | 13 | 13 | 100 | 9.64 | 109 | ST007 | 27.2 | 18.8 T | 26.3 | 67.8 | 9.64 | 109 | ST007 | 27.2 | 18.8 T | 26.3 | 67.8 |
| PCB134 & 143 | pg/g | 13 | 13 | 100 | 15.6 | 70.8 | ST007 | 36.8 | 30.3 | 19.7 | 68.5 | 15.6 | 70.8 | ST007 | 36.8 | 30.3 | 19.7 | 68.5 |
| PCB135 | pg/g | 13 | 13 | 100 | 44.9 | 289 | ST007 | 113 | 76.5 | 78.8 | 254 J | 44.9 | 289 | ST007 | 113 | 76.5 | 78.8 | 254 J |
| PCB136 | pg/g | 13 | 13 | 100 | 43.4 | 441 | ST007 | 132 | 76.2 | 117 | 351 J | 43.4 | 441 | ST007 | 132 | 76.2 | 117 | 351 J |
| PCB137 | pg/g | 13 | 13 | 100 | 16 | 37.4 | ST012 | 23.5 | 21.3 T | 6.64 | 34.1 | 16 | 37.4 | ST012 | 23.5 | 21.3 T | 6.64 | 34.1 |
| PCB138 & 163 & 164 | pg/g | 13 | 13 | 100 | 338 | 1600 JT | ST004 | 793 | 659 | 419 | 1490 J | 338 | 1600 JT | ST004 | 793 | 659 | 419 | 1490 J |
| PCB139 & 149 | pg/g | 13 | 13 | 100 | 285 | 1650 JT | ST004 | 706 | 489 T | 458 | 1490 J | 285 | 1650 JT | ST004 | 706 | 489 T | 458 | 1490 J |
| PCB140 | pg/g | 13 | 11 | 85 | 2.64 | 20.8 | ST007 | 6.77 | 4.56 | 5.19 | 15.2 | 2.41 U | 20.8 | ST007 | 6.1 | 4.35 | 5.01 | 14 |
| PCB141 | pg/g | 13 | 13 | 100 | 58.4 | 414 JT | ST004 | 168 | 118 | 115 | 366 J | 58.4 | 414 JT | ST004 | 168 | 118 | 115 | 366 J |
| PCB144 | pg/g | 13 | 13 | 100 | 14.3 | 105 JT | ST004 | 40.6 | 27.4 | 27.4 | 87.6 J | 14.3 | 105 JT | ST004 | 40.6 | 27.4 | 27.4 | 87.6 J |
| PCB145 | pg/g | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.41 U | 2.53 U | ST007 | 2.47 | 2.5 U | 0.0461 | 2.52 U |
| PCB146 & 165 | pg/g | 13 | 13 | 100 | 44.5 | 291 | ST007 | 130 | 94.1 | 82.5 | 259 J | 44.5 | 291 | ST007 | 130 | 94.1 | 82.5 | 259 J |
| PCB147 | pg/g | 13 | 13 | 100 | 8.66 | 203 | ST007 | 36.8 | 16 | 55.7 | 142 | 8.66 | 203 | ST007 | 36.8 | 16 | 55.7 | 142 |
| PCB148 | pg/g | 13 | 4 | 31 | 4.37 | 44 | ST007 | 16.1 | 8.01 | 18.9 | 39.1 | 2.41 U | 44 | ST007 | 6.66 | 2.5 UT | 11.5 | 24.3 |
| PCB150 | pg/g | 13 | 4 | 31 | 3.92 | 46.1 | ST007 | 16 | 6.92 | 20.2 | 40.5 | 2.41 U | 46.1 | ST007 | 6.62 | 2.5 UT | 12 | 23.8 |
| PCB151 | pg/g | 13 | 13 | 100 | 81.1 | 592 JT | ST004 | 242 | 142 | 192 | 591 J | 81.1 | 592 JT | ST004 | 242 | 142 | 192 | 591 J |
| PCB152 | pg/g | 13 | 3 | 23 | 3.09 T | 17.1 | ST007 | 10.8 | 12.1 | 7.1 | 16.6 | 2.41 U | 17.1 | ST007 | 4.38 | 2.5 UT | 4.65 | 14.1 |
| PCB153 | pg/g | 13 | 13 | 100 | 309 | 1840 JT | ST004 | 822 | 609 | 509 | 1700 J | 309 | 1840 JT | ST004 | 822 | 609 | 509 | 1700 J |
| PCB154 | pg/g | 13 | 13 | 100 | 4.25 | 92.3 | ST007 | 20.8 | 10.8 | 24.8 | 66.9 | 4.25 | 92.3 | ST007 | 20.8 | 10.8 | 24.8 | 66.9 |
| PCB155 | pg/g | 13 | 2 | 15 | 2.82 | 6.22 | ST007 | 4.52 | 4.52 | 2.4 | 6.05 | 2.41 U | 6.22 | ST007 | 2.78 | 2.5 U | 1.04 | 4.18 |
| PCB156 | pg/g | 13 | 13 | 100 | 19.5 | 105 | ST013 | 56.1 | 54.3 | 26.7 | 102 J | 19.5 | 105 | ST013 | 56.1 | 54.3 | 26.7 | 102 J |
| PCB157 | pg/g | 13 | 13 | 100 | 5.15 | 16.7 | ST012 | 10.9 | 11.1 T | 3.75 | 16.3 | 5.15 | 16.7 | ST012 | 10.9 | 11.1 T | 3.75 | 16.3 |
| PCB158 & 160 | pg/g | 13 | 13 | 100 | 34.3 | 141 JT | ST004 | 73.4 | 66 | 34.6 | 131 J | 34.3 | 141 JT | ST004 | 73.4 | 66 | 34.6 | 131 J |
| PCB159 | pg/g | 13 | 13 | 100 | 2.79 | 40.8 JT | ST004 | 14.3 | 9.03 | 12 | 34.7 J | 2.79 | 40.8 JT | ST004 | 14.3 | 9.03 | 12 | 34.7 J |
| PCB166 | pg/g | 13 | 2 | 15 | 2.92 | 3.66 T | ST004 | 3.29 | 3.29 | 0.523 | 3.62 | 2.41 U | 3.66 T | ST004 | 2.6 | 2.5 UT | 0.343 | 3.22 |
| PCB167 | pg/g | 13 | 13 | 100 | 9.53 | 44 | ST013 | 23.8 | 22.8 | 10.7 | 42.5 J | 9.53 | 44 | ST013 | 23.8 | 22.8 | 10.7 | 42.5 J |
| PCB168 | pg/g | 13 | 3 | 23 | 3.39 | 7.63 | ST013 | 5.32 | 4.93 | 2.15 | 7.36 | 2.41 U | 7.63 | ST013 | 3.12 | 2.5 U | 1.53 | 6.01 |
| PCB169 | pg/g | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.218 U | 0.556 U | ST001 | 0.398 | 0.433 U | 0.103 | 0.519 U |

Table D2.2-1. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, First Quarter (Winter 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| PCB170 | pg/g | 13 | 13 | 100 | 48.4 | 916 | ST013 | 282 | 168 | 266 | 798 J | 48.4 | 916 | ST013 | 282 | 168 | 266 | 798 J |
| PCB171 | pg/g | 13 | 13 | 100 | 15.5 | 229 | ST013 | 77.3 | 45 | 69.3 | 214 J | 15.5 | 229 | ST013 | 77.3 | 45 | 69.3 | 214 J |
| PCB172 | pg/g | 13 | 13 | 100 | 9.66 | 153 | ST013 | 51.3 | 30.1 | 45.3 | 140 J | 9.66 | 153 | ST013 | 51.3 | 30.1 | 45.3 | 140 J |
| PCB173 | pg/g | 13 | 11 | 85 | 2.79 | 19.5 | ST013 | 7.56 | 4.81 | 5.64 | 17.7 J | 2.41 U | 19.5 | ST013 | 6.77 | 4.52 | 5.5 | 17.3 J |
| PCB174 | pg/g | 13 | 13 | 100 | 74.1 | 1000 JT | ST004 | 334 | 195 | 303 | 930 J | 74.1 | 1000 JT | ST004 | 334 | 195 | 303 | 930 J |
| PCB175 | pg/g | 13 | 13 | 100 | 3.4 | 43.8 JT | ST004 | 14.9 | 8.1 | 13.3 | 40.9 J | 3.4 | 43.8 JT | ST004 | 14.9 | 8.1 | 13.3 | 40.9 J |
| PCB176 | pg/g | 13 | 13 | 100 | 9.7 | 131 JT | ST004 | 41.9 | 23.4 | 37.9 | 114 J | 9.7 | 131 JT | ST004 | 41.9 | 23.4 | 37.9 | 114 J |
| PCB177 | pg/g | 13 | 13 | 100 | 40.7 | 546 | ST013 | 206 | 114 | 183 | 541 J | 40.7 | 546 | ST013 | 206 | 114 | 183 | 541 J |
| PCB178 | pg/g | 13 | 13 | 100 | 17.2 | 267 | ST007 | 85.3 | 42.8 | 82.3 | 225 J | 17.2 | 267 | ST007 | 85.3 | 42.8 | 82.3 | 225 J |
| PCB179 | pg/g | 13 | 13 | 100 | 40.2 | 488 JT | ST004 | 167 | 88 | 148 | 421 J | 40.2 | 488 JT | ST004 | 167 | 88 | 148 | 421 J |
| PCB180 | pg/g | 13 | 13 | 100 | 132 | 2370 | ST013 | 758 | 437 | 707 | 2150 J | 132 | 2370 | ST013 | 758 | 437 | 707 | 2150 J |
| PCB181 | pg/g | 13 | 3 | 23 | 3.93 | 7.46 | ST013 | 5.23 | 4.3 | 1.94 | 7.14 | 2.41 U | 7.46 | ST013 | 3.11 | 2.5 UT | 1.45 | 5.56 |
| PCB182 & 187 | pg/g | 13 | 13 | 100 | 98.1 | 1210 JT | ST004 | 464 | 253 | 398 | 1170 J | 98.1 | 1210 JT | ST004 | 464 | 253 | 398 | 1170 J |
| PCB183 | pg/g | 13 | 13 | 100 | 38 | 526 | ST013 | 182 | 101 | 166 | 516 J | 38 | 526 | ST013 | 182 | 101 | 166 | 516 J |
| PCB184 | pg/g | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.41 U | 2.53 U | ST007 | 2.47 | 2.5 U | 0.0461 | 2.52 U |
| PCB185 | pg/g | 13 | 13 | 100 | 8.12 | 107 JT | ST004 | 38.2 | 20.7 T | 33.8 | 105 J | 8.12 | 107 JT | ST004 | 38.2 | 20.7 T | 33.8 | 105 J |
| PCB186 | pg/g | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.41 U | 2.53 U | ST007 | 2.47 | 2.5 U | 0.0461 | 2.52 U |
| PCB188 | pg/g | 13 | 3 | 23 | 2.82 | 16.3 | ST007 | 7.56 | 3.57 T | 7.58 | 15 | 2.41 U | 16.3 | ST007 | 3.65 | 2.5 UT | 3.82 | 8.66 |
| PCB189 | pg/g | 13 | 13 | 100 | 1.63 J | 33.2 | ST013 | 10.1 | 6.92 | 8.86 | 25.9 J | 1.63 J | 33.2 | ST013 | 10.1 | 6.92 | 8.86 | 25.9 J |
| PCB190 | pg/g | 13 | 13 | 100 | 10.5 | 192 | ST013 | 61.2 | 35.2 | 55.8 | 168 J | 10.5 | 192 | ST013 | 61.2 | 35.2 | 55.8 | 168 J |
| PCB191 | pg/g | 13 | 12 | 92 | 2.42 | 35.1 | ST013 | 12.2 | 7.75 | 10.4 | 31.7 J | 2.42 | 35.1 | ST013 | 11.4 | 7 | 10.3 | 31.4 J |
| PCB192 | pg/g | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.41 U | 2.53 U | ST007 | 2.47 | 2.5 U | 0.0461 | 2.52 U |
| PCB193 | pg/g | 13 | 13 | 100 | 6.67 | 111 | ST013 | 37.8 | 21.1 | 33.8 | 100 J | 6.67 | 111 | ST013 | 37.8 | 21.1 | 33.8 | 100 J |
| PCB194 | pg/g | 13 | 13 | 100 | 24.3 | 531 | ST013 | 179 | 101 | 162 | 481 J | 24.3 | 531 | ST013 | 179 | 101 | 162 | 481 J |
| PCB195 | pg/g | 13 | 13 | 100 | 11.2 | 239 | ST013 | 76.3 | 38.9 | 73.1 | 216 J | 11.2 | 239 | ST013 | 76.3 | 38.9 | 73.1 | 216 J |
| PCB196 & 203 | pg/g | 13 | 13 | 100 | 38.7 | 613 JT | ST004 | 227 | 134 | 193 | 602 J | 38.7 | 613 JT | ST004 | 227 | 134 | 193 | 602 J |
| PCB197 | pg/g | 13 | 11 | 85 | 3.28 | 22 JT | ST004 | 8.89 | 5.2 | 6.77 | 20.7 J | 2.41 U | 22 JT | ST004 | 7.9 | 4.35 | 6.63 | 20.4 J |
| PCB198 | pg/g | 13 | 12 | 92 | 2.48 | 29.5 JT | ST004 | 12 | 9.84 | 8.24 | 27 J | 2.45 U | 29.5 JT | ST004 | 11.3 | 9.38 | 8.33 | 26.8 J |
| PCB199 | pg/g | 13 | 13 | 100 | 38 | 570 JT | ST004 | 204 | 128 | 168 | 523 J | 38 | 570 JT | ST004 | 204 | 128 | 168 | 523 J |
| PCB200 | pg/g | 13 | 13 | 100 | 4.95 | 75.4 JT | ST004 | 25.1 | 14.5 | 21.9 | 66.9 J | 4.95 | 75.4 JT | ST004 | 25.1 | 14.5 | 21.9 | 66.9 J |
| PCB201 | pg/g | 13 | 13 | 100 | 4.84 | 74.2 JT | ST004 | 26 | 14.4 | 22.1 | 67.1 J | 4.84 | 74.2 JT | ST004 | 26 | 14.4 | 22.1 | 67.1 J |
| PCB202 | pg/g | 13 | 13 | 100 | 9.02 | 103 T | ST004 | 41.4 | 26.2 T | 30.6 | 91.9 | 9.02 | 103 T | ST004 | 41.4 | 26.2 T | 30.6 | 91.9 |
| PCB204 | pg/g | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.41 U | 2.53 U | ST007 | 2.47 | 2.5 U | 0.0461 | 2.52 U |
| PCB205 | pg/g | 13 | 11 | 85 | 2.95 T | 24.5 | ST013 | 9.75 | 5.65 | 7.81 | 23.4 J | 2.41 U | 24.5 | ST013 | 8.62 | 4.68 | 7.64 | 23.1 J |
| PCB206 | pg/g | 13 | 13 | 100 | 11.9 | 155 | ST013 | 82.1 | 72.5 | 44.1 | 149 J | 11.9 | 155 | ST013 | 82.1 | 72.5 | 44.1 | 149 J |
| PCB207 | pg/g | 13 | 12 | 92 | 2.5 | 17.5 JT | ST004 | 10.5 | 10.3 | 4.76 | 16.8 J | 2.45 U | 17.5 JT | ST004 | 9.86 | 7.85 | 5.07 | 16.8 J |
| PCB208 | pg/g | 13 | 13 | 100 | 4.05 | 37.3 | ST013 | 21.5 | 20 | 9.75 | 35.7 | 4.05 | 37.3 | ST013 | 21.5 | 20 | 9.75 | 35.7 |
| PCB209 | pg/g | 13 | 13 | 100 | 14.9 | 264 | ST011 | 77.2 | 67.6 | 60.8 | 167 | 14.9 | 264 | ST011 | 77.2 | 67.6 | 60.8 | 167 |
| Total PCB Congeners | µg/kg | 13 | 13 | 100 | 5.46 JT | 28.7 JT | ST007 | 14 | 11.5 T | 7.59 | 26 J | 5.46 JT | 28.7 JT | ST007 | 14 | 11.5 T | 7.59 | 26 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 13 | 13 | 100 | 0.000154 JT | 0.000484 JT | ST004 | 0.000311 | 0.000321 JT | 0.0000909 | 0.000432 J | 0.000154 JT | 0.000484 JT | ST004 | 0.000311 | 0.000321 JT | 0.0000909 | 0.000432 J |
| **PCBs[c]** | | | | | | | | | | | | | | | | | | |
| Total PCBs | µg/kg | 13 | 13 | 100 | 5.46 JT | 28.7 JT | ST007 | 14 | 11.5 T | 7.59 | 26 J | 5.46 JT | 28.7 JT | ST007 | 14 | 11.5 T | 7.59 | 26 J |
| **PCB Homologs** | | | | | | | | | | | | | | | | | | |
| Dichlorobiphenyl homologs | pg/g | 13 | 13 | 100 | 82 T | 584 T | ST007 | 285 | 220 T | 153 | 570 | 82 T | 584 T | ST007 | 285 | 220 T | 153 | 570 |
| Heptachlorobiphenyl homologs | pg/g | 13 | 13 | 100 | 561 JT | 7980 T | ST013 | 2830 | 1600 T | 2520 | 7750 J | 561 JT | 7980 T | ST013 | 2830 | 1600 T | 2520 | 7750 J |
| Hexachlorobiphenyl homologs | pg/g | 13 | 13 | 100 | 1550 T | 8130 JT | ST004 | 3820 | 2900 T | 2260 | 7420 J | 1550 T | 8130 JT | ST004 | 3820 | 2900 T | 2260 | 7420 J |
| Monochlorobiphenyl homologs | pg/g | 13 | 13 | 100 | 2.74 T | 28.9 T | ST015 | 15.3 | 15.1 T | 8.15 | 25.8 | 2.74 T | 28.9 T | ST015 | 15.3 | 15.1 T | 8.15 | 25.8 |
| Nonachlorobiphenyl homologs | pg/g | 13 | 13 | 100 | 16 T | 209 T | ST013 | 113 | 100 T | 59 | 202 J | 16 T | 209 T | ST013 | 113 | 100 T | 59 | 202 J |
| Octachlorobiphenyl homologs | pg/g | 13 | 13 | 100 | 131 T | 2160 JT | ST004 | 805 | 473 T | 689 | 2140 J | 131 T | 2160 JT | ST004 | 805 | 473 T | 689 | 2140 J |
| Pentachlorobiphenyl homologs | pg/g | 13 | 13 | 100 | 1690 T | 5880 JT | ST007 | 2940 | 2920 T | 1100 | 4700 J | 1690 T | 5880 JT | ST007 | 2940 | 2920 T | 1100 | 4700 J |
| Tetrachlorobiphenyl homologs | pg/g | 13 | 13 | 100 | 695 T | 7310 T | ST007 | 2270 | 1750 T | 1740 | 5180 J | 695 T | 7310 T | ST007 | 2270 | 1750 T | 1740 | 5180 J |
| Trichlorobiphenyl homologs | pg/g | 13 | 13 | 100 | 173 T | 2530 T | ST011 | 888 | 642 T | 734 | 2400 | 173 T | 2530 T | ST011 | 888 | 642 T | 734 | 2400 |
| **Dioxins/Furans Homologs** | | | | | | | | | | | | | | | | | | |
| Heptachlorodibenzofuran homologs | pg/g | 13 | 13 | 100 | 2.27 | 41.8 | ST011 | 11.8 | 8.11 | 11.1 | 33.2 | 2.27 | 41.8 | ST011 | 11.8 | 8.11 | 11.1 | 33.2 |
| Heptachlorodibenzo-p-dioxin homologs | pg/g | 13 | 13 | 100 | 11.7 | 84.8 | ST001 | 38.1 | 29.4 | 23.8 | 77.4 | 11.7 | 84.8 | ST001 | 38.1 | 29.4 | 23.8 | 77.4 |
| Hexachlorodibenzofuran homologs | pg/g | 13 | 13 | 100 | 1.48 | 11.1 | ST011 | 4.46 | 3.63 | 2.74 | 8.77 | 1.48 | 11.1 | ST011 | 4.46 | 3.63 | 2.74 | 8.77 |
| Hexachlorodibenzo-p-dioxin homologs | pg/g | 13 | 13 | 100 | 1.75 | 14.3 | ST001 | 5.72 | 5.23 | 3.29 | 10.7 | 1.75 | 14.3 | ST001 | 5.72 | 5.23 | 3.29 | 10.7 |
| Octachlorodibenzofuran | pg/g | 13 | 13 | 100 | 3.41 J | 64.9 | ST011 | 15.4 | 9.99 | 17 | 47.3 | 3.41 J | 64.9 | ST011 | 15.4 | 9.99 | 17 | 47.3 |
| Octachlorodibenzo-p-dioxin | pg/g | 13 | 13 | 100 | 45.3 | 383 | ST001 | 163 | 144 | 105 | 353 | 45.3 | 383 | ST001 | 163 | 144 | 105 | 353 |

Table D2.2-1. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, First Quarter (Winter 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| Pentachlorodibenzofuran homologs | pg/g | 13 | 13 | 100 | 0.581 | 4.73 | ST001 | 1.73 | 1.31 | 1.22 | 4.09 | 0.581 | 4.73 | ST001 | 1.73 | 1.31 | 1.22 | 4.09 |
| Pentachlorodibenzo-p-dioxin homologs | pg/g | 13 | 10 | 77 | 0.059 | 2 | ST001 | 0.541 | 0.429 | 0.559 | 1.42 | 0.012 U | 2 | ST001 | 0.421 | 0.263 | 0.535 | 1.23 |
| Tetrachlorodibenzofuran homologs | pg/g | 13 | 13 | 100 | 0.055 | 2.51 | ST001 | 0.827 | 0.427 | 0.81 | 2.44 | 0.055 | 2.51 | ST001 | 0.827 | 0.427 | 0.81 | 2.44 |
| Tetrachlorodibenzo-p-dioxin homologs | pg/g | 13 | 13 | 100 | 0.068 | 1.84 | ST001 | 0.645 | 0.519 | 0.43 | 1.31 | 0.068 | 1.84 | ST001 | 0.645 | 0.519 | 0.43 | 1.31 |
| **PCDD/Fs Homologs** | | | | | | | | | | | | | | | | | | |
| Total PCDD/Fs | pg/g | 13 | 13 | 100 | 72.2 JT | 563 T | ST001 | 242 | 209 T | 160 | 546 | 72.2 JT | 563 T | ST001 | 242 | 209 T | 160 | 546 |
| **Dioxins/Furans** | | | | | | | | | | | | | | | | | | |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran | pg/g | 13 | 12 | 92 | 0.911 J | 11 | ST011 | 3.64 | 2.77 J | 2.97 | 9.4 | 0.911 J | 11 | ST011 | 3.43 | 2.54 J | 2.94 | 9.25 |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin | pg/g | 13 | 13 | 100 | 5.42 | 41.6 | ST011 | 17.6 | 15.2 | 12 | 41.1 | 5.42 | 41.6 | ST011 | 17.6 | 15.2 | 12 | 41.1 |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran | pg/g | 13 | 4 | 31 | 0.129 J | 1.04 J | ST011 | 0.559 | 0.535 J | 0.372 | 0.965 J | 0.045 U | 1.04 J | ST011 | 0.237 | 0.103 U | 0.292 | 0.751 J |
| 1,2,3,4,7,8-Hexachlorodibenzofuran | pg/g | 13 | 13 | 100 | 0.141 J | 1.6 JT | ST005 | 0.407 | 0.26 J | 0.411 | 1.15 J | 0.141 J | 1.6 JT | ST005 | 0.407 | 0.26 J | 0.411 | 1.15 J |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 13 | 8 | 62 | 0.064 J | 0.433 J | ST001 | 0.177 | 0.147 J | 0.112 | 0.356 J | 0.062 U | 0.433 J | ST001 | 0.171 | 0.145 J | 0.111 | 0.386 J |
| 1,2,3,6,7,8-Hexachlorodibenzofuran | pg/g | 13 | 10 | 77 | 0.082 J | 0.411 JT | ST005 | 0.2 | 0.133 J | 0.13 | 0.398 J | 0.076 U | 0.411 JT | ST005 | 0.181 | 0.127 J | 0.12 | 0.394 J |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 13 | 13 | 100 | 0.281 J | 2.04 J | ST001 | 0.827 | 0.767 J | 0.505 | 1.8 J | 0.281 J | 2.04 J | ST001 | 0.827 | 0.767 J | 0.505 | 1.8 J |
| 1,2,3,7,8,9-Hexachlorodibenzofuran | pg/g | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.007 U | 0.077 UT | ST005 | 0.0341 | 0.034 U | 0.0201 | 0.0668 U |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | pg/g | 13 | 13 | 100 | 0.208 J | 1.6 J | ST001 | 0.588 | 0.479 J | 0.381 | 1.26 J | 0.208 J | 1.6 J | ST001 | 0.588 | 0.479 J | 0.381 | 1.26 J |
| 1,2,3,7,8-Pentachlorodibenzofuran | pg/g | 13 | 5 | 38 | 0.055 J | 0.57 JT | ST005 | 0.215 | 0.108 J | 0.215 | 0.509 J | 0.01 U | 0.57 JT | ST005 | 0.105 | 0.061 U | 0.155 | 0.388 J |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | pg/g | 13 | 4 | 31 | 0.089 J | 0.3 J | ST001 | 0.168 | 0.141 J | 0.0921 | 0.278 J | 0.022 U | 0.3 J | ST001 | 0.106 | 0.089 J | 0.079 | 0.229 J |
| 2,3,4,6,7,8-Hexachlorodibenzofuran | pg/g | 13 | 10 | 77 | 0.112 J | 0.531 J | ST001 | 0.26 | 0.209 J | 0.149 | 0.523 J | 0.017 U | 0.531 J | ST001 | 0.224 | 0.195 J | 0.152 | 0.521 J |
| 2,3,4,7,8-Pentachlorodibenzofuran | pg/g | 13 | 5 | 38 | 0.088 J | 0.333 JT | ST005 | 0.177 | 0.108 J | 0.11 | 0.317 J | 0.011 U | 0.333 JT | ST005 | 0.099 | 0.088 J | 0.0943 | 0.286 J |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/g | 13 | 1 | 8 | 0.603 J | 0.603 J | ST001 | 0.603 | 0.603 J | -- | 0.603 J | 0.21 U | 0.915 U | ST012 | 0.581 | 0.603 J | 0.231 | 0.891 U |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | pg/g | 13 | 1 | 8 | 0.128 J | 0.128 J | ST008 | 0.128 | 0.128 J | -- | 0.128 J | 0.013 U | 0.128 J | ST008 | 0.0479 | 0.032 U | 0.0395 | 0.112 J |
| **PCDD/Fs** | | | | | | | | | | | | | | | | | | |
| TCDD TEQ (ND=0) | pg/g | 13 | 13 | 100 | 0.149 JT | 1.65 JT | ST001 | 0.583 | 0.461 JT | 0.435 | 1.33 J | 0.149 JT | 1.65 JT | ST001 | 0.583 | 0.461 JT | 0.435 | 1.33 J |
| **TCDD TEQ** | | | | | | | | | | | | | | | | | | |
| Total TCDD TEQ (ND = 0) | pg/g | 13 | 13 | 100 | 0.371 JT | 2.04 JT | ST001 | 0.893 | 0.742 JT | 0.478 | 1.72 J | 0.371 JT | 2.04 JT | ST001 | 0.893 | 0.742 JT | 0.478 | 1.72 J |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| 2,4'-DDD | µg/kg | 13 | 3 | 23 | 0.77 J | 1.4 | ST012 | 1.05 | 0.97 J | 0.322 | 1.36 J | 0.6 U | 2.9 U | ST009 | 1.4 | 1.1 U | 0.764 | 2.72 U |
| 2,4'-DDE | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.42 U | 2.4 U | ST008 | 0.785 | 0.65 U | 0.502 | 1.56 U |
| 2,4'-DDT | µg/kg | 13 | 8 | 62 | 0.45 NJ | 4.1 | ST007 | 1.26 | 0.9 J | 1.18 | 3.16 J | 0.25 U | 4.1 | ST007 | 1.04 | 0.73 J | 0.991 | 2.54 |
| 4,4'-DDD | µg/kg | 13 | 11 | 85 | 0.53 J | 2.4 JT | ST005 | 1 | 0.84 J | 0.519 | 1.85 J | 0.22 U | 2.4 JT | ST005 | 0.965 | 0.84 J | 0.53 | 1.74 J |
| 4,4'-DDE | µg/kg | 13 | 3 | 23 | 2 T | 2.8 NJ | ST007 | 2.3 | 2.1 J | 0.436 | 2.73 J | 0.64 U | 2.8 NJ | ST007 | 1.67 | 1.7 U | 0.518 | 2.38 J |
| 4,4'-DDT | µg/kg | 13 | 9 | 69 | 0.98 J | 4.1 NJ | ST003 | 2.53 | 2.2 J | 1.01 | 4.02 J | 0.19 U | 7.9 U | ST007 | 2.65 | 2.2 J | 1.92 | 5.62 J |
| Aldrin | µg/kg | 13 | 4 | 31 | 0.63 J | 1.1 NJT | ST005 | 0.865 | 0.865 J | 0.194 | 1.07 J | 0.4 U | 1.6 U | ST008 | 0.795 | 0.83 J | 0.355 | 1.3 J |
| alpha-Endosulfan | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.4 U | 5 U | ST008 | 1.07 | 0.51 U | 1.31 | 3.5 U |
| alpha-Hexachlorocyclohexane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.47 U | 2.7 U | ST008 | 0.845 | 0.72 U | 0.565 | 1.57 U |
| beta-Endosulfan | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.34 U | 2 U | ST008 | 0.662 | 0.54 U | 0.429 | 1.4 U |
| beta-Hexachlorocyclohexane | µg/kg | 13 | 1 | 8 | 1.4 | 1.4 | ST010 | 1.4 | 1.4 | -- | 1.4 | 0.54 U | 3.1 U | ST008 | 1.05 | 0.85 U | 0.649 | 2.08 |
| cis-Chlordane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.42 U | 2.4 U | ST008 | 0.79 | 0.63 U | 0.516 | 1.68 U |
| cis-Nonachlor | µg/kg | 13 | 5 | 38 | 0.61 J | 1.2 J | ST013 | 0.872 | 0.82 NJT | 0.269 | 1.18 J | 0.26 U | 1.2 J | ST013 | 0.745 | 0.8 U | 0.276 | 1.14 J |
| delta-Hexachlorocyclohexane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.099 U | 1.2 U | ST011 | 0.34 | 0.16 U | 0.378 | 1.14 U |
| Dieldrin | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.52 U | 3 U | ST008 | 0.94 | 0.8 U | 0.627 | 1.74 U |
| Endosulfan sulfate | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.8 U | 1.3 U | ST001 | 1.1 | 1.1 U | 0.129 | 1.24 U |
| Endrin | µg/kg | 13 | 1 | 8 | 2.4 NJT | 2.4 NJT | ST005 | 2.4 | 2.4 NJT | -- | 2.4 NJT | 0.36 U | 5.8 U | ST008 | 1.08 | 0.55 U | 1.51 | 3.76 J |
| Endrin aldehyde | µg/kg | 13 | 2 | 15 | 0.38 JT | 1.3 J | ST007 | 0.84 | 0.84 J | 0.651 | 1.25 J | 0.095 U | 1.3 J | ST007 | 0.341 | 0.23 U | 0.319 | 0.844 J |
| Endrin ketone | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.18 U | 0.83 U | ST008 | 0.274 | 0.24 U | 0.169 | 0.494 U |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.27 U | 1.6 U | ST008 | 0.492 | 0.41 U | 0.337 | 0.922 U |
| Heptachlor | µg/kg | 13 | 1 | 8 | 0.28 J | 0.28 J | ST011 | 0.28 | 0.28 J | -- | 0.28 J | 0.18 U | 1.3 U | ST001 | 0.558 | 0.25 U | 0.446 | 1.24 U |
| Heptachlor epoxide | µg/kg | 13 | 3 | 23 | 1.3 J | 2.9 NJT | ST005 | 2.03 | 1.9 NJ | 0.808 | 2.8 J | 0.24 U | 5 U | ST008 | 1.2 | 0.38 U | 1.39 | 3.74 J |
| Methoxychlor | µg/kg | 13 | 4 | 31 | 0.41 J | 1.9 NJ | ST010 | 0.89 | 0.625 J | 0.684 | 1.72 J | 0.18 U | 1.9 NJ | ST010 | 0.578 | 0.29 UT | 0.495 | 1.42 J |
| Mirex | µg/kg | 13 | 2 | 15 | 0.33 NJ | 0.47 J | ST002 | 0.4 | 0.4 J | 0.099 | 0.463 J | 0.18 U | 0.55 U | ST008 | 0.332 | 0.29 UT | 0.1 | 0.502 J |
| Oxychlordane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.86 U | 3.8 U | ST008 | 1.5 | 1.1 U | 0.899 | 3.2 U |
| Total chlordanes | µg/kg | 13 | 12 | 92 | 0.24 JT | 3.7 NJT | ST008 | 1.15 | 0.95 J | 0.975 | 2.77 J | 0.24 JT | 3.7 NJT | ST008 | 1.14 | 1 NJT | 0.934 | 2.68 J |
| Total DDD | µg/kg | 13 | 11 | 85 | 0.53 JT | 2.7 T | ST012 | 1.29 | 0.9 JT | 0.794 | 2.55 J | 0.53 JT | 2.9 UT | ST009 | 1.48 | 1 JT | 0.878 | 2.78 |
| Total DDE | µg/kg | 13 | 3 | 23 | 2 T | 2.8 NJT | ST007 | 2.3 | 2.1 JT | 0.436 | 2.73 J | 0.64 UT | 2.8 NJT | ST007 | 1.76 | 1.7 UT | 0.534 | 2.56 J |
| Total DDT | µg/kg | 13 | 12 | 92 | 0.45 NJT | 4.8 NJT | ST003; ST010 | 2.74 | 2.7 J | 1.41 | 4.8 J | 0.45 NJT | 4.8 NJT | ST003; ST010 | 2.72 | 2.7 NJT | 1.36 | 4.8 J |
| DDx | µg/kg | 13 | 12 | 92 | 0.98 JT | 7.8 JT | ST012 | 4.5 | 4.35 J | 2.31 | 7.58 J | 0.98 JT | 7.8 JT | ST012 | 4.34 | 4.3 JT | 2.28 | 7.56 J |
| Total Endosulfan | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1 UT | 5 UT | ST008 | 1.56 | 1.2 UT | 1.1 | 3.5 U |
| Toxaphene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 24 U | 150 U | ST008 | 44.5 | 30 U | 35.1 | 106 U |
| trans-Chlordane | µg/kg | 13 | 12 | 92 | 0.24 NJT | 0.81 J | ST008 | 0.432 | 0.405 J | 0.145 | 0.645 J | 0.24 NJT | 1 U | ST007 | 0.475 | 0.41 J | 0.21 | 0.886 J |

Table D2.2-1. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, First Quarter (Winter 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| trans-Nonachlor | µg/kg | 13 | 4 | 31 | 0.42 J | 2.9 NJ | ST008 | 1.08 | 0.49 J | 1.22 | 2.54 J | 0.16 U | 2.9 NJ | ST008 | 0.68 | 0.42 J | 0.743 | 1.82 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | µg/kg | 13 | 13 | 100 | 1.2 J | 42 | ST004 | 7.54 | 3.2 | 11.6 | 29.4 | 1.2 J | 42 | ST004 | 7.54 | 3.2 | 11.6 | 29.4 |
| Acenaphthene | µg/kg | 13 | 13 | 100 | 0.8 J | 54 T | ST005 | 9.71 | 1.9 J | 16 | 41.4 | 0.8 J | 54 T | ST005 | 9.71 | 1.9 J | 16 | 41.4 |
| Acenaphthylene | µg/kg | 13 | 13 | 100 | 0.9 J | 22 T | ST005 | 4.45 | 2.4 J | 5.54 | 12.7 | 0.9 J | 22 T | ST005 | 4.45 | 2.4 J | 5.54 | 12.7 |
| Anthracene | µg/kg | 13 | 13 | 100 | 1.7 J | 91 T | ST005 | 15 | 5.7 | 24.1 | 49.6 | 1.7 J | 91 T | ST005 | 15 | 5.7 | 24.1 | 49.6 |
| Benzo(a)anthracene | µg/kg | 13 | 13 | 100 | 7.6 | 260 T | ST005 | 47.8 | 16 | 69.1 | 159 | 7.6 | 260 T | ST005 | 47.8 | 16 | 69.1 | 159 |
| Benzo(a)pyrene | µg/kg | 13 | 13 | 100 | 7 | 350 T | ST005 | 60.3 | 20 | 92.2 | 192 | 7 | 350 T | ST005 | 60.3 | 20 | 92.2 | 192 |
| Benzo(b)fluoranthene | µg/kg | 13 | 13 | 100 | 6.9 | 230 T | ST005 | 51.3 | 19 | 64.6 | 170 | 6.9 | 230 T | ST005 | 51.3 | 19 | 64.6 | 170 |
| Benzo(g,h,i)perylene | µg/kg | 13 | 13 | 100 | 4.5 | 270 T | ST005 | 44.6 | 17 | 70.7 | 146 | 4.5 | 270 T | ST005 | 44.6 | 17 | 70.7 | 146 |
| Benzo(k)fluoranthene | µg/kg | 13 | 13 | 100 | 4.3 | 190 T | ST005 | 33.8 | 14 | 50.6 | 117 | 4.3 | 190 T | ST005 | 33.8 | 14 | 50.6 | 117 |
| Chrysene | µg/kg | 13 | 13 | 100 | 9.1 | 330 T | ST005 | 65 | 25 | 88.5 | 216 | 9.1 | 330 T | ST005 | 65 | 25 | 88.5 | 216 |
| Dibenzo(a,h)anthracene | µg/kg | 13 | 13 | 100 | 0.72 J | 32 T | ST005 | 6.15 | 2.5 J | 8.46 | 19.4 | 0.72 J | 32 T | ST005 | 6.15 | 2.5 J | 8.46 | 19.4 |
| Fluoranthene | µg/kg | 13 | 13 | 100 | 16 | 570 T | ST005 | 110 | 32 | 157 | 396 | 16 | 570 T | ST005 | 110 | 32 | 157 | 396 |
| Fluorene | µg/kg | 13 | 13 | 100 | 1.2 J | 39 T | ST005 | 7.98 | 2.1 J | 12.1 | 33.6 | 1.2 J | 39 T | ST005 | 7.98 | 2.1 J | 12.1 | 33.6 |
| Total HPAH | µg/kg | 13 | 13 | 100 | 82 JT | 3300 T | ST005 | 615 | 210 JT | 886 | 2100 | 82 JT | 3300 T | ST005 | 615 | 210 JT | 886 | 2100 |
| Indeno(1,2,3-cd)pyrene | µg/kg | 13 | 13 | 100 | 4.5 | 250 T | ST005 | 41.9 | 16 | 65.6 | 137 | 4.5 | 250 T | ST005 | 41.9 | 16 | 65.6 | 137 |
| Total LPAH | µg/kg | 13 | 13 | 100 | 22 JT | 660 T | ST005 | 121 | 39 JT | 181 | 450 | 22 JT | 660 T | ST005 | 121 | 39 JT | 181 | 450 |
| Naphthalene | µg/kg | 13 | 13 | 100 | 3.6 | 73 | ST004 | 17.2 | 7.2 | 21.5 | 62.2 | 3.6 | 73 | ST004 | 17.2 | 7.2 | 21.5 | 62.2 |
| Phenanthrene | µg/kg | 13 | 13 | 100 | 9.7 | 380 T | ST005 | 59.4 | 17 | 101 | 218 | 9.7 | 380 T | ST005 | 59.4 | 17 | 101 | 218 |
| Pyrene | µg/kg | 13 | 13 | 100 | 18 | 850 T | ST005 | 157 | 45 | 236 | 586 | 18 | 850 T | ST005 | 157 | 45 | 236 | 586 |
| Total cPAH (BaPEq) | µg/kg | 13 | 13 | 100 | 9.83 JT | 458 T | ST005 | 80.9 | 27.8 JT | 121 | 258 | 9.83 JT | 458 T | ST005 | 80.9 | 27.8 JT | 121 | 258 |
| Total cPAHs | µg/kg | 13 | 13 | 100 | 41 JT | 1600 T | ST005 | 303 | 110 JT | 425 | 982 | 41 JT | 1600 T | ST005 | 303 | 110 JT | 425 | 982 |
| Total PAHs | µg/kg | 13 | 13 | 100 | 100 JT | 4000 T | ST005 | 735 | 250 JT | 1060 | 2380 J | 100 JT | 4000 T | ST005 | 735 | 250 JT | 1060 | 2380 J |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl) phthalate | µg/kg | 13 | 13 | 100 | 35 | 230 | ST013 | 126 | 110 | 56.4 | 224 | 35 | 230 | ST013 | 126 | 110 | 56.4 | 224 |
| Butylbenzyl phthalate | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.5 U | 26 U | ST013 | 11.2 | 9.8 U | 6.69 | 20.6 U |
| Dibutyl phthalate | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 7.3 U | 35 U | ST013 | 15.7 | 13 U | 8.17 | 30.8 U |
| Diethyl phthalate | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 6.3 U | 13 U | ST004 | 9.54 | 9.5 U | 1.79 | 11.8 U |
| Dimethyl phthalate | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.3 U | 5.6 U | ST001 | 4.7 | 4.9 U | 0.675 | 5.42 U |
| Di-n-octyl phthalate | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.2 U | 3.8 U | ST001 | 3.15 | 3.3 U | 0.448 | 3.62 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.7 U | 4.7 U | ST001 | 3.92 | 4.1 U | 0.58 | 4.52 U |
| 1,2-Dichlorobenzene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.4 U | 4.1 U | ST001 | 3.42 | 3.6 U | 0.491 | 3.92 U |
| 1,3-Dichlorobenzene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.9 U | 5 U | ST001 | 4.19 | 4.4 U | 0.61 | 4.82 U |
| 1,4-Dichlorobenzene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.34 U | 0.59 U | ST001 | 0.495 | 0.52 U | 0.0725 | 0.566 U |
| 2,4-Dinitrotoluene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 5 U | 8.7 U | ST001 | 7.28 | 7.6 U | 1.07 | 8.34 U |
| 2,6-Dinitrotoluene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 5 U | 8.7 U | ST001 | 7.28 | 7.6 U | 1.07 | 8.34 U |
| 2-Chloronaphthalene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 6.5 U | 12 U | ST001 | 9.63 | 9.8 U | 1.64 | 11.4 U |
| 2-Nitroaniline | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.9 U | 8.4 U | ST001 | 7.04 | 7.3 U | 1.02 | 8.1 U |
| 3,3'-Dichlorobenzidine | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 6.7 U | 12 U | ST001 | 9.85 | 10 U | 1.59 | 11.4 U |
| 3-Nitroaniline | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.7 U | 8.1 U | ST001 | 6.78 | 7.1 U | 0.998 | 7.8 U |
| 4-Bromophenyl phenyl ether | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 4.4 U | ST001 | 3.68 | 3.8 U | 0.543 | 4.22 U |
| 4-Chloroaniline | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.8 U | 6.5 U | ST001 | 5.48 | 5.7 U | 0.793 | 6.26 U |
| 4-Chlorophenyl phenyl ether | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.6 U | 6.2 U | ST001 | 5.23 | 5.5 U | 0.755 | 5.96 U |
| 4-Nitroaniline | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 6.1 U | 11 U | ST001 | 8.87 | 9.2 U | 1.35 | 10.3 U |
| Aniline | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.7 U | 4.7 U | ST001 | 3.92 | 4.1 U | 0.58 | 4.52 U |
| Azobenzene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.3 U | 7.5 U | ST001 | 6.25 | 6.5 U | 0.913 | 7.2 U |
| Benzoic acid | µg/kg | 9 | 5 | 56 | 310 JT | 1600 | ST010 | 718 | 410 | 559 | 1470 J | 260 U | 1600 | ST010 | 521 | 310 JT | 459 | 1340 J |
| Benzyl alcohol | µg/kg | 13 | 8 | 62 | 9.2 J | 35 | ST010 | 15.4 | 12 J | 8.48 | 29.1 | 7.5 U | 35 | ST010 | 13.2 | 11 J | 7.15 | 24.8 |
| Bis(2-chloroethoxy) methane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.4 U | 4.1 U | ST001 | 3.42 | 3.6 U | 0.491 | 3.92 U |
| Bis(2-chloroethyl) ether | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.3 U | 7.5 U | ST001 | 6.25 | 6.5 U | 0.913 | 7.2 U |
| Bis(2-chloroisopropyl) ether | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.2 U | 3.8 U | ST001 | 3.15 | 3.3 U | 0.448 | 3.62 U |
| Carbazole | µg/kg | 13 | 5 | 38 | 3.9 J | 14 JT | ST005 | 6.88 | 4.5 J | 4.24 | 12.7 J | 2.4 U | 14 JT | ST005 | 4.7 | 3.7 U | 3.07 | 10.2 J |
| Dibenzofuran | µg/kg | 13 | 13 | 100 | 0.94 J | 23 | ST004 | 3.86 | 1.4 J | 6.04 | 13.8 | 0.94 J | 23 | ST004 | 3.86 | 1.4 J | 6.04 | 13.8 |
| Hexachlorobenzene | µg/kg | 13 | 2 | 15 | 0.9 J | 2 J | ST003 | 1.45 | 1.45 J | 0.778 | 1.95 J | 0.15 U | 6.1 U | ST012 | 2.2 | 0.9 J | 2.48 | 6.04 U |
| Hexachlorobutadiene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.88 U | 2.9 U | ST008 | 1.47 | 1.4 U | 0.466 | 2.12 U |
| Hexachlorocyclopentadiene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 27 U | 47 U | ST001 | 39.2 | 41 U | 5.8 | 45.2 U |
| Hexachloroethane | µg/kg | 13 | 1 | 8 | 1 | 1 | ST010 | 1 | 1 | -- | 1 | 0.29 U | 1.3 U | ST007; ST015 | 0.678 | 0.5 U | 0.334 | 1.3 U |
| Isophorone | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.9 U | 5 U | ST001 | 4.19 | 4.4 U | 0.61 | 4.82 U |

Table D2.2-1. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, First Quarter (Winter 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| Nitrobenzene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.6 U | 6.2 U | ST001 | 5.23 | 5.5 U | 0.755 | 5.96 U |
| N-Nitrosodimethylamine | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 11 U | 19 U | ST001 | 16.3 | 17 U | 2.36 | 18.4 U |
| N-Nitrosodiphenylamine | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4 U | 6.8 U | ST001 | 5.74 | 6 U | 0.831 | 6.56 U |
| N-Nitrosodipropylamine | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 5.8 U | 9.9 U | ST001 | 8.32 | 8.7 U | 1.21 | 9.54 U |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| 2,3,4,5-Tetrachlorophenol | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.2 U | 2 U | ST001 | 1.65 | 1.7 U | 0.222 | 1.88 U |
| 2,3,5,6-Tetrachlorophenol | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.54 U | 0.93 U | ST001 | 0.792 | 0.82 U | 0.113 | 0.894 U |
| 2,4,5-Trichlorophenol | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.99 U | 1.7 U | ST001 | 1.46 | 1.5 U | 0.204 | 1.64 U |
| 2,4,6-Trichlorophenol | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.7 U | 1.3 U | ST001 | 1.05 | 1.1 U | 0.178 | 1.24 U |
| 2,4-Dichlorophenol | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.3 U | 5.6 U | ST001 | 4.7 | 4.9 U | 0.675 | 5.42 U |
| 2,4-Dimethylphenol | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 9.9 U | 17 U | ST001 | 14.6 | 15 U | 2.04 | 16.4 U |
| 2,4-Dinitrophenol | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 65 U | 120 U | ST001 | 96.3 | 98 U | 16.4 | 114 U |
| 2-Chlorophenol | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.1 U | 5.3 U | ST001 | 4.45 | 4.6 U | 0.64 | 5.12 U |
| 2-Methylphenol | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 6.1 U | 11 U | ST001 | 8.87 | 9.2 U | 1.35 | 10.3 U |
| 2-Nitrophenol | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.7 U | 8.1 U | ST001 | 6.78 | 7.1 U | 0.998 | 7.8 U |
| 4,6-Dinitro-2-methylphenol | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.1 U | 5.3 U | ST001 | 4.45 | 4.6 U | 0.64 | 5.12 U |
| 4-Chloro-3-methylphenol | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.8 U | 6.5 U | ST001 | 5.48 | 5.7 U | 0.793 | 6.26 U |
| 4-Methylphenol | µg/kg | 13 | 12 | 92 | 9.1 J | 770 | ST010 | 273 | 170 | 270 | 688 | 8.2 U | 770 | ST010 | 253 | 140 | 269 | 680 |
| 4-Nitrophenol | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 54 U | 93 U | ST001 | 78 | 82 U | 11.4 | 89.4 U |
| Pentachlorophenol | µg/kg | 13 | 13 | 100 | 0.78 J | 44 | ST007 | 6 | 2.7 J | 11.5 | 21.8 J | 0.78 J | 44 | ST007 | 6 | 2.7 J | 11.5 | 21.8 J |
| Phenol | µg/kg | 13 | 8 | 62 | 26 J | 130 | ST010 | 60 | 56 | 35.1 | 111 | 5.2 U | 130 | ST010 | 40.7 | 26 J | 37 | 98.2 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 13 | 13 | 100 | 21 J | 65 JT | ST005 | 47.7 | 49 J | 10.2 | 59.6 J | 21 J | 65 JT | ST005 | 47.7 | 49 J | 10.2 | 59.6 J |
| Total Petroleum Hydrocarbons (Gasoline) | mg/kg | 13 | 6 | 46 | 1.8 J | 11 JT | ST005 | 6.37 | 7.1 J | 3.7 | 10.4 J | 1.1 UT | 11 JT | ST005 | 3.82 | 1.9 U | 3.43 | 9.62 J |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 13 | 13 | 100 | 230 J | 590 JT | ST005 | 454 | 450 J | 92.5 | 578 J | 230 J | 590 JT | ST005 | 454 | 450 J | 92.5 | 578 J |
| Total Petroleum Hydrocarbons | mg/kg | 13 | 13 | 100 | 250 JT | 670 JT | ST005 | 505 | 500 JT | 105 | 646 J | 250 JT | 670 JT | ST005 | 505 | 500 JT | 105 | 646 J |
| **Herbicides** | | | | | | | | | | | | | | | | | | |
| 2,4,5-T | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 5.8 U | 9.9 U | ST001 | 8.32 | 8.7 U | 1.21 | 9.54 U |
| 2,4-D | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 8.6 U | 71 U | ST013 | 16.2 | 11 UT | 16.6 | 36.8 U |
| 2,4-DB | µg/kg | 13 | 10 | 77 | 14 J | 41 NJ | ST013 | 24.4 | 22.5 J | 8.1 | 36.5 J | 9.9 U | 73 U | ST012 | 30.1 | 23 J | 19.1 | 68.2 U |
| Dalapon | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 25 U | 44 U | ST001 | 36.8 | 38 U | 5.43 | 42.2 U |
| Dicamba | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 7.7 U | 14 U | ST001 | 11.6 | 12 U | 1.91 | 13.4 U |
| Dichloroprop | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 5.6 U | 9.6 U | ST001 | 8.07 | 8.4 U | 1.17 | 9.24 U |
| Dinoseb | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 29 U | 50 U | ST001 | 41.9 | 44 U | 6.1 | 48.2 U |
| MCPA | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4900 U | 8400 U | ST001 | 7040 | 7300 U | 1020 | 8100 U |
| MCPP | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4200 U | 7100 U | ST001 | 6010 | 6300 U | 865 | 6860 U |
| Silvex | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 5.6 U | 58 U | ST007 | 19.4 | 13 U | 14.8 | 49.6 U |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.097 U | 0.17 U | ST001 | 0.144 | 0.15 U | 0.0216 | 0.164 U |
| 1,1,1-Trichloroethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.14 U | 0.24 U | ST001 | 0.202 | 0.21 U | 0.0282 | 0.228 U |
| 1,1,2,2-Tetrachloroethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.22 U | 0.38 U | ST001 | 0.315 | 0.33 U | 0.0448 | 0.362 U |
| 1,1,2-Trichloroethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.13 U | 0.21 U | ST001 | 0.182 | 0.19 U | 0.0254 | 0.204 U |
| 1,1-Dichloroethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.11 U | 0.19 U | ST001 | 0.163 | 0.17 U | 0.0236 | 0.184 U |
| 1,1-Dichloroethene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.15 U | 0.26 U | ST001 | 0.219 | 0.23 U | 0.032 | 0.248 U |
| 1,2,3-Trichloropropane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.33 U | 0.56 U | ST001 | 0.47 | 0.49 U | 0.0675 | 0.542 U |
| 1,2-Dichloroethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.18 U | 0.3 U | ST001 | 0.254 | 0.26 U | 0.0357 | 0.288 U |
| 1,2-Dichloropropane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.12 U | 0.21 U | ST001 | 0.175 | 0.18 U | 0.0257 | 0.204 U |
| 1,4-Dichloro-trans-2-butene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.59 U | 1.1 U | ST001 | 0.864 | 0.9 U | 0.136 | 1.02 U |
| 2-Chloroethyl vinyl ether | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.27 U | 0.47 U | ST001 | 0.392 | 0.41 U | 0.058 | 0.452 U |
| Acetone | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 12 U | 41 UJ | ST010 | 19 | 16.5 U | 9.13 | 33.3 UJ |
| Acrylonitrile | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.83 U | 1.3 U | ST001 | 1.11 | 1.2 U | 0.166 | 1.27 U |
| Benzene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.079 U | 0.14 U | ST001 | 0.118 | 0.12 U | 0.0182 | 0.134 U |
| Bromochloromethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.18 U | 0.31 U | ST001 | 0.258 | 0.27 U | 0.0378 | 0.298 U |
| Bromodichloromethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.072 U | 0.13 U | ST001 | 0.107 | 0.11 U | 0.0173 | 0.124 U |
| Bromoform | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.22 U | 0.38 U | ST001 | 0.315 | 0.33 U | 0.0448 | 0.362 U |
| Bromomethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.5 U | 0.87 U | ST001 | 0.728 | 0.76 U | 0.107 | 0.834 U |
| BTEX | µg/kg | 13 | 6 | 46 | 5.2 T | 310 T | ST007 | 115 | 47.5 | 138 | 300 | 0.2 UT | 310 T | ST007 | 53.2 | 1 UT | 107 | 286 |
| Carbon disulfide | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.12 U | 0.21 U | ST001 | 0.178 | 0.19 U | 0.0259 | 0.204 U |
| Carbon tetrachloride | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.09 U | 0.16 U | ST001 | 0.135 | 0.14 U | 0.0198 | 0.154 U |
| Chlorobenzene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.11 U | 0.19 U | ST001 | 0.159 | 0.17 U | 0.0229 | 0.184 U |

Table D2.2-1. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, First Quarter (Winter 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| Chlorodibromomethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.18 U | 0.31 U | ST001 | 0.264 | 0.28 U | 0.0378 | 0.298 U |
| Chloroethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.36 U | 0.62 U | ST001 | 0.523 | 0.55 U | 0.0755 | 0.596 U |
| Chloroform | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.15 U | 0.25 U | ST001 | 0.209 | 0.22 U | 0.0301 | 0.238 U |
| Chloromethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.14 U | 0.24 U | ST001 | 0.199 | 0.21 U | 0.0287 | 0.228 U |
| cis-1,2-Dichloroethene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.18 U | 0.3 U | ST001 | 0.254 | 0.26 U | 0.0357 | 0.288 U |
| cis-1,3-Dichloropropene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.12 U | 0.2 U | ST001 | 0.165 | 0.17 U | 0.0222 | 0.188 U |
| Dichlorodifluoromethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.11 U | 0.19 U | ST001 | 0.157 | 0.16 U | 0.0232 | 0.184 U |
| Ethylbenzene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.092 U | 0.16 U | ST001 | 0.136 | 0.14 U | 0.0195 | 0.154 U |
| Ethylene dibromide | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.11 U | 0.19 U | ST001 | 0.163 | 0.17 U | 0.0236 | 0.184 U |
| Isopropylbenzene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.16 U | 0.27 U | ST001 | 0.225 | 0.23 U | 0.0315 | 0.258 U |
| m,p-Xylene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.2 U | 0.34 U | ST001 | 0.289 | 0.3 U | 0.0413 | 0.328 U |
| Methyl iodide | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.59 U | 1.1 U | ST001 | 0.864 | 0.9 U | 0.136 | 1.02 U |
| Methyl isobutyl ketone | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.1 U | 1.6 U | ST001 | 1.37 | 1.4 U | 0.17 | 1.57 U |
| Methyl n-butyl ketone | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 6.3 U | 11 U | ST001; ST005; ST012 | 9.25 | 9.5 U | 1.49 | 11 U |
| Methyl tert-butyl ether | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.13 U | 0.22 U | ST001 | 0.188 | 0.2 U | 0.0264 | 0.214 U |
| Methylene bromide | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.13 U | 0.22 U | ST001 | 0.186 | 0.19 U | 0.0263 | 0.214 U |
| Methylene chloride | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.34 U | 1.9 U | ST001 | 0.863 | 0.74 U | 0.467 | 1.72 U |
| Methylethyl ketone | µg/kg | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 8.1 UJ | 8.1 UJ | ST010 | 8.1 | 8.1 UJ | -- | 8.1 UJ |
| o-Xylene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.11 U | 0.18 U | ST001 | 0.154 | 0.16 U | 0.0218 | 0.174 U |
| Styrene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.17 U | 0.29 U | ST001 | 0.243 | 0.25 U | 0.0352 | 0.278 U |
| Tetrachloroethene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.16 U | 0.27 U | ST001 | 0.225 | 0.23 U | 0.0315 | 0.258 U |
| Toluene | µg/kg | 13 | 6 | 46 | 5.2 | 310 | ST007 | 115 | 47.5 | 138 | 300 | 0.18 U | 310 | ST007 | 53.2 | 1 U | 107 | 286 |
| trans-1,2-Dichloroethene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.11 U | 0.19 U | ST001 | 0.157 | 0.16 U | 0.0232 | 0.184 U |
| trans-1,3-Dichloropropene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.12 U | 0.21 U | ST001 | 0.173 | 0.18 U | 0.0253 | 0.198 U |
| Trichloroethene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.15 U | 0.25 U | ST001 | 0.214 | 0.22 U | 0.0299 | 0.244 U |
| Trichlorofluoromethane | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.63 U | 1.1 U | ST001; ST005; ST012 | 0.925 | 0.95 U | 0.149 | 1.1 U |
| Vinyl chloride | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.25 U | 0.44 U | ST001 | 0.368 | 0.38 U | 0.0543 | 0.422 U |
| Xylene | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.2 UT | 0.34 UT | ST001 | 0.289 | 0.3 UT | 0.0413 | 0.328 U |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DDx - total of 2,4' and 4,4'-DDD, -DDE, -DDT
DL - detection limit
HPAH - high molecular weightpolycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
TOC - total organic carbon

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D2.2-2. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Second Quarter (Spring 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| **Grain Size** | | | | | | | | | | | | | | | | | | |
| >9 Phi clay | percent | 12 | 12 | 100 | 4.58 | 8.18 T | ST012 | 6.64 | 6.6 | 1.02 | 8 | 4.58 | 8.18 T | ST012 | 6.64 | 6.6 | 1.02 | 8 |
| 8-9 Phi clay | percent | 12 | 12 | 100 | 4.11 | 6.54 | ST004 | 5.29 | 5.06 | 0.855 | 6.48 | 4.11 | 6.54 | ST004 | 5.29 | 5.06 | 0.855 | 6.48 |
| Coarse sand | percent | 12 | 12 | 100 | 0.2 | 1.48 | ST007 | 0.484 | 0.305 | 0.387 | 1.19 | 0.2 | 1.48 | ST007 | 0.484 | 0.305 | 0.387 | 1.19 |
| Coarse silt | percent | 12 | 12 | 100 | 9.73 | 25.2 | ST015 | 18.1 | 18.5 | 4.7 | 24.4 | 9.73 | 25.2 | ST015 | 18.1 | 18.5 | 4.7 | 24.4 |
| Fine gravel | percent | 12 | 12 | 100 | 0.03 | 1.41 | ST008 | 0.367 | 0.185 | 0.432 | 1.19 | 0.03 | 1.41 | ST008 | 0.367 | 0.185 | 0.432 | 1.19 |
| Fine sand | percent | 12 | 12 | 100 | 0.457 T | 8.29 | ST007 | 3.1 | 2.34 | 2.72 | 7.87 | 0.457 T | 8.29 | ST007 | 3.1 | 2.34 | 2.72 | 7.87 |
| Fine silt | percent | 12 | 12 | 100 | 11.3 | 22.3 T | ST012 | 17.2 | 16.9 | 3.46 | 21.6 | 11.3 | 22.3 T | ST012 | 17.2 | 16.9 | 3.46 | 21.6 |
| Fines | percent | 12 | 12 | 100 | 71.3 T | 98.3 T | ST002 | 87.3 | 89.1 | 8.65 | 97 | 71.3 T | 98.3 T | ST002 | 87.3 | 89.1 | 8.65 | 97 |
| Medium gravel | percent | 12 | 12 | 100 | 0 T | 0 T | ST002; ST003; ST004; ST005; ST007; ST008; ST009; ST010; ST011; ST012; ST015; ST016 | 0 | 0 | 0 | 0 | 0 T | 0 T | ST002; ST003; ST004; ST005; ST007; ST008; ST009; ST010; ST011; ST012; ST015; ST016 | 0 | 0 | 0 | 0 |
| Medium sand | percent | 12 | 12 | 100 | 0.21 T | 5.01 | ST007 | 1.05 | 0.4 | 1.38 | 3.38 | 0.21 T | 5.01 | ST007 | 1.05 | 0.4 | 1.38 | 3.38 |
| Medium silt | percent | 12 | 12 | 100 | 22.1 | 34.9 T | ST012 | 28.9 | 28.8 | 3.43 | 34.4 | 22.1 | 34.9 T | ST012 | 28.9 | 28.8 | 3.43 | 34.4 |
| Very coarse sand | percent | 12 | 12 | 100 | 0.15 | 0.76 | ST009 | 0.373 | 0.325 | 0.206 | 0.689 | 0.15 | 0.76 | ST009 | 0.373 | 0.325 | 0.206 | 0.689 |
| Very fine sand | percent | 12 | 12 | 100 | 0.45 | 16.2 | ST009 | 7.22 | 6.96 | 4.79 | 15.1 | 0.45 | 16.2 | ST009 | 7.22 | 6.96 | 4.79 | 15.1 |
| Very fine silt | percent | 12 | 12 | 100 | 7.96 | 14.6 | ST011 | 11.1 | 11.1 | 2.12 | 13.8 | 7.96 | 14.6 | ST011 | 11.1 | 11.1 | 2.12 | 13.8 |
| **Conventionals** | | | | | | | | | | | | | | | | | | |
| Specific Gravity | NA | 12 | 12 | 100 | 1.2 | 1.31 | ST007 | 1.25 | 1.26 | 0.0314 | 1.3 | 1.2 | 1.31 | ST007 | 1.25 | 1.26 | 0.0314 | 1.3 |
| Total organic carbon | percent | 12 | 12 | 100 | 2.46 | 3.14 | ST008 | 2.83 | 2.77 | 0.229 | 3.12 | 2.46 | 3.14 | ST008 | 2.83 | 2.77 | 0.229 | 3.12 |
| Total solids | percent | 12 | 12 | 100 | 30.7 | 40.7 | ST007 | 35.1 | 34.8 | 3.18 | 40.2 | 30.7 | 40.7 | ST007 | 35.1 | 34.8 | 3.18 | 40.2 |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/kg | 12 | 12 | 100 | 29400 | 48500 | ST016 | 41300 | 42600 | 5910 | 48200 | 29400 | 48500 | ST016 | 41300 | 42600 | 5910 | 48200 |
| Antimony | mg/kg | 12 | 12 | 100 | 0.16 J | 0.25 J | ST002; ST012; ST015 | 0.219 | 0.215 J | 0.0263 | 0.25 J | 0.16 J | 0.25 J | ST002; ST012; ST015 | 0.219 | 0.215 J | 0.0263 | 0.25 J |
| Arsenic | mg/kg | 12 | 12 | 100 | 4.45 T | 5.6 | ST002; ST012 | 4.89 | 4.8 | 0.438 | 5.6 | 4.45 T | 5.6 | ST002; ST012 | 4.89 | 4.8 | 0.438 | 5.6 |
| Cadmium | mg/kg | 12 | 12 | 100 | 0.188 J | 0.308 | ST002 | 0.249 | 0.247 J | 0.0364 | 0.301 J | 0.188 J | 0.308 | ST002 | 0.249 | 0.247 J | 0.0364 | 0.301 J |
| Chromium | mg/kg | 12 | 12 | 100 | 28.7 J | 38.9 J | ST012 | 32.2 | 31.4 J | 2.99 | 37.4 J | 28.7 J | 38.9 J | ST012 | 32.2 | 31.4 J | 2.99 | 37.4 J |
| Chromium hexavalent | mg/kg | 12 | 6 | 50 | 0.09 J | 0.34 J | ST011 | 0.162 | 0.13 J | 0.0937 | 0.3 J | 0.09 J | 0.34 J | ST011 | 0.131 | 0.1 UJ | 0.0709 | 0.252 J |
| Copper | mg/kg | 12 | 12 | 100 | 39.7 | 56 | ST004 | 46 | 44.2 | 5.78 | 55.8 | 39.7 | 56 | ST004 | 46 | 44.2 | 5.78 | 55.8 |
| Lead | mg/kg | 12 | 12 | 100 | 11.5 | 16.4 | ST002 | 14 | 13.9 | 1.92 | 16.2 | 11.5 | 16.4 | ST002 | 14 | 13.9 | 1.92 | 16.2 |
| Mercury | mg/kg | 12 | 12 | 100 | 0.044 | 0.063 | ST004 | 0.0542 | 0.0545 | 0.0058 | 0.0619 | 0.044 | 0.063 | ST004 | 0.0542 | 0.0545 | 0.0058 | 0.0619 |
| Nickel | mg/kg | 12 | 12 | 100 | 24.4 | 32 | ST012 | 27.5 | 27.2 | 2.34 | 31 | 24.4 | 32 | ST012 | 27.5 | 27.2 | 2.34 | 31 |
| Selenium | mg/kg | 12 | 12 | 100 | 0.19 | 0.28 | ST002; ST012 | 0.228 | 0.22 | 0.0319 | 0.28 | 0.19 | 0.28 | ST002; ST012 | 0.228 | 0.22 | 0.0319 | 0.28 |
| Silver | mg/kg | 12 | 12 | 100 | 0.108 | 0.186 | ST011 | 0.152 | 0.152 | 0.0223 | 0.183 | 0.108 | 0.186 | ST011 | 0.152 | 0.152 | 0.0223 | 0.183 |
| Zinc | mg/kg | 12 | 12 | 100 | 93.5 | 143 | ST015 | 123 | 126 | 13.8 | 139 | 93.5 | 143 | ST015 | 123 | 126 | 13.8 | 139 |
| **Butyltins** | | | | | | | | | | | | | | | | | | |
| Butyltin ion | µg/kg | 12 | 12 | 100 | 0.68 J | 3.5 | ST012 | 1.59 | 1.35 J | 0.835 | 2.84 J | 0.68 J | 3.5 | ST012 | 1.59 | 1.35 J | 0.835 | 2.84 J |
| Dibutyltin ion | µg/kg | 12 | 4 | 33 | 4.4 | 11 | ST012 | 7.25 | 6.8 | 2.75 | 10.4 | 1.4 U | 11 | ST012 | 3.92 | 2.9 U | 2.93 | 8.8 |
| Tetrabutyltin | µg/kg | 12 | 0 | 0 | -- | -- | | -- | -- | -- | -- | 0.18 U | 0.23 U | ST002; ST011; ST012 | 0.208 | 0.21 U | 0.0182 | 0.23 U |
| Tributyltin ion | µg/kg | 12 | 10 | 83 | 0.48 J | 4.9 | ST004 | 1.78 | 1.5 J | 1.37 | 4.23 | 0.42 U | 4.9 | ST004 | 1.57 | 1.45 J | 1.33 | 4.08 |
| **PCB Aroclors** | | | | | | | | | | | | | | | | | | |
| Aroclor 1016 | µg/kg | 12 | 0 | 0 | -- | -- | | -- | -- | -- | -- | 4.2 U | 5.6 U | ST011 | 4.91 | 4.9 U | 0.438 | 5.49 U |
| Aroclor 1221 | µg/kg | 12 | 0 | 0 | -- | -- | | -- | -- | -- | -- | 4.2 U | 5.6 U | ST011 | 4.91 | 4.9 U | 0.438 | 5.49 U |
| Aroclor 1232 | µg/kg | 12 | 0 | 0 | -- | -- | | -- | -- | -- | -- | 4.2 U | 5.6 U | ST011 | 4.91 | 4.9 U | 0.438 | 5.49 U |
| Aroclor 1242 | µg/kg | 12 | 7 | 58 | 6.2 J | 9.5 J | ST007 | 7.61 | 7.7 J | 1.38 | 9.35 J | 4.3 U | 9.5 J | ST007 | 6.43 | 6.2 J | 1.8 | 9.23 J |
| Aroclor 1248 | µg/kg | 12 | 0 | 0 | -- | -- | | -- | -- | -- | -- | 4.2 U | 5.6 U | ST011 | 4.91 | 4.9 U | 0.438 | 5.49 U |
| Aroclor 1254 | µg/kg | 12 | 9 | 75 | 7.1 J | 20 J | ST007 | 11.8 | 11 J | 3.96 | 18 J | 4.3 U | 20 J | ST007 | 10.1 | 9.45 J | 4.66 | 17.3 J |
| Aroclor 1260 | µg/kg | 12 | 7 | 58 | 5.9 J | 41 | ST007 | 14.2 | 7.4 J | 13.5 | 35.9 | 4.3 U | 41 | ST007 | 10.3 | 6 J | 11 | 31.7 |
| Aroclor 1262 | µg/kg | 12 | 0 | 0 | -- | -- | | -- | -- | -- | -- | 4.2 U | 5.6 U | ST011 | 4.91 | 4.9 U | 0.438 | 5.49 U |
| Aroclor 1268 | µg/kg | 12 | 0 | 0 | -- | -- | | -- | -- | -- | -- | 4.2 U | 5.6 U | ST011 | 4.91 | 4.9 U | 0.438 | 5.49 U |
| Aroclors | µg/kg | 12 | 10 | 83 | 7.1 JT | 71 JT | ST007 | 26 | 24 J | 19.5 | 58.4 J | 4.3 UT | 71 JT | ST007 | 22.4 | 19.5 J | 19.5 | 55.6 J |
| **PCB Congeners** | | | | | | | | | | | | | | | | | | |
| PCB001 | pg/g | 12 | 11 | 92 | 2.76 | 42 | ST007 | 9.04 | 3.59 | 11.9 | 29.9 | 2.65 UJ | 42 | ST007 | 8.51 | 3.58 | 11.5 | 28.7 |
| PCB002 | pg/g | 12 | 12 | 100 | 3.28 | 9.3 | ST011 | 5.86 | 5.37 | 1.6 | 8.35 | 3.28 | 9.3 | ST011 | 5.86 | 5.37 | 1.6 | 8.35 |
| PCB003 | pg/g | 12 | 12 | 100 | 3.14 | 13.4 | ST007 | 6.46 | 4.68 | 3.81 | 13.1 | 3.14 | 13.4 | ST007 | 6.46 | 4.68 | 3.81 | 13.1 |
| PCB004 & 010 | pg/g | 12 | 9 | 75 | 8.45 | 2030 | ST007 | 249 | 13 | 668 | 1250 | 4.99 U | 2030 | ST007 | 188 | 12.6 | 580 | 954 |
| PCB005 & 008 | pg/g | 12 | 12 | 100 | 20.3 | 141 | ST007 | 51.2 | 26.1 | 47 | 134 | 20.3 | 141 | ST007 | 51.2 | 26.1 | 47 | 134 |
| PCB006 | pg/g | 12 | 6 | 50 | 6.23 | 38.9 | ST015 | 20.6 | 18.8 | 14.6 | 37.8 | 4.98 U | 38.9 | ST015 | 13.4 | 7.2 UJ | 12.4 | 36.4 |
| PCB007 & 009 | pg/g | 12 | 3 | 25 | 11 | 17.2 | ST007 | 14.1 | 14.1 | 3.1 | 16.9 | 4.98 U | 17.2 | ST007 | 7.27 | 5 U | 4.33 | 15.5 |
| PCB011 | pg/g | 12 | 12 | 100 | 107 | 234 | ST010 | 149 | 138 | 39.3 | 224 | 107 | 234 | ST010 | 149 | 138 | 39.3 | 224 |
| PCB012 & 013 | pg/g | 12 | 5 | 42 | 5.31 | 18.7 | ST011 | 10.8 | 9.47 | 5.92 | 17.9 | 4.98 U | 18.7 | ST011 | 7.4 | 5 U | 4.64 | 16.6 |
| PCB014 | pg/g | 12 | 0 | 0 | -- | -- | | -- | -- | -- | -- | 4.98 U | 5.01 U | ST012 | 5 | 5 U | 0.00793 | 5 U |
| PCB015 | pg/g | 12 | 12 | 100 | 19.4 | 162 | ST011 | 53.3 | 35.9 | 43.2 | 136 | 19.4 | 162 | ST011 | 53.3 | 35.9 | 43.2 | 136 |
| PCB016 & 032 | pg/g | 12 | 12 | 100 | 26.7 | 800 | ST007 | 121 | 39 | 219 | 460 | 26.7 | 800 | ST007 | 121 | 39 | 219 | 460 |
| PCB017 | pg/g | 12 | 12 | 100 | 18.6 | 1560 | ST007 | 168 | 31.6 | 439 | 764 | 18.6 | 1560 | ST007 | 168 | 31.6 | 439 | 764 |
| PCB018 | pg/g | 12 | 12 | 100 | 35.7 | 801 | ST007 | 148 | 56.9 | 219 | 510 | 35.7 | 801 | ST007 | 148 | 56.9 | 219 | 510 |

Table D2.2-2. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Second Quarter (Spring 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| PCB019 | pg/g | 12 | 10 | 83 | 8.11 T | 5630 | ST007 | 591 | 30.8 | 1770 | 3130 | 4.85 UJ | 5630 | ST007 | 494 | 16.3 | 1620 | 2570 |
| PCB020 & 021 & 033 | pg/g | 12 | 12 | 100 | 23.6 | 283 | ST007 | 83 | 41.3 | 86.1 | 242 | 23.6 | 283 | ST007 | 83 | 41.3 | 86.1 | 242 |
| PCB022 | pg/g | 12 | 11 | 92 | 17.7 | 127 | ST011 | 51.6 | 31.3 | 40.1 | 117 | 16.8 UJ | 127 | ST011 | 48.7 | 29.8 | 39.5 | 116 |
| PCB023 | pg/g | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.49 U | 2.5 U | ST002; ST005; ST007; ST009; ST010; ST011; ST012; ST015; ST016 | 2.5 | 2.5 U | 0.00452 | 2.5 U |
| PCB024 & 027 | pg/g | 12 | 12 | 100 | 4.31 | 560 | ST007 | 56.2 | 7.75 | 159 | 267 | 4.31 | 560 | ST007 | 56.2 | 7.75 | 159 | 267 |
| PCB025 | pg/g | 12 | 11 | 92 | 8.69 | 85.9 | ST007 | 23.6 | 13 | 23.1 | 62.8 | 7.87 UJ | 85.9 | ST007 | 22.3 | 12.7 | 22.5 | 60.4 |
| PCB026 | pg/g | 12 | 12 | 100 | 13.8 | 148 | ST007 | 38.2 | 21 | 39.2 | 105 | 13.8 | 148 | ST007 | 38.2 | 21 | 39.2 | 105 |
| PCB028 | pg/g | 12 | 12 | 100 | 50.8 | 409 | ST011 | 154 | 93.3 | 124 | 365 | 50.8 | 409 | ST011 | 154 | 93.3 | 124 | 365 |
| PCB029 | pg/g | 12 | 1 | 8 | 3.27 | 3.27 | ST011 | 3.27 | 3.27 | -- | 3.27 | 2.49 U | 3.27 | ST011 | 2.56 | 2.5 U | 0.223 | 2.85 |
| PCB030 | pg/g | 12 | 1 | 8 | 7.11 | 7.11 | ST007 | 7.11 | 7.11 | -- | 7.11 | 2.49 U | 7.11 | ST007 | 2.88 | 2.5 U | 1.33 | 4.57 |
| PCB031 | pg/g | 12 | 12 | 100 | 52.7 | 361 | ST011 | 136 | 91.7 | 100 | 313 | 52.7 | 361 | ST011 | 136 | 91.7 | 100 | 313 |
| PCB034 | pg/g | 12 | 1 | 8 | 12.3 | 12.3 | ST007 | 12.3 | 12.3 | -- | 12.3 | 2.49 U | 12.3 | ST007 | 3.31 | 2.5 U | 2.83 | 6.91 |
| PCB035 | pg/g | 12 | 9 | 75 | 2.54 T | 7.85 | ST011 | 3.8 | 3.3 | 1.66 | 6.55 | 2.5 U | 7.85 | ST011 | 3.71 | 3.29 | 1.58 | 6.43 J |
| PCB036 | pg/g | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.49 U | 2.5 U | ST002; ST005; ST007; ST009; ST010; ST011; ST012; ST015; ST016 | 2.5 | 2.5 U | 0.00452 | 2.5 U |
| PCB037 | pg/g | 12 | 12 | 100 | 17 | 133 | ST011 | 46 | 35.7 | 32.9 | 107 | 17 | 133 | ST011 | 46 | 35.7 | 32.9 | 107 |
| PCB038 | pg/g | 12 | 5 | 42 | 3.68 | 83.2 | ST007 | 20 | 4.22 | 35.3 | 67.5 | 2.49 U | 83.2 | ST007 | 9.78 | 2.5 U | 23.1 | 40 |
| PCB039 | pg/g | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.49 U | 2.5 U | ST002; ST005; ST007; ST009; ST010; ST011; ST012; ST015; ST016 | 2.5 | 2.5 U | 0.00452 | 2.5 U |
| PCB040 | pg/g | 12 | 12 | 100 | 10.3 | 90 | ST007 | 30 | 19.4 | 24.9 | 78.2 | 10.3 | 90 | ST007 | 30 | 19.4 | 24.9 | 78.2 |
| PCB041 & 064 & 071 & 072 | pg/g | 12 | 11 | 92 | 66.5 | 1450 | ST007 | 265 | 118 | 404 | 909 | 2.5 U | 1450 | ST007 | 243 | 111 | 392 | 855 |
| PCB042 & 059 | pg/g | 12 | 12 | 100 | 21.5 | 356 | ST007 | 75.1 | 41.2 | 93.7 | 233 | 21.5 | 356 | ST007 | 75.1 | 41.2 | 93.7 | 233 |
| PCB043 & 049 | pg/g | 12 | 12 | 100 | 70.1 | 4580 | ST007 | 534 | 142 | 1280 | 2280 | 70.1 | 4580 | ST007 | 534 | 142 | 1280 | 2280 |
| PCB044 | pg/g | 12 | 12 | 100 | 69.7 | 1360 | ST007 | 262 | 130 | 359 | 827 | 69.7 | 1360 | ST007 | 262 | 130 | 359 | 827 |
| PCB045 | pg/g | 12 | 12 | 100 | 8.59 | 111 | ST007 | 27.9 | 15.2 | 30.2 | 84.7 | 8.59 | 111 | ST007 | 27.9 | 15.2 | 30.2 | 84.7 |
| PCB046 | pg/g | 12 | 11 | 92 | 4.31 | 275 | ST007 | 34.9 | 8.96 | 79.9 | 151 | 4.31 | 275 | ST007 | 32.5 | 8.55 | 76.7 | 139 |
| PCB047 | pg/g | 12 | 12 | 100 | 29 | 4540 | ST007 | 468 | 74.2 | 1280 | 2160 | 29 | 4540 | ST007 | 468 | 74.2 | 1280 | 2160 |
| PCB048 & 075 | pg/g | 12 | 12 | 100 | 12.8 | 377 | ST007 | 58.8 | 23.2 | 102 | 218 | 12.8 | 377 | ST007 | 58.8 | 23.2 | 102 | 218 |
| PCB050 | pg/g | 12 | 4 | 33 | 2.5 | 165 | ST007 | 43.7 | 3.71 | 80.9 | 141 | 2.49 U | 165 | ST007 | 16.2 | 2.5 U | 46.8 | 76.4 |
| PCB051 | pg/g | 12 | 12 | 100 | 3.75 | 2330 | ST007 | 218 | 14.6 | 666 | 1090 | 3.75 | 2330 | ST007 | 218 | 14.6 | 666 | 1090 |
| PCB052 & 069 | pg/g | 12 | 12 | 100 | 104 | 8120 | ST007 | 901 | 201 | 2280 | 4000 | 104 | 8120 | ST007 | 901 | 201 | 2280 | 4000 |
| PCB053 | pg/g | 12 | 12 | 100 | 10.8 | 7930 | ST007 | 698 | 29.3 | 2280 | 3640 | 10.8 | 7930 | ST007 | 698 | 29.3 | 2280 | 3640 |
| PCB054 | pg/g | 12 | 8 | 67 | 2.54 | 1020 | ST007 | 135 | 8.11 | 358 | 669 | 2.49 UT | 1020 | ST007 | 90.5 | 2.78 | 293 | 469 |
| PCB055 | pg/g | 12 | 6 | 50 | 2.79 | 68.3 | ST007 | 14.9 | 4.67 | 26.2 | 52.7 | 2.49 U | 68.3 | ST007 | 8.7 | 2.65 | 18.8 | 34.1 |
| PCB056 & 060 | pg/g | 12 | 12 | 100 | 44.4 | 201 | ST007 | 91.4 | 72.6 | 51.1 | 185 | 44.4 | 201 | ST007 | 91.4 | 72.6 | 51.1 | 185 |
| PCB057 | pg/g | 12 | 2 | 17 | 3.04 | 32.5 | ST007 | 17.8 | 17.8 | 20.8 | 31 | 2.49 U | 32.5 | ST007 | 5.04 | 2.5 U | 8.65 | 16.3 |
| PCB058 | pg/g | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.49 U | 2.5 U | ST002; ST005; ST007; ST009; ST010; ST011; ST012; ST015; ST016 | 2.5 | 2.5 U | 0.00452 | 2.5 U |
| PCB061 & 070 | pg/g | 12 | 12 | 100 | 98.9 | 969 | ST007 | 250 | 162 | 242 | 630 | 98.9 | 969 | ST007 | 250 | 162 | 242 | 630 |
| PCB062 | pg/g | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.49 U | 2.5 U | ST002; ST005; ST007; ST009; ST010; ST011; ST012; ST015; ST016 | 2.5 | 2.5 U | 0.00452 | 2.5 U |
| PCB063 | pg/g | 12 | 12 | 100 | 2.78 | 17.8 | ST007 | 6.4 | 4.91 | 4.34 | 14 | 2.78 | 17.8 | ST007 | 6.4 | 4.91 | 4.34 | 14 |
| PCB065 | pg/g | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.49 U | 2.5 U | ST002; ST005; ST007; ST009; ST010; ST011; ST012; ST015; ST016 | 2.5 | 2.5 U | 0.00452 | 2.5 U |
| PCB066 & 076 | pg/g | 12 | 12 | 100 | 75.1 | 554 | ST007 | 171 | 129 | 134 | 396 | 75.1 | 554 | ST007 | 171 | 129 | 134 | 396 |
| PCB067 | pg/g | 12 | 11 | 92 | 2.58 | 115 | ST007 | 15.1 | 4.21 | 33.2 | 63.6 | 2.5 U | 115 | ST007 | 14.1 | 4.14 | 31.9 | 58.4 |
| PCB068 | pg/g | 12 | 7 | 58 | 2.73 | 45 | ST007 | 9.6 | 3.67 | 15.6 | 33.1 | 2.49 U | 45 | ST007 | 6.64 | 2.75 | 12.1 | 23.1 |
| PCB073 | pg/g | 12 | 1 | 8 | 184 | 184 | ST007 | 184 | 184 | -- | 184 | 2.49 U | 184 | ST007 | 17.6 | 2.5 U | 52.4 | 84.2 |
| PCB074 | pg/g | 12 | 12 | 100 | 34.9 | 265 | ST007 | 82.6 | 59.3 | 65 | 194 | 34.9 | 265 | ST007 | 82.6 | 59.3 | 65 | 194 |
| PCB077 | pg/g | 12 | 12 | 100 | 11.5 | 32.6 | ST011 | 19.9 | 18.2 | 7.1 | 31.2 | 11.5 | 32.6 | ST011 | 19.9 | 18.2 | 7.1 | 31.2 |
| PCB078 | pg/g | 12 | 1 | 8 | 10.5 | 10.5 | ST007 | 10.5 | 10.5 | -- | 10.5 | 2.49 U | 10.5 | ST007 | 3.16 | 2.5 U | 2.31 | 6.1 |
| PCB079 | pg/g | 12 | 11 | 92 | 2.77 | 82.8 | ST007 | 11.7 | 4.64 | 23.7 | 46.1 | 2.5 U | 82.8 | ST007 | 11 | 4.41 | 22.7 | 42.5 |
| PCB080 | pg/g | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.49 U | 2.5 U | ST002; ST005; ST007; ST009; ST010; ST011; ST012; ST015; ST016 | 2.5 | 2.5 U | 0.00452 | 2.5 U |
| PCB081 | pg/g | 12 | 1 | 8 | 0.847 J | 0.847 J | ST002 | 0.847 | 0.847 J | -- | 0.847 J | 0.411 U | 5.11 UJ | ST007 | 1.4 | 1.01 U | 1.25 | 3.49 UJ |
| PCB082 | pg/g | 12 | 12 | 100 | 18.6 | 204 | ST007 | 51.5 | 33.4 | 51 | 131 | 18.6 | 204 | ST007 | 51.5 | 33.4 | 51 | 131 |

Table D2.2-2. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Second Quarter (Spring 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| PCB083 | pg/g | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.49 U | 2.5 U | ST002; ST005; ST007; ST009; ST010; ST011; ST012; ST015; ST016 | 2.5 | 2.5 U | 0.00452 | 2.5 U |
| PCB084 & 092 | pg/g | 12 | 12 | 100 | 59.1 | 5380 | ST007 | 591 | 126 | 1510 | 2660 | 59.1 | 5380 | ST007 | 591 | 126 | 1510 | 2660 |
| PCB085 & 116 | pg/g | 12 | 12 | 100 | 30.9 | 397 | ST007 | 89 | 53.8 | 100 | 241 | 30.9 | 397 | ST007 | 89 | 53.8 | 100 | 241 |
| PCB086 | pg/g | 12 | 2 | 17 | 3.12 | 64.1 | ST007 | 33.6 | 33.6 | 43.1 | 61.1 | 2.49 U | 64.1 | ST007 | 7.68 | 2.5 U | 17.8 | 30.6 |
| PCB087 & 117 & 125 | pg/g | 12 | 12 | 100 | 56.6 | 2630 | ST007 | 340 | 114 | 724 | 1340 | 56.6 | 2630 | ST007 | 340 | 114 | 724 | 1340 |
| PCB088 & 091 | pg/g | 12 | 12 | 100 | 22.1 | 2750 | ST007 | 285 | 55.6 | 777 | 1320 | 22.1 | 2750 | ST007 | 285 | 55.6 | 777 | 1320 |
| PCB089 | pg/g | 12 | 10 | 83 | 2.86 | 63.1 | ST007 | 9.98 | 3.5 | 18.7 | 37.8 | 2.5 U | 63.1 | ST007 | 8.74 | 3.18 | 17.2 | 32.2 |
| PCB090 & 101 | pg/g | 12 | 12 | 100 | 161 | 25000 | ST007 | 2490 | 392 | 7100 | 11900 | 161 | 25000 | ST007 | 2490 | 392 | 7100 | 11900 |
| PCB093 | pg/g | 12 | 1 | 8 | 8.29 | 8.29 | ST007 | 8.29 | 8.29 | -- | 8.29 | 2.49 U | 8.29 | ST007 | 2.98 | 2.5 U | 1.67 | 5.11 |
| PCB094 | pg/g | 12 | 6 | 50 | 2.61 | 588 | ST007 | 104 | 7.91 | 237 | 444 | 2.49 U | 588 | ST007 | 53.1 | 2.56 | 168 | 270 |
| PCB095 & 098 & 102 | pg/g | 12 | 12 | 100 | 111 | 20900 | ST007 | 2040 | 284 | 5940 | 9970 | 111 | 20900 | ST007 | 2040 | 284 | 5940 | 9970 |
| PCB096 | pg/g | 12 | 10 | 83 | 2.53 T | 675 | ST007 | 72.7 | 6.2 | 212 | 376 | 2.5 U | 675 | ST007 | 61 | 3.81 | 193 | 310 |
| PCB097 | pg/g | 12 | 12 | 100 | 42.9 | 1670 | ST007 | 229 | 85.2 | 456 | 861 | 42.9 | 1670 | ST007 | 229 | 85.2 | 456 | 861 |
| PCB099 | pg/g | 12 | 12 | 100 | 75.5 | 4400 | ST007 | 534 | 177 | 1220 | 2230 | 75.5 | 4400 | ST007 | 534 | 177 | 1220 | 2230 |
| PCB100 | pg/g | 12 | 9 | 75 | 4.89 | 882 | ST007 | 111 | 11.5 | 289 | 543 | 2.49 UT | 882 | ST007 | 84.1 | 5.91 | 252 | 415 |
| PCB103 | pg/g | 12 | 9 | 75 | 2.68 T | 814 | ST007 | 102 | 8.55 | 267 | 507 | 2.5 U | 814 | ST007 | 77.6 | 6.02 | 232 | 392 |
| PCB104 | pg/g | 12 | 2 | 17 | 3.72 | 92.4 | ST007 | 48.1 | 48.1 | 62.7 | 88 | 2.49 U | 92.4 | ST007 | 10.1 | 2.5 U | 25.9 | 43.6 |
| PCB105 | pg/g | 12 | 12 | 100 | 58.3 | 1110 | ST007 | 201 | 106 | 291 | 624 | 58.3 | 1110 | ST007 | 201 | 106 | 291 | 624 |
| PCB106 & 118 | pg/g | 12 | 12 | 100 | 149 | 6720 | ST007 | 866 | 306 | 1850 | 3390 | 149 | 6720 | ST007 | 866 | 306 | 1850 | 3390 |
| PCB107 & 109 | pg/g | 12 | 12 | 100 | 12.3 | 245 | ST007 | 44.7 | 24.9 | 64.2 | 141 | 12.3 | 245 | ST007 | 44.7 | 24.9 | 64.2 | 141 |
| PCB108 & 112 | pg/g | 12 | 12 | 100 | 6.75 | 258 | ST007 | 36.4 | 14.1 | 70.2 | 134 | 6.75 | 258 | ST007 | 36.4 | 14.1 | 70.2 | 134 |
| PCB110 | pg/g | 12 | 12 | 100 | 189 | 13000 | ST007 | 1490 | 388 | 3630 | 6400 | 189 | 13000 | ST007 | 1490 | 388 | 3630 | 6400 |
| PCB111 & 115 | pg/g | 12 | 12 | 100 | 3.37 | 37.8 | ST007 | 9.66 | 6.03 | 9.49 | 25.2 | 3.37 | 37.8 | ST007 | 9.66 | 6.03 | 9.49 | 25.2 |
| PCB113 | pg/g | 12 | 1 | 8 | 114 | 114 | ST007 | 114 | 114 | -- | 114 | 2.49 U | 114 | ST007 | 11.8 | 2.5 U | 32.2 | 52.7 |
| PCB114 | pg/g | 12 | 12 | 100 | 2.9 | 32.6 | ST007 | 9.02 | 6.24 | 8.12 | 22.5 | 2.9 | 32.6 | ST007 | 9.02 | 6.24 | 8.12 | 22.5 |
| PCB119 | pg/g | 12 | 12 | 100 | 3.4 | 665 | ST007 | 67.4 | 10.4 | 188 | 322 | 3.4 | 665 | ST007 | 67.4 | 10.4 | 188 | 322 |
| PCB120 | pg/g | 12 | 2 | 17 | 4.11 | 157 | ST007 | 80.6 | 80.6 | 108 | 149 | 2.49 U | 157 | ST007 | 15.5 | 2.5 U | 44.6 | 72.9 |
| PCB121 | pg/g | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.49 U | 2.5 U | ST002; ST005; ST007; ST009; ST010; ST011; ST012; ST015; ST016 | 2.5 | 2.5 U | 0.00452 | 2.5 U |
| PCB122 | pg/g | 12 | 11 | 92 | 2.51 | 19.4 | ST007 | 5.63 | 3.54 | 4.94 | 14 | 2.5 U | 19.4 | ST007 | 5.37 | 3.42 | 4.8 | 13.5 |
| PCB123 | pg/g | 12 | 11 | 92 | 3.57 | 29.2 | ST007 | 8.09 | 5.48 | 7.27 | 20.1 | 3.57 | 29.2 | ST007 | 8.56 | 5.85 | 7.12 | 20.7 J |
| PCB124 | pg/g | 12 | 12 | 100 | 7.47 | 191 | ST007 | 29.8 | 12.8 | 51.4 | 106 | 7.47 | 191 | ST007 | 29.8 | 12.8 | 51.4 | 106 |
| PCB126 | pg/g | 12 | 12 | 100 | 1.57 J | 36 | ST007 | 5.74 | 2.9 | 9.6 | 19.4 | 1.57 J | 36 | ST007 | 5.74 | 2.9 | 9.6 | 19.4 |
| PCB127 | pg/g | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.49 U | 2.5 U | ST002; ST005; ST007; ST009; ST010; ST011; ST012; ST015; ST016 | 2.5 | 2.5 U | 0.00452 | 2.5 U |
| PCB128 & 162 | pg/g | 12 | 12 | 100 | 13.3 | 2940 | ST007 | 300 | 63.8 | 832 | 1390 | 13.3 | 2940 | ST007 | 300 | 63.8 | 832 | 1390 |
| PCB129 | pg/g | 12 | 12 | 100 | 8.02 | 875 | ST007 | 92 | 19.7 | 247 | 420 | 8.02 | 875 | ST007 | 92 | 19.7 | 247 | 420 |
| PCB130 | pg/g | 12 | 12 | 100 | 9.62 | 1620 | ST007 | 167 | 32.8 | 458 | 778 | 9.62 | 1620 | ST007 | 167 | 32.8 | 458 | 778 |
| PCB131 | pg/g | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.49 U | 2.5 U | ST002; ST005; ST007; ST009; ST010; ST011; ST012; ST015; ST016 | 2.5 | 2.5 U | 0.00452 | 2.5 U |
| PCB132 & 161 | pg/g | 12 | 12 | 100 | 55.3 | 13500 | ST007 | 1270 | 140 | 3850 | 6350 | 55.3 | 13500 | ST007 | 1270 | 140 | 3850 | 6350 |
| PCB133 & 142 | pg/g | 12 | 12 | 100 | 6.27 | 1060 | ST007 | 106 | 17.1 | 301 | 513 | 6.27 | 1060 | ST007 | 106 | 17.1 | 301 | 513 |
| PCB134 & 143 | pg/g | 12 | 12 | 100 | 10.4 | 2690 | ST007 | 252 | 24.7 | 768 | 1260 | 10.4 | 2690 | ST007 | 252 | 24.7 | 768 | 1260 |
| PCB135 | pg/g | 12 | 12 | 100 | 25.4 | 9810 | ST007 | 904 | 77.5 | 2810 | 4600 | 25.4 | 9810 | ST007 | 904 | 77.5 | 2810 | 4600 |
| PCB136 | pg/g | 12 | 12 | 100 | 22.2 | 12600 | ST007 | 1140 | 70.9 | 3610 | 5860 | 22.2 | 12600 | ST007 | 1140 | 70.9 | 3610 | 5860 |
| PCB137 | pg/g | 12 | 11 | 92 | 9.45 | 355 | ST007 | 51.7 | 21.7 | 101 | 196 | 9.45 | 355 | ST007 | 48.4 | 20.8 | 96.9 | 180 |
| PCB138 & 163 & 164 | pg/g | 12 | 12 | 100 | 258 | 58600 | ST007 | 5530 | 590 | 16700 | 27400 | 258 | 58600 | ST007 | 5530 | 590 | 16700 | 27400 |
| PCB139 & 149 | pg/g | 12 | 12 | 100 | 161 | 70600 | ST007 | 6440 | 490 | 20200 | 32900 | 161 | 70600 | ST007 | 6440 | 490 | 20200 | 32900 |
| PCB140 | pg/g | 12 | 8 | 67 | 2.94 | 127 | ST007 | 22.3 | 5.3 | 42.8 | 90.7 | 2.49 UT | 127 | ST007 | 15.7 | 4.32 | 35.5 | 69.9 |
| PCB141 | pg/g | 12 | 12 | 100 | 41.2 | 17000 | ST007 | 1550 | 112 | 4870 | 7900 | 41.2 | 17000 | ST007 | 1550 | 112 | 4870 | 7900 |
| PCB144 | pg/g | 12 | 12 | 100 | 8.8 | 4560 | ST007 | 410 | 26.5 | 1310 | 2110 | 8.8 | 4560 | ST007 | 410 | 26.5 | 1310 | 2110 |
| PCB145 | pg/g | 12 | 1 | 8 | 6.01 | 6.01 | ST007 | 6.01 | 6.01 | -- | 6.01 | 2.49 U | 6.01 | ST007 | 2.79 | 2.5 U | 1.01 | 4.08 |
| PCB146 & 165 | pg/g | 12 | 12 | 100 | 36 | 8150 | ST007 | 784 | 98.9 | 2320 | 3890 | 36 | 8150 | ST007 | 784 | 98.9 | 2320 | 3890 |
| PCB147 | pg/g | 12 | 12 | 100 | 3.95 | 997 | ST007 | 99.9 | 13.9 | 283 | 475 | 3.95 | 997 | ST007 | 99.9 | 13.9 | 283 | 475 |
| PCB148 | pg/g | 12 | 4 | 33 | 3.88 | 93.7 | ST007 | 28.5 | 8.17 | 43.7 | 81.5 | 2.49 U | 93.7 | ST007 | 11.2 | 2.5 U | 26.1 | 49 |
| PCB150 | pg/g | 12 | 3 | 25 | 3.87 | 184 | ST007 | 65.4 | 8.47 | 103 | 166 | 2.49 U | 184 | ST007 | 18.7 | 2.5 U | 52.1 | 87.5 J |
| PCB151 | pg/g | 12 | 12 | 100 | 46.8 | 24500 | ST007 | 2220 | 142 | 7020 | 11400 | 46.8 | 24500 | ST007 | 2220 | 142 | 7020 | 11400 |
| PCB152 | pg/g | 12 | 3 | 25 | 2.79 | 146 | ST007 | 50.9 | 3.79 | 82.4 | 132 | 2.49 U | 146 | ST007 | 14.6 | 2.5 U | 41.4 | 67.8 |
| PCB153 | pg/g | 12 | 12 | 100 | 243 | 76900 | ST007 | 7070 | 576 | 22000 | 35800 | 243 | 76900 | ST007 | 7070 | 576 | 22000 | 35800 |
| PCB154 | pg/g | 12 | 9 | 75 | 3.98 T | 459 | ST007 | 67.6 | 12.2 | 148 | 301 | 2.5 U | 459 | ST007 | 51.7 | 11.4 | 129 | 241 |

Table D2.2-2. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Second Quarter (Spring 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| PCB155 | pg/g | 12 | 1 | 8 | 27.8 | 27.8 | ST007 | 27.8 | 27.8 | -- | 27.8 | 2.49 U | 27.8 | ST007 | 4.61 | 2.5 U | 7.3 | 13.9 |
| PCB156 | pg/g | 12 | 12 | 100 | 20.1 | 3510 | ST007 | 339 | 46.5 | 999 | 1640 | 20.1 | 3510 | ST007 | 339 | 46.5 | 999 | 1640 |
| PCB157 | pg/g | 12 | 12 | 100 | 4.94 | 218 | ST007 | 27.5 | 9.84 | 60.1 | 109 | 4.94 | 218 | ST007 | 27.5 | 9.84 | 60.1 | 109 |
| PCB158 & 160 | pg/g | 12 | 11 | 92 | 23.5 | 5140 | ST007 | 528 | 55.4 | 1530 | 2650 | 2.5 U | 5140 | ST007 | 484 | 55.4 | 1470 | 2410 |
| PCB159 | pg/g | 12 | 12 | 100 | 3.27 | 1000 | ST007 | 92.9 | 7.93 | 286 | 467 | 3.27 | 1000 | ST007 | 92.9 | 7.93 | 286 | 467 |
| PCB166 | pg/g | 12 | 2 | 17 | 2.82 | 17.3 | ST007 | 10.1 | 10.1 | 10.2 | 16.6 | 2.49 U | 17.3 | ST007 | 3.76 | 2.5 U | 4.27 | 9.34 |
| PCB167 | pg/g | 12 | 12 | 100 | 9.53 | 1390 | ST007 | 136 | 20.1 | 395 | 653 | 9.53 | 1390 | ST007 | 136 | 20.1 | 395 | 653 |
| PCB168 | pg/g | 12 | 1 | 8 | 62.6 | 62.6 | ST007 | 62.6 | 62.6 | -- | 62.6 | 2.49 U | 62.6 | ST007 | 7.51 | 2.5 U | 17.4 | 29.5 |
| PCB169 | pg/g | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.331 U | 0.657 U | ST015 | 0.469 | 0.436 U | 0.106 | 0.648 U |
| PCB170 | pg/g | 12 | 12 | 100 | 63.2 | 31500 | ST007 | 2850 | 184 | 9030 | 14600 | 63.2 | 31500 | ST007 | 2850 | 184 | 9030 | 14600 |
| PCB171 | pg/g | 12 | 12 | 100 | 16.7 | 8300 | ST007 | 750 | 47.9 | 2380 | 3840 | 16.7 | 8300 | ST007 | 750 | 47.9 | 2380 | 3840 |
| PCB172 | pg/g | 12 | 12 | 100 | 12.1 | 5200 | ST007 | 473 | 33.5 | 1490 | 2410 | 12.1 | 5200 | ST007 | 473 | 33.5 | 1490 | 2410 |
| PCB173 | pg/g | 12 | 10 | 83 | 2.84 T | 707 | ST007 | 76.8 | 5.55 | 221 | 396 | 2.5 U | 707 | ST007 | 64.4 | 4.97 | 202 | 327 |
| PCB174 | pg/g | 12 | 12 | 100 | 65 | 36700 | ST007 | 3310 | 208 | 10500 | 17000 | 65 | 36700 | ST007 | 3310 | 208 | 10500 | 17000 |
| PCB175 | pg/g | 12 | 12 | 100 | 2.83 | 1740 | ST007 | 156 | 8.61 | 499 | 803 | 2.83 | 1740 | ST007 | 156 | 8.61 | 499 | 803 |
| PCB176 | pg/g | 12 | 12 | 100 | 6.96 | 5050 | ST007 | 452 | 23.7 | 1450 | 2330 | 6.96 | 5050 | ST007 | 452 | 23.7 | 1450 | 2330 |
| PCB177 | pg/g | 12 | 12 | 100 | 42.6 | 20300 | ST007 | 1840 | 124 | 5810 | 9420 | 42.6 | 20300 | ST007 | 1840 | 124 | 5810 | 9420 |
| PCB178 | pg/g | 12 | 12 | 100 | 16.6 | 7430 | ST007 | 677 | 45.4 | 2130 | 3450 | 16.6 | 7430 | ST007 | 677 | 45.4 | 2130 | 3450 |
| PCB179 | pg/g | 12 | 12 | 100 | 29.9 | 17500 | ST007 | 1580 | 90.7 | 5020 | 8120 | 29.9 | 17500 | ST007 | 1580 | 90.7 | 5020 | 8120 |
| PCB180 | pg/g | 12 | 12 | 100 | 157 | 83000 | ST007 | 7510 | 477 | 23800 | 38400 | 157 | 83000 | ST007 | 7510 | 477 | 23800 | 38400 |
| PCB181 | pg/g | 12 | 1 | 8 | 206 | 206 | ST007 | 206 | 206 | -- | 206 | 2.49 U | 206 | ST007 | 19.5 | 2.5 U | 58.7 | 94.1 |
| PCB182 & 187 | pg/g | 12 | 12 | 100 | 95.8 | 46200 | ST007 | 4200 | 284 | 13200 | 21500 | 95.8 | 46200 | ST007 | 4200 | 284 | 13200 | 21500 |
| PCB183 | pg/g | 12 | 12 | 100 | 33.2 | 22500 | ST007 | 2020 | 108 | 6450 | 10400 | 33.2 | 22500 | ST007 | 2020 | 108 | 6450 | 10400 |
| PCB184 | pg/g | 12 | 1 | 8 | 9.24 | 9.24 | ST007 | 9.24 | 9.24 | -- | 9.24 | 2.49 U | 9.24 | ST007 | 3.06 | 2.5 U | 1.95 | 5.53 |
| PCB185 | pg/g | 12 | 12 | 100 | 7.9 | 4110 | ST007 | 370 | 22.5 | 1180 | 1900 | 7.9 | 4110 | ST007 | 370 | 22.5 | 1180 | 1900 |
| PCB186 | pg/g | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.49 U | 2.5 U | ST002; ST005; ST007; ST009; ST010; ST011; ST012; ST015; ST016 | 2.5 | 2.5 U | 0.00452 | 2.5 U |
| PCB188 | pg/g | 12 | 1 | 8 | 46.7 | 46.7 | ST007 | 46.7 | 46.7 | -- | 46.7 | 2.49 U | 46.7 | ST007 | 6.18 | 2.5 U | 12.8 | 22.4 |
| PCB189 | pg/g | 12 | 11 | 92 | 2.37 J | 1060 | ST007 | 104 | 6.39 | 317 | 541 | 2.37 J | 1060 | ST007 | 96 | 6.05 J | 304 | 490 |
| PCB190 | pg/g | 12 | 12 | 100 | 14.6 | 6530 | ST007 | 590 | 37.6 | 1870 | 3020 | 14.6 | 6530 | ST007 | 590 | 37.6 | 1870 | 3020 |
| PCB191 | pg/g | 12 | 11 | 92 | 2.63 | 1260 | ST007 | 124 | 7.83 | 377 | 643 | 2.5 U | 1260 | ST007 | 114 | 7.28 | 361 | 581 |
| PCB192 | pg/g | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.49 U | 2.5 U | ST002; ST005; ST007; ST009; ST010; ST011; ST012; ST015; ST016 | 2.5 | 2.5 U | 0.00452 | 2.5 U |
| PCB193 | pg/g | 12 | 12 | 100 | 8.13 | 3510 | ST007 | 319 | 22.4 | 1010 | 1630 | 8.13 | 3510 | ST007 | 319 | 22.4 | 1010 | 1630 |
| PCB194 | pg/g | 12 | 12 | 100 | 32.9 | 18200 | ST007 | 1650 | 117 | 5210 | 8420 | 32.9 | 18200 | ST007 | 1650 | 117 | 5210 | 8420 |
| PCB195 | pg/g | 12 | 12 | 100 | 16.5 | 8330 | ST007 | 751 | 48.5 | 2390 | 3850 | 16.5 | 8330 | ST007 | 751 | 48.5 | 2390 | 3850 |
| PCB196 & 203 | pg/g | 12 | 12 | 100 | 38.9 | 21500 | ST007 | 1960 | 149 | 6150 | 9950 | 38.9 | 21500 | ST007 | 1960 | 149 | 6150 | 9950 |
| PCB197 | pg/g | 12 | 9 | 75 | 3 | 715 | ST007 | 85.9 | 5.72 | 236 | 435 | 2.5 U | 715 | ST007 | 65.1 | 4.6 | 205 | 330 |
| PCB198 | pg/g | 12 | 10 | 83 | 2.78 | 1060 | ST007 | 115 | 9.08 | 332 | 593 | 2.5 U | 1060 | ST007 | 96.2 | 7.05 | 304 | 489 |
| PCB199 | pg/g | 12 | 12 | 100 | 33.7 | 18200 | ST007 | 1680 | 147 | 5200 | 8450 | 33.7 | 18200 | ST007 | 1680 | 147 | 5200 | 8450 |
| PCB200 | pg/g | 12 | 12 | 100 | 4.05 | 2370 | ST007 | 216 | 15.6 | 678 | 1100 | 4.05 | 2370 | ST007 | 216 | 15.6 | 678 | 1100 |
| PCB201 | pg/g | 12 | 12 | 100 | 4.6 | 2240 | ST007 | 205 | 15.3 | 641 | 1040 | 4.6 | 2240 | ST007 | 205 | 15.3 | 641 | 1040 |
| PCB202 | pg/g | 12 | 12 | 100 | 10.3 | 2770 | ST007 | 261 | 27 | 791 | 1290 | 10.3 | 2770 | ST007 | 261 | 27 | 791 | 1290 |
| PCB204 | pg/g | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.49 U | 2.5 U | ST002; ST005; ST007; ST009; ST010; ST011; ST012; ST015; ST016 | 2.5 | 2.5 U | 0.00452 | 2.5 U |
| PCB205 | pg/g | 12 | 10 | 83 | 3.19 T | 810 | ST007 | 88.3 | 6.7 | 254 | 454 | 2.5 U | 810 | ST007 | 74 | 5.37 | 232 | 375 |
| PCB206 | pg/g | 12 | 12 | 100 | 25.4 | 3210 | ST007 | 365 | 70.5 | 903 | 1690 | 25.4 | 3210 | ST007 | 365 | 70.5 | 903 | 1690 |
| PCB207 | pg/g | 12 | 12 | 100 | 2.72 | 388 | ST007 | 40.2 | 8.06 | 110 | 183 | 2.72 | 388 | ST007 | 40.2 | 8.06 | 110 | 183 |
| PCB208 | pg/g | 12 | 12 | 100 | 8.49 | 452 | ST007 | 58.5 | 19.4 | 125 | 235 | 8.49 | 452 | ST007 | 58.5 | 19.4 | 125 | 235 |
| PCB209 | pg/g | 12 | 12 | 100 | 46 | 284 | ST005 | 97.6 | 75.8 | 67.7 | 224 | 46 | 284 | ST005 | 97.6 | 75.8 | 67.7 | 224 |
| Total PCB Congeners | µg/kg | 12 | 12 | 100 | 4.07 JT | 840 T | ST007 | 80.6 | 10.2 | 239 | 395 | 4.07 JT | 840 T | ST007 | 80.6 | 10.2 | 239 | 395 |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 12 | 12 | 100 | 0.000166 JT | 0.00403 T | ST007 | 0.000627 | 0.000309 | 0.00108 | 0.00216 | 0.000166 JT | 0.00403 T | ST007 | 0.000627 | 0.000309 | 0.00108 | 0.00216 |
| **PCBs[c]** | | | | | | | | | | | | | | | | | | |
| Total PCBs | µg/kg | 12 | 12 | 100 | 4.07 JT | 840 T | ST007 | 80.6 | 10.2 | 239 | 395 | 4.07 JT | 840 T | ST007 | 80.6 | 10.2 | 239 | 395 |
| **PCB Homologs** | | | | | | | | | | | | | | | | | | |
| Dichlorobiphenyl homologs | pg/g | 12 | 12 | 100 | 177 T | 2410 T | ST007 | 458 | 248 | 626 | 1370 | 177 T | 2410 T | ST007 | 458 | 248 | 626 | 1370 |
| Heptachlorobiphenyl homologs | pg/g | 12 | 12 | 100 | 578 JT | 303000 T | ST007 | 27400 | 1740 | 86800 | 140000 | 578 JT | 303000 T | ST007 | 27400 | 1740 | 86800 | 140000 |
| Hexachlorobiphenyl homologs | pg/g | 12 | 12 | 100 | 1040 T | 319000 T | ST007 | 29600 | 2680 | 91200 | 149000 | 1040 T | 319000 T | ST007 | 29600 | 2680 | 91200 | 149000 |
| Monochlorobiphenyl homologs | pg/g | 12 | 12 | 100 | 9.5 T | 62.1 T | ST007 | 20.6 | 13.1 | 15.8 | 49.9 | 9.5 T | 62.1 T | ST007 | 20.6 | 13.1 | 15.8 | 49.9 |
| Nonachlorobiphenyl homologs | pg/g | 12 | 12 | 100 | 36.6 T | 4050 T | ST007 | 464 | 98.1 | 1140 | 2100 | 36.6 T | 4050 T | ST007 | 464 | 98.1 | 1140 | 2100 |
| Octachlorobiphenyl homologs | pg/g | 12 | 12 | 100 | 144 T | 76200 T | ST007 | 6960 | 551 | 21800 | 35300 | 144 T | 76200 T | ST007 | 6960 | 551 | 21800 | 35300 |

Table D2.2-2. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Second Quarter (Spring 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| Pentachlorobiphenyl homologs | pg/g | 12 | 12 | 100 | 1020 JT | 89100 T | ST007 | 9730 | 2280 | 25000 | 43500 | 1020 JT | 89100 T | ST007 | 9730 | 2280 | 25000 | 43500 |
| Tetrachlorobiphenyl homologs | pg/g | 12 | 12 | 100 | 684 T | 35300 T | ST007 | 4330 | 1270 J | 9790 | 17700 | 684 T | 35300 T | ST007 | 4330 | 1270 J | 9790 | 17700 |
| Trichlorobiphenyl homologs | pg/g | 12 | 12 | 100 | 262 T | 10700 T | ST007 | 1520 | 514 | 2940 | 5910 | 262 T | 10700 T | ST007 | 1520 | 514 | 2940 | 5910 |
| **Dioxins/Furans Homologs** | | | | | | | | | | | | | | | | | | |
| Heptachlorodibenzofuran homologs | pg/g | 12 | 11 | 92 | 0.893 | 18.7 | ST009 | 8.86 | 8.92 | 5.17 | 16.3 | 0.893 | 18.7 | ST009 | 8.41 | 8.58 | 5.17 | 16.1 |
| Heptachlorodibenzo-p-dioxin homologs | pg/g | 12 | 10 | 83 | 14.1 | 52 | ST004 | 37.3 | 44.2 | 15.6 | 51.4 | 7.96 U | 52 | ST004 | 32.6 | 40.2 | 17.8 | 51.2 |
| Hexachlorodibenzofuran homologs | pg/g | 12 | 11 | 92 | 0.346 | 12.5 | ST005 | 3.91 | 2.87 | 3.46 | 9.62 | 0.346 | 12.5 | ST005 | 3.7 | 2.77 | 3.37 | 9.34 |
| Hexachlorodibenzo-p-dioxin homologs | pg/g | 12 | 10 | 83 | 0.427 | 7.22 | ST009 | 3.38 | 3.45 | 1.96 | 6.2 | 0.17 U | 7.22 | ST009 | 2.95 | 3.04 | 2.05 | 5.98 |
| Octachlorodibenzofuran | pg/g | 12 | 12 | 100 | 2.86 J | 62.7 J | ST008 | 16.6 | 14.8 J | 16.8 | 46.2 J | 2.86 J | 62.7 J | ST008 | 16.6 | 14.8 J | 16.8 | 46.2 J |
| Octachlorodibenzo-p-dioxin | pg/g | 12 | 11 | 92 | 26.2 | 210 | ST004 | 113 | 115 J | 59.1 | 190 | 26.2 | 210 | ST004 | 107 | 113 J | 60.1 | 188 |
| Pentachlorodibenzofuran homologs | pg/g | 12 | 11 | 92 | 0.124 | 5.06 | ST005 | 1.68 | 1.65 | 1.42 | 4.03 | 0.11 U | 5.06 | ST005 | 1.55 | 1.35 | 1.43 | 3.93 |
| Pentachlorodibenzo-p-dioxin homologs | pg/g | 12 | 2 | 17 | 0.307 | 0.32 | ST008 | 0.314 | 0.314 | 0.00919 | 0.319 | 0.087 U | 0.32 | ST008 | 0.163 | 0.113 U | 0.0888 | 0.313 |
| Tetrachlorodibenzofuran homologs | pg/g | 12 | 3 | 25 | 0.672 | 0.927 | ST005 | 0.771 | 0.714 | 0.137 | 0.906 | 0.133 U | 0.927 | ST005 | 0.358 | 0.217 U | 0.271 | 0.81 |
| Tetrachlorodibenzo-p-dioxin homologs | pg/g | 12 | 3 | 25 | 0.611 | 0.902 | ST011 | 0.794 | 0.868 | 0.159 | 0.899 | 0.124 U | 0.902 | ST011 | 0.329 | 0.173 U | 0.294 | 0.883 |
| **PCDD/Fs Homologs** | | | | | | | | | | | | | | | | | | |
| Total PCDD/Fs | pg/g | 12 | 12 | 100 | 5.16 JT | 304 JT | ST004 | 167 | 202 J | 104 | 286 J | 5.16 JT | 304 JT | ST004 | 167 | 202 J | 104 | 286 J |
| **Dioxins/Furans** | | | | | | | | | | | | | | | | | | |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran | pg/g | 12 | 10 | 83 | 0.831 J | 5.55 | ST009 | 2.94 | 2.91 J | 1.65 | 5.21 J | 0.831 J | 5.55 | ST009 | 3.02 | 2.91 J | 1.72 | 5.46 |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin | pg/g | 12 | 10 | 83 | 3.58 J | 24.4 | ST004 | 13 | 12.9 J | 7.84 | 23.1 | 3.58 J | 24.4 | ST004 | 12.7 | 11.3 UJ | 7.13 | 22.7 |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran | pg/g | 12 | 4 | 33 | 0.189 J | 1.72 J | ST005 | 0.655 | 0.357 J | 0.715 | 1.52 J | 0.101 U | 1.72 J | ST005 | 0.315 | 0.17 J | 0.453 | 1.02 J |
| 1,2,3,4,7,8-Hexachlorodibenzofuran | pg/g | 12 | 9 | 75 | 0.184 J | 8.08 | ST005 | 1.34 | 0.415 J | 2.56 | 5.43 J | 0.078 U | 8.08 | ST005 | 1.03 | 0.307 J | 2.25 | 4.44 J |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.123 U | 0.323 U | ST011 | 0.188 | 0.185 U | 0.0619 | 0.286 U |
| 1,2,3,6,7,8-Hexachlorodibenzofuran | pg/g | 12 | 3 | 25 | 0.316 J | 1.21 J | ST005 | 0.685 | 0.527 J | 0.468 | 1.14 J | 0.064 U | 1.21 J | ST005 | 0.277 | 0.174 U | 0.32 | 0.835 J |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 12 | 5 | 42 | 0.463 J | 1.07 J | ST009 | 0.727 | 0.671 J | 0.237 | 1.02 J | 0.135 U | 1.31 U | ST004 | 0.614 | 0.627 J | 0.388 | 1.18 J |
| 1,2,3,7,8,9-Hexachlorodibenzofuran | pg/g | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.072 U | 0.251 U | ST003 | 0.146 | 0.128 U | 0.0611 | 0.233 U |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | pg/g | 12 | 6 | 50 | 0.308 J | 0.866 J | ST009 | 0.535 | 0.439 J | 0.221 | 0.838 J | 0.125 U | 0.866 J | ST009 | 0.376 | 0.345 U | 0.234 | 0.804 J |
| 1,2,3,7,8-Pentachlorodibenzofuran | pg/g | 12 | 2 | 17 | 0.37 J | 2.09 J | ST005 | 1.23 | 1.23 J | 1.21 | 2 J | 0.055 U | 2.09 J | ST005 | 0.292 | 0.099 U | 0.573 | 1.14 J |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | pg/g | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.087 U | 0.263 U | ST011 | 0.13 | 0.112 U | 0.0558 | 0.241 U |
| 2,3,4,6,7,8-Hexachlorodibenzofuran | pg/g | 12 | 2 | 17 | 0.279 J | 0.746 J | ST012 | 0.513 | 0.513 J | 0.33 | 0.723 J | 0.066 U | 0.746 J | ST012 | 0.204 | 0.149 U | 0.181 | 0.489 J |
| 2,3,4,7,8-Pentachlorodibenzofuran | pg/g | 12 | 1 | 8 | 0.48 J | 0.48 J | ST005 | 0.48 | 0.48 J | -- | 0.48 J | 0.074 U | 0.48 J | ST005 | 0.18 | 0.11 U | 0.147 | 0.47 J |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/g | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.133 U | 1.91 U | ST005 | 0.544 | 0.217 U | 0.61 | 1.61 U |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | pg/g | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.124 U | 0.357 U | ST011 | 0.182 | 0.146 U | 0.0804 | 0.349 U |
| **PCDD/Fs** | | | | | | | | | | | | | | | | | | |
| TCDD TEQ (ND=0) | pg/g | 12 | 12 | 100 | 0.0529 JT | 1.42 JT | ST005 | 0.372 | 0.295 J | 0.379 | 0.961 J | 0.0529 JT | 1.42 JT | ST005 | 0.372 | 0.295 J | 0.379 | 0.961 J |
| **TCDD TEQ** | | | | | | | | | | | | | | | | | | |
| Total TCDD TEQ (ND = 0) | pg/g | 12 | 12 | 100 | 0.226 JT | 4.1 JT | ST007 | 0.999 | 0.769 J | 1.06 | 2.8 J | 0.226 JT | 4.1 JT | ST007 | 0.999 | 0.769 J | 1.06 | 2.8 J |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| 2,4'-DDD | µg/kg | 12 | 3 | 25 | 0.83 J | 1.5 | ST007 | 1.14 | 1.1 | 0.337 | 1.46 | 0.53 U | 1.5 | ST007 | 0.772 | 0.67 U | 0.275 | 1.28 |
| 2,4'-DDE | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.57 U | 0.75 U | ST011 | 0.664 | 0.67 U | 0.0582 | 0.739 U |
| 2,4'-DDT | µg/kg | 12 | 10 | 83 | 0.45 J | 3 NJ | ST007 | 0.965 | 0.675 J | 0.792 | 2.37 J | 0.43 U | 3 NJ | ST007 | 0.893 | 0.625 J | 0.738 | 2.23 J |
| 4,4'-DDD | µg/kg | 12 | 12 | 100 | 0.76 J | 2.5 | ST005 | 1.15 | 0.97 J | 0.491 | 2.06 | 0.76 J | 2.5 | ST005 | 1.15 | 0.97 J | 0.491 | 2.06 |
| 4,4'-DDE | µg/kg | 12 | 12 | 100 | 1.8 | 2.5 | ST012 | 2.16 | 2.2 | 0.223 | 2.45 | 1.8 | 2.5 | ST012 | 2.16 | 2.2 | 0.223 | 2.45 |
| 4,4'-DDT | µg/kg | 12 | 8 | 67 | 1.9 NJ | 3.3 NJ | ST015 | 2.45 | 2.45 J | 0.424 | 3.06 J | 0.98 U | 3.3 NJ | ST015 | 2.16 | 2.4 J | 0.746 | 3.14 J |
| Aldrin | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.38 U | 0.78 U | ST007 | 0.47 | 0.445 U | 0.103 | 0.621 U |
| alpha-Endosulfan | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.46 U | 1.4 U | ST004 | 0.627 | 0.52 U | 0.275 | 1.13 U |
| alpha-Hexachlorocyclohexane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.64 U | 0.85 U | ST011 | 0.751 | 0.75 U | 0.0668 | 0.839 U |
| beta-Endosulfan | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.47 U | 0.62 U | ST011 | 0.549 | 0.55 U | 0.0481 | 0.615 U |
| beta-Hexachlorocyclohexane | µg/kg | 12 | 1 | 8 | 0.88 J | 0.88 J | ST007 | 0.88 | 0.88 J | -- | 0.88 J | 0.76 U | 0.98 U | ST011 | 0.877 | 0.875 J | 0.0649 | 0.964 U |
| cis-Chlordane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.57 U | 0.75 U | ST011 | 0.664 | 0.67 U | 0.0582 | 0.739 U |
| cis-Nonachlor | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.21 U | 1.5 U | ST007 | 0.36 | 0.255 U | 0.361 | 0.873 U |
| delta-Hexachlorocyclohexane | µg/kg | 12 | 2 | 17 | 0.19 J | 0.37 NJ | ST005 | 0.28 | 0.28 J | 0.127 | 0.361 J | 0.14 U | 0.56 U | ST007 | 0.217 | 0.175 U | 0.124 | 0.456 J |
| Dieldrin | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.72 U | 0.95 U | ST011 | 0.838 | 0.84 U | 0.0734 | 0.934 U |
| Endosulfan sulfate | µg/kg | 12 | 3 | 25 | 0.27 J | 0.49 J | ST010 | 0.353 | 0.3 J | 0.119 | 0.471 J | 0.22 U | 0.99 U | ST005 | 0.469 | 0.3 J | 0.311 | 0.985 U |
| Endrin | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.5 U | 0.66 U | ST011 | 0.585 | 0.58 U | 0.047 | 0.649 U |
| Endrin aldehyde | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.14 U | 0.23 U | ST011 | 0.163 | 0.16 U | 0.0238 | 0.197 U |
| Endrin ketone | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.21 U | 1.8 U | ST015 | 0.761 | 0.625 U | 0.59 | 1.64 U |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.38 U | 0.99 U | ST005; ST007 | 0.545 | 0.48 U | 0.212 | 0.99 U |
| Heptachlor | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.21 U | 0.86 U | ST011 | 0.448 | 0.26 U | 0.283 | 0.855 U |
| Heptachlor epoxide | µg/kg | 12 | 1 | 8 | 0.61 J | 0.61 J | ST008 | 0.61 | 0.61 J | -- | 0.61 J | 0.32 U | 0.61 J | ST008 | 0.4 | 0.385 U | 0.0746 | 0.511 J |
| Methoxychlor | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.26 U | 1.7 U | ST015 | 0.608 | 0.375 U | 0.472 | 1.48 U |
| Mirex | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.25 U | 0.49 U | ST004 | 0.308 | 0.29 U | 0.0624 | 0.402 U |
| Oxychlordane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.91 U | 1.3 U | ST011 | 1.1 | 1.1 U | 0.115 | 1.25 U |
| Total chlordanes | µg/kg | 12 | 7 | 58 | 0.22 NJT | 0.84 JT | ST007 | 0.501 | 0.45 JT | 0.244 | 0.837 J | 0.22 NJT | 1.3 UT | ST011 | 0.753 | 0.835 J | 0.371 | 1.25 U |
| Total DDD | µg/kg | 12 | 12 | 100 | 0.76 JT | 3.3 JT | ST005 | 1.43 | 1.04 | 0.806 | 2.86 J | 0.76 JT | 3.3 JT | ST005 | 1.43 | 1.04 | 0.806 | 2.86 J |
| Total DDE | µg/kg | 12 | 12 | 100 | 1.8 T | 2.5 T | ST012 | 2.16 | 2.2 | 0.223 | 2.45 | 1.8 T | 2.5 T | ST012 | 2.16 | 2.2 | 0.223 | 2.45 |
| Total DDT | µg/kg | 12 | 11 | 92 | 0.57 JT | 4.9 NJT | ST015 | 2.66 | 3 NJT | 1.18 | 4.1 J | 0.57 JT | 4.9 NJT | ST015 | 2.52 | 2.95 J | 1.23 | 4.02 J |

Table D2.2-2. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Second Quarter (Spring 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| DDx | µg/kg | 12 | 12 | 100 | 2.8 JT | 9 NJT | ST015 | 6.04 | 6.05 J | 1.79 | 8.95 J | 2.8 JT | 9 NJT | ST015 | 6.04 | 6.05 J | 1.79 | 8.95 J |
| Total Endosulfan | µg/kg | 12 | 3 | 25 | 0.27 JT | 0.49 JT | ST010 | 0.353 | 0.3 JT | 0.119 | 0.471 J | 0.27 JT | 1.4 UT | ST004 | 0.65 | 0.55 U | 0.321 | 1.17 U |
| Toxaphene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 23 U | 60 U | ST007 | 30.6 | 28 U | 9.94 | 46.8 U |
| trans-Chlordane | µg/kg | 12 | 7 | 58 | 0.22 NJ | 0.84 J | ST007 | 0.459 | 0.45 J | 0.199 | 0.747 J | 0.17 U | 0.84 J | ST007 | 0.348 | 0.28 J | 0.201 | 0.67 J |
| trans-Nonachlor | µg/kg | 12 | 1 | 8 | 0.3 J | 0.3 J | ST005 | 0.3 | 0.3 J | -- | 0.3 J | 0.22 U | 0.95 U | ST004 | 0.319 | 0.26 U | 0.2 | 0.592 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | µg/kg | 12 | 12 | 100 | 1.1 J | 21 | ST005 | 4.32 | 2.45 J | 5.46 | 12.6 | 1.1 J | 21 | ST005 | 4.32 | 2.45 J | 5.46 | 12.6 |
| Acenaphthene | µg/kg | 12 | 9 | 75 | 1.1 J | 56 | ST005 | 9.08 | 3.5 J | 17.7 | 35.9 | 0.58 U | 56 | ST005 | 6.96 | 2.4 J | 15.5 | 28.3 |
| Acenaphthylene | µg/kg | 12 | 12 | 100 | 0.96 J | 19 | ST005 | 4.01 | 2.1 J | 5.17 | 13.3 | 0.96 J | 19 | ST005 | 4.01 | 2.1 J | 5.17 | 13.3 |
| Anthracene | µg/kg | 12 | 11 | 92 | 1.2 J | 100 | ST005 | 14 | 4.7 | 28.8 | 56.5 | 1.2 J | 100 | ST005 | 12.9 | 3.85 J | 27.7 | 52.1 |
| Benzo(a)anthracene | µg/kg | 12 | 12 | 100 | 4.6 | 290 | ST005 | 39.2 | 13 | 80 | 159 | 4.6 | 290 | ST005 | 39.2 | 13 | 80 | 159 |
| Benzo(a)pyrene | µg/kg | 12 | 12 | 100 | 7.6 | 440 | ST005 | 62.7 | 20.5 | 121 | 250 | 7.6 | 440 | ST005 | 62.7 | 20.5 | 121 | 250 |
| Benzo(b)fluoranthene | µg/kg | 12 | 12 | 100 | 6.8 | 360 | ST005 | 52.7 | 19.5 | 98.7 | 205 | 6.8 | 360 | ST005 | 52.7 | 19.5 | 98.7 | 205 |
| Benzo(g,h,i)perylene | µg/kg | 12 | 12 | 100 | 6.2 | 370 | ST005 | 53.1 | 17.5 | 102 | 213 | 6.2 | 370 | ST005 | 53.1 | 17.5 | 102 | 213 |
| Benzo(k)fluoranthene | µg/kg | 12 | 12 | 100 | 2.4 J | 130 | ST005 | 19.1 | 7.3 | 35.6 | 73.3 | 2.4 J | 130 | ST005 | 19.1 | 7.3 | 35.6 | 73.3 |
| Chrysene | µg/kg | 12 | 12 | 100 | 6.4 | 370 | ST005 | 53 | 21 | 101 | 206 | 6.4 | 370 | ST005 | 53 | 21 | 101 | 206 |
| Dibenzo(a,h)anthracene | µg/kg | 12 | 12 | 100 | 0.95 J | 50 | ST005 | 7.2 | 2.8 J | 13.8 | 28.6 | 0.95 J | 50 | ST005 | 7.2 | 2.8 J | 13.8 | 28.6 |
| Fluoranthene | µg/kg | 12 | 12 | 100 | 9.6 | 530 | ST005 | 77 | 35.5 | 144 | 283 | 9.6 | 530 | ST005 | 77 | 35.5 | 144 | 283 |
| Fluorene | µg/kg | 12 | 8 | 67 | 1.8 J | 30 | ST005 | 6.5 | 3.3 J | 9.56 | 21.1 | 1.3 U | 30 | ST005 | 4.8 | 2.25 J | 8.03 | 16.1 |
| Total HPAH | µg/kg | 12 | 12 | 100 | 69 JT | 3500 T | ST005 | 498 | 185 J | 960 | 1940 | 69 JT | 3500 T | ST005 | 498 | 185 J | 960 | 1940 |
| Indeno(1,2,3-cd)pyrene | µg/kg | 12 | 12 | 100 | 5.2 | 330 | ST005 | 46 | 14 | 91.5 | 190 | 5.2 | 330 | ST005 | 46 | 14 | 91.5 | 190 |
| Total LPAH | µg/kg | 12 | 12 | 100 | 8.2 JT | 580 T | ST005 | 81 | 30.5 J | 159 | 309 | 8.2 JT | 580 T | ST005 | 81 | 30.5 J | 159 | 309 |
| Naphthalene | µg/kg | 12 | 4 | 33 | 11 | 58 | ST005 | 23.3 | 12 | 23.2 | 51.1 | 0.41 U | 58 | ST005 | 8.12 | 0.635 UJ | 16.5 | 32.7 |
| Phenanthrene | µg/kg | 12 | 12 | 100 | 4.8 | 300 | ST005 | 41.2 | 18 | 82.1 | 156 | 4.8 | 300 | ST005 | 41.2 | 18 | 82.1 | 156 |
| Pyrene | µg/kg | 12 | 12 | 100 | 10 | 660 | ST005 | 90.3 | 35 | 181 | 349 | 10 | 660 | ST005 | 90.3 | 35 | 181 | 349 |
| Total cPAH (BaPEq) | µg/kg | 12 | 12 | 100 | 10.8 JT | 590 T | ST005 | 84 | 27.6 J | 162 | 335 | 10.8 JT | 590 T | ST005 | 84 | 27.6 J | 162 | 335 |
| Total cPAHs | µg/kg | 12 | 12 | 100 | 39 JT | 2000 T | ST005 | 282 | 95.5 J | 551 | 1130 | 39 JT | 2000 T | ST005 | 282 | 95.5 J | 551 | 1130 |
| Total PAHs | µg/kg | 12 | 12 | 100 | 77 JT | 4100 T | ST005 | 581 | 225 J | 1120 | 2260 | 77 JT | 4100 T | ST005 | 581 | 225 J | 1120 | 2260 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl) phthalate | µg/kg | 12 | 12 | 100 | 85 | 290 | ST007 | 148 | 140 | 50.2 | 219 | 85 | 290 | ST007 | 148 | 140 | 50.2 | 219 |
| Butylbenzyl phthalate | µg/kg | 12 | 3 | 25 | 13 J | 21 | ST007 | 16 | 14 | 4.36 | 20.3 | 8.7 U | 21 | ST007 | 11.2 | 9.6 U | 3.54 | 17.2 |
| Dibutyl phthalate | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 20 U | 26 U | ST011 | 23 | 23 U | 1.91 | 25.5 U |
| Diethyl phthalate | µg/kg | 12 | 7 | 58 | 4.4 J | 8.3 J | ST007 | 5.4 | 4.7 J | 1.4 | 7.64 J | 3.3 U | 8.3 J | ST007 | 4.68 | 4.45 J | 1.37 | 7.09 J |
| Dimethyl phthalate | µg/kg | 12 | 1 | 8 | 11 J | 11 J | ST015 | 11 | 11 J | -- | 11 J | 2.5 U | 11 J | ST015 | 3.59 | 2.95 U | 2.35 | 6.76 J |
| Di-n-octyl phthalate | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.2 U | 5.6 U | ST011 | 4.91 | 4.9 U | 0.438 | 5.49 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 6.4 U | 8.5 U | ST011 | 7.51 | 7.5 U | 0.668 | 8.39 U |
| 1,2-Dichlorobenzene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 7.2 U | 9.5 U | ST011 | 8.38 | 8.4 U | 0.734 | 9.34 U |
| 1,3-Dichlorobenzene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 7.4 U | 9.8 U | ST011 | 8.65 | 8.7 U | 0.759 | 9.64 U |
| 1,4-Dichlorobenzene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.29 U | 2.9 U | ST007 | 0.566 | 0.325 U | 0.738 | 1.58 UJ |
| 2,4-Dinitrotoluene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.7 U | 4.9 U | ST011 | 4.36 | 4.4 U | 0.39 | 4.85 U |
| 2,6-Dinitrotoluene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 5 U | 6.6 U | ST011 | 5.8 | 5.8 U | 0.512 | 6.49 U |
| 2-Chloronaphthalene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4 U | 5.3 U | ST011 | 4.66 | 4.65 U | 0.403 | 5.19 U |
| 2-Nitroaniline | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 7.9 U | 11 U | ST002; ST011; ST012 | 9.42 | 9.25 U | 1.09 | 11 U |
| 3,3'-Dichlorobenzidine | µg/kg | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 9.1 U | 13 U | ST011 | 11.2 | 11 U | 1.06 | 12.5 U |
| 3-Nitroaniline | µg/kg | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 6.2 U | 8.2 U | ST011 | 7.31 | 7.3 U | 0.597 | 8.1 U |
| 4-Bromophenyl phenyl ether | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4 U | 5.3 U | ST011 | 4.66 | 4.65 U | 0.403 | 5.19 U |
| 4-Chloroaniline | µg/kg | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.7 U | 6.2 U | ST011 | 5.55 | 5.5 U | 0.45 | 6.15 U |
| 4-Chlorophenyl phenyl ether | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.5 U | 4.6 U | ST011 | 4.08 | 4.1 U | 0.356 | 4.55 U |
| 4-Nitroaniline | µg/kg | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.5 U | 5.9 U | ST011 | 5.25 | 5.2 U | 0.42 | 5.8 U |
| Aniline | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.7 U | 4.9 U | ST011 | 4.36 | 4.4 U | 0.39 | 4.85 U |
| Azobenzene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.8 UJ | 3.6 U | ST011 | 3.2 | 3.2 U | 0.27 | 3.55 U |
| Benzoic acid | µg/kg | 12 | 1 | 8 | 300 J | 300 J | ST007 | 300 | 300 J | -- | 300 J | 250 UJ | 320 UJ | ST011 | 287 | 285 UJ | 21.9 | 315 UJ |
| Benzyl alcohol | µg/kg | 12 | 1 | 8 | 17 | 17 | ST008 | 17 | 17 | -- | 17 | 5.2 U | 17 | ST008 | 7.01 | 6.15 U | 3.19 | 11.4 |
| Bis(2-chloroethoxy) methane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.7 U | 4.9 U | ST011 | 4.36 | 4.4 U | 0.39 | 4.85 U |
| Bis(2-chloroethyl) ether | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.7 U | 6.2 U | ST011 | 5.49 | 5.5 U | 0.481 | 6.15 U |
| Bis(2-chloroisopropyl) ether | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 6.4 U | 8.5 U | ST011 | 7.51 | 7.5 U | 0.668 | 8.39 U |
| Carbazole | µg/kg | 12 | 2 | 17 | 6.3 J | 23 | ST005 | 14.7 | 14.7 J | 11.8 | 22.2 J | 3.2 U | 23 | ST005 | 5.59 | 3.9 U | 5.54 | 13.8 J |
| Dibenzofuran | µg/kg | 12 | 4 | 33 | 1.5 J | 6 | ST005 | 3.48 | 3.2 J | 1.93 | 5.67 J | 1.5 J | 6 | ST005 | 2.33 | 1.85 U | 1.32 | 4.79 J |
| Hexachlorobenzene | µg/kg | 12 | 1 | 8 | 1.1 J | 1.1 J | ST009 | 1.1 | 1.1 J | -- | 1.1 J | 0.22 U | 1.3 U | ST003 | 0.9 | 0.99 U | 0.326 | 1.19 J |
| Hexachlorobutadiene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.3 U | 1.6 U | ST002; ST011; ST012 | 1.47 | 1.5 U | 0.107 | 1.6 U |
| Hexachlorocyclopentadiene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 72 U | 95 U | ST011 | 83.8 | 84 U | 7.34 | 93.4 U |
| Hexachloroethane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.4 U | 8.6 U | ST008 | 1.15 | 0.475 U | 2.35 | 4.16 U |
| Isophorone | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 3.3 U | ST011 | 2.92 | 2.9 U | 0.252 | 3.25 U |
| Nitrobenzene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 5.5 U | 7.2 U | ST011 | 6.37 | 6.4 U | 0.548 | 7.09 U |
| N-Nitrosodimethylamine | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 15 U | 20 U | ST002; ST011; ST012 | 17.9 | 18 U | 1.62 | 20 U |

Table D2.2-2. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Second Quarter (Spring 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| N-Nitrosodiphenylamine | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4 U | 5.3 U | ST011 | 4.66 | 4.65 U | 0.403 | 5.19 U |
| N-Nitrosodipropylamine | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 5.9 U | 7.9 U | ST011 | 6.93 | 6.95 U | 0.611 | 7.74 U |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| 2,3,4,5-Tetrachlorophenol | µg/kg | 12 | 1 | 8 | 3.2 J | 3.2 J | ST015 | 3.2 | 3.2 J | -- | 3.2 J | 1.6 U | 3.2 J | ST015 | 1.94 | 1.85 U | 0.427 | 2.6 J |
| 2,3,5,6-Tetrachlorophenol | µg/kg | 12 | 2 | 17 | 1.4 NJ | 3.1 NJ | ST015 | 2.25 | 2.25 J | 1.2 | 3.02 J | 0.76 U | 3.1 NJ | ST015 | 1.11 | 0.9 U | 0.649 | 2.17 J |
| 2,4,6-Trichlorophenol | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.96 U | 1.3 U | ST002; ST011; ST012 | 1.16 | 1.2 U | 0.116 | 1.3 U |
| 2,4-Dichlorophenol | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 3.3 U | ST011 | 2.92 | 2.9 U | 0.252 | 3.25 U |
| 2,4-Dimethylphenol | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 14 U | 18 U | ST002; ST011; ST012 | 16.2 | 16 U | 1.47 | 18 U |
| 2,4-Dinitrophenol | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 42 U | 56 U | ST011 | 49.1 | 49 U | 4.38 | 54.9 U |
| 2-Chlorophenol | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 5 U | 6.6 U | ST011 | 5.8 | 5.8 U | 0.512 | 6.49 U |
| 2-Methylphenol | µg/kg | 12 | 6 | 50 | 7.6 J | 30 | ST009 | 18.1 | 20 | 8.8 | 28.3 | 4.4 U | 30 | ST009 | 11.4 | 6.25 J | 9.19 | 26.2 |
| 2-Nitrophenol | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.7 U | 4.9 U | ST011 | 4.36 | 4.4 U | 0.39 | 4.85 U |
| 4,6-Dinitro-2-methylphenol | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.5 U | 4.6 U | ST011 | 4.08 | 4.1 U | 0.356 | 4.55 U |
| 4-Chloro-3-methylphenol | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.5 U | 4.6 U | ST011 | 4.08 | 4.1 U | 0.356 | 4.55 U |
| 4-Methylphenol | µg/kg | 12 | 12 | 100 | 16 | 2000 | ST007 | 493 | 145 | 687 | 1840 | 16 | 2000 | ST007 | 493 | 145 | 687 | 1840 |
| 4-Nitrophenol | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 45 U | 59 U | ST011 | 52 | 52 U | 4.43 | 57.9 U |
| Pentachlorophenol | µg/kg | 12 | 12 | 100 | 0.8 NJ | 5 J | ST007 | 2.16 | 1.8 J | 1.25 | 4.56 J | 0.8 NJ | 5 J | ST007 | 2.16 | 1.8 J | 1.25 | 4.56 J |
| Phenol | µg/kg | 12 | 8 | 67 | 12 J | 90 | ST007 | 37.9 | 24 J | 28.5 | 83.7 | 5.1 U | 90 | ST007 | 27.2 | 19 J | 27.7 | 80.1 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 12 | 12 | 100 | 82 J | 120 JT | ST007 | 94.1 | 94.5 J | 11 | 109 J | 82 J | 120 JT | ST007 | 94.1 | 94.5 J | 11 | 109 J |
| Total Petroleum Hydrocarbons (Gasoline) | mg/kg | 12 | 6 | 50 | 10 J | 33 J | ST008 | 17.2 | 14 J | 8.47 | 29.8 J | 1.7 U | 33 J | ST008 | 10 | 8.4 J | 9.5 | 25.9 J |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 12 | 12 | 100 | 430 J | 600 JT | ST005; ST007; ST016 | 540 | 560 J | 61.3 | 600 J | 430 J | 600 JT | ST005; ST007; ST016 | 540 | 560 J | 61.3 | 600 J |
| Total Petroleum Hydrocarbons | mg/kg | 12 | 12 | 100 | 510 JT | 730 JT | ST007 | 643 | 665 J | 75.8 | 719 J | 510 JT | 730 JT | ST007 | 643 | 665 J | 75.8 | 719 J |
| **Herbicides** | | | | | | | | | | | | | | | | | | |
| 2,4,5-T | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 7.9 U | 11 U | ST002; ST011; ST012 | 9.42 | 9.25 U | 1.09 | 11 U |
| 2,4-D | µg/kg | 12 | 7 | 58 | 14 NJ | 25 J | ST005 | 18.9 | 18 J | 4.49 | 24.4 J | 9.4 U | 25 J | ST005 | 15.9 | 14 J | 5.05 | 23.9 J |
| 2,4-DB | µg/kg | 12 | 1 | 8 | 36 NJ | 36 NJ | ST009 | 36 | 36 NJ | -- | 36 NJ | 9.8 U | 620 U | ST005 | 70.1 | 14 U | 174 | 316 U |
| Dalapon | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 35 U | 46 U | ST011 | 40.8 | 41 U | 3.56 | 45.5 U |
| Dicamba | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 11 U | 15 U | ST011 | 12.8 | 13 U | 1.22 | 14.5 U |
| Dichloroprop | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 7.7 U | 11 U | ST011 | 9.03 | 9 U | 0.931 | 10.4 U |
| Dinoseb | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 40 U | 53 U | ST011 | 46.6 | 46.5 U | 4.03 | 51.9 U |
| MCPA | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 6700 U | 15000 U | ST005 | 8380 | 7800 U | 2200 | 11600 U |
| MCPP | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 5700 U | 7500 U | ST011 | 6640 | 6700 U | 582 | 7390 U |
| Silvex | µg/kg | 12 | 1 | 8 | 51 NJ | 51 NJ | ST003 | 51 | 51 NJ | -- | 51 NJ | 7.7 U | 82 U | ST011 | 18.4 | 9.1 U | 23.4 | 65 J |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.22 U | 0.38 U | ST008 | 0.277 | 0.25 U | 0.0569 | 0.369 U |
| 1,1,1-Trichloroethane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.19 U | 0.33 U | ST008 | 0.241 | 0.215 U | 0.0489 | 0.319 U |
| 1,1,2,2-Tetrachloroethane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.32 U | 0.55 UJ | ST008 | 0.399 | 0.355 U | 0.0818 | 0.534 UJ |
| 1,1,2-Trichloroethane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.32 U | 0.55 U | ST008 | 0.399 | 0.355 U | 0.0818 | 0.534 U |
| 1,1-Dichloroethane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.2 U | 0.34 U | ST008 | 0.249 | 0.225 U | 0.0505 | 0.329 U |
| 1,1-Dichloroethene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.17 U | 0.29 U | ST008 | 0.21 | 0.19 U | 0.0424 | 0.279 U |
| 1,2,3-Trichloropropane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.84 U | 1.5 UJ | ST008 | 1.07 | 0.935 U | 0.239 | 1.45 UJ |
| 1,2-Dichloroethane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.17 U | 0.29 U | ST008 | 0.21 | 0.19 U | 0.0424 | 0.279 U |
| 1,2-Dichloropropane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.28 U | 0.47 U | ST008 | 0.343 | 0.305 U | 0.0685 | 0.454 U |
| 1,4-Dichloro-trans-2-butene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.2 U | 2.1 UJ | ST008 | 1.52 | 1.35 U | 0.316 | 2.05 UJ |
| 2-Chloroethyl vinyl ether | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.9 U | 1.6 U | ST008 | 1.15 | 1.05 UJ | 0.254 | 1.55 U |
| Acetone | µg/kg | 12 | 1 | 8 | 270 | 270 | ST015 | 270 | 270 | -- | 270 | 12 U | 270 | ST015 | 97.9 | 71 U | 87.1 | 237 |
| Acrylonitrile | µg/kg | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.4 U | 2.3 U | ST008 | 1.67 | 1.5 U | 0.344 | 2.25 U |
| Benzene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.23 U | 0.39 U | ST008 | 0.287 | 0.255 U | 0.0584 | 0.379 U |
| Bromochloromethane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.52 U | 0.89 U | ST008 | 0.65 | 0.58 U | 0.135 | 0.868 U |
| Bromodichloromethane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.32 U | 0.55 U | ST008 | 0.399 | 0.355 U | 0.0818 | 0.534 U |
| Bromoform | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.55 U | 0.94 U | ST008 | 0.686 | 0.615 U | 0.14 | 0.913 U |
| Bromomethane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.5 U | 2.6 U | ST008 | 1.88 | 1.7 U | 0.386 | 2.49 U |
| BTEX | µg/kg | 12 | 10 | 83 | 2.1 JT | 13000 JT | ST007; ST008 | 4870 | 3950 | 5190 | 13000 J | 0.49 UT | 13000 JT | ST007; ST008 | 4150 | 1850 | 4990 | 13000 J |
| Carbon disulfide | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.17 U | 0.29 U | ST008 | 0.21 | 0.19 U | 0.0424 | 0.279 U |
| Carbon tetrachloride | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.21 U | 0.36 U | ST008 | 0.263 | 0.235 U | 0.0536 | 0.349 U |
| Chlorobenzene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.15 U | 1 U | ST007 | 0.252 | 0.17 U | 0.238 | 0.593 U |
| Chlorodibromomethane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.28 U | 0.48 U | ST008 | 0.351 | 0.315 U | 0.0703 | 0.464 U |
| Chloroethane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.69 U | 1.2 U | ST007; ST008 | 0.878 | 0.775 U | 0.195 | 1.2 U |
| Chloroform | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.19 U | 0.32 U | ST008 | 0.233 | 0.205 U | 0.0473 | 0.309 U |
| Chloromethane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.32 U | 0.55 U | ST008 | 0.399 | 0.355 U | 0.0818 | 0.534 U |
| cis-1,2-Dichloroethene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.29 U | 0.5 U | ST008 | 0.363 | 0.325 U | 0.0741 | 0.484 U |
| cis-1,3-Dichloropropene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.17 U | 0.28 U | ST008 | 0.207 | 0.185 U | 0.0416 | 0.275 U |
| Dichlorodifluoromethane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.19 U | 0.33 U | ST008 | 0.241 | 0.215 U | 0.0489 | 0.319 U |
| Ethylbenzene | µg/kg | 12 | 1 | 8 | 1.4 J | 1.4 J | ST007 | 1.4 | 1.4 J | -- | 1.4 J | 0.19 U | 1.4 J | ST007 | 0.329 | 0.215 U | 0.34 | 0.806 J |
| Ethylene dibromide | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.27 U | 0.46 U | ST008 | 0.34 | 0.305 U | 0.0686 | 0.449 U |

Table D2.2-2. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Second Quarter (Spring 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| Isopropylbenzene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.15 U | 0.25 U | ST008 | 0.184 | 0.165 U | 0.0365 | 0.245 U |
| m,p-Xylene | µg/kg | 12 | 1 | 8 | 1.2 J | 1.2 J | ST007 | 1.2 | 1.2 J | -- | 1.2 J | 0.44 U | 1.2 J | ST007 | 0.586 | 0.485 U | 0.216 | 0.947 J |
| Methyl iodide | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.1 U | 1.8 U | ST008 | 1.33 | 1.2 U | 0.253 | 1.75 U |
| Methyl isobutyl ketone | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.64 U | 1.1 U | ST007; ST008 | 0.802 | 0.71 U | 0.174 | 1.1 U |
| Methyl n-butyl ketone | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.7 U | 3 U | ST008 | 2.17 | 1.95 U | 0.442 | 2.89 U |
| Methyl tert-butyl ether | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.19 U | 0.32 U | ST008 | 0.234 | 0.21 U | 0.0462 | 0.309 U |
| Methylene bromide | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.44 U | 0.74 U | ST008 | 0.545 | 0.485 U | 0.11 | 0.724 U |
| Methylene chloride | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.4 U | 18 U | ST007 | 7.6 | 3.3 U | 6.17 | 17.5 U |
| Methylethyl ketone | µg/kg | 5 | 5 | 100 | 21 J | 46 J | ST007 | 31.6 | 28 J | 11.8 | 45.2 J | 21 J | 46 J | ST007 | 31.6 | 28 J | 11.8 | 45.2 J |
| o-Xylene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.17 U | 0.29 U | ST008 | 0.21 | 0.19 U | 0.0424 | 0.279 U |
| Styrene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.2 U | 0.33 U | ST008 | 0.247 | 0.22 U | 0.0489 | 0.325 U |
| Tetrachloroethene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.22 U | 0.38 U | ST008 | 0.277 | 0.25 U | 0.0569 | 0.369 U |
| Toluene | µg/kg | 12 | 10 | 83 | 2.1 J | 13000 | ST007; ST008 | 4870 | 3950 | 5190 | 13000 | 0.43 U | 13000 | ST007; ST008 | 4150 | 1850 | 4990 | 13000 |
| trans-1,2-Dichloroethene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.25 U | 0.42 U | ST008 | 0.308 | 0.275 U | 0.0621 | 0.409 U |
| trans-1,3-Dichloropropene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.27 U | 0.46 U | ST008 | 0.34 | 0.305 U | 0.0686 | 0.449 U |
| Trichloroethene | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.21 U | 0.35 U | ST008 | 0.258 | 0.23 U | 0.0505 | 0.339 U |
| Trichlorofluoromethane | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.32 U | 0.55 U | ST008 | 0.399 | 0.355 U | 0.0818 | 0.534 U |
| Vinyl chloride | µg/kg | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.28 U | 0.47 U | ST008 | 0.343 | 0.305 U | 0.0685 | 0.454 U |
| Xylene | µg/kg | 12 | 1 | 8 | 1.2 JT | 1.2 JT | ST007 | 1.2 | 1.2 JT | -- | 1.2 JT | 0.44 UT | 1.2 JT | ST007 | 0.586 | 0.485 U | 0.216 | 0.947 J |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DDx - total of 2,4' and 4,4'-DDD, -DDE, -DDT
DL - detection limit
HPAH - high molecular weightpolycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
TOC - total organic carbon

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D2.2-3. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Third Quarter (Summer 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| **Grain Size** | | | | | | | | | | | | | | | | | | |
| >9 Phi clay | percent | 6 | 6 | 100 | 4.04 | 6.58 | ST014 | 5.04 | 5.04 | 0.878 | 6.23 | 4.04 | 6.58 | ST014 | 5.04 | 5.04 | 0.878 | 6.23 |
| 8-9 Phi clay | percent | 6 | 6 | 100 | 3.59 | 10.7 | ST004 | 6.35 | 5.5 J | 2.48 | 9.93 | 3.59 | 10.7 | ST004 | 6.35 | 5.5 J | 2.48 | 9.93 |
| Coarse sand | percent | 6 | 6 | 100 | 0.18 | 1.83 | ST007 | 0.56 | 0.355 | 0.629 | 1.48 | 0.18 | 1.83 | ST007 | 0.56 | 0.355 | 0.629 | 1.48 |
| Coarse silt | percent | 6 | 6 | 100 | 18.4 | 44.1 T | ST015 | 27.6 | 26.1 | 9.06 | 40.4 | 18.4 | 44.1 T | ST015 | 27.6 | 26.1 | 9.06 | 40.4 |
| Fine gravel | percent | 6 | 6 | 100 | 0.17 | 3.76 | ST007 | 1.23 | 0.927 | 1.29 | 3.09 | 0.17 | 3.76 | ST007 | 1.23 | 0.927 | 1.29 | 3.09 |
| Fine sand | percent | 6 | 6 | 100 | 0.46 | 12.8 | ST007 | 3.21 | 1.14 | 4.76 | 10.3 | 0.46 | 12.8 | ST007 | 3.21 | 1.14 | 4.76 | 10.3 |
| Fine silt | percent | 6 | 6 | 100 | 11 T | 19.8 | ST012 | 15.9 | 16.4 | 3.31 | 19.4 | 11 T | 19.8 | ST012 | 15.9 | 16.4 | 3.31 | 19.4 |
| Fines | percent | 6 | 6 | 100 | 74.8 T | 99.1 T | ST004 | 90.1 | 91.8 J | 8.64 | 98.4 | 74.8 T | 99.1 T | ST004 | 90.1 | 91.8 J | 8.64 | 98.4 |
| Medium gravel | percent | 6 | 6 | 100 | 0 T | 1.1 | ST007 | 0.233 | 0 | 0.441 | 0.9 | 0 T | 1.1 | ST007 | 0.233 | 0 | 0.441 | 0.9 |
| Medium sand | percent | 6 | 6 | 100 | 0.25 | 8.04 | ST007 | 1.73 | 0.534 | 3.09 | 6.21 | 0.25 | 8.04 | ST007 | 1.73 | 0.534 | 3.09 | 6.21 |
| Medium silt | percent | 6 | 6 | 100 | 18.1 JT | 28.4 | ST004 | 24.1 | 25.4 | 4.52 | 28.3 | 18.1 JT | 28.4 | ST004 | 24.1 | 25.4 | 4.52 | 28.3 |
| Very coarse sand | percent | 6 | 6 | 100 | 0.24 | 1.21 | ST004 | 0.667 | 0.562 | 0.429 | 1.2 | 0.24 | 1.21 | ST004 | 0.667 | 0.562 | 0.429 | 1.2 |
| Very fine sand | percent | 6 | 6 | 100 | 2.33 | 9.06 | ST014 | 6.54 | 7.05 | 2.59 | 9.04 | 2.33 | 9.06 | ST014 | 6.54 | 7.05 | 2.59 | 9.04 |
| Very fine silt | percent | 6 | 6 | 100 | 7.35 T | 19.4 | ST004 | 11.2 | 10 | 4.27 | 17.5 | 7.35 T | 19.4 | ST004 | 11.2 | 10 | 4.27 | 17.5 |
| **Conventionals** | | | | | | | | | | | | | | | | | | |
| Specific Gravity | NA | 2 | 2 | 100 | 1.07 T | 1.19 T | ST009 | 1.13 | 1.13 | 0.0849 | 1.18 | 1.07 T | 1.19 T | ST009 | 1.13 | 1.13 | 0.0849 | 1.18 |
| Sulfide | mg/kg | 1 | 1 | 100 | 32 JT | 32 JT | ST004 | 32 | 32 JT | -- | 32 JT | 32 JT | 32 JT | ST004 | 32 | 32 JT | -- | 32 JT |
| Total organic carbon | percent | 10 | 10 | 100 | 1.98 | 3.24 | ST006 | 2.7 | 2.68 | 0.317 | 3.13 | 1.98 | 3.24 | ST006 | 2.7 | 2.68 | 0.317 | 3.13 |
| Total solids | percent | 11 | 11 | 100 | 13.1 | 37.2 | ST014 | 27.7 | 29.2 | 7.81 | 37.1 | 13.1 | 37.2 | ST014 | 27.7 | 29.2 | 7.81 | 37.1 |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/kg | 9 | 9 | 100 | 16800 | 49800 | ST009 | 32200 | 29200 | 9580 | 46200 | 16800 | 49800 | ST009 | 32200 | 29200 | 9580 | 46200 |
| Antimony | mg/kg | 9 | 9 | 100 | 0.15 J | 0.405 JT | ST006 | 0.223 | 0.2 J | 0.0763 | 0.347 J | 0.15 J | 0.405 JT | ST006 | 0.223 | 0.2 J | 0.0763 | 0.347 J |
| Arsenic | mg/kg | 9 | 9 | 100 | 3.04 | 5.65 T | ST006 | 4.1 | 3.6 | 1.09 | 5.59 | 3.04 | 5.65 T | ST006 | 4.1 | 3.6 | 1.09 | 5.59 |
| Cadmium | mg/kg | 9 | 9 | 100 | 0.224 | 0.61 | ST002 | 0.372 | 0.389 | 0.153 | 0.594 | 0.224 | 0.61 | ST002 | 0.372 | 0.389 | 0.153 | 0.594 |
| Chromium | mg/kg | 9 | 9 | 100 | 21.7 | 59.5 | ST009 | 35.5 | 32.4 | 10.8 | 52.7 | 21.7 | 59.5 | ST009 | 35.5 | 32.4 | 10.8 | 52.7 |
| Chromium hexavalent | mg/kg | 7 | 1 | 14 | 1.02 J | 1.02 J | ST009 | 1.02 | 1.02 J | -- | 1.02 J | 0.2 UJ | 1.02 J | ST009 | 0.317 | 0.2 UJ | 0.31 | 0.774 J |
| Copper | mg/kg | 9 | 9 | 100 | 32.2 | 93.6 T | ST006 | 49.3 | 37.8 | 21.3 | 86.2 | 32.2 | 93.6 T | ST006 | 49.3 | 37.8 | 21.3 | 86.2 |
| Lead | mg/kg | 9 | 9 | 100 | 15.3 | 41.3 T | ST006 | 22.1 | 19.9 | 8.36 | 35.1 | 15.3 | 41.3 T | ST006 | 22.1 | 19.9 | 8.36 | 35.1 |
| Mercury | mg/kg | 9 | 9 | 100 | 0.06 | 0.163 JT | ST002 | 0.0836 | 0.068 | 0.0329 | 0.136 J | 0.06 | 0.163 JT | ST002 | 0.0836 | 0.068 | 0.0329 | 0.136 J |
| Nickel | mg/kg | 9 | 9 | 100 | 18.4 | 44.2 | ST009 | 26.5 | 24 | 7.51 | 38.2 | 18.4 | 44.2 | ST009 | 26.5 | 24 | 7.51 | 38.2 |
| Selenium | mg/kg | 9 | 4 | 44 | 0.16 J | 0.29 T | ST011 | 0.24 | 0.255 | 0.0594 | 0.289 | 0.13 U | 0.29 T | ST011 | 0.207 | 0.17 U | 0.0632 | 0.286 |
| Silver | mg/kg | 9 | 9 | 100 | 0.19 | 1.02 T | ST006 | 0.364 | 0.26 | 0.259 | 0.794 | 0.19 | 1.02 T | ST006 | 0.364 | 0.26 | 0.259 | 0.794 |
| Zinc | mg/kg | 9 | 9 | 100 | 108 | 319 T | ST006 | 153 | 117 | 69 | 265 | 108 | 319 T | ST006 | 153 | 117 | 69 | 265 |
| **Butyltins** | | | | | | | | | | | | | | | | | | |
| Butyltin ion | µg/kg | 8 | 7 | 88 | 0.45 J | 3.1 J | ST009 | 1.52 | 1.5 J | 0.86 | 2.74 J | 0.45 J | 8.2 U | ST006 | 2.36 | 1.6 J | 2.49 | 6.42 J |
| Dibutyltin ion | µg/kg | 8 | 8 | 100 | 1.5 JT | 38 | ST006 | 7.31 | 2.7 J | 12.5 | 26.5 | 1.5 JT | 38 | ST006 | 7.31 | 2.7 J | 12.5 | 26.5 |
| Tetrabutyltin | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.19 U | 0.4 U | ST006 | 0.251 | 0.225 U | 0.0702 | 0.365 U |
| Tributyltin ion | µg/kg | 8 | 7 | 88 | 2.3 JT | 64 | ST006 | 14.7 | 7.1 | 22 | 48.7 | 0.24 U | 64 | ST006 | 12.9 | 6 | 21 | 46.2 |
| **PCB Aroclors** | | | | | | | | | | | | | | | | | | |
| Aroclor 1016 | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.4 UT | 310 U | ST009 | 78.6 | 26.9 U | 113 | 288 U |
| Aroclor 1221 | µg/kg | 10 | 1 | 10 | 3.2 NJ | 3.2 NJ | ST011 | 3.2 | 3.2 NJ | -- | 3.2 NJ | 3.2 NJ | 64 U | ST007 | 19.5 | 7.25 U | 21.2 | 57.3 U |
| Aroclor 1232 | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.4 UT | 370 U | ST006 | 106 | 35.9 U | 136 | 321 U |
| Aroclor 1242 | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.4 UT | 230 U | ST009 | 42.7 | 14.9 U | 69 | 155 U |
| Aroclor 1248 | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.9 U | 350 U | ST006 | 68.1 | 7.25 U | 120 | 292 U |
| Aroclor 1254 | µg/kg | 10 | 3 | 30 | 16 J | 72 | ST006 | 42 | 38 NJ | 28.2 | 68.6 J | 4.4 UT | 72 | ST006 | 25.8 | 14 J | 24.4 | 68.4 |
| Aroclor 1260 | µg/kg | 10 | 7 | 70 | 10 J | 1800 | ST007 | 294 | 31 T | 665 | 1290 | 6.5 U | 1800 | ST007 | 208 | 21.5 | 560 | 1030 |
| Aroclor 1262 | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.7 U | 64 U | ST007 | 11.8 | 6.1 U | 18.6 | 41 U |
| Aroclor 1268 | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.7 U | 64 U | ST007 | 11.8 | 6.1 U | 18.6 | 41 U |
| Aroclors | µg/kg | 10 | 7 | 70 | 10 JT | 1800 T | ST007 | 313 | 39.2 NJT | 658 | 1310 | 6.5 UT | 1800 T | ST007 | 252 | 35.1 J | 552 | 1130 |
| **PCB Congeners** | | | | | | | | | | | | | | | | | | |
| PCB001 | pg/g | 11 | 8 | 73 | 6.11 J | 173 | ST007 | 41.8 | 24.9 | 55 | 131 | 6.11 J | 173 | ST007 | 33.5 | 14.1 | 48.1 | 112 |
| PCB002 | pg/g | 11 | 10 | 91 | 8.92 J | 29.4 | ST006 | 16.8 | 15.8 | 6.78 | 28.5 | 8.92 J | 29.4 | ST006 | 16.2 | 15.1 | 6.76 | 28.5 |
| PCB003 | pg/g | 11 | 9 | 82 | 6.24 J | 52.7 | ST007 | 22 | 18.5 T | 14.2 | 46.1 | 6.24 J | 52.7 | ST007 | 20 | 15.7 | 13.5 | 44.4 |
| PCB004 & 010 | pg/g | 11 | 6 | 55 | 17.6 | 23900 | ST007 | 4050 | 60.7 | 9720 | 18000 | 17.6 | 23900 | ST007 | 2220 | 25 U | 7190 | 12100 |
| PCB005 & 008 | pg/g | 11 | 8 | 73 | 58.3 | 824 | ST007 | 213 | 94.9 | 261 | 644 | 19.8 U | 824 | ST007 | 161 | 75.7 | 236 | 567 |
| PCB006 | pg/g | 11 | 3 | 27 | 13.4 | 268 | ST007 | 110 | 48.7 T | 138 | 246 | 13.4 | 268 | ST007 | 47.2 | 25 U | 73.7 | 158 |
| PCB007 & 009 | pg/g | 11 | 2 | 18 | 14.3 T | 493 | ST007 | 254 | 254 | 338 | 469 | 5 U | 493 | ST007 | 63.8 | 25 U | 142 | 259 |
| PCB011 | pg/g | 11 | 11 | 100 | 171 | 592 | ST002 | 314 | 299 | 109 | 481 | 171 | 592 | ST002 | 314 | 299 | 109 | 481 |
| PCB012 & 013 | pg/g | 11 | 2 | 18 | 19.6 T | 46 | ST007 | 32.8 | 32.8 | 18.7 | 44.7 | 5 U | 46 | ST007 | 23.7 | 25 U | 9.51 | 35.5 |
| PCB014 | pg/g | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.99 UT | 25 U | ST004; ST005; ST011; ST012; ST013; ST014 | 19.9 | 25 U | 7.75 | 25 U |
| PCB015 | pg/g | 11 | 8 | 73 | 57.7 | 348 | ST007 | 147 | 113 | 101 | 313 | 19.8 U | 348 | ST007 | 122 | 95.5 | 98.5 | 298 |
| PCB016 & 032 | pg/g | 11 | 11 | 100 | 13 | 19100 | ST007 | 1840 | 101 | 5720 | 9680 | 13 | 19100 | ST007 | 1840 | 101 | 5720 | 9680 |
| PCB017 | pg/g | 11 | 10 | 91 | 44.7 | 20600 | ST007 | 2160 | 92 | 6480 | 11400 | 10.3 UJ | 20600 | ST007 | 1960 | 90.4 | 6180 | 10400 |

Table D2.2-3. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Third Quarter (Summer 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Units | # Analyzed | # Detected | % Detected | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | Standard Deviation | 95th Percentile[b] | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (full DL) | Median (full DL)[b] | Standard Deviation (full DL) | 95th Percentile (full DL)[b] |
| PCB018 | pg/g | 11 | 11 | 100 | 24.6 | 6190 | ST007 | 705 | 142 | 1820 | 3290 | 24.6 | 6190 | ST007 | 705 | 142 | 1820 | 3290 |
| PCB019 | pg/g | 11 | 10 | 91 | 16.7 | 25600 | ST007 | 2690 | 72.4 | 8050 | 14400 | 9.9 U | 25600 | ST007 | 2450 | 54.6 | 7680 | 13200 |
| PCB020 & 021 & 033 | pg/g | 11 | 10 | 91 | 72 | 4740 | ST007 | 601 | 115 | 1460 | 2770 | 9.9 U | 4740 | ST007 | 547 | 108 | 1390 | 2550 |
| PCB022 | pg/g | 11 | 11 | 100 | 14.8 | 1910 | ST007 | 258 | 81.3 | 551 | 1080 | 14.8 | 1910 | ST007 | 258 | 81.3 | 551 | 1080 |
| PCB023 | pg/g | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 12.5 U | ST004; ST005; ST011; ST012; ST013; ST014 | 9.97 | 12.5 U | 3.87 | 12.5 U |
| PCB024 & 027 | pg/g | 11 | 8 | 73 | 9.97 | 4280 | ST007 | 573 | 32.3 | 1500 | 2830 | 9.9 U | 4280 | ST007 | 420 | 26.7 T | 1280 | 2210 |
| PCB025 | pg/g | 11 | 8 | 73 | 19.6 | 1150 | ST007 | 177 | 40.2 | 393 | 772 | 9.9 U | 1150 | ST007 | 133 | 26.6 UJ | 338 | 609 |
| PCB026 | pg/g | 11 | 11 | 100 | 10.2 | 3360 | ST007 | 353 | 48.3 | 998 | 1750 | 10.2 | 3360 | ST007 | 353 | 48.3 | 998 | 1750 |
| PCB028 | pg/g | 11 | 11 | 100 | 49.7 | 1910 | ST007 | 433 | 250 | 523 | 1330 | 49.7 | 1910 | ST007 | 433 | 250 | 523 | 1330 |
| PCB029 | pg/g | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 12.5 U | ST004; ST005; ST011; ST012; ST013; ST014 | 9.97 | 12.5 U | 3.87 | 12.5 U |
| PCB030 | pg/g | 11 | 1 | 9 | 30.9 | 30.9 | ST007 | 30.9 | 30.9 | -- | 30.9 | 2.5 U | 30.9 | ST007 | 11.9 | 12.5 U | 7.4 | 21.7 |
| PCB031 | pg/g | 11 | 11 | 100 | 37.9 | 1390 | ST007 | 317 | 184 | 380 | 968 | 37.9 | 1390 | ST007 | 317 | 184 | 380 | 968 |
| PCB034 | pg/g | 11 | 1 | 9 | 259 | 259 | ST007 | 259 | 259 | -- | 259 | 2.5 U | 259 | ST007 | 32.6 | 12.5 U | 75.2 | 136 |
| PCB035 | pg/g | 11 | 2 | 18 | 6.97 T | 14.6 | ST011 | 10.8 | 10.8 | 5.4 | 14.2 | 2.5 U | 14.6 | ST011 | 10.6 | 12.5 U | 3.38 | 13.6 |
| PCB036 | pg/g | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 12.5 U | ST004; ST005; ST011; ST012; ST013; ST014 | 9.97 | 12.5 U | 3.87 | 12.5 U |
| PCB037 | pg/g | 11 | 11 | 100 | 19.2 | 240 | ST011 | 110 | 93.7 | 66.7 | 229 | 19.2 | 240 | ST011 | 110 | 93.7 | 66.7 | 229 |
| PCB038 | pg/g | 11 | 5 | 45 | 12.2 T | 931 | ST007 | 215 | 28.9 | 401 | 760 | 2.5 U | 931 | ST007 | 103 | 12.5 U | 275 | 503 |
| PCB039 | pg/g | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 12.5 U | ST004; ST005; ST011; ST012; ST013; ST014 | 9.97 | 12.5 U | 3.87 | 12.5 U |
| PCB040 | pg/g | 11 | 7 | 64 | 29.3 | 104 | ST011 | 62.7 | 56.2 T | 28.6 | 102 | 9.9 U | 104 | ST011 | 47.9 | 41.3 UJ | 31.3 | 99.9 |
| PCB041 & 064 & 071 & 072 | pg/g | 11 | 11 | 100 | 47 | 8530 | ST007 | 1040 | 282 | 2490 | 4570 | 47 | 8530 | ST007 | 1040 | 282 | 2490 | 4570 |
| PCB042 & 059 | pg/g | 11 | 11 | 100 | 18.1 | 1150 | ST007 | 200 | 105 | 319 | 671 | 18.1 | 1150 | ST007 | 200 | 105 | 319 | 671 |
| PCB043 & 049 | pg/g | 11 | 10 | 91 | 55.1 | 47700 | ST007 | 5160 | 409 | 14900 | 26700 | 12.5 U | 47700 | ST007 | 4690 | 344 | 14300 | 24300 |
| PCB044 | pg/g | 11 | 11 | 100 | 64.9 | 4750 | ST007 | 751 | 357 T | 1340 | 2700 | 64.9 | 4750 | ST007 | 751 | 357 T | 1340 | 2700 |
| PCB045 | pg/g | 11 | 8 | 73 | 27.9 | 200 | ST007 | 64.8 | 43.7 | 57.9 | 158 | 9.9 U | 200 | ST007 | 54.2 | 38.3 | 52.3 | 140 |
| PCB046 | pg/g | 11 | 8 | 73 | 11.4 J | 2840 | ST007 | 381 | 32.7 | 994 | 1860 | 9.9 U | 2840 | ST007 | 282 | 22.4 UJ | 849 | 1450 |
| PCB047 | pg/g | 11 | 11 | 100 | 28.6 | 28000 | ST007 | 3070 | 330 T | 8310 | 15500 | 28.6 | 28000 | ST007 | 3070 | 330 T | 8310 | 15500 |
| PCB048 & 075 | pg/g | 11 | 8 | 73 | 38.9 | 128 | ST013 | 74.1 | 57.7 | 35.3 | 126 | 9.9 U | 128 | ST013 | 61.4 | 57.3 | 39.1 | 126 |
| PCB050 | pg/g | 11 | 5 | 45 | 3.52 J | 667 | ST007 | 149 | 11.1 J | 290 | 545 | 2.5 U | 667 | ST007 | 72.6 | 11.1 J | 198 | 361 |
| PCB051 | pg/g | 11 | 10 | 91 | 18.5 | 27200 | ST007 | 2910 | 91.8 | 8540 | 15400 | 9.9 U | 27200 | ST007 | 2650 | 83.5 | 8150 | 14100 |
| PCB052 & 069 | pg/g | 11 | 11 | 100 | 79.6 | 53800 | ST007 | 5340 | 432 | 16100 | 27500 | 79.6 | 53800 | ST007 | 5340 | 432 | 16100 | 27500 |
| PCB053 | pg/g | 11 | 9 | 82 | 38.6 | 69700 | ST007 | 7910 | 130 T | 23200 | 42100 | 9.9 U | 69700 | ST007 | 6480 | 123 | 21000 | 35200 |
| PCB054 | pg/g | 11 | 9 | 82 | 3.63 | 9800 | ST007 | 1140 | 16.9 | 3250 | 6000 | 3.63 | 9800 | ST007 | 932 | 14.8 | 2940 | 5050 |
| PCB055 | pg/g | 11 | 7 | 64 | 5.33 J | 341 | ST007 | 60.8 | 15.8 | 124 | 247 | 5.33 J | 341 | ST007 | 43 | 12.5 U | 99 | 184 |
| PCB056 & 060 | pg/g | 11 | 11 | 100 | 39.3 | 699 | ST007 | 239 | 191 T | 173 | 528 | 39.3 | 699 | ST007 | 239 | 191 T | 173 | 528 |
| PCB057 | pg/g | 11 | 5 | 45 | 4.98 JT | 166 | ST007 | 40.5 | 7.22 J | 70.4 | 137 | 2.5 U | 166 | ST007 | 24.1 | 12.5 U | 47.3 | 92.4 |
| PCB058 | pg/g | 11 | 2 | 18 | 6.78 J | 12.9 | ST004 | 9.84 | 9.84 J | 4.33 | 12.6 J | 2.5 U | 12.9 | ST004 | 9.73 | 12.5 U | 4.02 | 12.7 |
| PCB061 & 070 | pg/g | 11 | 11 | 100 | 86.7 | 3570 | ST007 | 737 | 465 T | 962 | 2190 | 86.7 | 3570 | ST007 | 737 | 465 T | 962 | 2190 |
| PCB062 | pg/g | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 12.5 U | ST004; ST005; ST011; ST012; ST013; ST014 | 9.97 | 12.5 U | 3.87 | 12.5 U |
| PCB063 | pg/g | 11 | 9 | 82 | 11.7 J | 81.8 | ST007 | 26.4 | 18.2 | 21.8 | 62.1 | 9.9 U | 81.8 | ST007 | 23.6 | 17.7 | 20.4 | 57.2 |
| PCB065 | pg/g | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 12.5 U | ST004; ST005; ST011; ST012; ST013; ST014 | 9.97 | 12.5 U | 3.87 | 12.5 U |
| PCB066 & 076 | pg/g | 11 | 11 | 100 | 76.3 | 1430 | ST007 | 506 | 408 T | 354 | 1080 | 76.3 | 1430 | ST007 | 506 | 408 T | 354 | 1080 |
| PCB067 | pg/g | 11 | 8 | 73 | 9.24 | 181 | ST007 | 40.7 | 18.6 | 57.7 | 131 | 9.24 | 181 | ST007 | 32.8 | 14.3 T | 50.2 | 110 |
| PCB068 | pg/g | 11 | 7 | 64 | 3.92 | 246 | ST007 | 48.8 | 10.5 J | 87.9 | 185 | 3.92 | 246 | ST007 | 35.3 | 12.5 U | 70.6 | 144 |
| PCB073 | pg/g | 11 | 2 | 18 | 17.1 | 79.2 | ST013 | 48.2 | 48.2 | 43.9 | 76.1 | 2.5 U | 79.2 | ST013 | 16.5 | 12.5 U | 21.3 | 48.2 |
| PCB074 | pg/g | 11 | 11 | 100 | 31.7 | 914 | ST007 | 240 | 166 T | 238 | 631 | 31.7 | 914 | ST007 | 240 | 166 T | 238 | 631 |
| PCB077 | pg/g | 11 | 10 | 91 | 26 | 77 | ST006 | 48.6 | 44.6 | 16.9 | 76.1 | 10.9 UJ | 77 | ST006 | 45.1 | 44.1 | 19.7 | 76.1 |
| PCB078 | pg/g | 11 | 2 | 18 | 9.19 J | 48.9 | ST007 | 29 | 29 J | 28.1 | 46.9 J | 2.5 U | 48.9 | ST007 | 13.5 | 12.5 U | 12.4 | 30.7 |
| PCB079 | pg/g | 11 | 8 | 73 | 5.63 | 253 | ST007 | 46.4 | 14.2 | 84.3 | 178 | 5.63 | 253 | ST007 | 37.9 | 12.9 | 72 | 147 |
| PCB080 | pg/g | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 12.5 U | ST004; ST005; ST011; ST012; ST013; ST014 | 9.97 | 12.5 U | 3.87 | 12.5 U |
| PCB081 | pg/g | 11 | 4 | 36 | 6.21 | 72.6 | ST007 | 25.5 | 11.7 J | 31.5 | 63.5 J | 1.48 U | 72.6 | ST007 | 13.7 | 7.63 U | 19.8 | 42.2 J |
| PCB082 | pg/g | 11 | 10 | 91 | 15.9 | 1190 | ST007 | 215 | 84.3 | 351 | 771 | 15.9 | 1190 | ST007 | 203 | 82.4 T | 335 | 725 |
| PCB083 | pg/g | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 16.5 UJ | ST012 | 10.3 | 12.5 U | 4.3 | 14.5 UJ |
| PCB084 & 092 | pg/g | 11 | 10 | 91 | 50.7 | 19100 | ST007 | 2330 | 415 | 5900 | 11000 | 50.7 | 19100 | ST007 | 2140 | 341 | 5630 | 10100 |
| PCB085 & 116 | pg/g | 11 | 11 | 100 | 27.6 | 1630 | ST007 | 269 | 98.5 | 460 | 986 | 27.6 | 1630 | ST007 | 269 | 98.5 | 460 | 986 |
| PCB086 | pg/g | 11 | 1 | 9 | 5.35 T | 5.35 T | ST015 | 5.35 | 5.35 T | -- | 5.35 T | 2.5 U | 12.5 U | ST004; ST005; ST011; ST012; ST013; ST014 | 10.2 | 12.5 U | 3.39 | 12.5 U |
| PCB087 & 117 & 125 | pg/g | 11 | 11 | 100 | 45.2 | 14500 | ST007 | 1580 | 214 | 4290 | 7590 | 45.2 | 14500 | ST007 | 1580 | 214 | 4290 | 7590 |

Table D2.2-3. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Third Quarter (Summer 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Units | # Analyzed | # Detected | % Detected | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | Standard Deviation | 95th Percentile[b] | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (full DL) | Median (full DL)[b] | Standard Deviation (full DL) | 95th Percentile (full DL)[b] |
| PCB088 & 091 | pg/g | 11 | 11 | 100 | 18.6 | 10300 | ST007 | 1120 | 162 | 3050 | 5450 | 18.6 | 10300 | ST007 | 1120 | 162 | 3050 | 5450 |
| PCB089 | pg/g | 11 | 5 | 45 | 5.43 | 45.7 | ST007 | 16.6 | 8.73 J | 16.7 | 39.6 | 5.43 | 45.7 | ST007 | 14.5 | 12.5 U | 10.8 | 31.3 J |
| PCB090 & 101 | pg/g | 11 | 11 | 100 | 128 | 124000 | ST007 | 12400 | 963 | 37000 | 63600 | 128 | 124000 | ST007 | 12400 | 963 | 37000 | 63600 |
| PCB093 | pg/g | 11 | 2 | 18 | 0.259 J | 2.76 T | ST015 | 1.51 | 1.51 J | 1.77 | 2.63 J | 0.259 J | 12.5 U | ST004; ST005; ST011; ST013; ST014 | 8.88 | 9.91 U | 4.7 | 12.5 U |
| PCB094 | pg/g | 11 | 7 | 64 | 14.6 T | 1240 | ST007 | 222 | 34 | 452 | 919 | 4.12 UJ | 1240 | ST007 | 145 | 14.7 | 366 | 705 |
| PCB095 & 098 & 102 | pg/g | 11 | 11 | 100 | 83.7 | 97400 | ST007 | 9630 | 738 | 29100 | 50000 | 83.7 | 97400 | ST007 | 9630 | 738 | 29100 | 50000 |
| PCB096 | pg/g | 11 | 8 | 73 | 3.26 | 2530 | ST007 | 339 | 18 | 886 | 1670 | 3.26 | 2530 | ST007 | 250 | 13.8 JT | 757 | 1310 |
| PCB097 | pg/g | 11 | 11 | 100 | 40.2 | 5710 | ST007 | 736 | 187 T | 1660 | 3140 | 40.2 | 5710 | ST007 | 736 | 187 T | 1660 | 3140 |
| PCB099 | pg/g | 11 | 11 | 100 | 70.1 | 10600 | ST007 | 1520 | 433 | 3050 | 6010 | 70.1 | 10600 | ST007 | 1520 | 433 | 3050 | 6010 |
| PCB100 | pg/g | 11 | 9 | 82 | 10.7 J | 2870 | ST007 | 439 | 44.3 | 937 | 2000 | 9.9 U | 2870 | ST007 | 363 | 42.3 T | 855 | 1780 |
| PCB103 | pg/g | 11 | 10 | 91 | 8.09 | 3340 | ST007 | 384 | 32.2 | 1040 | 1920 | 8.09 | 3340 | ST007 | 350 | 25.1 | 993 | 1770 |
| PCB104 | pg/g | 11 | 4 | 36 | 8.37 J | 343 | ST007 | 110 | 43.8 J | 159 | 303 | 2.5 U | 343 | ST007 | 45.8 | 12.5 U | 101 | 209 |
| PCB105 | pg/g | 11 | 11 | 100 | 55.4 | 11500 | ST007 | 1350 | 245 T | 3380 | 6220 | 55.4 | 11500 | ST007 | 1350 | 245 T | 3380 | 6220 |
| PCB106 & 118 | pg/g | 11 | 11 | 100 | 136 | 35400 | ST007 | 4040 | 657 | 10400 | 18900 | 136 | 35400 | ST007 | 4040 | 657 | 10400 | 18900 |
| PCB107 & 109 | pg/g | 11 | 11 | 100 | 10.6 | 837 | ST007 | 141 | 55.3 | 236 | 502 | 10.6 | 837 | ST007 | 141 | 55.3 | 236 | 502 |
| PCB108 & 112 | pg/g | 11 | 10 | 91 | 21.2 | 648 | ST007 | 117 | 37.6 | 191 | 423 | 9.9 U | 648 | ST007 | 107 | 33.9 | 184 | 399 |
| PCB110 | pg/g | 11 | 11 | 100 | 174 | 63200 | ST007 | 6770 | 875 | 18700 | 33200 | 174 | 63200 | ST007 | 6770 | 875 | 18700 | 33200 |
| PCB111 & 115 | pg/g | 11 | 9 | 82 | 6.87 | 215 | ST007 | 38.6 | 10.5 J | 67.3 | 144 | 6.87 | 215 | ST007 | 33.6 | 10.5 J | 61.2 | 126 |
| PCB113 | pg/g | 11 | 2 | 18 | 9.53 J | 10.5 JT | ST015 | 10 | 10 J | 0.686 | 10.5 J | 2.5 U | 12.5 U | ST005; ST011; ST012; ST013; ST014 | 10.4 | 10.5 JT | 2.93 | 12.5 U |
| PCB114 | pg/g | 11 | 8 | 73 | 9.95 J | 205 | ST007 | 45.7 | 15.2 | 66.9 | 155 | 3.09 U | 205 | ST007 | 35.6 | 14.1 T | 58.7 | 134 |
| PCB119 | pg/g | 11 | 8 | 73 | 17.2 | 1560 | ST007 | 265 | 69.5 | 526 | 1080 | 9.9 U | 1560 | ST007 | 196 | 44.7 | 456 | 868 |
| PCB120 | pg/g | 11 | 3 | 27 | 9.7 T | 682 | ST007 | 236 | 16 | 386 | 615 | 2.5 U | 682 | ST007 | 72 | 12.5 U | 202 | 349 |
| PCB121 | pg/g | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 12.5 U | ST004; ST005; ST011; ST012; ST013; ST014 | 9.97 | 12.5 U | 3.87 | 12.5 U |
| PCB122 | pg/g | 11 | 5 | 45 | 8.71 | 121 | ST007 | 40.7 | 28.7 | 46.4 | 104 | 8.71 | 121 | ST007 | 25.1 | 12.5 U | 32.9 | 78.2 |
| PCB123 | pg/g | 11 | 8 | 73 | 2.55 J | 132 | ST007 | 27.8 | 12.9 J | 42.7 | 95.4 | 2.55 J | 132 | ST007 | 24.6 | 13.2 J | 36.4 | 79.8 |
| PCB124 | pg/g | 11 | 10 | 91 | 16.8 | 1240 | ST007 | 167 | 32.4 | 379 | 734 | 9.9 U | 1240 | ST007 | 153 | 31.3 | 362 | 678 |
| PCB126 | pg/g | 11 | 7 | 64 | 1.74 J | 326 | ST007 | 55.3 | 9.35 J | 120 | 236 | 1.74 J | 326 | ST007 | 38.2 | 8.17 U | 95.7 | 176 |
| PCB127 | pg/g | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 12.5 U | ST004; ST005; ST011; ST012; ST013; ST014 | 9.97 | 12.5 U | 3.87 | 12.5 U |
| PCB128 & 162 | pg/g | 11 | 11 | 100 | 29.5 | 18300 | ST007 | 1890 | 194 | 5450 | 9480 | 29.5 | 18300 | ST007 | 1890 | 194 | 5450 | 9480 |
| PCB129 | pg/g | 11 | 10 | 91 | 21 | 4580 | ST007 | 518 | 48.2 J | 1430 | 2590 | 9.9 U | 4580 | ST007 | 472 | 47.9 | 1360 | 2360 |
| PCB130 | pg/g | 11 | 10 | 91 | 13.3 | 11300 | ST007 | 1240 | 97.8 J | 3540 | 6370 | 13.3 | 11300 | ST007 | 1130 | 90.6 | 3380 | 5820 |
| PCB131 | pg/g | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 12.5 U | ST004; ST005; ST011; ST012; ST013; ST014 | 9.97 | 12.5 U | 3.87 | 12.5 U |
| PCB132 & 161 | pg/g | 11 | 11 | 100 | 42.5 | 75700 | ST007 | 7340 | 422 | 22700 | 38700 | 42.5 | 75700 | ST007 | 7340 | 422 | 22700 | 38700 |
| PCB133 & 142 | pg/g | 11 | 9 | 82 | 24.5 | 5550 | ST007 | 698 | 95.5 | 1820 | 3410 | 9.9 U | 5550 | ST007 | 576 | 56.8 | 1650 | 2880 |
| PCB134 & 143 | pg/g | 11 | 11 | 100 | 8.3 J | 11800 | ST007 | 1170 | 86.3 | 3530 | 6040 | 8.3 J | 11800 | ST007 | 1170 | 86.3 | 3530 | 6040 |
| PCB135 | pg/g | 11 | 10 | 91 | 26.8 | 54900 | ST007 | 5800 | 306 | 17300 | 30600 | 26.8 | 54900 | ST007 | 5280 | 283 | 16500 | 27900 |
| PCB136 | pg/g | 11 | 11 | 100 | 20.1 | 65200 | ST007 | 6200 | 291 | 19600 | 33100 | 20.1 | 65200 | ST007 | 6200 | 291 | 19600 | 33100 |
| PCB137 | pg/g | 11 | 10 | 91 | 11.1 | 1770 | ST007 | 248 | 43.4 | 540 | 1070 | 11.1 | 1770 | ST007 | 227 | 38.8 | 517 | 993 |
| PCB138 & 163 & 164 | pg/g | 11 | 11 | 100 | 184 | 311000 | ST007 | 30100 | 1730 | 93200 | 158000 | 184 | 311000 | ST007 | 30100 | 1730 | 93200 | 158000 |
| PCB139 & 149 | pg/g | 11 | 11 | 100 | 137 | 346000 | ST007 | 32900 | 1570 | 104000 | 175000 | 137 | 346000 | ST007 | 32900 | 1570 | 104000 | 175000 |
| PCB140 | pg/g | 11 | 7 | 64 | 6 | 318 | ST007 | 69.2 | 26.8 | 111 | 241 | 6 | 318 | ST007 | 48.3 | 13 | 90.9 | 190 |
| PCB141 | pg/g | 11 | 11 | 100 | 34.8 | 113000 | ST007 | 10700 | 435 | 33900 | 57200 | 34.8 | 113000 | ST007 | 10700 | 435 | 33900 | 57200 |
| PCB144 | pg/g | 11 | 8 | 73 | 20.8 | 25100 | ST007 | 3230 | 116 | 8840 | 16400 | 9.9 U | 25100 | ST007 | 2360 | 90.5 | 7540 | 12700 |
| PCB145 | pg/g | 11 | 1 | 9 | 7.11 J | 7.11 J | ST007 | 7.11 | 7.11 J | -- | 7.11 J | 2.5 U | 12.5 U | ST004; ST005; ST011; ST012; ST013; ST014 | 9.72 | 12.5 U | 3.97 | 12.5 U |
| PCB146 & 165 | pg/g | 11 | 11 | 100 | 31 | 41100 | ST007 | 4110 | 303 | 12300 | 21100 | 31 | 41100 | ST007 | 4110 | 303 | 12300 | 21100 |
| PCB147 | pg/g | 11 | 10 | 91 | 18.4 | 2590 | ST007 | 348 | 64.8 | 795 | 1590 | 9.9 U | 2590 | ST007 | 317 | 58.6 T | 761 | 1480 |
| PCB148 | pg/g | 11 | 7 | 64 | 3.42 | 201 | ST007 | 44.9 | 24.9 T | 69.9 | 151 | 3.42 | 201 | ST007 | 32.9 | 12.5 U | 56.6 | 117 |
| PCB150 | pg/g | 11 | 6 | 55 | 5.82 J | 454 | ST007 | 93 | 24.5 | 177 | 351 | 2.5 U | 454 | ST007 | 55.2 | 12.5 U | 133 | 247 |
| PCB151 | pg/g | 11 | 11 | 100 | 47 | 144000 | ST007 | 13700 | 546 | 43200 | 72900 | 47 | 144000 | ST007 | 13700 | 546 | 43200 | 72900 |
| PCB152 | pg/g | 11 | 4 | 36 | 3.19 JT | 243 | ST007 | 75.5 | 27.9 | 113 | 212 | 2.5 U | 243 | ST007 | 34.3 | 12.5 U | 69.9 | 141 |
| PCB153 | pg/g | 11 | 11 | 100 | 190 | 447000 | ST007 | 43000 | 2290 | 134000 | 227000 | 190 | 447000 | ST007 | 43000 | 2290 | 134000 | 227000 |
| PCB154 | pg/g | 11 | 10 | 91 | 17.2 | 1220 | ST007 | 196 | 51.4 | 367 | 770 | 9.9 U | 1220 | ST007 | 179 | 51.4 | 353 | 720 |
| PCB155 | pg/g | 11 | 1 | 9 | 34.2 | 34.2 | ST007 | 34.2 | 34.2 | -- | 34.2 | 2.5 U | 34.2 | ST007 | 12.2 | 12.5 U | 8.27 | 23.4 |
| PCB156 | pg/g | 11 | 11 | 100 | 16.9 | 22600 | ST007 | 2220 | 133 | 6760 | 11500 | 16.9 | 22600 | ST007 | 2220 | 133 | 6760 | 11500 |
| PCB157 | pg/g | 11 | 10 | 91 | 4.59 J | 1470 | ST007 | 177 | 24.4 | 455 | 851 | 4.59 J | 1470 | ST007 | 163 | 23.9 | 434 | 782 |
| PCB158 & 160 | pg/g | 11 | 11 | 100 | 18.5 | 30800 | ST007 | 2970 | 176 | 9230 | 15600 | 18.5 | 30800 | ST007 | 2970 | 176 | 9230 | 15600 |
| PCB159 | pg/g | 11 | 9 | 82 | 7.72 | 7160 | ST007 | 831 | 30.2 | 2370 | 4330 | 7.72 | 7160 | ST007 | 682 | 22.9 | 2150 | 3630 |
| PCB166 | pg/g | 11 | 3 | 27 | 9.36 J | 98.4 | ST007 | 43.2 | 21.7 | 48.2 | 90.7 | 2.5 U | 98.4 | ST007 | 19.3 | 12.5 U | 26.8 | 60.1 |

Table D2.2-3. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Third Quarter (Summer 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| PCB167 | pg/g | 11 | 11 | 100 | 8.51 J | 8290 | ST007 | 821 | 61.5 | 2480 | 4240 | 8.51 J | 8290 | ST007 | 821 | 61.5 | 2480 | 4240 |
| PCB168 | pg/g | 11 | 2 | 18 | 13.1 T | 15.5 | ST006 | 14.3 | 14.3 | 1.7 | 15.4 | 2.5 U | 23.6 UJ | ST013 | 12.5 | 12.5 U | 4.96 | 19.6 J |
| PCB169 | pg/g | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.51 U | 34.7 UJ | ST007 | 8.8 | 6.56 U | 9.33 | 23.5 UJ |
| PCB170 | pg/g | 11 | 11 | 100 | 48.2 | 194000 | ST007 | 18400 | 748 | 58200 | 98300 | 48.2 | 194000 | ST007 | 18400 | 748 | 58200 | 98300 |
| PCB171 | pg/g | 11 | 11 | 100 | 14.3 | 47000 | ST007 | 4490 | 184 | 14100 | 23900 | 14.3 | 47000 | ST007 | 4490 | 184 | 14100 | 23900 |
| PCB172 | pg/g | 11 | 10 | 91 | 39.5 | 30500 | ST007 | 3200 | 118 | 9590 | 17000 | 9.9 U | 30500 | ST007 | 2910 | 110 | 9150 | 15500 |
| PCB173 | pg/g | 11 | 7 | 64 | 5.59 | 4450 | ST007 | 663 | 24.9 T | 1670 | 3140 | 5.59 | 4450 | ST007 | 426 | 17.9 | 1330 | 2260 |
| PCB174 | pg/g | 11 | 11 | 100 | 56.9 | 224000 | ST007 | 21300 | 690 | 67200 | 114000 | 56.9 | 224000 | ST007 | 21300 | 690 | 67200 | 114000 |
| PCB175 | pg/g | 11 | 8 | 73 | 10.8 | 10800 | ST007 | 1370 | 26.9 | 3810 | 7040 | 9.89 U | 10800 | ST007 | 1010 | 25.2 | 3250 | 5440 J |
| PCB176 | pg/g | 11 | 10 | 91 | 26.8 | 32800 | ST007 | 3390 | 99.2 | 10300 | 18200 | 9.9 U | 32800 | ST007 | 3090 | 84.4 | 9860 | 16600 |
| PCB177 | pg/g | 11 | 11 | 100 | 37.3 | 126000 | ST007 | 12000 | 474 | 37800 | 64000 | 37.3 | 126000 | ST007 | 12000 | 474 | 37800 | 64000 |
| PCB178 | pg/g | 11 | 11 | 100 | 15.6 | 47000 | ST007 | 4470 | 157 | 14100 | 23800 | 15.6 | 47000 | ST007 | 4470 | 157 | 14100 | 23800 |
| PCB179 | pg/g | 11 | 11 | 100 | 28 | 112000 | ST007 | 10600 | 333 | 33600 | 56700 | 28 | 112000 | ST007 | 10600 | 333 | 33600 | 56700 |
| PCB180 | pg/g | 11 | 11 | 100 | 124 | 483000 | ST007 | 45900 | 1530 | 145000 | 245000 | 124 | 483000 | ST007 | 45900 | 1530 | 145000 | 245000 |
| PCB181 | pg/g | 11 | 2 | 18 | 3.18 | 87.2 T | ST015 | 45.2 | 45.2 | 59.4 | 83 | 3.18 | 87.2 T | ST015 | 17.7 | 12.5 U | 23.2 | 49.9 |
| PCB182 & 187 | pg/g | 11 | 11 | 100 | 91.7 | 291000 | ST007 | 27600 | 897 | 87400 | 147000 | 91.7 | 291000 | ST007 | 27600 | 897 | 87400 | 147000 |
| PCB183 | pg/g | 11 | 11 | 100 | 33.3 | 153000 | ST007 | 14400 | 407 | 46000 | 77300 | 33.3 | 153000 | ST007 | 14400 | 407 | 46000 | 77300 |
| PCB184 | pg/g | 11 | 1 | 9 | 34.6 | 34.6 | ST007 | 34.6 | 34.6 | -- | 34.6 | 2.5 U | 34.6 | ST007 | 12.2 | 12.5 U | 8.37 | 23.6 |
| PCB185 | pg/g | 11 | 9 | 82 | 29.5 | 26200 | ST007 | 3030 | 95 | 8690 | 15900 | 9.9 U | 26200 | ST007 | 2490 | 78.3 | 7870 | 13300 |
| PCB186 | pg/g | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 12.5 U | ST004; ST005; ST011; ST012; ST013; ST014 | 9.97 | 12.5 U | 3.87 | 12.5 U |
| PCB188 | pg/g | 11 | 3 | 27 | 5.18 T | 85.9 | ST007 | 33.7 | 9.93 | 45.3 | 78.3 | 2.5 U | 85.9 | ST007 | 17.1 | 12.5 U | 23.1 | 49.2 |
| PCB189 | pg/g | 11 | 8 | 73 | 9.74 | 5630 | ST007 | 742 | 36.6 | 1980 | 3690 | 0.747 U | 5630 | ST007 | 542 | 29.5 | 1690 | 2860 |
| PCB190 | pg/g | 11 | 11 | 100 | 12.7 | 41600 | ST007 | 3970 | 154 | 12500 | 21200 | 12.7 | 41600 | ST007 | 3970 | 154 | 12500 | 21200 |
| PCB191 | pg/g | 11 | 8 | 73 | 5.98 | 7380 | ST007 | 956 | 40.3 | 2600 | 4820 | 5.98 | 7380 | ST007 | 698 | 27.1 | 2220 | 3730 |
| PCB192 | pg/g | 11 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 12.5 U | ST004; ST005; ST011; ST012; ST013; ST014 | 9.97 | 12.5 U | 3.87 | 12.5 U |
| PCB193 | pg/g | 11 | 10 | 91 | 30.3 | 21600 | ST007 | 2270 | 91.5 | 6790 | 12000 | 9.9 U | 21600 | ST007 | 2070 | 70.9 | 6480 | 11000 |
| PCB194 | pg/g | 11 | 11 | 100 | 28.6 | 99600 | ST007 | 9520 | 310 | 29900 | 50500 | 28.6 | 99600 | ST007 | 9520 | 310 | 29900 | 50500 |
| PCB195 | pg/g | 11 | 11 | 100 | 13.3 | 44900 | ST007 | 4310 | 145 | 13500 | 22800 | 13.3 | 44900 | ST007 | 4310 | 145 | 13500 | 22800 |
| PCB196 & 203 | pg/g | 11 | 9 | 82 | 151 | 111000 | ST007 | 12800 | 553 | 36800 | 67100 | 26.8 UJ | 111000 | ST007 | 10500 | 305 | 33300 | 56100 |
| PCB197 | pg/g | 11 | 7 | 64 | 5.27 J | 4140 | ST007 | 610 | 21.8 | 1560 | 2910 | 5.27 J | 4140 | ST007 | 395 | 13.3 | 1240 | 2100 |
| PCB198 | pg/g | 11 | 6 | 55 | 8.32 | 8060 | ST007 | 1440 | 84.7 | 3250 | 6140 | 8.32 | 8060 | ST007 | 795 | 16.8 | 2410 | 4230 |
| PCB199 | pg/g | 11 | 11 | 100 | 29.6 | 91100 | ST007 | 8650 | 334 | 27300 | 46100 | 29.6 | 91100 | ST007 | 8650 | 334 | 27300 | 46100 |
| PCB200 | pg/g | 11 | 7 | 64 | 16.6 | 13800 | ST007 | 2040 | 92.7 T | 5180 | 9700 | 9.9 U | 13800 | ST007 | 1310 | 42.6 | 4140 | 6970 |
| PCB201 | pg/g | 11 | 8 | 73 | 21.7 | 13900 | ST007 | 1820 | 89.8 | 4880 | 9110 | 9.9 U | 13900 | ST007 | 1330 | 48.2 | 4170 | 7050 |
| PCB202 | pg/g | 11 | 10 | 91 | 36.2 | 14800 | ST007 | 1580 | 76.4 | 4650 | 8270 | 9.9 U | 14800 | ST007 | 1440 | 67.4 | 4430 | 7540 |
| PCB204 | pg/g | 11 | 1 | 9 | 6.53 J | 6.53 J | ST007 | 6.53 | 6.53 J | -- | 6.53 J | 2.5 U | 12.5 U | ST004; ST005; ST011; ST012; ST013; ST014 | 9.67 | 12.5 U | 4.01 | 12.5 U |
| PCB205 | pg/g | 11 | 9 | 82 | 6.54 J | 4430 | ST007 | 514 | 17.8 | 1470 | 2680 | 6.54 J | 4430 | ST007 | 422 | 15.9 | 1330 | 2250 |
| PCB206 | pg/g | 11 | 11 | 100 | 18.5 | 16200 | ST007 | 1670 | 220 T | 4820 | 8370 | 18.5 | 16200 | ST007 | 1670 | 220 T | 4820 | 8370 |
| PCB207 | pg/g | 11 | 10 | 91 | 10.9 J | 1980 | ST007 | 221 | 21.3 | 618 | 1120 | 9.9 U | 1980 | ST007 | 202 | 20.2 | 590 | 1020 |
| PCB208 | pg/g | 11 | 10 | 91 | 30.4 | 2260 | ST007 | 282 | 56.7 | 696 | 1310 | 9.9 U | 2260 | ST007 | 257 | 52.2 T | 665 | 1200 |
| PCB209 | pg/g | 11 | 10 | 91 | 37.1 | 299 | ST007 | 185 | 199 | 90.2 | 296 | 37.1 | 299 | ST007 | 182 | 199 | 86.1 | 296 |
| Total PCB Congeners | µg/kg | 11 | 11 | 100 | 3.14 JT | 4830 JT | ST007 | 470 | 29.9 JT | 1450 | 2460 J | 3.14 JT | 4830 JT | ST007 | 470 | 29.9 JT | 1450 | 2460 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 11 | 11 | 100 | 0.0000248 JT | 0.0352 T | ST007 | 0.00381 | 0.000466 T | 0.0104 | 0.019 | 0.0000248 JT | 0.0352 T | ST007 | 0.00381 | 0.000466 T | 0.0104 | 0.019 |
| **PCBs[c]** | | | | | | | | | | | | | | | | | | |
| Total PCBs | µg/kg | 11 | 11 | 100 | 3.14 JT | 4830 JT | ST007 | 470 | 29.9 JT | 1450 | 2460 J | 3.14 JT | 4830 JT | ST007 | 470 | 29.9 JT | 1450 | 2460 J |
| **PCB Homologs** | | | | | | | | | | | | | | | | | | |
| Dichlorobiphenyl homologs | pg/g | 11 | 11 | 100 | 171 T | 26200 T | ST007 | 2870 | 640 T | 7740 | 13600 | 171 T | 26200 T | ST007 | 2870 | 640 T | 7740 | 13600 |
| Heptachlorobiphenyl homologs | pg/g | 11 | 11 | 100 | 462 T | 1860000 T | ST007 | 177000 | 6020 T | 558000 | 942000 | 462 T | 1860000 T | ST007 | 177000 | 6020 T | 558000 | 942000 |
| Hexachlorobiphenyl homologs | pg/g | 11 | 11 | 100 | 824 JT | 1750000 JT | ST007 | 168000 | 9080 JT | 525000 | 890000 J | 824 JT | 1750000 JT | ST007 | 168000 | 9080 JT | 525000 | 890000 J |
| Monochlorobiphenyl homologs | pg/g | 11 | 10 | 91 | 11.2 JT | 242 T | ST007 | 70 | 51.1 J | 66.8 | 176 | 9.9 UT | 242 T | ST007 | 64.5 | 51 T | 65.9 | 169 |
| Nonachlorobiphenyl homologs | pg/g | 11 | 11 | 100 | 18.5 T | 20400 T | ST007 | 2120 | 297 T | 6060 | 10600 | 18.5 T | 20400 T | ST007 | 2120 | 297 T | 6060 | 10600 |
| Octachlorobiphenyl homologs | pg/g | 11 | 11 | 100 | 71.5 T | 406000 JT | ST007 | 38700 | 1280 T | 122000 | 206000 J | 71.5 T | 406000 JT | ST007 | 38700 | 1280 T | 122000 | 206000 J |
| Pentachlorobiphenyl homologs | pg/g | 11 | 11 | 100 | 860 JT | 411000 T | ST007 | 43700 | 5370 JT | 122000 | 214000 J | 860 JT | 411000 T | ST007 | 43700 | 5370 JT | 122000 | 214000 J |
| Tetrachlorobiphenyl homologs | pg/g | 11 | 11 | 100 | 527 T | 262000 T | ST007 | 27500 | 3370 JT | 77800 | 135000 | 527 T | 262000 T | ST007 | 27500 | 3370 JT | 77800 | 135000 |
| Trichlorobiphenyl homologs | pg/g | 11 | 11 | 100 | 169 T | 91700 T | ST007 | 9650 | 1260 T | 27200 | 47500 | 169 T | 91700 T | ST007 | 9650 | 1260 T | 27200 | 47500 |
| **Dioxins/Furans Homologs** | | | | | | | | | | | | | | | | | | |
| Heptachlorodibenzofuran homologs | pg/g | 7 | 7 | 100 | 4.86 J | 72.2 | ST002 | 24.3 | 8.93 T | 29.3 | 69 | 4.86 J | 72.2 | ST002 | 24.3 | 8.93 T | 29.3 | 69 |
| Heptachlorodibenzo-p-dioxin homologs | pg/g | 7 | 7 | 100 | 20.7 | 268 | ST007 | 84.1 | 34.3 | 96.1 | 238 | 20.7 | 268 | ST007 | 84.1 | 34.3 | 96.1 | 238 |
| Hexachlorodibenzofuran homologs | pg/g | 7 | 7 | 100 | 0.6 J | 31.4 | ST007 | 9.83 | 4.87 | 11.8 | 28.5 | 0.6 J | 31.4 | ST007 | 9.83 | 4.87 | 11.8 | 28.5 |
| Hexachlorodibenzo-p-dioxin homologs | pg/g | 7 | 7 | 100 | 0.924 J | 35.2 | ST007 | 10.6 | 4.39 J | 13 | 31.4 | 0.924 J | 35.2 | ST007 | 10.6 | 4.39 J | 13 | 31.4 |

Table D2.2-3. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Third Quarter (Summer 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| Octachlorodibenzofuran | pg/g | 7 | 7 | 100 | 4.97 J | 123 | ST002 | 37.4 | 10.9 | 48.7 | 114 | 4.97 J | 123 | ST002 | 37.4 | 10.9 | 48.7 | 114 |
| Octachlorodibenzo-p-dioxin | pg/g | 7 | 7 | 100 | 85.2 | 1300 | ST007 | 389 | 131 T | 481 | 1160 | 85.2 | 1300 | ST007 | 389 | 131 T | 481 | 1160 |
| Pentachlorodibenzofuran homologs | pg/g | 7 | 7 | 100 | 0.72 J | 17.1 | ST007 | 4.92 | 2.15 J | 6.28 | 15 | 0.72 J | 17.1 | ST007 | 4.92 | 2.15 J | 6.28 | 15 |
| Pentachlorodibenzo-p-dioxin homologs | pg/g | 7 | 3 | 43 | 0.301 J | 3.13 J | ST002 | 1.88 | 2.22 J | 1.44 | 3.04 J | 0.0155 U | 3.13 J | ST002 | 0.819 | 0.0251 UT | 1.3 | 2.86 J |
| Tetrachlorodibenzofuran homologs | pg/g | 7 | 7 | 100 | 0.283 J | 8.71 | ST007 | 2.59 | 1.37 | 3 | 7.33 | 0.283 J | 8.71 | ST007 | 2.59 | 1.37 | 3 | 7.33 |
| Tetrachlorodibenzo-p-dioxin homologs | pg/g | 7 | 7 | 100 | 0.513 JT | 7.61 | ST007 | 1.99 | 0.715 J | 2.57 | 6.01 | 0.513 JT | 7.61 | ST007 | 1.99 | 0.715 J | 2.57 | 6.01 |
| **PCDD/Fs Homologs** | | | | | | | | | | | | | | | | | | |
| Total PCDD/Fs | pg/g | 7 | 7 | 100 | 120 JT | 1820 JT | ST007 | 564 | 191 JT | 684 | 1650 J | 120 JT | 1820 JT | ST007 | 564 | 191 JT | 684 | 1650 J |
| **Dioxins/Furans** | | | | | | | | | | | | | | | | | | |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran | pg/g | 7 | 7 | 100 | 1.55 J | 18.7 | ST007 | 6.69 | 2.51 J | 7.71 | 18.3 | 1.55 J | 18.7 | ST007 | 6.69 | 2.51 J | 7.71 | 18.3 |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin | pg/g | 7 | 7 | 100 | 8.77 | 137 | ST007 | 40.5 | 13 T | 50.4 | 121 | 8.77 | 137 | ST007 | 40.5 | 13 T | 50.4 | 121 |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran | pg/g | 7 | 4 | 57 | 0.282 J | 1.73 J | ST007 | 0.854 | 0.703 J | 0.697 | 1.64 J | 0.0441 U | 1.73 J | ST007 | 0.528 | 0.282 J | 0.64 | 1.54 J |
| 1,2,3,4,7,8-Hexachlorodibenzofuran | pg/g | 7 | 7 | 100 | 0.145 J | 2.38 J | ST007 | 1.01 | 1.03 J | 0.869 | 2.17 J | 0.145 J | 2.38 J | ST007 | 1.01 | 1.03 J | 0.869 | 2.17 J |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 7 | 3 | 43 | 0.178 J | 1.49 J | ST007 | 0.819 | 0.79 J | 0.656 | 1.42 J | 0.0274 U | 1.49 J | ST007 | 0.381 | 0.0917 U | 0.559 | 1.28 J |
| 1,2,3,6,7,8-Hexachlorodibenzofuran | pg/g | 7 | 4 | 57 | 0.314 J | 1.24 J | ST007 | 0.744 | 0.711 J | 0.437 | 1.2 J | 0.0256 U | 1.24 J | ST007 | 0.446 | 0.314 J | 0.484 | 1.16 J |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 7 | 6 | 86 | 0.276 JT | 6.69 | ST007 | 2 | 0.579 J | 2.57 | 5.85 J | 0.276 JT | 6.69 | ST007 | 1.77 | 0.574 J | 2.42 | 5.68 J |
| 1,2,3,7,8,9-Hexachlorodibenzofuran | pg/g | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.0259 U | 0.115 U | ST007 | 0.0584 | 0.0348 UT | 0.0364 | 0.107 U |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | pg/g | 7 | 6 | 86 | 0.287 J | 3.78 J | ST007 | 1.21 | 0.375 J | 1.44 | 3.36 J | 0.0305 U | 3.78 J | ST007 | 1.04 | 0.375 J | 1.39 | 3.28 J |
| 1,2,3,7,8-Pentachlorodibenzofuran | pg/g | 7 | 5 | 71 | 0.0502 JT | 0.847 J | ST014 | 0.537 | 0.51 J | 0.326 | 0.843 J | 0.0257 U | 0.847 J | ST014 | 0.397 | 0.452 J | 0.358 | 0.841 J |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | pg/g | 7 | 2 | 29 | 0.507 J | 0.801 J | ST007 | 0.654 | 0.654 J | 0.208 | 0.786 J | 0.0155 U | 0.801 J | ST007 | 0.205 | 0.0251 UT | 0.318 | 0.713 J |
| 2,3,4,6,7,8-Hexachlorodibenzofuran | pg/g | 7 | 4 | 57 | 0.208 J | 1.49 J | ST007 | 0.776 | 0.703 J | 0.653 | 1.44 J | 0.0239 U | 1.49 J | ST007 | 0.463 | 0.208 J | 0.604 | 1.39 J |
| 2,3,4,7,8-Pentachlorodibenzofuran | pg/g | 7 | 2 | 29 | 0.0715 JT | 0.734 J | ST007 | 0.403 | 0.403 J | 0.468 | 0.701 J | 0.0257 U | 0.734 J | ST007 | 0.305 | 0.324 U | 0.274 | 0.659 J |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/g | 7 | 3 | 43 | 0.585 J | 2.02 | ST014 | 1.29 | 1.25 | 0.718 | 1.94 | 0.0731 UT | 2.02 | ST014 | 0.823 | 0.863 U | 0.677 | 1.79 |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | pg/g | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.0133 U | 0.0264 U | ST009 | 0.0175 | 0.0159 U | 0.00428 | 0.024 U |
| **PCDD/Fs** | | | | | | | | | | | | | | | | | | |
| TCDD TEQ (ND=0) | pg/g | 7 | 7 | 100 | 0.157 JT | 4.73 JT | ST007 | 1.39 | 0.631 JT | 1.76 | 4.19 J | 0.157 JT | 4.73 JT | ST007 | 1.39 | 0.631 JT | 1.76 | 4.19 J |
| **TCDD TEQ** | | | | | | | | | | | | | | | | | | |
| Total TCDD TEQ (ND = 0) | pg/g | 11 | 11 | 100 | 0.0363 A | 39.9 JT | ST007 | 4.69 | 0.873 JT | 11.7 | 21.7 J | 0.0363 A | 39.9 JT | ST007 | 4.69 | 0.873 JT | 11.7 | 21.7 J |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| 2,4'-DDD | µg/kg | 9 | 5 | 56 | 1.4 NJ | 24 | ST007 | 6.6 | 1.7 NJ | 9.79 | 20 J | 0.34 U | 24 | ST007 | 3.95 | 1.4 NJ | 7.61 | 16.1 J |
| 2,4'-DDE | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.14 U | 0.84 U | ST004 | 0.57 | 0.62 U | 0.223 | 0.8 U |
| 2,4'-DDT | µg/kg | 9 | 2 | 22 | 0.71 J | 1.6 | ST011 | 1.16 | 1.16 J | 0.629 | 1.56 J | 0.13 U | 14 U | ST007 | 2.08 | 0.51 U | 4.49 | 9.04 |
| 4,4'-DDD | µg/kg | 9 | 8 | 89 | 0.69 JT | 4.2 | ST011 | 2.15 | 2.2 J | 1.25 | 3.82 J | 0.69 JT | 4.2 | ST011 | 1.99 | 1.9 | 1.26 | 3.76 J |
| 4,4'-DDE | µg/kg | 9 | 8 | 89 | 1.5 | 4.9 | ST006 | 2.69 | 2.35 | 1.17 | 4.52 J | 0.92 U | 4.9 | ST006 | 2.49 | 2.2 | 1.24 | 4.46 J |
| 4,4'-DDT | µg/kg | 9 | 7 | 78 | 1.6 J | 16 | ST014 | 6.07 | 3.6 J | 5.89 | 15.1 J | 0.62 U | 120 U | ST007 | 18.1 | 3.6 J | 38.6 | 78.4 |
| Aldrin | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.25 U | 0.92 U | ST007 | 0.491 | 0.41 U | 0.223 | 0.844 U |
| alpha-Endosulfan | µg/kg | 9 | 1 | 11 | 0.71 J | 0.71 J | ST006 | 0.71 | 0.71 J | -- | 0.71 J | 0.083 U | 0.71 J | ST006 | 0.463 | 0.52 U | 0.191 | 0.674 J |
| alpha-Hexachlorocyclohexane | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.22 U | 0.95 U | ST004 | 0.689 | 0.79 U | 0.229 | 0.906 U |
| beta-Endosulfan | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.065 U | 1.4 U | ST007 | 0.587 | 0.58 U | 0.36 | 1.12 U |
| beta-Hexachlorocyclohexane | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.32 U | 1.1 U | ST004; ST009 | 0.826 | 0.91 U | 0.261 | 1.1 U |
| cis-Chlordane | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.069 U | 1.5 U | ST006 | 0.672 | 0.7 U | 0.396 | 1.24 U |
| cis-Nonachlor | µg/kg | 9 | 1 | 11 | 1.2 JT | 1.2 JT | ST015 | 1.2 | 1.2 JT | -- | 1.2 JT | 0.18 U | 98 U | ST007 | 12 | 0.92 U | 32.3 | 61.1 U |
| delta-Hexachlorocyclohexane | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.15 U | 1.2 U | ST007 | 0.357 | 0.2 U | 0.354 | 0.984 U |
| Dieldrin | µg/kg | 9 | 3 | 33 | 1.4 J | 4.9 | ST006 | 3.2 | 3.3 J | 1.75 | 4.74 J | 0.75 UT | 13 U | ST007 | 3.01 | 1.1 U | 4.01 | 9.76 |
| Endosulfan sulfate | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.17 U | 7.8 U | ST007 | 1.12 | 0.26 U | 2.51 | 4.86 U |
| Endrin | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.15 U | 0.73 U | ST004 | 0.503 | 0.57 UT | 0.199 | 0.698 U |
| Endrin aldehyde | µg/kg | 9 | 1 | 11 | 0.52 J | 0.52 J | ST009 | 0.52 | 0.52 J | -- | 0.52 J | 0.15 U | 12 U | ST007 | 1.69 | 0.37 UT | 3.88 | 7.64 U |
| Endrin ketone | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.26 U | 130 U | ST007 | 15.2 | 0.8 U | 43.1 | 78.7 U |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.39 UT | 1.7 U | ST006 | 0.593 | 0.46 U | 0.418 | 1.24 U |
| Heptachlor | µg/kg | 9 | 5 | 56 | 0.55 J | 2.3 NJ | ST004 | 1.18 | 1 T | 0.689 | 2.1 J | 0.22 U | 2.3 NJ | ST004 | 0.936 | 0.73 J | 0.62 | 1.9 J |
| Heptachlor epoxide | µg/kg | 9 | 2 | 22 | 0.48 J | 1.1 NJ | ST006 | 0.79 | 0.79 J | 0.438 | 1.07 J | 0.34 UT | 1.1 NJ | ST006 | 0.502 | 0.42 U | 0.234 | 0.88 J |
| Methoxychlor | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.16 U | 11 U | ST007 | 1.6 | 0.38 U | 3.53 | 6.92 U |
| Mirex | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.17 U | 0.35 U | ST006 | 0.228 | 0.21 U | 0.0567 | 0.318 U |
| Oxychlordane | µg/kg | 9 | 1 | 11 | 0.7 J | 0.7 J | ST014 | 0.7 | 0.7 J | -- | 0.7 J | 0.13 U | 1.3 U | ST006 | 0.389 | 0.19 U | 0.389 | 1.06 J |
| Total chlordanes | µg/kg | 9 | 5 | 56 | 1 NJT | 3.1 NJT | ST006 | 1.64 | 1.3 NJT | 0.859 | 2.82 J | 0.71 UT | 98 UT | ST007 | 12.1 | 1.1 JT | 32.2 | 60 J |
| Total DDD | µg/kg | 9 | 9 | 100 | 0.69 JT | 24 T | ST007 | 5.58 | 4.2 NJT | 7.28 | 17.2 J | 0.69 JT | 24 T | ST007 | 5.58 | 4.2 NJT | 7.28 | 17.2 J |
| Total DDE | µg/kg | 9 | 8 | 89 | 1.5 T | 4.9 T | ST006 | 2.69 | 2.35 | 1.17 | 4.52 J | 0.92 UT | 4.9 T | ST006 | 2.49 | 2.2 T | 1.24 | 4.46 J |
| Total DDT | µg/kg | 9 | 7 | 78 | 1.6 JT | 17 JT | ST014 | 6.44 | 3.6 JT | 6.11 | 15.8 J | 0.62 UT | 17 JT | ST014 | 6.64 | 3.6 JT | 6.28 | 15.8 J |
| DDx | µg/kg | 9 | 9 | 100 | 2.4 JT | 25 NJT | ST006 | 12.9 | 8 NJT | 9.21 | 24.6 J | 2.4 JT | 25 NJT | ST006 | 12.9 | 8 NJT | 9.21 | 24.6 J |
| Total Endosulfan | µg/kg | 9 | 1 | 11 | 0.71 JT | 0.71 JT | ST006 | 0.71 | 0.71 JT | -- | 0.71 JT | 0.45 UT | 7.8 UT | ST007 | 1.37 | 0.59 UT | 2.41 | 4.96 J |
| Toxaphene | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 28 U | 120 U | ST006 | 45 | 32 U | 30 | 96 U |
| trans-Chlordane | µg/kg | 9 | 5 | 56 | 0.32 NJ | 2.5 J | ST006 | 1.03 | 0.82 J | 0.862 | 2.2 J | 0.2 U | 3.4 U | ST007 | 1.13 | 0.8 U | 1.08 | 3.04 J |
| trans-Nonachlor | µg/kg | 9 | 3 | 33 | 0.26 J | 0.62 NJ | ST006 | 0.39 | 0.29 J | 0.2 | 0.587 J | 0.18 UT | 1.1 U | ST007 | 0.379 | 0.26 J | 0.3 | 0.908 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | µg/kg | 9 | 9 | 100 | 2.9 J | 51 | ST006 | 9.93 | 4.4 JT | 15.5 | 33.6 | 2.9 J | 51 | ST006 | 9.93 | 4.4 JT | 15.5 | 33.6 |

Table D2.2-3. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Third Quarter (Summer 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| Acenaphthene | µg/kg | 9 | 9 | 100 | 1.8 J | 16 | ST006 | 6.52 | 5.5 T | 4.62 | 14 | 1.8 J | 16 | ST006 | 6.52 | 5.5 T | 4.62 | 14 |
| Acenaphthylene | µg/kg | 9 | 9 | 100 | 3 J | 12 | ST006 | 6.08 | 5.4 J | 2.7 | 10.2 | 3 J | 12 | ST006 | 6.08 | 5.4 J | 2.7 | 10.2 |
| Anthracene | µg/kg | 9 | 9 | 100 | 3.2 J | 37 | ST006 | 16.9 | 12 | 10.7 | 33.8 | 3.2 J | 37 | ST006 | 16.9 | 12 | 10.7 | 33.8 |
| Benzo(a)anthracene | µg/kg | 9 | 9 | 100 | 11 | 150 | ST011 | 59.4 | 36 | 52.2 | 146 | 11 | 150 | ST011 | 59.4 | 36 | 52.2 | 146 |
| Benzo(a)pyrene | µg/kg | 9 | 9 | 100 | 12 | 150 | ST006 | 56.1 | 43 | 44 | 128 | 12 | 150 | ST006 | 56.1 | 43 | 44 | 128 |
| Benzo(b)fluoranthene | µg/kg | 9 | 9 | 100 | 17 | 260 | ST006 | 92.3 | 58 | 79.8 | 228 | 17 | 260 | ST006 | 92.3 | 58 | 79.8 | 228 |
| Benzo(g,h,i)perylene | µg/kg | 9 | 9 | 100 | 15 | 150 | ST006 | 55.2 | 45 | 41.3 | 123 | 15 | 150 | ST006 | 55.2 | 45 | 41.3 | 123 |
| Benzo(k)fluoranthene | µg/kg | 9 | 9 | 100 | 5.7 JT | 86 | ST006 | 27.5 | 15 | 26.5 | 73.6 | 5.7 JT | 86 | ST006 | 27.5 | 15 | 26.5 | 73.6 |
| Chrysene | µg/kg | 9 | 9 | 100 | 15 | 240 | ST006 | 86.2 | 49 | 78.3 | 216 | 15 | 240 | ST006 | 86.2 | 49 | 78.3 | 216 |
| Dibenzo(a,h)anthracene | µg/kg | 9 | 9 | 100 | 2.3 J | 27 | ST006 | 8.44 | 5.6 | 7.65 | 21.4 | 2.3 J | 27 | ST006 | 8.44 | 5.6 | 7.65 | 21.4 |
| Fluoranthene | µg/kg | 9 | 9 | 100 | 29 | 390 | ST006 | 169 | 120 | 146 | 386 | 29 | 390 | ST006 | 169 | 120 | 146 | 386 |
| Fluorene | µg/kg | 9 | 9 | 100 | 2.1 J | 21 | ST006 | 8 | 5.5 JT | 6.42 | 19 | 2.1 J | 21 | ST006 | 8 | 5.5 JT | 6.42 | 19 |
| Total HPAH | µg/kg | 9 | 9 | 100 | 150 JT | 2000 T | ST006 | 762 | 500 T | 628 | 1800 | 150 JT | 2000 T | ST006 | 762 | 500 T | 628 | 1800 |
| Indeno(1,2,3-cd)pyrene | µg/kg | 9 | 9 | 100 | 10 | 130 | ST006 | 49.6 | 42 | 36.2 | 108 | 10 | 130 | ST006 | 49.6 | 42 | 36.2 | 108 |
| Total LPAH | µg/kg | 9 | 9 | 100 | 48 JT | 360 T | ST006 | 131 | 88 JT | 101 | 300 | 48 JT | 360 T | ST006 | 131 | 88 JT | 101 | 300 |
| Naphthalene | µg/kg | 10 | 9 | 90 | 8.6 | 39 | ST006 | 19.3 | 18 | 10.9 | 37.4 | 0.48 U | 39 | ST006 | 17.4 | 15 | 11.8 | 37.2 |
| Phenanthrene | µg/kg | 9 | 9 | 100 | 14 | 180 | ST006 | 64.6 | 40 T | 55.9 | 160 | 14 | 180 | ST006 | 64.6 | 40 T | 55.9 | 160 |
| Pyrene | µg/kg | 9 | 9 | 100 | 30 | 400 | ST006 | 152 | 110 | 129 | 360 | 30 | 400 | ST006 | 152 | 110 | 129 | 360 |
| Total cPAH (BaPEq) | µg/kg | 9 | 9 | 100 | 18.2 JT | 231 T | ST006 | 85.1 | 60.9 T | 67.9 | 197 | 18.2 JT | 231 T | ST006 | 85.1 | 60.9 T | 67.9 | 197 |
| Total cPAHs | µg/kg | 9 | 9 | 100 | 73 JT | 1000 T | ST006 | 376 | 230 T | 307 | 892 | 73 JT | 1000 T | ST006 | 376 | 230 T | 307 | 892 |
| Total PAHs | µg/kg | 9 | 9 | 100 | 200 JT | 2300 T | ST006 | 882 | 640 T | 695 | 2020 J | 200 JT | 2300 T | ST006 | 882 | 640 T | 695 | 2020 J |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl) phthalate | µg/kg | 9 | 9 | 100 | 81 | 1600 | ST006 | 365 | 210 | 476 | 1140 | 81 | 1600 | ST006 | 365 | 210 | 476 | 1140 |
| Butylbenzyl phthalate | µg/kg | 9 | 5 | 56 | 11 JT | 110 | ST006 | 32.4 | 14 J | 43.4 | 91 J | 9.7 U | 110 | ST006 | 22.7 | 12 J | 32.8 | 72 J |
| Dibutyl phthalate | µg/kg | 9 | 4 | 44 | 23 T | 100 | ST006 | 57.5 | 53.5 | 36.7 | 96.4 | 23 T | 120 U | ST007 | 71.4 | 76 | 33.4 | 112 |
| Diethyl phthalate | µg/kg | 9 | 4 | 44 | 5.7 JT | 26 J | ST006 | 13.9 | 11.9 J | 8.76 | 24.2 J | 4 U | 26 J | ST006 | 8.67 | 5.6 U | 7.31 | 21.2 J |
| Dimethyl phthalate | µg/kg | 9 | 2 | 22 | 1.7 JT | 19 J | ST006 | 10.4 | 10.4 J | 12.2 | 18.1 J | 1.7 JT | 19 J | ST006 | 4.62 | 3.1 U | 5.42 | 12.8 J |
| Di-n-octyl phthalate | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.2 UT | 13 U | ST006 | 5.61 | 5.2 U | 2.99 | 10.2 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.4 UT | 20 U | ST006 | 8.56 | 7.9 U | 4.62 | 15.6 U |
| 1,2-Dichlorobenzene | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.8 UT | 23 U | ST006 | 9.71 | 8.8 U | 5.39 | 18.2 U |
| 1,3-Dichlorobenzene | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.9 UT | 23 U | ST006 | 9.93 | 9.1 U | 5.31 | 18.2 U |
| 1,4-Dichlorobenzene | µg/kg | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.27 U | 23 U | ST006 | 3.99 | 0.34 U | 7.31 | 16.5 U |
| 2,4-Dinitrotoluene | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2 UT | 12 U | ST006 | 5.03 | 4.6 U | 2.79 | 9.32 U |
| 2,6-Dinitrotoluene | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.6 UT | 16 U | ST006 | 6.67 | 6.1 U | 3.74 | 12.4 U |
| 2-Chloronaphthalene | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.1 UT | 13 U | ST006 | 5.38 | 4.9 U | 3.05 | 10 U |
| 2-Nitroaniline | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.2 UT | 25 U | ST006 | 10.8 | 9.7 U | 5.81 | 19.8 U |
| 3,3'-Dichlorobenzidine | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.8 UT | 29 U | ST006 | 12.4 | 12 U | 6.73 | 22.6 U |
| 3-Nitroaniline | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.3 UT | 19 U | ST006 | 8.23 | 7.6 U | 4.36 | 14.9 U |
| 4-Bromophenyl phenyl ether | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.1 UT | 13 U | ST006 | 5.38 | 4.9 U | 3.05 | 10 U |
| 4-Chloroaniline | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 UT | 15 U | ST006 | 6.33 | 5.8 U | 3.49 | 11.7 U |
| 4-Chlorophenyl phenyl ether | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.9 UT | 11 U | ST006 | 4.66 | 4.3 U | 2.55 | 8.56 U |
| 4-Nitroaniline | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.4 UT | 14 U | ST006 | 5.97 | 5.5 U | 3.23 | 10.9 U |
| Aniline | µg/kg | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2 UT | 12 U | ST006 | 5.4 | 4.4 U | 3.89 | 10.7 U |
| Azobenzene | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.5 UT | 8.4 U | ST006 | 3.66 | 3.4 U | 1.92 | 6.6 U |
| Benzoic acid | µg/kg | 3 | 3 | 100 | 220 J | 1300 J | ST006 | 683 | 530 J | 556 | 1220 J | 220 J | 1300 J | ST006 | 683 | 530 J | 556 | 1220 J |
| Benzyl alcohol | µg/kg | 9 | 9 | 100 | 10 JT | 42 J | ST006 | 20.1 | 16 | 10.7 | 36.8 J | 10 JT | 42 J | ST006 | 20.1 | 16 | 10.7 | 36.8 J |
| Bis(2-chloroethoxy) methane | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2 UT | 12 U | ST006 | 5.03 | 4.6 U | 2.79 | 9.32 U |
| Bis(2-chloroethyl) ether | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 UT | 15 U | ST006 | 6.33 | 5.8 U | 3.49 | 11.7 U |
| Bis(2-chloroisopropyl) ether | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.4 UT | 20 U | ST006 | 8.56 | 7.9 U | 4.62 | 15.6 U |
| Carbazole | µg/kg | 9 | 7 | 78 | 3.6 J | 33 J | ST006 | 9.94 | 7.5 J | 10.3 | 25.6 J | 3.6 J | 33 J | ST006 | 8.69 | 5 J | 9.29 | 23.1 J |
| Dibenzofuran | µg/kg | 9 | 8 | 89 | 1.7 J | 10 | ST006 | 4.91 | 3.8 J | 3.28 | 9.9 | 1.7 J | 10 | ST006 | 4.58 | 3.7 J | 3.23 | 9.88 |
| Hexachlorobenzene | µg/kg | 9 | 1 | 11 | 2.2 | 2.2 | ST007 | 2.2 | 2.2 | -- | 2.2 | 0.46 U | 2.6 U | ST009 | 1.11 | 0.77 U | 0.764 | 2.44 |
| Hexachlorobutadiene | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.34 UT | 5.5 U | ST006 | 1.33 | 0.79 U | 1.6 | 3.94 U |
| Hexachlorocyclopentadiene | µg/kg | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 38 UT | 230 UJ | ST006 | 105 | 85 UJ | 74.8 | 206 UJ |
| Hexachloroethane | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.34 U | 0.55 U | ST004 | 0.437 | 0.46 U | 0.0671 | 0.526 U |
| Isophorone | µg/kg | 9 | 1 | 11 | 19 J | 19 J | ST006 | 19 | 19 J | -- | 19 J | 1.3 UT | 19 J | ST006 | 4.58 | 3.1 U | 5.45 | 12.8 J |
| Nitrobenzene | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.9 UT | 17 U | ST006 | 7.27 | 6.7 U | 3.93 | 13.3 U |
| N-Nitrosodimethylamine | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 7.9 UT | 47 U | ST006 | 20.4 | 19 U | 10.8 | 37 U |
| N-Nitrosodiphenylamine | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.1 UT | 13 U | ST006 | 5.38 | 4.9 U | 3.05 | 10 U |
| N-Nitrosodipropylamine | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.1 UT | 19 U | ST006 | 7.98 | 7.3 U | 4.43 | 14.8 U |

Table D2.2-3. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Third Quarter (Summer 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| 2,3,4,5-Tetrachlorophenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.55 UT | 2.3 U | ST004 | 1.74 | 1.95 U | 0.615 | 2.23 U |
| 2,3,5,6-Tetrachlorophenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.44 UT | 1.1 U | ST004 | 0.86 | 0.92 U | 0.226 | 1.07 U |
| 2,4,5-Trichlorophenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.5 U | 2 UJ | ST004 | 1.7 | 1.7 U | 0.19 | 1.95 UJ |
| 2,4,6-Trichlorophenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.29 UT | 1.5 U | ST004 | 1.1 | 1.2 U | 0.419 | 1.45 U |
| 2,4-Dichlorophenol | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.3 UT | 7.6 U | ST006 | 3.31 | 3.1 U | 1.74 | 5.96 U |
| 2,4-Dimethylphenol | µg/kg | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 7.1 UT | 42 UJ | ST006 | 19.1 | 17 U | 10 | 34.3 UJ |
| 2,4-Dinitrophenol | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 22 UT | 130 U | ST006 | 56.1 | 52 U | 29.9 | 102 U |
| 2-Chlorophenol | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.6 UT | 16 U | ST006 | 6.67 | 6.1 U | 3.74 | 12.4 U |
| 2-Methylphenol | µg/kg | 9 | 3 | 33 | 4.9 J | 16 J | ST006 | 8.77 | 5.4 J | 6.27 | 14.9 J | 2 UT | 16 J | ST006 | 5.59 | 4.9 J | 4.05 | 11.8 J |
| 2-Nitrophenol | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2 UT | 12 U | ST006 | 5.03 | 4.6 U | 2.79 | 9.32 U |
| 4,6-Dinitro-2-methylphenol | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.9 UT | 11 U | ST006 | 4.66 | 4.3 U | 2.55 | 8.56 U |
| 4-Chloro-3-methylphenol | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.9 UT | 11 U | ST006 | 4.66 | 4.3 U | 2.55 | 8.56 U |
| 4-Methylphenol | µg/kg | 9 | 9 | 100 | 18 | 5500 J | ST009 | 819 | 56 | 1820 | 3900 J | 18 | 5500 J | ST009 | 819 | 56 | 1820 | 3900 J |
| 4-Nitrophenol | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 24 UT | 140 U | ST006 | 59.7 | 55 U | 32.3 | 109 U |
| Pentachlorophenol | µg/kg | 6 | 1 | 17 | 2.6 NJT | 2.6 NJT | ST015 | 2.6 | 2.6 NJT | -- | 2.6 NJT | 0.38 U | 2.6 NJT | ST015 | 0.802 | 0.445 U | 0.882 | 2.08 J |
| Phenol | µg/kg | 9 | 3 | 33 | 68 | 230 | ST006 | 143 | 130 | 81.7 | 220 | 10 UT | 230 | ST006 | 65.7 | 37 U | 71.3 | 190 |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 9 | 9 | 100 | 110 JT | 470 J | ST006 | 184 | 150 JT | 118 | 390 J | 110 JT | 470 J | ST006 | 184 | 150 JT | 118 | 390 J |
| Total Petroleum Hydrocarbons (Gasoline) | mg/kg | 8 | 2 | 25 | 3.5 T | 3.7 T | ST015 | 3.6 | 3.6 | 0.141 | 3.69 | 3.5 T | 18 U | ST006 | 6.79 | 4.65 U | 5.14 | 15.6 U |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 9 | 9 | 100 | 480 J | 2100 J | ST006 | 912 | 770 J | 513 | 1780 J | 480 J | 2100 J | ST006 | 912 | 770 J | 513 | 1780 J |
| Total Petroleum Hydrocarbons | mg/kg | 9 | 9 | 100 | 600 JT | 2570 JT | ST006 | 1100 | 920 JT | 629 | 2170 J | 600 JT | 2570 JT | ST006 | 1100 | 920 JT | 629 | 2170 J |
| **Herbicides** | | | | | | | | | | | | | | | | | | |
| 2,4,5-T | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 18 U | 110 U | ST012 | 67.1 | 87 U | 37.9 | 106 U |
| 2,4-D | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 37 U | 130 U | ST012 | 87.8 | 96 UT | 35.2 | 126 U |
| 2,4-DB | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 30 U | 120 U | ST012 | 77.8 | 95 U | 36.6 | 116 U |
| Dalapon | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 140 U | 460 U | ST012 | 313 | 380 U | 133 | 448 U |
| Dicamba | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 15 U | 140 U | ST002; ST007; ST012 | 84.7 | 91 UT | 54.9 | 140 U |
| Dichloroprop | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 13 U | 100 U | ST012 | 61.6 | 78 UT | 37.1 | 98.4 U |
| Dinoseb | µg/kg | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 27 UJ | 170 UT | ST015 | 65.8 | 33 UJ | 69.6 | 150 UJ |
| MCPA | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2200 U | 87000 U | ST012 | 43900 | 50000 U | 38500 | 85400 U |
| MCPP | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1100 U | 74000 U | ST012 | 36600 | 42000 U | 33600 | 72800 U |
| Silvex | µg/kg | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 16 U | 100 U | ST012 | 63.8 | 84 U | 36.5 | 98.4 U |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.21 U | 0.27 U | ST004; ST005 | 0.243 | 0.24 U | 0.0229 | 0.27 U |
| 1,1,1-Trichloroethane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.18 U | 0.24 U | ST004 | 0.21 | 0.21 U | 0.0216 | 0.237 U |
| 1,1,2,2-Tetrachloroethane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.3 U | 0.39 U | ST004 | 0.347 | 0.34 U | 0.032 | 0.387 U |
| 1,1,2-Trichloroethane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.3 U | 0.39 U | ST004 | 0.347 | 0.34 U | 0.032 | 0.387 U |
| 1,1-Dichloroethane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.19 U | 0.24 U | ST004; ST005 | 0.216 | 0.21 U | 0.019 | 0.24 U |
| 1,1-Dichloroethene | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.16 U | 0.2 U | ST004; ST005 | 0.183 | 0.18 U | 0.015 | 0.2 U |
| 1,2,3-Trichloropropane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.78 U | 1.1 U | ST004 | 0.917 | 0.89 U | 0.108 | 1.07 U |
| 1,2-Dichloroethane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.16 U | 0.2 U | ST004; ST005 | 0.183 | 0.18 U | 0.015 | 0.2 U |
| 1,2-Dichloropropane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.26 U | 0.33 U | ST004; ST005 | 0.297 | 0.29 U | 0.0275 | 0.33 U |
| 1,4-Dichloro-trans-2-butene | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.2 U | 1.5 U | ST004; ST005 | 1.34 | 1.3 U | 0.127 | 1.5 U |
| 2-Chloroethyl vinyl ether | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.84 U | 1.1 UJ | ST004; ST005 | 0.976 | 0.96 U | 0.099 | 1.1 UJ |
| Acetone | µg/kg | 7 | 2 | 29 | 360 J | 4500 J | ST007 | 2430 | 2430 J | 2930 | 4290 J | 9.9 UJ | 4500 J | ST007 | 712 | 29 U | 1680 | 3260 J |
| Acrylonitrile | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.3 U | 1.7 U | ST004 | 1.49 | 1.5 U | 0.135 | 1.67 U |
| Benzene | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.22 U | 0.28 U | ST004; ST005 | 0.251 | 0.25 U | 0.0234 | 0.28 U |
| Bromochloromethane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.49 U | 0.63 U | ST004 | 0.564 | 0.56 U | 0.0506 | 0.627 U |
| Bromodichloromethane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.3 U | 0.39 U | ST004 | 0.347 | 0.34 U | 0.032 | 0.387 U |
| Bromoform | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.52 U | 0.67 U | ST004 | 0.599 | 0.59 U | 0.0552 | 0.667 U |
| Bromomethane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.4 U | 1.8 U | ST004; ST005 | 1.63 | 1.6 U | 0.15 | 1.8 U |
| BTEX | µg/kg | 7 | 3 | 43 | 0.27 JT | 10 T | ST005 | 3.58 | 0.47 JT | 5.56 | 9.05 J | 0.27 JT | 10 T | ST005 | 1.82 | 0.49 UT | 3.61 | 7.16 |
| Carbon disulfide | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.16 U | 0.2 U | ST004; ST005 | 0.183 | 0.18 U | 0.015 | 0.2 U |
| Carbon tetrachloride | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.2 U | 0.26 U | ST004 | 0.23 | 0.23 U | 0.0216 | 0.257 U |
| Chlorobenzene | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.14 U | 0.18 U | ST004; ST005 | 0.163 | 0.16 U | 0.015 | 0.18 U |
| Chlorodibromomethane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.26 U | 0.34 U | ST004 | 0.303 | 0.3 U | 0.0275 | 0.337 U |
| Chloroethane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.65 U | 0.84 U | ST004 | 0.751 | 0.74 U | 0.0701 | 0.837 U |
| Chloroform | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.17 U | 0.23 U | ST004 | 0.201 | 0.2 U | 0.0212 | 0.227 U |
| Chloromethane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.3 U | 0.39 U | ST004 | 0.347 | 0.34 U | 0.032 | 0.387 U |
| cis-1,2-Dichloroethene | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.27 U | 0.35 U | ST004; ST005 | 0.316 | 0.31 U | 0.0299 | 0.35 U |
| cis-1,3-Dichloropropene | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.16 U | 0.2 U | ST004; ST005 | 0.18 | 0.18 U | 0.0173 | 0.2 U |
| Dichlorodifluoromethane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.18 U | 0.24 U | ST004 | 0.21 | 0.21 U | 0.0216 | 0.237 U |
| Ethylbenzene | µg/kg | 7 | 2 | 29 | 0.27 J | 0.47 J | ST015 | 0.37 | 0.37 J | 0.141 | 0.46 J | 0.2 U | 0.47 J | ST015 | 0.259 | 0.23 U | 0.0963 | 0.41 J |
| Ethylene dibromide | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.25 U | 0.33 U | ST004 | 0.293 | 0.29 U | 0.0275 | 0.327 U |

Table D2.2-3. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Third Quarter (Summer 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| Isopropylbenzene | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.14 U | 0.18 U | ST004; ST005 | 0.163 | 0.16 U | 0.015 | 0.18 U |
| m,p-Xylene | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.41 U | 0.53 U | ST004 | 0.473 | 0.47 U | 0.0442 | 0.527 U |
| Methyl iodide | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.95 U | 1.3 U | ST004 | 1.12 | 1.1 U | 0.122 | 1.27 U |
| Methyl isobutyl ketone | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.6 U | 0.77 U | ST004 | 0.689 | 0.68 U | 0.0631 | 0.767 U |
| Methyl n-butyl ketone | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.6 UJ | 2.1 U | ST004; ST005 | 1.87 | 1.9 UJ | 0.189 | 2.1 U |
| Methyl tert-butyl ether | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.18 U | 0.23 U | ST004 | 0.204 | 0.2 U | 0.0172 | 0.227 U |
| Methylene bromide | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.41 U | 0.53 U | ST004 | 0.473 | 0.47 U | 0.0442 | 0.527 U |
| Methylene chloride | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.4 U | 2.7 U | ST002 | 1.86 | 1.8 U | 0.42 | 2.46 U |
| Methylethyl ketone | µg/kg | 3 | 3 | 100 | 5.4 J | 7.3 J | ST014 | 6.27 | 6.1 J | 0.961 | 7.18 J | 5.4 J | 7.3 J | ST014 | 6.27 | 6.1 J | 0.961 | 7.18 J |
| o-Xylene | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.16 U | 0.2 U | ST004; ST005 | 0.183 | 0.18 U | 0.015 | 0.2 U |
| Styrene | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.19 U | 0.24 U | ST004 | 0.214 | 0.21 U | 0.0172 | 0.237 U |
| Tetrachloroethene | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.21 U | 0.27 U | ST004; ST005 | 0.243 | 0.24 U | 0.0229 | 0.27 U |
| Toluene | µg/kg | 7 | 1 | 14 | 10 | 10 | ST005 | 10 | 10 | -- | 10 | 0.38 U | 10 | ST005 | 1.85 | 0.46 U | 3.6 | 7.23 |
| trans-1,2-Dichloroethene | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.23 U | 0.3 U | ST004 | 0.266 | 0.26 U | 0.0257 | 0.297 U |
| trans-1,3-Dichloropropene | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.25 U | 0.33 U | ST004 | 0.293 | 0.29 U | 0.0275 | 0.327 U |
| Trichloroethene | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.19 U | 0.25 U | ST004 | 0.221 | 0.22 U | 0.0212 | 0.247 U |
| Trichlorofluoromethane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.3 U | 0.39 U | ST004 | 0.347 | 0.34 U | 0.032 | 0.387 U |
| Vinyl chloride | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.26 U | 0.33 U | ST004; ST005 | 0.297 | 0.29 U | 0.0275 | 0.33 U |
| Xylene | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.41 UT | 0.53 UT | ST004 | 0.473 | 0.47 UT | 0.0442 | 0.527 U |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DDx - total of 2,4' and 4,4'-DDD, -DDE, -DDT
DL - detection limit
HPAH - high molecular weightpolycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
TOC - total organic carbon

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D2.2-4. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Fourth Quarter (Fall 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| **Grain Size** | | | | | | | | | | | | | | | | | | |
| >9 Phi clay | percent | 13 | 13 | 100 | 2.86 | 8.47 | ST010 | 4.74 | 4.59 | 1.55 | 7.2 | 2.86 | 8.47 | ST010 | 4.74 | 4.59 | 1.55 | 7.2 |
| 8-9 Phi clay | percent | 13 | 13 | 100 | 2.14 | 8.41 | ST001 | 4.56 | 4.35 | 1.88 | 8.01 | 2.14 | 8.41 | ST001 | 4.56 | 4.35 | 1.88 | 8.01 |
| Coarse sand | percent | 13 | 13 | 100 | 0.33 | 4 | ST007 | 0.9 | 0.64 | 0.951 | 2.19 | 0.33 | 4 | ST007 | 0.9 | 0.64 | 0.951 | 2.19 |
| Coarse silt | percent | 13 | 13 | 100 | 7.83 | 45.7 | ST015 | 23.5 | 21.3 | 9.32 | 38.7 | 7.83 | 45.7 | ST015 | 23.5 | 21.3 | 9.32 | 38.7 |
| Fine gravel | percent | 13 | 13 | 100 | 0.31 | 2.02 | ST015 | 1.15 | 1.1 | 0.561 | 1.95 | 0.31 | 2.02 | ST015 | 1.15 | 1.1 | 0.561 | 1.95 |
| Fine sand | percent | 13 | 13 | 100 | 0.82 | 24.3 | ST007 | 4 | 1.15 | 6.35 | 13.5 | 0.82 | 24.3 | ST007 | 4 | 1.15 | 6.35 | 13.5 |
| Fine silt | percent | 13 | 13 | 100 | 8.3 | 21.5 | ST013 | 15.7 | 17.3 | 4.33 | 20.7 | 8.3 | 21.5 | ST013 | 15.7 | 17.3 | 4.33 | 20.7 |
| Fines | percent | 13 | 13 | 100 | 42.6 T | 106 T | ST011 | 84.2 | 86 T | 15.5 | 100 | 42.6 T | 106 T | ST011 | 84.2 | 86 T | 15.5 | 100 |
| Medium gravel | percent | 13 | 13 | 100 | 0 | 2.04 | ST011 | 0.611 | 0.36 | 0.662 | 1.75 | 0 | 2.04 | ST011 | 0.611 | 0.36 | 0.662 | 1.75 |
| Medium sand | percent | 13 | 13 | 100 | 0.32 | 19.8 | ST007 | 2.2 | 0.6 | 5.3 | 8.76 | 0.32 | 19.8 | ST007 | 2.2 | 0.6 | 5.3 | 8.76 |
| Medium silt | percent | 13 | 13 | 100 | 12.3 | 29.5 | ST005 | 24.3 | 25.4 | 5.68 | 29.2 | 12.3 | 29.5 | ST005 | 24.3 | 25.4 | 5.68 | 29.2 |
| Very coarse sand | percent | 13 | 13 | 100 | 0.33 | 1.92 | ST016 | 1.07 | 1.05 | 0.44 | 1.7 | 0.33 | 1.92 | ST016 | 1.07 | 1.05 | 0.44 | 1.7 |
| Very fine sand | percent | 13 | 13 | 100 | 3.49 | 13 T | ST014 | 7.25 | 6.74 | 3.17 | 12 | 3.49 | 13 T | ST014 | 7.25 | 6.74 | 3.17 | 12 |
| Very fine silt | percent | 13 | 13 | 100 | 4.58 | 15.4 | ST010 | 11.4 | 12.4 | 3.39 | 15.2 | 4.58 | 15.4 | ST010 | 11.4 | 12.4 | 3.39 | 15.2 |
| **Conventionals** | | | | | | | | | | | | | | | | | | |
| Specific Gravity | NA | 13 | 13 | 100 | 1.15 | 1.28 | ST007 | 1.21 | 1.21 | 0.0323 | 1.26 | 1.15 | 1.28 | ST007 | 1.21 | 1.21 | 0.0323 | 1.26 |
| Total organic carbon | percent | 16 | 16 | 100 | 2 | 3.47 | ST009 | 2.54 | 2.57 | 0.408 | 3.25 | 2 | 3.47 | ST009 | 2.54 | 2.57 | 0.408 | 3.25 |
| Total solids | percent | 16 | 16 | 100 | 15.8 | 39 T | ST003; ST014 | 29.3 | 29.3 | 6.76 | 39 | 15.8 | 39 T | ST003; ST014 | 29.3 | 29.3 | 6.76 | 39 |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/kg | 16 | 16 | 100 | 15200 | 45400 | ST004 | 33700 | 36200 | 8750 | 43400 | 15200 | 45400 | ST004 | 33700 | 36200 | 8750 | 43400 |
| Antimony | mg/kg | 16 | 15 | 94 | 0.135 JT | 0.39 | ST006 | 0.182 | 0.16 J | 0.0718 | 0.334 J | 0.11 U | 0.39 | ST006 | 0.177 | 0.155 J | 0.0716 | 0.33 J |
| Arsenic | mg/kg | 16 | 16 | 100 | 1.48 J | 7.01 | ST011 | 5.02 | 5.16 | 1.4 | 6.77 | 1.48 J | 7.01 | ST011 | 5.02 | 5.16 | 1.4 | 6.77 |
| Cadmium | mg/kg | 16 | 16 | 100 | 0.084 J | 0.676 | ST002 | 0.329 | 0.286 | 0.148 | 0.583 | 0.084 J | 0.676 | ST002 | 0.329 | 0.286 | 0.148 | 0.583 |
| Chromium | mg/kg | 16 | 16 | 100 | 10.8 | 39.3 | ST004 | 31.8 | 33.9 | 7.77 | 38.9 | 10.8 | 39.3 | ST004 | 31.8 | 33.9 | 7.77 | 38.9 |
| Chromium hexavalent | mg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.16 UJ | 0.27 UJ | ST010 | 0.206 | 0.21 UJ | 0.032 | 0.258 UJ |
| Copper | mg/kg | 16 | 16 | 100 | 15.2 | 63 | ST004 | 47.8 | 50.1 | 12.3 | 61.1 | 15.2 | 63 | ST004 | 47.8 | 50.1 | 12.3 | 61.1 |
| Lead | mg/kg | 16 | 16 | 100 | 6.19 | 27.1 | ST006 | 17.4 | 17 | 4.65 | 24.8 | 6.19 | 27.1 | ST006 | 17.4 | 17 | 4.65 | 24.8 |
| Mercury | mg/kg | 16 | 15 | 94 | 0.06 | 0.172 | ST006 | 0.0901 | 0.081 | 0.0344 | 0.166 | 0.034 U | 0.172 | ST006 | 0.0866 | 0.08 | 0.0361 | 0.166 |
| Nickel | mg/kg | 16 | 16 | 100 | 7.94 | 33 | ST007 | 25.6 | 27.7 | 6.44 | 31.8 | 7.94 | 33 | ST007 | 25.6 | 27.7 | 6.44 | 31.8 |
| Selenium | mg/kg | 16 | 12 | 75 | 0.21 T | 0.32 | ST013 | 0.258 | 0.25 | 0.0325 | 0.304 | 0.04 U | 0.32 | ST013 | 0.22 | 0.245 | 0.076 | 0.298 |
| Silver | mg/kg | 16 | 16 | 100 | 0.15 | 0.79 | ST006 | 0.294 | 0.27 | 0.141 | 0.453 | 0.15 | 0.79 | ST006 | 0.294 | 0.27 | 0.141 | 0.453 |
| Zinc | mg/kg | 16 | 16 | 100 | 71.6 | 254 | ST006 | 152 | 156 | 39.2 | 197 | 71.6 | 254 | ST006 | 152 | 156 | 39.2 | 197 |
| **Butyltins** | | | | | | | | | | | | | | | | | | |
| Butyltin ion | µg/kg | 15 | 10 | 67 | 0.55 J | 12 | ST006 | 2.14 | 1.02 J | 3.48 | 7.27 J | 0.079 U | 12 | ST006 | 1.49 | 0.9 J | 2.95 | 4.65 J |
| Dibutyltin ion | µg/kg | 15 | 14 | 93 | 0.83 J | 62 | ST006 | 6.72 | 2.45 J | 15.9 | 24.6 | 0.56 U | 62 | ST006 | 6.31 | 2.2 J | 15.4 | 21.7 |
| Tetrabutyltin | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.16 U | 0.45 U | ST006 | 0.243 | 0.23 U | 0.0685 | 0.345 U |
| Tributyltin ion | µg/kg | 15 | 12 | 80 | 0.6 JT | 81 | ST006 | 11.8 | 4.65 | 22 | 43.6 | 0.24 U | 81 | ST006 | 9.52 | 4.3 | 20.1 | 33.4 |
| **PCB Aroclors** | | | | | | | | | | | | | | | | | | |
| Aroclor 1016 | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.7 UJ | 27 U | ST006 | 5.9 | 2.4 U | 7.34 | 19.8 U |
| Aroclor 1221 | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.7 U | 15 U | ST007 | 4.19 | 2.4 U | 3.87 | 11 U |
| Aroclor 1232 | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.7 U | 32 U | ST006 | 6.43 | 2.4 U | 8.58 | 21.8 U |
| Aroclor 1242 | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.7 U | 21 U | ST006 | 9.27 | 7.9 U | 5.18 | 17.4 U |
| Aroclor 1248 | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.7 U | 15 U | ST007 | 4.19 | 2.4 U | 3.87 | 11 U |
| Aroclor 1254 | µg/kg | 13 | 1 | 8 | 23 J | 23 J | ST001 | 23 | 23 J | -- | 23 J | 4.4 U | 35 U | ST012 | 14.1 | 11 U | 10.4 | 34.4 U |
| Aroclor 1260 | µg/kg | 12 | 6 | 50 | 7.7 J | 2600 | ST007 | 460 | 39.5 J | 1050 | 1970 | 5 U | 2600 | ST007 | 234 | 10.4 U | 745 | 1210 |
| Aroclor 1262 | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.7 U | 15 U | ST007 | 4.19 | 2.4 U | 3.87 | 11 U |
| Aroclor 1268 | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.7 U | 15 U | ST007 | 4.19 | 2.4 U | 3.87 | 11 U |
| Aroclors | µg/kg | 13 | 7 | 54 | 7.7 JT | 2600 T | ST007 | 398 | 23 JT | 971 | 1840 | 6.5 UT | 2600 T | ST007 | 221 | 14 UT | 715 | 1080 |
| **PCB Congeners** | | | | | | | | | | | | | | | | | | |
| PCB001 | pg/g | 16 | 15 | 94 | 6.76 | 657 JT | ST007 | 58.6 | 11.5 | 166 | 233 J | 6.76 | 657 JT | ST007 | 55.5 | 11.4 | 161 | 202 J |
| PCB002 | pg/g | 16 | 16 | 100 | 6.86 | 41.7 | ST006 | 17.7 | 16.3 | 7.68 | 31.4 J | 6.86 | 41.7 | ST006 | 17.7 | 16.3 | 7.68 | 31.4 J |
| PCB003 | pg/g | 16 | 16 | 100 | 5.73 | 102 JT | ST007 | 20 | 10.9 | 25 | 66.9 J | 5.73 | 102 JT | ST007 | 20 | 10.9 | 25 | 66.9 J |
| PCB004 & 010 | pg/g | 16 | 8 | 50 | 50.2 | 67800 JT | ST007 | 8580 | 73.7 | 23900 | 44200 J | 9.97 UT | 67800 JT | ST007 | 4300 | 45.2 J | 16900 | 17200 J |
| PCB005 & 008 | pg/g | 16 | 16 | 100 | 36.4 | 4220 JT | ST007 | 364 | 75.1 | 1030 | 1320 J | 36.4 | 4220 JT | ST007 | 364 | 75.1 | 1030 | 1320 J |
| PCB006 | pg/g | 16 | 6 | 38 | 24.2 | 1330 JT | ST007 | 263 | 44.4 | 523 | 1020 J | 9.95 U | 1330 JT | ST007 | 108 | 20 U | 327 | 405 J |
| PCB007 & 009 | pg/g | 16 | 1 | 6 | 709 JT | 709 JT | ST007 | 709 | 709 JT | -- | 709 JT | 9.95 U | 709 JT | ST007 | 55.5 | 10 U | 174 | 192 J |
| PCB011 | pg/g | 16 | 16 | 100 | 197 | 588 | ST009 | 331 | 306 J | 102 | 540 | 197 | 588 | ST009 | 331 | 306 J | 102 | 540 |
| PCB012 & 013 | pg/g | 16 | 3 | 19 | 25.5 | 141 JT | ST007 | 66.4 | 32.7 | 64.7 | 130 J | 9.95 U | 141 JT | ST007 | 23.6 | 10 U | 32.3 | 59.8 J |

Table D2.2-4. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Fourth Quarter (Fall 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| PCB014 | pg/g | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 9.88 UT | 20 U | ST010 | 11.8 | 10 U | 4.01 | 19.9 U |
| PCB015 | pg/g | 16 | 16 | 100 | 41.8 | 604 T | ST007 | 147 | 93.5 | 142 | 357 | 41.8 | 604 T | ST007 | 147 | 93.5 | 142 | 357 |
| PCB016 & 032 | pg/g | 16 | 16 | 100 | 37.6 | 10600 T | ST007 | 773 | 102 | 2620 | 2860 | 37.6 | 10600 T | ST007 | 773 | 102 | 2620 | 2860 |
| PCB017 | pg/g | 16 | 15 | 94 | 29.1 | 28800 T | ST007 | 2020 | 100 | 7410 | 8880 | 22.3 UJ | 28800 T | ST007 | 1890 | 86.9 | 7180 | 7460 |
| PCB018 | pg/g | 16 | 16 | 100 | 56.5 | 20100 JT | ST007 | 1400 | 141 | 4990 | 5330 J | 56.5 | 20100 JT | ST007 | 1400 | 141 | 4990 | 5330 J |
| PCB019 | pg/g | 16 | 14 | 88 | 22.9 | 195000 JT | ST007 | 14100 | 63.8 | 52100 | 69000 J | 9.96 U | 195000 JT | ST007 | 12300 | 51.5 | 48700 | 49600 J |
| PCB020 & 021 & 033 | pg/g | 16 | 16 | 100 | 33.9 | 13200 T | ST007 | 961 | 119 | 3270 | 3590 | 33.9 | 13200 T | ST007 | 961 | 119 | 3270 | 3590 |
| PCB022 | pg/g | 16 | 16 | 100 | 28.4 T | 2000 T | ST007 | 221 | 93.8 | 478 | 681 | 28.4 T | 2000 T | ST007 | 221 | 93.8 | 478 | 681 |
| PCB023 | pg/g | 16 | 1 | 6 | 12.2 T | 12.2 T | ST007 | 12.2 | 12.2 T | -- | 12.2 T | 4.97 U | 12.2 T | ST007 | 6.38 | 5 U | 2.52 | 10.5 |
| PCB024 & 027 | pg/g | 16 | 14 | 88 | 8.12 JT | 18900 JT | ST007 | 1380 | 21.5 | 5040 | 6750 J | 8.12 JT | 18900 JT | ST007 | 1210 | 19.9 | 4720 | 4880 J |
| PCB025 | pg/g | 16 | 14 | 88 | 11.5 T | 1140 T | ST007 | 120 | 41.6 | 294 | 457 | 9.96 U | 1140 T | ST007 | 107 | 34.4 | 277 | 352 |
| PCB026 | pg/g | 16 | 15 | 94 | 16.9 T | 4100 JT | ST007 | 330 | 55.1 | 1040 | 1330 J | 9.99 U | 4100 JT | ST007 | 310 | 52 | 1010 | 1130 J |
| PCB028 | pg/g | 16 | 16 | 100 | 82.9 T | 2450 T | ST007 | 455 | 307 | 566 | 1190 | 82.9 T | 2450 T | ST007 | 455 | 307 | 566 | 1190 |
| PCB029 | pg/g | 16 | 1 | 6 | 33.5 JT | 33.5 JT | ST007 | 33.5 | 33.5 JT | -- | 33.5 JT | 4.97 U | 33.5 JT | ST007 | 7.71 | 5 U | 7.16 | 15.9 J |
| PCB030 | pg/g | 16 | 1 | 6 | 171 JT | 171 JT | ST007 | 171 | 171 JT | -- | 171 JT | 4.97 U | 171 JT | ST007 | 16.3 | 5 U | 41.3 | 50.2 J |
| PCB031 | pg/g | 16 | 16 | 100 | 69.2 T | 3090 T | ST007 | 432 | 216 | 725 | 1200 | 69.2 T | 3090 T | ST007 | 432 | 216 | 725 | 1200 |
| PCB034 | pg/g | 16 | 2 | 12 | 7.59 | 754 JT | ST007 | 381 | 381 J | 528 | 717 J | 4.97 U | 754 JT | ST007 | 52.9 | 5 U | 187 | 196 J |
| PCB035 | pg/g | 16 | 11 | 69 | 5.23 | 56.5 JT | ST007 | 13.8 | 8.32 | 14.5 | 36.6 J | 4.98 U | 56.5 JT | ST007 | 11.7 | 8.21 | 12.4 | 26.6 J |
| PCB036 | pg/g | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.94 UT | 9.99 U | ST010 | 5.93 | 5 U | 2.01 | 9.98 U |
| PCB037 | pg/g | 16 | 16 | 100 | 32.4 | 486 JT | ST007 | 137 | 110 | 112 | 284 J | 32.4 | 486 JT | ST007 | 137 | 110 | 112 | 284 J |
| PCB038 | pg/g | 16 | 6 | 38 | 7.06 | 1500 T | ST007 | 274 | 33.9 | 601 | 1140 | 4.97 U | 1500 T | ST007 | 107 | 6.04 | 372 | 420 |
| PCB039 | pg/g | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.94 UT | 9.99 U | ST010 | 5.93 | 5 U | 2.01 | 9.98 U |
| PCB040 | pg/g | 16 | 16 | 100 | 17.6 | 1220 JT | ST007 | 130 | 54.2 | 292 | 393 J | 17.6 | 1220 JT | ST007 | 130 | 54.2 | 292 | 393 J |
| PCB041 & 064 & 071 & 072 | pg/g | 16 | 16 | 100 | 83.3 | 17200 T | ST007 | 1350 | 292 | 4230 | 4710 | 83.3 | 17200 T | ST007 | 1350 | 292 | 4230 | 4710 |
| PCB042 & 059 | pg/g | 16 | 16 | 100 | 31.1 | 2930 T | ST007 | 289 | 112 | 707 | 882 | 31.1 | 2930 T | ST007 | 289 | 112 | 707 | 882 |
| PCB043 & 049 | pg/g | 16 | 16 | 100 | 114 | 40900 T | ST007 | 3020 | 407 | 10100 | 11300 | 114 | 40900 T | ST007 | 3020 | 407 | 10100 | 11300 |
| PCB044 | pg/g | 16 | 16 | 100 | 128 | 21700 T | ST007 | 1720 | 397 | 5330 | 5930 | 128 | 21700 T | ST007 | 1720 | 397 | 5330 | 5930 |
| PCB045 | pg/g | 16 | 16 | 100 | 12.2 T | 1390 T | ST007 | 128 | 38.8 | 338 | 411 | 12.2 T | 1390 T | ST007 | 128 | 38.8 | 338 | 411 |
| PCB046 | pg/g | 16 | 15 | 94 | 7.06 T | 6690 JT | ST007 | 474 | 26.9 | 1720 | 2060 J | 7.06 T | 6690 JT | ST007 | 445 | 25.5 | 1670 | 1730 J |
| PCB047 | pg/g | 16 | 16 | 100 | 46.3 | 25500 T | ST007 | 2180 | 262 | 6320 | 9870 | 46.3 | 25500 T | ST007 | 2180 | 262 | 6320 | 9870 |
| PCB048 & 075 | pg/g | 16 | 16 | 100 | 14.9 | 2470 T | ST007 | 212 | 58.3 | 603 | 723 | 14.9 | 2470 T | ST007 | 212 | 58.3 | 603 | 723 |
| PCB050 | pg/g | 16 | 5 | 31 | 8.09 | 1430 T | ST007 | 313 | 14.7 | 625 | 1160 | 4.98 U | 1430 T | ST007 | 102 | 5.01 U | 355 | 434 |
| PCB051 | pg/g | 16 | 16 | 100 | 5.45 J | 18700 T | ST007 | 1380 | 56.8 | 4640 | 6060 | 5.45 J | 18700 T | ST007 | 1380 | 56.8 | 4640 | 6060 |
| PCB052 & 069 | pg/g | 16 | 16 | 100 | 171 | 131000 T | ST007 | 8700 | 534 | 32600 | 33700 | 171 | 131000 T | ST007 | 8700 | 534 | 32600 | 33700 |
| PCB053 | pg/g | 16 | 16 | 100 | 17.2 | 138000 T | ST007 | 8800 | 96.8 | 34500 | 35300 | 17.2 | 138000 T | ST007 | 8800 | 96.8 | 34500 | 35300 |
| PCB054 | pg/g | 16 | 14 | 88 | 5 | 17700 JT | ST007 | 1310 | 13.5 | 4720 | 6490 J | 5 | 17700 JT | ST007 | 1150 | 11.9 | 4410 | 4770 J |
| PCB055 | pg/g | 16 | 11 | 69 | 5.76 J | 772 T | ST007 | 81.8 | 9.11 | 229 | 408 | 4.98 U | 772 T | ST007 | 58.1 | 7.87 | 191 | 226 |
| PCB056 & 060 | pg/g | 16 | 16 | 100 | 78.4 T | 1810 T | ST007 | 313 | 178 | 417 | 827 | 78.4 T | 1810 T | ST007 | 313 | 178 | 417 | 827 |
| PCB057 | pg/g | 16 | 4 | 25 | 7.07 | 677 T | ST007 | 180 | 17.4 | 332 | 579 | 4.97 U | 677 T | ST007 | 49.3 | 5 U | 167 | 185 |
| PCB058 | pg/g | 16 | 1 | 6 | 52.3 JT | 52.3 JT | ST007 | 52.3 | 52.3 JT | -- | 52.3 JT | 4.97 U | 52.3 JT | ST007 | 8.89 | 5 U | 11.7 | 20.6 J |
| PCB061 & 070 | pg/g | 16 | 16 | 100 | 183 | 10600 T | ST007 | 1120 | 464 | 2540 | 3600 | 183 | 10600 T | ST007 | 1120 | 464 | 2540 | 3600 |
| PCB062 | pg/g | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.94 UT | 9.99 U | ST010 | 5.93 | 5 U | 2.01 | 9.98 U |
| PCB063 | pg/g | 16 | 16 | 100 | 5.83 T | 176 T | ST007 | 27.1 | 17.6 | 40.8 | 73.9 | 5.83 T | 176 T | ST007 | 27.1 | 17.6 | 40.8 | 73.9 |
| PCB065 | pg/g | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.94 UT | 9.99 U | ST010 | 5.93 | 5 U | 2.01 | 9.98 U |
| PCB066 & 076 | pg/g | 16 | 16 | 100 | 169 T | 6930 T | ST007 | 849 | 425 | 1640 | 2630 | 169 T | 6930 T | ST007 | 849 | 425 | 1640 | 2630 |
| PCB067 | pg/g | 16 | 14 | 88 | 5.41 J | 1240 JT | ST007 | 104 | 15.1 | 327 | 460 J | 4.99 UT | 1240 JT | ST007 | 92.2 | 13.9 | 306 | 340 J |
| PCB068 | pg/g | 16 | 11 | 69 | 6.47 | 298 T | ST007 | 42.5 | 9.02 | 86.4 | 180 | 4.98 U | 298 T | ST007 | 31.4 | 8.29 | 72.6 | 121 |
| PCB073 | pg/g | 16 | 6 | 38 | 6.53 | 4130 T | ST007 | 721 | 20.9 | 1670 | 3130 | 4.97 U | 4130 T | ST007 | 274 | 8.25 | 1030 | 1130 |
| PCB074 | pg/g | 16 | 16 | 100 | 66.7 | 2390 T | ST007 | 323 | 173 | 561 | 908 | 66.7 | 2390 T | ST007 | 323 | 173 | 561 | 908 |
| PCB077 | pg/g | 16 | 16 | 100 | 18.6 | 161 T | ST007 | 54.3 | 42.6 | 40.4 | 139 | 18.6 | 161 T | ST007 | 54.3 | 42.6 | 40.4 | 139 |
| PCB078 | pg/g | 16 | 1 | 6 | 302 T | 302 T | ST007 | 302 | 302 T | -- | 302 T | 4.97 U | 302 T | ST007 | 24.5 | 5 U | 74 | 83 |
| PCB079 | pg/g | 16 | 15 | 94 | 5.27 | 941 T | ST007 | 75.9 | 10.5 | 240 | 324 | 5 U | 941 T | ST007 | 71.5 | 9.51 | 232 | 280 |
| PCB080 | pg/g | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.94 UT | 9.99 U | ST010 | 5.93 | 5 U | 2.01 | 9.98 U |
| PCB081 | pg/g | 16 | 15 | 94 | 0.929 J | 358 JT | ST007 | 28.2 | 3.47 JT | 91.3 | 116 J | 0.929 J | 358 JT | ST007 | 26.6 | 3.44 J | 88.4 | 98.5 J |
| PCB082 | pg/g | 16 | 16 | 100 | 41.4 | 2570 JT | ST007 | 266 | 104 | 619 | 900 J | 41.4 | 2570 JT | ST007 | 266 | 104 | 619 | 900 J |
| PCB083 | pg/g | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.94 UT | 9.99 U | ST010 | 5.93 | 5 U | 2.01 | 9.98 U |
| PCB084 & 092 | pg/g | 16 | 16 | 100 | 125 | 79400 T | ST007 | 5380 | 367 | 19700 | 21100 | 125 | 79400 T | ST007 | 5380 | 367 | 19700 | 21100 |
| PCB085 & 116 | pg/g | 16 | 16 | 100 | 51.7 | 3510 T | ST007 | 337 | 115 | 849 | 1120 | 51.7 | 3510 T | ST007 | 337 | 115 | 849 | 1120 |

Table D2.2-4. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Fourth Quarter (Fall 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| PCB086 | pg/g | 16 | 2 | 12 | 9.12 | 903 JT | ST007 | 456 | 456 J | 632 | 858 J | 4.97 U | 903 JT | ST007 | 62.3 | 5.01 U | 224 | 233 J |
| PCB087 & 117 & 125 | pg/g | 16 | 16 | 100 | 100 | 30200 T | ST007 | 2150 | 265 | 7480 | 8140 | 100 | 30200 T | ST007 | 2150 | 265 | 7480 | 8140 |
| PCB088 & 091 | pg/g | 16 | 16 | 100 | 40.6 | 22700 T | ST007 | 1620 | 147 | 5630 | 6350 | 40.6 | 22700 T | ST007 | 1620 | 147 | 5630 | 6350 |
| PCB089 | pg/g | 16 | 10 | 62 | 7.33 | 791 JT | ST007 | 89.6 | 11.4 | 246 | 444 J | 4.97 U | 791 JT | ST007 | 58.5 | 9.93 | 195 | 213 J |
| PCB090 & 101 | pg/g | 16 | 16 | 100 | 319 | 257000 T | ST007 | 17200 | 913 | 64000 | 67500 | 319 | 257000 T | ST007 | 17200 | 913 | 64000 | 67500 |
| PCB093 | pg/g | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.94 UT | 9.99 U | ST010 | 5.93 | 5 U | 2.01 | 9.98 U |
| PCB094 | pg/g | 16 | 12 | 75 | 5.23 T | 21200 JT | ST007 | 1810 | 12 | 6110 | 9680 J | 5 U | 21200 JT | ST007 | 1360 | 10.4 | 5290 | 5490 J |
| PCB095 & 098 & 102 | pg/g | 16 | 16 | 100 | 214 | 212000 T | ST007 | 14100 | 666 | 52800 | 55500 | 214 | 212000 T | ST007 | 14100 | 666 | 52800 | 55500 |
| PCB096 | pg/g | 16 | 13 | 81 | 5.07 | 7400 JT | ST007 | 593 | 12.2 | 2050 | 3030 J | 5.07 | 7400 JT | ST007 | 483 | 11.3 | 1840 | 1930 J |
| PCB097 | pg/g | 16 | 16 | 100 | 89.2 | 24500 T | ST007 | 1760 | 239 | 6070 | 6650 | 89.2 | 24500 T | ST007 | 1760 | 239 | 6070 | 6650 |
| PCB099 | pg/g | 16 | 16 | 100 | 168 | 45200 T | ST007 | 3380 | 448 | 11200 | 12700 | 168 | 45200 T | ST007 | 3380 | 448 | 11200 | 12700 |
| PCB100 | pg/g | 16 | 14 | 88 | 9.69 T | 2880 T | ST007 | 323 | 28 | 780 | 1660 | 9.69 T | 2880 T | ST007 | 284 | 25.6 | 734 | 1470 |
| PCB103 | pg/g | 16 | 15 | 94 | 5.35 J | 5060 T | ST007 | 387 | 19.7 | 1290 | 1690 | 5.35 J | 5060 T | ST007 | 363 | 18.9 | 1250 | 1450 |
| PCB104 | pg/g | 16 | 4 | 25 | 13.2 | 417 T | ST007 | 137 | 58.4 | 192 | 370 | 4.97 U | 417 T | ST007 | 38.6 | 5.01 U | 104 | 182 |
| PCB105 | pg/g | 16 | 16 | 100 | 122 | 19700 T | ST007 | 1510 | 288 | 4850 | 5600 | 122 | 19700 T | ST007 | 1510 | 288 | 4850 | 5600 |
| PCB106 & 118 | pg/g | 16 | 16 | 100 | 331 | 82700 T | ST007 | 5950 | 780 | 20500 | 22700 | 331 | 82700 T | ST007 | 5950 | 780 | 20500 | 22700 |
| PCB107 & 109 | pg/g | 16 | 16 | 100 | 27.2 | 2150 T | ST007 | 200 | 63.9 | 522 | 707 | 27.2 | 2150 T | ST007 | 200 | 63.9 | 522 | 707 |
| PCB108 & 112 | pg/g | 16 | 16 | 100 | 15.2 | 4810 JT | ST007 | 346 | 36.1 | 1190 | 1340 J | 15.2 | 4810 JT | ST007 | 346 | 36.1 | 1190 | 1340 J |
| PCB110 | pg/g | 16 | 16 | 100 | 370 | 171000 T | ST007 | 11700 | 979 | 42500 | 45600 | 370 | 171000 T | ST007 | 11700 | 979 | 42500 | 45600 |
| PCB111 & 115 | pg/g | 16 | 16 | 100 | 6.24 | 388 T | ST007 | 38.1 | 14.5 | 93.6 | 125 | 6.24 | 388 T | ST007 | 38.1 | 14.5 | 93.6 | 125 |
| PCB113 | pg/g | 16 | 4 | 25 | 7.1 | 2080 T | ST007 | 527 | 11.2 | 1040 | 1770 | 4.97 U | 2080 T | ST007 | 137 | 5.01 U | 518 | 529 |
| PCB114 | pg/g | 16 | 15 | 94 | 7.18 | 325 T | ST007 | 38 | 14.8 | 80.4 | 139 | 7.18 | 325 T | ST007 | 36.1 | 14 | 78 | 126 |
| PCB119 | pg/g | 16 | 16 | 100 | 7.82 J | 7240 T | ST007 | 508 | 29.2 | 1800 | 1990 | 7.82 J | 7240 T | ST007 | 508 | 29.2 | 1800 | 1990 |
| PCB120 | pg/g | 16 | 2 | 12 | 8.28 | 1570 T | ST007 | 789 | 789 | 1100 | 1490 | 4.97 U | 1570 T | ST007 | 104 | 5 U | 391 | 400 |
| PCB121 | pg/g | 16 | 1 | 6 | 207 T | 207 T | ST007 | 207 | 207 T | -- | 207 T | 4.97 U | 207 T | ST007 | 18.6 | 5 U | 50.3 | 59.2 |
| PCB122 | pg/g | 16 | 13 | 81 | 5.01 | 351 T | ST007 | 39.3 | 12.3 | 94.2 | 167 | 5 UT | 351 T | ST007 | 33.5 | 10.4 | 85.2 | 121 |
| PCB123 | pg/g | 16 | 16 | 100 | 6.21 | 317 JT | ST007 | 32.5 | 11.3 | 76.2 | 106 J | 6.21 | 317 JT | ST007 | 32.5 | 11.3 | 76.2 | 106 J |
| PCB124 | pg/g | 16 | 16 | 100 | 12.9 | 3520 T | ST007 | 257 | 34.5 | 870 | 975 | 12.9 | 3520 T | ST007 | 257 | 34.5 | 870 | 975 |
| PCB126 | pg/g | 16 | 13 | 81 | 3.29 J | 745 JT | ST007 | 64.6 | 6.41 | 205 | 315 J | 3.29 J | 745 JT | ST007 | 53.7 | 6.28 | 184 | 208 J |
| PCB127 | pg/g | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.94 UT | 9.99 U | ST010 | 5.93 | 5 U | 2.01 | 9.98 U |
| PCB128 & 162 | pg/g | 16 | 16 | 100 | 70.8 | 37300 T | ST007 | 2520 | 155 | 9280 | 9940 | 70.8 | 37300 T | ST007 | 2520 | 155 | 9280 | 9940 |
| PCB129 | pg/g | 16 | 16 | 100 | 14 | 12600 T | ST007 | 835 | 38.8 | 3140 | 3300 | 14 | 12600 T | ST007 | 835 | 38.8 | 3140 | 3300 |
| PCB130 | pg/g | 16 | 16 | 100 | 27.7 | 24900 T | ST007 | 1650 | 65.3 | 6200 | 6530 | 27.7 | 24900 T | ST007 | 1650 | 65.3 | 6200 | 6530 |
| PCB131 | pg/g | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.94 UT | 9.99 U | ST010 | 5.93 | 5 U | 2.01 | 9.98 U |
| PCB132 & 161 | pg/g | 16 | 16 | 100 | 92.7 | 193000 T | ST007 | 12500 | 333 | 48100 | 49900 | 92.7 | 193000 T | ST007 | 12500 | 333 | 48100 | 49900 |
| PCB133 & 142 | pg/g | 16 | 16 | 100 | 10.9 | 18400 T | ST007 | 1220 | 43.1 | 4580 | 4820 | 10.9 | 18400 T | ST007 | 1220 | 43.1 | 4580 | 4820 |
| PCB134 & 143 | pg/g | 16 | 16 | 100 | 19.8 | 43700 T | ST007 | 2830 | 62.9 | 10900 | 11200 | 19.8 | 43700 T | ST007 | 2830 | 62.9 | 10900 | 11200 |
| PCB135 | pg/g | 16 | 16 | 100 | 56.1 | 121000 T | ST007 | 7850 | 170 | 30200 | 31000 | 56.1 | 121000 T | ST007 | 7850 | 170 | 30200 | 31000 |
| PCB136 | pg/g | 16 | 16 | 100 | 42.1 | 146000 T | ST007 | 9400 | 168 | 36400 | 37300 | 42.1 | 146000 T | ST007 | 9400 | 168 | 36400 | 37300 |
| PCB137 | pg/g | 16 | 16 | 100 | 19.9 | 5480 T | ST007 | 405 | 48.1 | 1350 | 1580 | 19.9 | 5480 T | ST007 | 405 | 48.1 | 1350 | 1580 |
| PCB138 & 163 & 164 | pg/g | 16 | 16 | 100 | 367 | 650000 T | ST007 | 42400 | 1160 | 162000 | 168000 | 367 | 650000 T | ST007 | 42400 | 1160 | 162000 | 168000 |
| PCB139 & 149 | pg/g | 16 | 16 | 100 | 289 | 561000 T | ST007 | 36500 | 884 | 140000 | 144000 | 289 | 561000 T | ST007 | 36500 | 884 | 140000 | 144000 |
| PCB140 | pg/g | 16 | 13 | 81 | 7.38 | 1160 T | ST007 | 109 | 11.4 | 316 | 512 | 5 U | 1160 T | ST007 | 90.5 | 11 | 286 | 350 |
| PCB141 | pg/g | 16 | 16 | 100 | 71.9 | 261000 T | ST007 | 16800 | 267 | 65100 | 66600 | 71.9 | 261000 T | ST007 | 16800 | 267 | 65100 | 66600 |
| PCB144 | pg/g | 16 | 16 | 100 | 13.8 | 45600 T | ST007 | 2930 | 44.6 | 11400 | 11600 | 13.8 | 45600 T | ST007 | 2930 | 44.6 | 11400 | 11600 |
| PCB145 | pg/g | 16 | 1 | 6 | 34.3 T | 34.3 T | ST007 | 34.3 | 34.3 T | -- | 34.3 T | 4.97 U | 34.3 T | ST007 | 7.76 | 5 U | 7.35 | 16.1 |
| PCB146 & 165 | pg/g | 16 | 16 | 100 | 59.2 | 117000 T | ST007 | 7700 | 210 | 29200 | 30400 | 59.2 | 117000 T | ST007 | 7700 | 210 | 29200 | 30400 |
| PCB147 | pg/g | 16 | 16 | 100 | 11 | 3930 T | ST007 | 332 | 33.3 | 971 | 1420 | 11 | 3930 T | ST007 | 332 | 33.3 | 971 | 1420 |
| PCB148 | pg/g | 16 | 7 | 44 | 5.89 | 535 T | ST007 | 100 | 38.7 | 193 | 392 | 4.98 U | 535 T | ST007 | 47.4 | 6.6 | 131 | 179 |
| PCB150 | pg/g | 16 | 8 | 50 | 5.62 | 1260 T | ST007 | 179 | 24.8 | 437 | 838 | 4.98 U | 1260 T | ST007 | 92.8 | 7.88 | 312 | 356 |
| PCB151 | pg/g | 16 | 16 | 100 | 92.6 | 253000 T | ST007 | 16400 | 311 | 63100 | 64800 | 92.6 | 253000 T | ST007 | 16400 | 311 | 63100 | 64800 |
| PCB152 | pg/g | 16 | 5 | 31 | 7.55 | 1010 JT | ST007 | 220 | 22.6 | 442 | 818 J | 4.97 U | 1010 JT | ST007 | 72.8 | 5.01 U | 250 | 290 J |
| PCB153 | pg/g | 16 | 16 | 100 | 412 | 972000 T | ST007 | 63100 | 1390 | 242000 | 250000 | 412 | 972000 T | ST007 | 63100 | 1390 | 242000 | 250000 |
| PCB154 | pg/g | 16 | 16 | 100 | 6.26 J | 3620 T | ST007 | 300 | 32.6 | 891 | 1150 | 6.26 J | 3620 T | ST007 | 300 | 32.6 | 891 | 1150 |
| PCB155 | pg/g | 16 | 2 | 12 | 23.1 | 46.5 T | ST007 | 34.8 | 34.8 | 16.5 | 45.3 | 4.97 U | 46.5 T | ST007 | 9.65 | 5 U | 10.9 | 29 |
| PCB156 | pg/g | 16 | 16 | 100 | 39.4 | 49700 T | ST007 | 3250 | 108 | 12400 | 12900 | 39.4 | 49700 T | ST007 | 3250 | 108 | 12400 | 12900 |
| PCB157 | pg/g | 16 | 16 | 100 | 9.91 | 2130 T | ST007 | 159 | 21.9 | 526 | 611 | 9.91 | 2130 T | ST007 | 159 | 21.9 | 526 | 611 |
| PCB158 & 160 | pg/g | 16 | 16 | 100 | 41.5 | 71600 T | ST007 | 4640 | 110 | 17900 | 18400 | 41.5 | 71600 T | ST007 | 4640 | 110 | 17900 | 18400 |

Table D2.2-4. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Fourth Quarter (Fall 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| PCB159 | pg/g | 16 | 10 | 62 | 5.7 J | 1060 T | ST007 | 148 | 21.8 | 324 | 642 | 4.98 U | 1060 T | ST007 | 94.9 | 12.2 | 261 | 363 |
| PCB166 | pg/g | 16 | 4 | 25 | 15 | 201 T | ST007 | 65.3 | 22.6 | 90.7 | 175 | 4.97 U | 201 T | ST007 | 20.7 | 5 U | 48.5 | 71.9 |
| PCB167 | pg/g | 16 | 16 | 100 | 20.1 | 18800 T | ST007 | 1240 | 45.1 | 4680 | 4900 | 20.1 | 18800 T | ST007 | 1240 | 45.1 | 4680 | 4900 |
| PCB168 | pg/g | 16 | 4 | 25 | 21.3 | 593 T | ST007 | 172 | 37.5 | 281 | 511 | 4.97 U | 593 T | ST007 | 47.4 | 5 U | 146 | 184 |
| PCB169 | pg/g | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.837 U | 9.73 UJT | ST007 | 3.68 | 3.45 U | 2.46 | 8.42 UJ |
| PCB170 | pg/g | 16 | 16 | 100 | 143 | 478000 T | ST007 | 30800 | 415 | 119000 | 123000 | 143 | 478000 T | ST007 | 30800 | 415 | 119000 | 123000 |
| PCB171 | pg/g | 16 | 16 | 100 | 34.9 | 136000 T | ST007 | 8730 | 109 | 33900 | 34700 | 34.9 | 136000 T | ST007 | 8730 | 109 | 33900 | 34700 |
| PCB172 | pg/g | 16 | 12 | 75 | 34.6 | 87600 T | ST007 | 7440 | 88.5 | 25200 | 39800 | 5 U | 87600 T | ST007 | 5580 | 56.2 | 21900 | 22400 |
| PCB173 | pg/g | 16 | 13 | 81 | 5.19 | 12600 T | ST007 | 992 | 13.2 | 3490 | 5090 | 4.99 UT | 12600 T | ST007 | 808 | 11.4 | 3140 | 3210 |
| PCB174 | pg/g | 16 | 16 | 100 | 143 | 568000 T | ST007 | 36400 | 450 | 142000 | 145000 | 143 | 568000 T | ST007 | 36400 | 450 | 142000 | 145000 |
| PCB175 | pg/g | 16 | 12 | 75 | 9.41 | 28000 T | ST007 | 2360 | 22.2 | 8070 | 12600 | 5.01 U | 28000 T | ST007 | 1770 | 15.9 | 6990 | 7060 |
| PCB176 | pg/g | 16 | 16 | 100 | 15.2 | 78000 T | ST007 | 4980 | 53 | 19500 | 19800 | 15.2 | 78000 T | ST007 | 4980 | 53 | 19500 | 19800 |
| PCB177 | pg/g | 16 | 16 | 100 | 103 | 360000 T | ST007 | 23100 | 305 | 89800 | 92000 | 103 | 360000 T | ST007 | 23100 | 305 | 89800 | 92000 |
| PCB178 | pg/g | 16 | 16 | 100 | 35.8 | 113000 T | ST007 | 7280 | 104 | 28200 | 28900 | 35.8 | 113000 T | ST007 | 7280 | 104 | 28200 | 28900 |
| PCB179 | pg/g | 16 | 16 | 100 | 65.6 | 273000 T | ST007 | 17500 | 230 | 68100 | 69600 | 65.6 | 273000 T | ST007 | 17500 | 230 | 68100 | 69600 |
| PCB180 | pg/g | 16 | 16 | 100 | 317 | 1110000 T | ST007 | 71700 | 1060 | 277000 | 286000 | 317 | 1110000 T | ST007 | 71700 | 1060 | 277000 | 286000 |
| PCB181 | pg/g | 16 | 1 | 6 | 13.5 | 13.5 | ST005 | 13.5 | 13.5 | -- | 13.5 | 4.94 UT | 13.5 | ST005 | 6.46 | 5 U | 2.74 | 10.9 |
| PCB182 & 187 | pg/g | 16 | 16 | 100 | 210 | 639000 T | ST007 | 41300 | 630 | 159000 | 164000 | 210 | 639000 T | ST007 | 41300 | 630 | 159000 | 164000 |
| PCB183 | pg/g | 16 | 16 | 100 | 83.4 | 348000 T | ST007 | 22300 | 266 | 86800 | 88800 | 83.4 | 348000 T | ST007 | 22300 | 266 | 86800 | 88800 |
| PCB184 | pg/g | 16 | 2 | 12 | 5.05 | 131 T | ST007 | 68 | 68 | 89.1 | 125 | 4.97 U | 131 T | ST007 | 13.8 | 5 U | 31.3 | 40.2 |
| PCB185 | pg/g | 16 | 13 | 81 | 17.9 | 74700 T | ST007 | 5840 | 47.6 | 20700 | 30100 | 5.01 U | 74700 T | ST007 | 4750 | 44.2 | 18700 | 19000 |
| PCB186 | pg/g | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.94 UT | 9.99 U | ST010 | 5.93 | 5 U | 2.01 | 9.98 U |
| PCB188 | pg/g | 16 | 4 | 25 | 9.18 | 203 T | ST007 | 62.2 | 18.3 | 94.1 | 176 | 4.97 U | 203 T | ST007 | 19.9 | 5 U | 49.1 | 68.4 |
| PCB189 | pg/g | 16 | 16 | 100 | 6.66 | 16600 T | ST007 | 1070 | 14.6 | 4140 | 4270 | 6.66 | 16600 T | ST007 | 1070 | 14.6 | 4140 | 4270 |
| PCB190 | pg/g | 16 | 16 | 100 | 34 | 104000 T | ST007 | 6700 | 85 | 25900 | 26700 | 34 | 104000 T | ST007 | 6700 | 85 | 25900 | 26700 |
| PCB191 | pg/g | 16 | 15 | 94 | 5.82 J | 22200 T | ST007 | 1510 | 14.8 | 5720 | 6760 | 5.82 J | 22200 T | ST007 | 1420 | 13.7 | 5540 | 5660 |
| PCB192 | pg/g | 16 | 3 | 19 | 46.8 | 582 | ST006 | 389 | 539 | 297 | 578 | 4.94 UT | 582 | ST006 | 77.7 | 5 U | 189 | 550 |
| PCB193 | pg/g | 16 | 16 | 100 | 20 | 61200 T | ST007 | 3940 | 49.6 | 15300 | 15700 | 20 | 61200 T | ST007 | 3940 | 49.6 | 15300 | 15700 |
| PCB194 | pg/g | 16 | 15 | 94 | 67.8 | 202000 T | ST007 | 14100 | 260 | 52000 | 63100 | 53.6 UJ | 202000 T | ST007 | 13300 | 247 | 50300 | 53100 |
| PCB195 | pg/g | 16 | 16 | 100 | 34.1 | 132000 T | ST007 | 8530 | 114 | 32900 | 34200 | 34.1 | 132000 T | ST007 | 8530 | 114 | 32900 | 34200 |
| PCB196 & 203 | pg/g | 16 | 15 | 94 | 83.2 | 293000 T | ST007 | 20200 | 357 | 75500 | 90100 | 83.2 | 293000 T | ST007 | 19000 | 322 | 73100 | 75600 |
| PCB197 | pg/g | 16 | 13 | 81 | 6.09 | 12600 T | ST007 | 996 | 14.3 | 3490 | 5110 | 5 U | 12600 T | ST007 | 811 | 11 | 3140 | 3230 |
| PCB198 | pg/g | 16 | 16 | 100 | 7.43 | 23500 T | ST007 | 1520 | 23.7 | 5860 | 6050 | 7.43 | 23500 T | ST007 | 1520 | 23.7 | 5860 | 6050 |
| PCB199 | pg/g | 16 | 16 | 100 | 73 | 275000 T | ST007 | 17800 | 309 | 68600 | 70700 | 73 | 275000 T | ST007 | 17800 | 309 | 68600 | 70700 |
| PCB200 | pg/g | 16 | 14 | 88 | 13.3 | 39700 T | ST007 | 2920 | 43.6 | 10600 | 14100 | 9.96 U | 39700 T | ST007 | 2560 | 35.4 | 9910 | 10200 |
| PCB201 | pg/g | 16 | 16 | 100 | 11.8 | 41000 T | ST007 | 2640 | 42.9 | 10200 | 10500 | 11.8 | 41000 T | ST007 | 2640 | 42.9 | 10200 | 10500 |
| PCB202 | pg/g | 16 | 16 | 100 | 22.6 | 43800 T | ST007 | 2850 | 65.9 | 10900 | 11300 | 22.6 | 43800 T | ST007 | 2850 | 65.9 | 10900 | 11300 |
| PCB204 | pg/g | 16 | 1 | 6 | 53.9 T | 53.9 T | ST007 | 53.9 | 53.9 T | -- | 53.9 T | 4.97 U | 53.9 T | ST007 | 8.99 | 5 U | 12.1 | 21 |
| PCB205 | pg/g | 16 | 14 | 88 | 5.65 | 10300 T | ST007 | 766 | 15.8 | 2740 | 3700 | 5.65 | 10300 T | ST007 | 671 | 12.2 | 2570 | 2690 |
| PCB206 | pg/g | 16 | 15 | 94 | 41.9 | 35300 T | ST007 | 2610 | 151 | 9050 | 11100 | 41.9 | 35300 T | ST007 | 2450 | 139 | 8760 | 9400 |
| PCB207 | pg/g | 16 | 15 | 94 | 5.36 J | 4190 T | ST007 | 306 | 14.8 | 1070 | 1320 | 5.36 J | 4190 T | ST007 | 287 | 14.6 | 1040 | 1110 |
| PCB208 | pg/g | 16 | 16 | 100 | 12.5 | 5110 T | ST007 | 378 | 39.3 | 1260 | 1400 | 12.5 | 5110 T | ST007 | 378 | 39.3 | 1260 | 1400 |
| PCB209 | pg/g | 16 | 16 | 100 | 66.8 | 559 T | ST007 | 195 | 137 | 145 | 439 | 66.8 | 559 T | ST007 | 195 | 137 | 145 | 439 |
| Total PCB Congeners | µg/kg | 16 | 16 | 100 | 7.56 JT | 11100 JT | ST007 | 727 | 24.3 J | 2770 | 2860 J | 7.56 JT | 11100 JT | ST007 | 727 | 24.3 J | 2770 | 2860 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 16 | 16 | 100 | 0.0000181 JT | 0.0803 JT | ST007 | 0.00566 | 0.000631 J | 0.0199 | 0.0223 J | 0.0000181 JT | 0.0803 JT | ST007 | 0.00566 | 0.000631 J | 0.0199 | 0.0223 J |
| **PCBs[c]** | | | | | | | | | | | | | | | | | | |
| Total PCBs | µg/kg | 16 | 16 | 100 | 7.56 JT | 11100 JT | ST007 | 727 | 24.3 J | 2770 | 2860 J | 7.56 JT | 11100 JT | ST007 | 727 | 24.3 J | 2770 | 2860 J |
| **PCB Homologs** | | | | | | | | | | | | | | | | | | |
| Dichlorobiphenyl homologs | pg/g | 16 | 16 | 100 | 291 T | 75100 JT | ST007 | 5290 | 642 | 18600 | 19600 J | 291 T | 75100 JT | ST007 | 5290 | 642 | 18600 | 19600 J |
| Heptachlorobiphenyl homologs | pg/g | 16 | 16 | 100 | 1250 JT | 4510000 T | ST007 | 290000 | 3950 | 1130000 | 1150000 | 1250 JT | 4510000 T | ST007 | 290000 | 3950 | 1130000 | 1150000 |
| Hexachlorobiphenyl homologs | pg/g | 16 | 16 | 100 | 1790 JT | 3620000 JT | ST007 | 236000 | 5760 | 903000 | 933000 J | 1790 JT | 3620000 JT | ST007 | 236000 | 5760 | 903000 | 933000 J |
| Monochlorobiphenyl homologs | pg/g | 16 | 16 | 100 | 19.7 T | 787 JT | ST007 | 92.6 | 39.2 | 188 | 308 J | 19.7 T | 787 JT | ST007 | 92.6 | 39.2 | 188 | 308 J |
| Nonachlorobiphenyl homologs | pg/g | 16 | 16 | 100 | 15.4 JT | 44600 T | ST007 | 3120 | 192 | 11100 | 11900 | 15.4 JT | 44600 T | ST007 | 3120 | 192 | 11100 | 11900 |
| Octachlorobiphenyl homologs | pg/g | 16 | 16 | 100 | 191 JT | 1070000 T | ST007 | 69400 | 1140 | 267000 | 277000 | 191 JT | 1070000 T | ST007 | 69400 | 1140 | 267000 | 277000 |
| Pentachlorobiphenyl homologs | pg/g | 16 | 16 | 100 | 2050 JT | 1010000 JT | ST007 | 69600 | 5640 | 251000 | 270000 J | 2050 JT | 1010000 JT | ST007 | 69600 | 5640 | 251000 | 270000 J |
| Tetrachlorobiphenyl homologs | pg/g | 16 | 16 | 100 | 1190 JT | 458000 JT | ST007 | 32900 | 4110 J | 113000 | 125000 J | 1190 JT | 458000 JT | ST007 | 32900 | 4110 J | 113000 | 125000 J |
| Trichlorobiphenyl homologs | pg/g | 16 | 16 | 100 | 350 T | 302000 JT | ST007 | 20400 | 1460 | 75100 | 78100 J | 350 T | 302000 JT | ST007 | 20400 | 1460 | 75100 | 78100 J |

Table D2.2-4. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Fourth Quarter (Fall 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| **Dioxins/Furans Homologs** | | | | | | | | | | | | | | | | | | |
| Heptachlorodibenzofuran homologs | pg/g | 16 | 13 | 81 | 3.05 J | 335 | ST006 | 34.5 | 4.68 J | 90.6 | 149 | 1.46 UT | 335 | ST006 | 28.4 | 4.04 J | 82.1 | 102 |
| Heptachlorodibenzo-p-dioxin homologs | pg/g | 16 | 16 | 100 | 6.58 J | 970 | ST006 | 101 | 22.6 | 239 | 418 | 6.58 J | 970 | ST006 | 101 | 22.6 | 239 | 418 |
| Hexachlorodibenzofuran homologs | pg/g | 16 | 16 | 100 | 0.182 J | 151 | ST006 | 11.9 | 1.75 J | 37.2 | 43.4 | 0.182 J | 151 | ST006 | 11.9 | 1.75 J | 37.2 | 43.4 |
| Hexachlorodibenzo-p-dioxin homologs | pg/g | 16 | 16 | 100 | 0.576 J | 125 | ST006 | 11.7 | 2.51 J | 30.6 | 45.5 | 0.576 J | 125 | ST006 | 11.7 | 2.51 J | 30.6 | 45.5 |
| Octachlorodibenzofuran | pg/g | 16 | 14 | 88 | 3.49 J | 328 | ST006 | 36.6 | 6.09 J | 84.9 | 142 | 2.02 UT | 328 | ST006 | 32.3 | 5.26 J | 79.9 | 114 |
| Octachlorodibenzo-p-dioxin | pg/g | 16 | 16 | 100 | 28.9 | 4120 | ST006 | 415 | 83.6 | 1010 | 1580 | 28.9 | 4120 | ST006 | 415 | 83.6 | 1010 | 1580 |
| Pentachlorodibenzofuran homologs | pg/g | 16 | 15 | 94 | 0.233 J | 41.2 | ST006 | 4.17 | 0.64 J | 10.4 | 16.1 | 0.214 U | 41.2 | ST006 | 3.92 | 0.627 J | 10.1 | 14.3 |
| Pentachlorodibenzo-p-dioxin homologs | pg/g | 16 | 5 | 31 | 0.116 J | 9.13 J | ST006 | 2.08 | 0.354 J | 3.94 | 7.43 J | 0.0342 U | 9.13 J | ST006 | 0.695 | 0.0502 U | 2.26 | 2.76 J |
| Tetrachlorodibenzofuran homologs | pg/g | 16 | 12 | 75 | 0.114 J | 14.3 | ST006 | 2.09 | 0.65 J | 3.96 | 8.3 | 0.0157 U | 14.3 | ST006 | 1.58 | 0.448 J | 3.51 | 6.12 |
| Tetrachlorodibenzo-p-dioxin homologs | pg/g | 16 | 13 | 81 | 0.183 J | 8.6 | ST006 | 1.11 | 0.42 J | 2.26 | 4.11 J | 0.0314 U | 8.6 | ST006 | 0.92 | 0.36 J | 2.07 | 2.99 J |
| **PCDD/Fs Homologs** | | | | | | | | | | | | | | | | | | |
| Total PCDD/Fs | pg/g | 16 | 16 | 100 | 37.4 JT | 6100 JT | ST006 | 606 | 122 J | 1490 | 2320 J | 37.4 JT | 6100 JT | ST006 | 606 | 122 J | 1490 | 2320 J |
| **Dioxins/Furans** | | | | | | | | | | | | | | | | | | |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran | pg/g | 16 | 16 | 100 | 0.537 J | 88.6 | ST006 | 7.7 | 1.13 J | 21.7 | 27.5 | 0.537 J | 88.6 | ST006 | 7.7 | 1.13 J | 21.7 | 27.5 |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin | pg/g | 16 | 16 | 100 | 3.27 J | 460 | ST006 | 45.3 | 8.69 | 112 | 167 | 3.27 J | 460 | ST006 | 45.3 | 8.69 | 112 | 167 |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran | pg/g | 16 | 3 | 19 | 1.28 J | 5.19 J | ST006 | 2.6 | 1.34 J | 2.24 | 4.81 J | 0.096 U | 5.19 J | ST006 | 0.64 | 0.155 U | 1.28 | 2.3 J |
| 1,2,3,4,7,8-Hexachlorodibenzofuran | pg/g | 16 | 11 | 69 | 0.0822 J | 12.6 J | ST006 | 1.78 | 0.364 J | 3.67 | 7.52 J | 0.0234 UT | 12.6 J | ST006 | 1.27 | 0.141 J | 3.1 | 4.97 J |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 16 | 3 | 19 | 0.0692 J | 5.06 J | ST006 | 1.78 | 0.22 JT | 2.84 | 4.58 J | 0.0347 U | 5.06 J | ST006 | 0.42 | 0.0592 U | 1.24 | 1.56 J |
| 1,2,3,6,7,8-Hexachlorodibenzofuran | pg/g | 16 | 10 | 62 | 0.053 J | 4.22 J | ST006 | 0.673 | 0.191 J | 1.28 | 2.74 J | 0.0347 U | 4.22 J | ST006 | 0.469 | 0.124 J | 1.03 | 1.75 J |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 16 | 13 | 81 | 0.211 J | 18.8 J | ST006 | 2.19 | 0.397 J | 5.05 | 9.15 J | 0.0479 U | 18.8 J | ST006 | 1.82 | 0.367 J | 4.58 | 6.73 J |
| 1,2,3,7,8,9-Hexachlorodibenzofuran | pg/g | 16 | 1 | 6 | 1.86 J | 1.86 J | ST006 | 1.86 | 1.86 J | -- | 1.86 J | 0.0457 UT | 1.86 J | ST006 | 0.195 | 0.0736 U | 0.446 | 0.607 J |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | pg/g | 16 | 7 | 44 | 0.18 J | 10.8 J | ST006 | 1.89 | 0.253 J | 3.94 | 7.89 J | 0.0428 U | 10.8 J | ST006 | 0.999 | 0.223 J | 2.64 | 3.53 J |
| 1,2,3,7,8-Pentachlorodibenzofuran | pg/g | 16 | 7 | 44 | 0.0509 J | 1.48 J | ST006 | 0.666 | 0.186 J | 0.676 | 1.47 J | 0.0145 U | 1.48 J | ST006 | 0.349 | 0.0905 J | 0.531 | 1.44 J |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | pg/g | 16 | 3 | 19 | 0.0464 J | 2.66 J | ST006 | 0.965 | 0.188 JT | 1.47 | 2.41 J | 0.0342 U | 2.66 J | ST006 | 0.243 | 0.0465 J | 0.648 | 0.868 J |
| 2,3,4,6,7,8-Hexachlorodibenzofuran | pg/g | 16 | 5 | 31 | 0.216 J | 5.15 J | ST006 | 1.31 | 0.406 J | 2.15 | 4.22 J | 0.0383 U | 5.15 J | ST006 | 0.471 | 0.0616 U | 1.26 | 1.66 J |
| 2,3,4,7,8-Pentachlorodibenzofuran | pg/g | 16 | 6 | 38 | 0.059 J | 2.76 J | ST006 | 0.721 | 0.37 J | 1.02 | 2.21 J | 0.0185 U | 2.76 J | ST006 | 0.309 | 0.0725 J | 0.675 | 1.12 J |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/g | 16 | 2 | 12 | 0.929 | 1.19 | ST005 | 1.06 | 1.06 | 0.185 | 1.18 | 0.0157 U | 2.72 U | ST006 | 0.407 | 0.131 U | 0.701 | 1.57 |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | pg/g | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.0161 U | 0.18 U | ST006 | 0.0523 | 0.0316 U | 0.0528 | 0.176 U |
| **PCDD/Fs** | | | | | | | | | | | | | | | | | | |
| TCDD TEQ (ND=0) | pg/g | 16 | 16 | 100 | 0.0678 JT | 16.3 JT | ST006 | 1.47 | 0.211 J | 3.99 | 5.44 J | 0.0678 JT | 16.3 JT | ST006 | 1.47 | 0.211 J | 3.99 | 5.44 J |
| **TCDD TEQ** | | | | | | | | | | | | | | | | | | |
| Total TCDD TEQ (ND = 0) | pg/g | 16 | 16 | 100 | 0.0859 JT | 81.9 JT | ST007 | 7.13 | 0.948 J | 20.5 | 35 J | 0.0859 JT | 81.9 JT | ST007 | 7.13 | 0.948 J | 20.5 | 35 J |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| 2,4'-DDD | µg/kg | 16 | 13 | 81 | 0.54 J | 150 | ST007 | 13.2 | 1.4 | 41.1 | 63.1 | 0.36 U | 150 | ST007 | 10.9 | 1.35 | 37.1 | 41.4 |
| 2,4'-DDE | µg/kg | 16 | 3 | 19 | 0.19 JT | 0.92 NJ | ST002 | 0.673 | 0.91 NJ | 0.419 | 0.919 J | 0.06 U | 18 U | ST007 | 1.53 | 0.355 U | 4.4 | 5.19 J |
| 2,4'-DDT | µg/kg | 16 | 9 | 56 | 1 | 7.3 NJ | ST006 | 2.56 | 1.4 | 2.13 | 6.06 J | 0.44 U | 91 U | ST007 | 7.52 | 1.3 J | 22.3 | 28.2 J |
| 4,4'-DDD | µg/kg | 16 | 15 | 94 | 0.71 | 13 | ST005 | 2.65 | 1.7 | 3.08 | 7.19 | 0.67 U | 13 | ST005 | 2.53 | 1.65 | 3.01 | 6.78 |
| 4,4'-DDE | µg/kg | 16 | 15 | 94 | 1.4 | 5 J | ST005 | 2.47 | 2.1 | 1.08 | 4.79 J | 0.9 U | 5 J | ST005 | 2.37 | 2.1 | 1.11 | 4.78 J |
| 4,4'-DDT | µg/kg | 16 | 9 | 56 | 2.1 NJ | 12 J | ST006 | 5.09 | 4 | 3.35 | 10.8 J | 0.57 U | 670 U | ST007 | 45.6 | 3.8 | 167 | 177 J |
| Aldrin | µg/kg | 16 | 1 | 6 | 0.61 NJ | 0.61 NJ | ST014 | 0.61 | 0.61 NJ | -- | 0.61 NJ | 0.16 U | 1.2 U | ST006 | 0.328 | 0.215 U | 0.276 | 0.803 U |
| alpha-Endosulfan | µg/kg | 16 | 7 | 44 | 0.14 JT | 0.38 NJ | ST014 | 0.243 | 0.22 J | 0.0923 | 0.365 J | 0.06 U | 0.65 U | ST007 | 0.23 | 0.19 J | 0.153 | 0.455 U |
| alpha-Hexachlorocyclohexane | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.13 U | 0.62 U | ST006 | 0.222 | 0.17 U | 0.143 | 0.56 U |
| beta-Endosulfan | µg/kg | 16 | 2 | 12 | 0.19 J | 0.79 J | ST006 | 0.49 | 0.49 J | 0.424 | 0.76 J | 0.049 U | 18 U | ST007 | 1.34 | 0.185 J | 4.45 | 5.09 J |
| beta-Hexachlorocyclohexane | µg/kg | 16 | 3 | 19 | 0.53 NJ | 0.93 JT | ST008 | 0.717 | 0.69 | 0.201 | 0.906 J | 0.18 U | 1.1 U | ST010 | 0.481 | 0.29 U | 0.306 | 0.973 J |
| cis-Chlordane | µg/kg | 16 | 2 | 12 | 0.15 NJ | 0.48 J | ST016 | 0.315 | 0.315 J | 0.233 | 0.464 J | 0.041 U | 0.48 J | ST016 | 0.145 | 0.066 U | 0.127 | 0.368 J |
| cis-Nonachlor | µg/kg | 16 | 1 | 6 | 3.3 NJ | 3.3 NJ | ST011 | 3.3 | 3.3 NJ | -- | 3.3 NJ | 0.46 UT | 460 U | ST007 | 29.8 | 0.805 U | 115 | 117 J |
| delta-Hexachlorocyclohexane | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.15 U | 3.3 U | ST007 | 0.447 | 0.195 U | 0.778 | 1.35 U |
| Dieldrin | µg/kg | 16 | 2 | 12 | 0.15 NJ | 0.34 NJ | ST009 | 0.245 | 0.245 J | 0.134 | 0.331 J | 0.045 UT | 0.64 U | ST005 | 0.359 | 0.35 U | 0.192 | 0.603 U |
| Endosulfan sulfate | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.12 U | 0.92 U | ST006 | 0.368 | 0.335 U | 0.165 | 0.59 U |
| Endrin | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.092 U | 1.1 U | ST007 | 0.226 | 0.13 U | 0.255 | 0.62 U |
| Endrin aldehyde | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.054 U | 86 U | ST007 | 5.52 | 0.0825 U | 21.5 | 21.8 U |
| Endrin ketone | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.13 U | 140 U | ST007 | 9.27 | 0.42 U | 34.9 | 36.1 U |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 16 | 2 | 12 | 0.48 J | 2.5 J | ST007 | 1.49 | 1.49 J | 1.43 | 2.4 J | 0.1 U | 2.5 J | ST007 | 0.521 | 0.35 U | 0.593 | 1.6 J |
| Heptachlor | µg/kg | 16 | 1 | 6 | 1.2 T | 1.2 T | ST008 | 1.2 | 1.2 T | -- | 1.2 T | 0.098 U | 1.2 T | ST008 | 0.294 | 0.16 U | 0.288 | 0.788 |
| Heptachlor epoxide | µg/kg | 16 | 9 | 56 | 0.22 NJT | 1.5 NJ | ST006 | 0.591 | 0.42 J | 0.439 | 1.34 J | 0.11 U | 6.7 U | ST007 | 0.851 | 0.35 J | 1.6 | 2.8 J |
| Methoxychlor | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.17 U | 67 U | ST007 | 4.93 | 0.675 U | 16.6 | 18.7 U |
| Mirex | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.16 U | 0.77 U | ST006 | 0.279 | 0.215 U | 0.176 | 0.695 U |

Table D2.2-4. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Fourth Quarter (Fall 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| Oxychlordane | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.079 U | 0.44 U | ST010 | 0.2 | 0.13 U | 0.126 | 0.403 U |
| Total chlordanes | µg/kg | 16 | 11 | 69 | 0.41 NJT | 3.4 NJT | ST011 | 1.15 | 0.83 JT | 0.85 | 2.6 J | 0.41 NJT | 460 UT | ST007 | 29.8 | 0.87 J | 115 | 118 J |
| Total DDD | µg/kg | 16 | 16 | 100 | 0.78 T | 150 T | ST007 | 13.2 | 2.8 J | 36.7 | 51 | 0.78 T | 150 T | ST007 | 13.2 | 2.8 J | 36.7 | 51 |
| Total DDE | µg/kg | 16 | 15 | 94 | 1.4 T | 5.9 NJT | ST005 | 2.6 | 2.2 T | 1.21 | 5.06 J | 1.4 T | 18 UT | ST007 | 3.56 | 2.25 | 4.02 | 8.93 J |
| Total DDT | µg/kg | 16 | 11 | 69 | 1.1 NJT | 19 NJT | ST006 | 6.23 | 5 T | 4.84 | 14 J | 0.62 UT | 91 UT | ST007 | 10.5 | 4.6 J | 21.9 | 37 J |
| DDx | µg/kg | 16 | 16 | 100 | 2.6 T | 150 T | ST007 | 20 | 8.2 J | 35.8 | 62.3 J | 2.6 T | 150 T | ST007 | 20 | 8.2 J | 35.8 | 62.3 J |
| Total Endosulfan | µg/kg | 16 | 8 | 50 | 0.14 JT | 0.79 JT | ST006 | 0.335 | 0.255 J | 0.23 | 0.713 J | 0.14 JT | 18 UT | ST007 | 1.45 | 0.335 U | 4.42 | 5.09 J |
| Toxaphene | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 19 UT | 9700 U | ST007 | 645 | 41 U | 2410 | 2510 U |
| trans-Chlordane | µg/kg | 16 | 10 | 62 | 0.26 J | 1.4 NJT | ST008 | 0.703 | 0.61 J | 0.348 | 1.27 J | 0.15 U | 14 U | ST007 | 1.48 | 0.57 J | 3.36 | 4.55 J |
| trans-Nonachlor | µg/kg | 16 | 7 | 44 | 0.096 J | 0.41 NJ | ST012 | 0.248 | 0.23 J | 0.134 | 0.398 J | 0.066 U | 11 U | ST007 | 0.973 | 0.2 J | 2.69 | 3.73 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | µg/kg | 15 | 15 | 100 | 1.8 JT | 57 | ST005 | 8.46 | 5.1 | 13.7 | 25.5 | 1.8 JT | 57 | ST005 | 8.46 | 5.1 | 13.7 | 25.5 |
| Acenaphthene | µg/kg | 15 | 15 | 100 | 1.5 JT | 120 | ST005 | 12.8 | 4.9 J | 29.8 | 43 | 1.5 JT | 120 | ST005 | 12.8 | 4.9 J | 29.8 | 43 |
| Acenaphthylene | µg/kg | 15 | 15 | 100 | 2.2 JT | 60 | ST005 | 10.5 | 5.6 | 15.5 | 40.4 | 2.2 JT | 60 | ST005 | 10.5 | 5.6 | 15.5 | 40.4 |
| Anthracene | µg/kg | 15 | 15 | 100 | 3.1 JT | 260 | ST005 | 29.9 | 12 | 64.3 | 100 | 3.1 JT | 260 | ST005 | 29.9 | 12 | 64.3 | 100 |
| Benzo(a)anthracene | µg/kg | 15 | 15 | 100 | 13 | 760 | ST005 | 96.1 | 35 | 191 | 382 | 13 | 760 | ST005 | 96.1 | 35 | 191 | 382 |
| Benzo(a)pyrene | µg/kg | 15 | 15 | 100 | 15 T | 1100 | ST005 | 136 | 34 | 280 | 582 | 15 T | 1100 | ST005 | 136 | 34 | 280 | 582 |
| Benzo(b)fluoranthene | µg/kg | 15 | 15 | 100 | 19 T | 1100 | ST005 | 144 | 51 | 275 | 554 | 19 T | 1100 | ST005 | 144 | 51 | 275 | 554 |
| Benzo(g,h,i)perylene | µg/kg | 15 | 15 | 100 | 14 T | 890 | ST005 | 118 | 30 | 227 | 491 | 14 T | 890 | ST005 | 118 | 30 | 227 | 491 |
| Benzo(k)fluoranthene | µg/kg | 15 | 15 | 100 | 6.3 T | 340 | ST005 | 46.8 | 17 | 85.9 | 186 | 6.3 T | 340 | ST005 | 46.8 | 17 | 85.9 | 186 |
| Chrysene | µg/kg | 15 | 15 | 100 | 19 T | 940 | ST005 | 131 | 51 | 233 | 478 | 19 T | 940 | ST005 | 131 | 51 | 233 | 478 |
| Dibenzo(a,h)anthracene | µg/kg | 15 | 15 | 100 | 2.3 JT | 110 | ST005 | 14.3 | 5.5 | 27.3 | 53.3 | 2.3 JT | 110 | ST005 | 14.3 | 5.5 | 27.3 | 53.3 |
| Fluoranthene | µg/kg | 15 | 15 | 100 | 28 T | 1500 | ST005 | 193 | 110 | 366 | 604 | 28 T | 1500 | ST005 | 193 | 110 | 366 | 604 |
| Fluorene | µg/kg | 15 | 15 | 100 | 1.7 JT | 86 | ST005 | 10.9 | 5.8 | 21 | 32.3 J | 1.7 JT | 86 | ST005 | 10.9 | 5.8 | 21 | 32.3 J |
| Total HPAH | µg/kg | 15 | 15 | 100 | 160 JT | 9200 T | ST005 | 1200 | 480 T | 2290 | 4510 | 160 JT | 9200 T | ST005 | 1200 | 480 T | 2290 | 4510 |
| Indeno(1,2,3-cd)pyrene | µg/kg | 15 | 15 | 100 | 11 T | 830 | ST005 | 103 | 26 | 210 | 424 | 11 T | 830 | ST005 | 103 | 26 | 210 | 424 |
| Total LPAH | µg/kg | 15 | 15 | 100 | 30 JT | 1500 T | ST005 | 186 | 95 T | 366 | 583 J | 30 JT | 1500 T | ST005 | 186 | 95 T | 366 | 583 J |
| Naphthalene | µg/kg | 16 | 15 | 94 | 6.5 T | 120 | ST005 | 21.8 | 16 | 28 | 57 | 0.39 U | 120 | ST005 | 20.5 | 15.5 | 27.6 | 52.5 |
| Phenanthrene | µg/kg | 15 | 15 | 100 | 13 T | 830 | ST005 | 93.7 | 48 | 205 | 300 | 13 T | 830 | ST005 | 93.7 | 48 | 205 | 300 |
| Pyrene | µg/kg | 15 | 15 | 100 | 30 T | 1600 | ST005 | 211 | 94 | 394 | 732 | 30 T | 1600 | ST005 | 211 | 94 | 394 | 732 |
| Total cPAH (BaPEq) | µg/kg | 15 | 15 | 100 | 21.8 JT | 1480 T | ST005 | 184 | 50.4 T | 375 | 772 | 21.8 JT | 1480 T | ST005 | 184 | 50.4 T | 375 | 772 |
| Total cPAHs | µg/kg | 15 | 15 | 100 | 87 JT | 5200 T | ST005 | 672 | 230 T | 1310 | 2680 | 87 JT | 5200 T | ST005 | 672 | 230 T | 1310 | 2680 |
| Total PAHs | µg/kg | 15 | 15 | 100 | 190 JT | 11000 T | ST005 | 1400 | 580 T | 2730 | 5190 J | 190 JT | 11000 T | ST005 | 1400 | 580 T | 2730 | 5190 J |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl) phthalate | µg/kg | 15 | 15 | 100 | 68 | 710 | ST006 | 221 | 150 | 174 | 549 J | 68 | 710 | ST006 | 221 | 150 | 174 | 549 J |
| Butylbenzyl phthalate | µg/kg | 15 | 12 | 80 | 8.6 J | 130 | ST007 | 35.5 | 10.4 J | 44.9 | 113 J | 8.6 J | 130 | ST007 | 32.4 | 11 U | 40.7 | 108 J |
| Dibutyl phthalate | µg/kg | 15 | 13 | 87 | 28 | 110 J | ST004; ST006 | 54.4 | 47 | 28.1 | 110 J | 28 | 110 J | ST004; ST006 | 57.5 | 49 | 27.5 | 110 J |
| Diethyl phthalate | µg/kg | 15 | 13 | 87 | 4.5 J | 20 J | ST006 | 7.44 | 6 JT | 3.97 | 13.2 J | 4.5 J | 20 J | ST006 | 8.25 | 6.1 J | 4.29 | 16.5 J |
| Dimethyl phthalate | µg/kg | 15 | 1 | 7 | 2.3 J | 2.3 J | ST015 | 2.3 | 2.3 J | -- | 2.3 J | 1.3 U | 13 U | ST006 | 3.83 | 1.9 U | 3.82 | 11.6 U |
| Di-n-octyl phthalate | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.2 U | 22 U | ST006 | 6.43 | 3 U | 6.59 | 19.9 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | µg/kg | 15 | 1 | 7 | 4.4 J | 4.4 J | ST007 | 4.4 | 4.4 J | -- | 4.4 J | 3.4 U | 33 U | ST006 | 9.87 | 4.6 U | 9.95 | 30.2 U |
| 1,2-Dichlorobenzene | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.8 U | 37 U | ST006 | 10.9 | 5.1 U | 11.2 | 33.5 U |
| 1,3-Dichlorobenzene | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.9 U | 38 U | ST006 | 11.3 | 5.3 U | 11.5 | 34.5 U |
| 1,4-Dichlorobenzene | µg/kg | 16 | 1 | 6 | 17 | 17 | ST007 | 17 | 17 | -- | 17 | 0.15 UJT | 17 | ST007 | 1.43 | 0.4 UJ | 4.16 | 4.81 |
| 2,4-Dinitrotoluene | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2 U | 19 U | ST006 | 5.72 | 2.7 U | 5.85 | 17.6 U |
| 2,6-Dinitrotoluene | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.6 U | 26 U | ST006 | 7.56 | 3.5 U | 7.77 | 23.2 U |
| 2-Chloronaphthalene | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.1 U | 21 U | ST006 | 6.06 | 2.8 U | 6.27 | 18.9 U |
| 2-Nitroaniline | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.2 U | 41 U | ST006 | 12.1 | 5.6 U | 12.4 | 37.5 U |
| 3,3'-Dichlorobenzidine | µg/kg | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.8 U | 47 U | ST006 | 14.5 | 6.75 U | 14.6 | 43.1 U |
| 3-Nitroaniline | µg/kg | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.3 U | 32 U | ST006 | 9.84 | 4.6 U | 9.91 | 29.4 U |
| 4-Bromophenyl phenyl ether | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.1 U | 21 U | ST006 | 6.06 | 2.8 U | 6.27 | 18.9 U |
| 4-Chloroaniline | µg/kg | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 25 U | ST006 | 7.49 | 3.5 U | 7.63 | 22.4 U |
| 4-Chlorophenyl phenyl ether | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.8 U | 18 U | ST006 | 5.36 | 2.5 U | 5.52 | 16.6 U |
| 4-Nitroaniline | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.4 U | 23 U | ST006 | 6.79 | 3.2 U | 6.93 | 20.9 U |
| Aniline | µg/kg | 14 | 2 | 14 | 5 J | 11 J | ST016 | 8 | 8 J | 4.24 | 10.7 J | 2 U | 19 U | ST006 | 6.76 | 4.05 J | 5.94 | 17.7 U |
| Azobenzene | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.5 U | 14 U | ST006 | 4.2 | 2 U | 4.31 | 13.3 U |
| Benzoic acid | µg/kg | 15 | 4 | 27 | 170 JT | 220 J | ST001 | 188 | 180 J | 23.6 | 216 J | 130 U | 1300 U | ST006 | 381 | 190 U | 378 | 1160 U |

Table D2.2-4. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Fourth Quarter (Fall 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| Benzyl alcohol | µg/kg | 15 | 11 | 73 | 5.3 J | 30 | ST007 | 10.5 | 8.7 J | 7.05 | 22 J | 5.3 J | 30 | ST007 | 12.9 | 9 JT | 8.19 | 27.9 |
| Bis(2-chloroethoxy) methane | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2 U | 19 U | ST006 | 5.72 | 2.7 U | 5.85 | 17.6 U |
| Bis(2-chloroethyl) ether | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 25 U | ST006 | 7.2 | 3.4 U | 7.44 | 22.2 U |
| Bis(2-chloroisopropyl) ether | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.4 U | 33 U | ST006 | 9.8 | 4.6 U | 9.99 | 30.2 U |
| Carbazole | µg/kg | 15 | 10 | 67 | 2.3 JT | 84 | ST005 | 12.2 | 4.35 J | 25.3 | 49 J | 2.3 JT | 84 | ST005 | 11.6 | 5.3 U | 20.6 | 37.1 |
| Dibenzofuran | µg/kg | 15 | 14 | 93 | 1 J | 20 | ST005 | 4.31 | 3.3 J | 4.74 | 10.7 | 1 J | 20 | ST005 | 4.28 | 3.7 J | 4.57 | 9.99 |
| Hexachlorobenzene | µg/kg | 16 | 9 | 56 | 0.15 J | 10 | ST007 | 1.63 | 0.36 | 3.18 | 6.68 | 0.12 U | 10 | ST007 | 1.06 | 0.345 | 2.42 | 3.78 |
| Hexachlorobutadiene | µg/kg | 16 | 1 | 6 | 1 | 1 | ST001 | 1 | 1 | -- | 1 | 0.18 U | 1 | ST001 | 0.364 | 0.25 U | 0.266 | 0.918 |
| Hexachlorocyclopentadiene | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 38 U | 370 U | ST006 | 109 | 51 U | 112 | 335 U |
| Hexachloroethane | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.21 U | 1.1 U | ST006 | 0.366 | 0.28 U | 0.254 | 0.95 U |
| Isophorone | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.3 U | 13 U | ST006 | 3.79 | 1.8 U | 3.84 | 11.6 U |
| Nitrobenzene | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.9 U | 28 U | ST006 | 8.34 | 3.9 U | 8.58 | 25.9 U |
| N-Nitrosodimethylamine | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 7.9 U | 78 U | ST006 | 23 | 11 U | 23.3 | 70.3 U |
| N-Nitrosodiphenylamine | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.1 U | 21 U | ST006 | 6.06 | 2.8 U | 6.27 | 18.9 U |
| N-Nitrosodipropylamine | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.1 U | 31 U | ST006 | 9.05 | 4.2 U | 9.32 | 28.2 U |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| 2,3,4,5-Tetrachlorophenol | µg/kg | 13 | 2 | 15 | 3.3 J | 7.9 JT | ST008 | 5.6 | 5.6 J | 3.25 | 7.67 J | 0.53 U | 7.9 JT | ST008 | 1.45 | 0.72 U | 2.07 | 5.14 J |
| 2,3,5,6-Tetrachlorophenol | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.43 U | 1 U | ST007 | 0.608 | 0.58 U | 0.144 | 0.838 U |
| 2,4,5-Trichlorophenol | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.5 U | 8 U | ST014 | 2.37 | 1.9 U | 1.71 | 4.64 U |
| 2,4,6-Trichlorophenol | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.28 U | 0.47 U | ST010 | 0.367 | 0.37 U | 0.0569 | 0.458 U |
| 2,4-Dichlorophenol | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.3 U | 13 U | ST006 | 3.79 | 1.8 U | 3.84 | 11.6 U |
| 2,4-Dimethylphenol | µg/kg | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 23 U | 70 U | ST006 | 46.5 | 46.5 U | 33.2 | 67.7 U |
| 2,4-Dinitrophenol | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 22 U | 220 U | ST006 | 64.3 | 30 U | 65.9 | 199 U |
| 2-Chlorophenol | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.6 U | 26 U | ST006 | 7.56 | 3.5 U | 7.77 | 23.2 U |
| 2-Methylphenol | µg/kg | 15 | 1 | 7 | 2.4 J | 2.4 J | ST007 | 2.4 | 2.4 J | -- | 2.4 J | 2 U | 19 U | ST006 | 5.75 | 2.7 U | 5.84 | 17.6 U |
| 2-Nitrophenol | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2 U | 19 U | ST006 | 5.72 | 2.7 U | 5.85 | 17.6 U |
| 4,6-Dinitro-2-methylphenol | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.8 U | 18 U | ST006 | 5.36 | 2.5 U | 5.52 | 16.6 U |
| 4-Chloro-3-methylphenol | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.8 U | 18 U | ST006 | 5.36 | 2.5 U | 5.52 | 16.6 U |
| 4-Methylphenol | µg/kg | 15 | 11 | 73 | 4.9 J | 370 | ST007 | 70.3 | 44 | 103 | 228 | 2 U | 370 | ST007 | 53.5 | 19 U | 91.9 | 171 |
| 4-Nitrophenol | µg/kg | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 24 U | 230 U | ST006 | 67.9 | 32 U | 69.3 | 209 U |
| Pentachlorophenol | µg/kg | 13 | 3 | 23 | 6.3 NJ | 23 | ST016 | 14.8 | 15 JT | 8.35 | 22.2 J | 0.51 U | 23 | ST016 | 4.97 | 1.7 U | 6.84 | 18.2 J |
| Phenol | µg/kg | 15 | 1 | 7 | 25 J | 25 J | ST007 | 25 | 25 J | -- | 25 J | 5.1 U | 26 U | ST006 | 14.7 | 13 U | 7.06 | 25.3 J |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | 13 | 13 | 100 | 75.2 JT | 170 J | ST010 | 118 | 120 J | 27.2 | 164 J | 75.2 JT | 170 J | ST010 | 118 | 120 J | 27.2 | 164 J |
| Total Petroleum Hydrocarbons (Gasoline) | mg/kg | 16 | 5 | 31 | 4.7 T | 9.4 J | ST006 | 7.1 | 7.5 T | 1.72 | 9.02 J | 3.8 U | 9.4 J | ST006 | 5.33 | 4.75 | 1.62 | 7.98 J |
| Total Petroleum Hydrocarbons (Residual) | mg/kg | 13 | 13 | 100 | 422 JT | 1100 J | ST010 | 675 | 620 J | 163 | 897 J | 422 JT | 1100 J | ST010 | 675 | 620 J | 163 | 897 J |
| Total Petroleum Hydrocarbons | mg/kg | 13 | 13 | 100 | 497 JT | 1280 JT | ST010 | 795 | 740 JT | 190 | 1050 J | 497 JT | 1280 JT | ST010 | 795 | 740 JT | 190 | 1050 J |
| **Herbicides** | | | | | | | | | | | | | | | | | | |
| 2,4,5-T | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 11 U | 18 U | ST010 | 13.9 | 14 U | 2.14 | 17.4 U |
| 2,4-D | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 27 U | 51 U | ST016 | 41.9 | 44 U | 6.44 | 49.2 U |
| 2,4-DB | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 18 U | 30 U | ST010 | 23.5 | 24 U | 3.64 | 29.4 U |
| Dalapon | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 80 U | 140 U | ST010 | 107 | 110 U | 18 | 134 U |
| Dicamba | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 9 U | 16 U | ST010 | 12.2 | 12 U | 2.12 | 15.4 U |
| Dichloroprop | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 7.8 U | 14 U | ST010 | 10.4 | 11 U | 1.88 | 13.4 U |
| Dinoseb | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 17 UJ | 28 UJ | ST010 | 21.5 | 22 UJ | 3.28 | 26.8 UJ |
| MCPA | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1300 U | 3500 U | ST001 | 2090 | 1800 U | 727 | 3440 U |
| MCPP | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 650 U | 6000 U | ST002 | 1250 | 870 U | 1430 | 3060 U |
| Silvex | µg/kg | 13 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 9.3 U | 26 U | ST010 | 15.5 | 14 U | 5.27 | 24.2 U |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.12 UT | 0.57 U | ST003 | 0.301 | 0.3 U | 0.144 | 0.54 U |
| 1,1,1-Trichloroethane | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.098 UT | 0.5 U | ST003 | 0.263 | 0.26 U | 0.126 | 0.47 U |
| 1,1,2,2-Tetrachloroethane | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.17 UJT | 0.83 U | ST003 | 0.437 | 0.435 UJ | 0.209 | 0.778 UJ |
| 1,1,2-Trichloroethane | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.17 UT | 0.83 U | ST003 | 0.437 | 0.435 U | 0.209 | 0.778 U |
| 1,1-Dichloroethane | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.11 UT | 0.51 U | ST003 | 0.271 | 0.27 U | 0.128 | 0.48 U |
| 1,1-Dichloroethene | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.085 UT | 0.43 U | ST003 | 0.228 | 0.23 U | 0.109 | 0.408 U |
| 1,2,3-Trichloropropane | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.43 UJT | 2.2 U | ST003 | 1.16 | 1.2 UJ | 0.563 | 2.05 UJ |
| 1,2-Dichloroethane | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.085 UT | 0.43 U | ST003 | 0.228 | 0.23 U | 0.109 | 0.408 U |
| 1,2-Dichloropropane | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.14 UT | 0.71 U | ST003 | 0.372 | 0.37 U | 0.179 | 0.665 U |

Table D2.2-4. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Fourth Quarter (Fall 2007).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| 1,4-Dichloro-trans-2-butene | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.61 UJT | 3.1 U | ST003 | 1.64 | 1.65 UJ | 0.797 | 2.95 UJ |
| Acetone | µg/kg | 16 | 14 | 88 | 24 J | 69 J | ST012 | 44.9 | 44 J | 13.8 | 65.1 J | 12 UJ | 69 J | ST012 | 41.1 | 40 J | 16.5 | 64.5 J |
| Benzene | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.12 UT | 0.6 U | ST003 | 0.315 | 0.31 U | 0.15 | 0.563 U |
| Bromochloromethane | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.27 UT | 1.4 U | ST003 | 0.72 | 0.71 U | 0.358 | 1.33 U |
| Bromodichloromethane | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.17 UT | 0.83 U | ST003 | 0.437 | 0.435 U | 0.209 | 0.778 U |
| Bromoform | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.29 UT | 1.5 U | ST003 | 0.763 | 0.75 U | 0.384 | 1.43 U |
| Bromomethane | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.76 UT | 3.9 U | ST003 | 2.05 | 2 U | 0.985 | 3.68 U |
| BTEX | µg/kg | 16 | 3 | 19 | 1.8 JT | 800 T | ST007 | 268 | 3.4 T | 460 | 720 | 0.23 UT | 800 T | ST007 | 50.8 | 0.78 U | 200 | 203 |
| Carbon disulfide | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.085 UT | 0.43 U | ST003 | 0.228 | 0.23 U | 0.109 | 0.408 U |
| Carbon tetrachloride | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.11 UT | 0.54 U | ST003 | 0.286 | 0.29 U | 0.137 | 0.51 U |
| Chlorobenzene | µg/kg | 16 | 1 | 6 | 6.9 | 6.9 | ST007 | 6.9 | 6.9 | -- | 6.9 | 0.076 UT | 6.9 | ST007 | 0.624 | 0.205 U | 1.68 | 2.02 |
| Chlorodibromomethane | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.15 UT | 0.72 U | ST003 | 0.382 | 0.38 U | 0.181 | 0.683 U |
| Chloroethane | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.36 UT | 1.8 U | ST003 | 0.954 | 0.94 U | 0.467 | 1.73 U |
| Chloroform | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.094 UT | 0.48 U | ST003 | 0.252 | 0.25 U | 0.121 | 0.45 U |
| Chloromethane | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.17 UT | 0.83 U | ST003 | 0.437 | 0.435 U | 0.209 | 0.778 U |
| cis-1,2-Dichloroethene | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.15 UT | 0.75 U | ST003 | 0.396 | 0.395 U | 0.19 | 0.705 U |
| cis-1,3-Dichloropropene | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.083 UT | 0.42 U | ST003 | 0.223 | 0.22 U | 0.107 | 0.398 U |
| Dichlorodifluoromethane | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.098 UJT | 0.5 UJ | ST003 | 0.263 | 0.26 UJ | 0.126 | 0.47 UJ |
| Ethylbenzene | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.097 UT | 0.49 U | ST003 | 0.259 | 0.26 U | 0.124 | 0.46 U |
| Ethylene dibromide | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.14 UT | 0.7 U | ST003 | 0.369 | 0.37 U | 0.178 | 0.663 U |
| Isopropylbenzene | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.074 UT | 0.38 U | ST003 | 0.199 | 0.2 U | 0.0963 | 0.358 U |
| m,p-Xylene | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.23 UT | 1.2 U | ST003 | 0.601 | 0.59 U | 0.301 | 1.13 U |
| Methyl iodide | µg/kg | 16 | 1 | 6 | 4.4 J | 4.4 J | ST009 | 4.4 | 4.4 J | -- | 4.4 J | 0.52 UT | 4.4 J | ST009 | 1.98 | 1.85 U | 1.09 | 3.88 J |
| Methyl tert-butyl ether | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.095 UT | 0.48 U | ST003 | 0.256 | 0.255 U | 0.121 | 0.458 U |
| Methylene bromide | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.23 UT | 1.2 U | ST003 | 0.601 | 0.59 U | 0.301 | 1.13 U |
| Methylene chloride | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3 U | 23 U | ST003 | 8.64 | 7 U | 5.51 | 17 U |
| o-Xylene | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.085 UT | 0.43 U | ST003 | 0.228 | 0.23 U | 0.109 | 0.408 U |
| Styrene | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.1 UT | 0.51 U | ST003 | 0.268 | 0.27 U | 0.129 | 0.48 U |
| Tetrachloroethene | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.12 UT | 0.57 U | ST003 | 0.301 | 0.3 U | 0.144 | 0.54 U |
| Toluene | µg/kg | 16 | 3 | 19 | 1.8 J | 800 | ST007 | 268 | 3.4 | 460 | 720 | 0.2 UT | 800 | ST007 | 50.8 | 0.675 U | 200 | 203 |
| trans-1,2-Dichloroethene | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.13 UT | 0.63 U | ST003 | 0.333 | 0.33 U | 0.158 | 0.593 U |
| trans-1,3-Dichloropropene | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.14 UT | 0.7 U | ST003 | 0.369 | 0.37 U | 0.178 | 0.663 U |
| Trichloroethene | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.11 UT | 0.53 U | ST003 | 0.28 | 0.28 U | 0.133 | 0.5 U |
| Trichlorofluoromethane | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.17 UT | 0.83 U | ST003 | 0.437 | 0.435 U | 0.209 | 0.778 U |
| Vinyl chloride | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.14 UT | 0.71 U | ST003 | 0.372 | 0.37 U | 0.179 | 0.665 U |
| Xylene | µg/kg | 16 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.23 UT | 1.2 UT | ST003 | 0.601 | 0.59 U | 0.301 | 1.13 U |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

-- data not available.

cPAH - carcinogenic polycyclic aromatic hydrocarbon
DDx - total of 2,4' and 4,4'-DDD, -DDE, -DDT
DL - detection limit
HPAH - high molecular weightpolycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
TOC - total organic carbon

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D2.2-5. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Third Quarter (Summer 2009).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| **Grain Size** | | | | | | | | | | | | | | | | | | |
| Clay | percent | 1 | 1 | 100 | 7.1 T | 7.1 T | ST001 | 7.1 | 7.1 T | -- | 7.1 T | 7.1 T | 7.1 T | ST001 | 7.1 | 7.1 T | -- | 7.1 T |
| Coarse sand | percent | 1 | 1 | 100 | 1.05 T | 1.05 T | ST001 | 1.05 | 1.05 T | -- | 1.05 T | 1.05 T | 1.05 T | ST001 | 1.05 | 1.05 T | -- | 1.05 T |
| Fine gravel | percent | 1 | 1 | 100 | 0 T | 0 T | ST001 | 0 | 0 T | -- | 0 T | 0 T | 0 T | ST001 | 0 | 0 T | -- | 0 T |
| Fine sand | percent | 1 | 1 | 100 | 11.5 T | 11.5 T | ST001 | 11.5 | 11.5 T | -- | 11.5 T | 11.5 T | 11.5 T | ST001 | 11.5 | 11.5 T | -- | 11.5 T |
| Fines | percent | 1 | 1 | 100 | 81.4 T | 81.4 T | ST001 | 81.4 | 81.4 T | -- | 81.4 T | 81.4 T | 81.4 T | ST001 | 81.4 | 81.4 T | -- | 81.4 T |
| Medium gravel | percent | 1 | 1 | 100 | 0 T | 0 T | ST001 | 0 | 0 T | -- | 0 T | 0 T | 0 T | ST001 | 0 | 0 T | -- | 0 T |
| Medium sand | percent | 1 | 1 | 100 | 1.2 T | 1.2 T | ST001 | 1.2 | 1.2 T | -- | 1.2 T | 1.2 T | 1.2 T | ST001 | 1.2 | 1.2 T | -- | 1.2 T |
| Silt | percent | 1 | 1 | 100 | 74.3 T | 74.3 T | ST001 | 74.3 | 74.3 T | -- | 74.3 T | 74.3 T | 74.3 T | ST001 | 74.3 | 74.3 T | -- | 74.3 T |
| Very coarse sand | percent | 1 | 1 | 100 | 0.14 T | 0.14 T | ST001 | 0.14 | 0.14 T | -- | 0.14 T | 0.14 T | 0.14 T | ST001 | 0.14 | 0.14 T | -- | 0.14 T |
| Very fine sand | percent | 1 | 1 | 100 | 9.45 T | 9.45 T | ST001 | 9.45 | 9.45 T | -- | 9.45 T | 9.45 T | 9.45 T | ST001 | 9.45 | 9.45 T | -- | 9.45 T |
| **Conventionals** | | | | | | | | | | | | | | | | | | |
| Total organic carbon | percent | 6 | 6 | 100 | 2.17 | 3.62 | ST006 | 2.83 | 2.8 | 0.537 | 3.52 | 2.17 | 3.62 | ST006 | 2.83 | 2.8 | 0.537 | 3.52 |
| Total solids | percent | 7 | 7 | 100 | 24.8 | 35.9 | ST003 | 30.8 | 32.7 T | 4.35 | 35.7 | 24.8 | 35.9 | ST003 | 30.8 | 32.7 T | 4.35 | 35.7 |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/kg | 6 | 6 | 100 | 20100 | 29500 T | ST006 | 22900 | 21700 | 3560 | 28200 | 20100 | 29500 T | ST006 | 22900 | 21700 | 3560 | 28200 |
| Antimony | mg/kg | 6 | 6 | 100 | 0.16 | 0.342 | ST003 | 0.221 | 0.186 | 0.073 | 0.326 | 0.16 | 0.342 | ST003 | 0.221 | 0.186 | 0.073 | 0.326 |
| Arsenic | mg/kg | 6 | 6 | 100 | 2.75 | 4.05 | ST002 | 3.4 | 3.37 | 0.466 | 3.97 | 2.75 | 4.05 | ST002 | 3.4 | 3.37 | 0.466 | 3.97 |
| Cadmium | mg/kg | 6 | 6 | 100 | 0.225 J | 0.276 T | ST006 | 0.257 | 0.264 J | 0.0196 | 0.275 J | 0.225 J | 0.276 T | ST006 | 0.257 | 0.264 J | 0.0196 | 0.275 J |
| Chromium | mg/kg | 6 | 6 | 100 | 21.5 | 30.8 | ST003 | 26.3 | 26.9 | 3.22 | 30.1 | 21.5 | 30.8 | ST003 | 26.3 | 26.9 | 3.22 | 30.1 |
| Copper | mg/kg | 6 | 6 | 100 | 34.9 | 42.7 T | ST006 | 38.2 | 37.8 J | 3.07 | 42.3 J | 34.9 | 42.7 T | ST006 | 38.2 | 37.8 J | 3.07 | 42.3 J |
| Lead | mg/kg | 6 | 6 | 100 | 15.9 JT | 30.9 J | ST004 | 22.3 | 21.9 | 4.99 | 29.1 J | 15.9 JT | 30.9 J | ST004 | 22.3 | 21.9 | 4.99 | 29.1 J |
| Mercury | mg/kg | 6 | 6 | 100 | 0.08 | 0.184 | ST006 | 0.111 | 0.102 | 0.038 | 0.166 | 0.08 | 0.184 | ST006 | 0.111 | 0.102 | 0.038 | 0.166 |
| Nickel | mg/kg | 6 | 6 | 100 | 18.9 | 24.1 | ST003 | 22.1 | 23 | 1.98 | 23.9 | 18.9 | 24.1 | ST003 | 22.1 | 23 | 1.98 | 23.9 |
| Selenium | mg/kg | 6 | 6 | 100 | 0.15 | 0.31 T | ST006 | 0.228 | 0.205 | 0.0631 | 0.308 | 0.15 | 0.31 T | ST006 | 0.228 | 0.205 | 0.0631 | 0.308 |
| Silver | mg/kg | 6 | 6 | 100 | 0.174 | 0.457 | ST007 | 0.27 | 0.233 | 0.11 | 0.428 | 0.174 | 0.457 | ST007 | 0.27 | 0.233 | 0.11 | 0.428 |
| Zinc | mg/kg | 6 | 6 | 100 | 101 | 135 T | ST006 | 111 | 107 | 12.2 | 129 | 101 | 135 T | ST006 | 111 | 107 | 12.2 | 129 |
| **Butyltins** | | | | | | | | | | | | | | | | | | |
| Butyltin ion | µg/kg | 6 | 3 | 50 | 1.2 J | 2 J | ST006 | 1.5 | 1.3 J | 0.436 | 1.93 J | 0.73 U | 2 J | ST006 | 1.14 | 1 J | 0.483 | 1.83 J |
| Dibutyltin ion | µg/kg | 6 | 6 | 100 | 1.3 J | 4.2 | ST001 | 2.35 | 2.15 J | 0.985 | 3.75 J | 1.3 J | 4.2 | ST001 | 2.35 | 2.15 J | 0.985 | 3.75 J |
| Tetrabutyltin | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.3 U | 1.6 U | ST002; ST006 | 1.43 | 1.4 U | 0.137 | 1.6 U |
| Tributyltin ion | µg/kg | 6 | 5 | 83 | 2 J | 54 | ST001 | 12.9 | 2.9 J | 23 | 43.9 | 1.3 U | 54 | ST001 | 11 | 2.5 J | 21.1 | 41.4 |
| **PCB Aroclors** | | | | | | | | | | | | | | | | | | |
| Aroclor 1016 | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.9 U | 19 U | ST003 | 4.97 | 2.25 U | 6.88 | 14.9 U |
| Aroclor 1221 | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.9 U | 19 U | ST003 | 4.97 | 2.25 U | 6.88 | 14.9 U |
| Aroclor 1232 | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.9 U | 19 U | ST003 | 4.97 | 2.25 U | 6.88 | 14.9 U |
| Aroclor 1242 | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.9 U | 19 U | ST003 | 4.97 | 2.25 U | 6.88 | 14.9 U |
| Aroclor 1248 | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.9 U | 19 U | ST003 | 4.97 | 2.25 U | 6.88 | 14.9 U |
| Aroclor 1254 | µg/kg | 6 | 1 | 17 | 4.8 J | 4.8 J | ST007 | 4.8 | 4.8 J | -- | 4.8 J | 2 U | 19 U | ST003 | 5.45 | 2.4 U | 6.72 | 15.5 J |
| Aroclor 1260 | µg/kg | 6 | 6 | 100 | 4.9 | 1300 | ST003 | 256 | 45.5 | 514 | 1010 | 4.9 | 1300 | ST003 | 256 | 45.5 | 514 | 1010 |
| Aroclor 1262 | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.9 U | 19 U | ST003 | 4.97 | 2.25 U | 6.88 | 14.9 U |
| Aroclor 1268 | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.9 U | 19 U | ST003 | 4.97 | 2.25 U | 6.88 | 14.9 U |
| Aroclors | µg/kg | 6 | 6 | 100 | 4.9 T | 1300 T | ST003 | 257 | 45.5 | 513 | 1010 | 4.9 T | 1300 T | ST003 | 257 | 45.5 | 513 | 1010 |
| **PCB Congeners** | | | | | | | | | | | | | | | | | | |
| PCB001 | pg/g | 7 | 7 | 100 | 9.84 J | 170 | ST003 | 36.7 | 14.7 | 58.9 | 126 | 9.84 J | 170 | ST003 | 36.7 | 14.7 | 58.9 | 126 |
| PCB002 | pg/g | 7 | 7 | 100 | 11.3 J | 16.1 | ST007 | 14.1 | 14.5 | 1.72 | 16 | 11.3 J | 16.1 | ST007 | 14.1 | 14.5 | 1.72 | 16 |
| PCB003 | pg/g | 7 | 7 | 100 | 8.77 | 42.1 | ST003 | 16.7 | 13.1 | 11.4 | 33.9 | 8.77 | 42.1 | ST003 | 16.7 | 13.1 | 11.4 | 33.9 |
| PCB004 & 010 | pg/g | 7 | 7 | 100 | 28.1 | 6010 | ST003 | 984 | 171 | 2220 | 4310 | 28.1 | 6010 | ST003 | 984 | 171 | 2220 | 4310 |
| PCB005 & 008 | pg/g | 7 | 7 | 100 | 41.8 | 583 | ST003 | 138 | 67 | 197 | 435 | 41.8 | 583 | ST003 | 138 | 67 | 197 | 435 |
| PCB006 | pg/g | 7 | 5 | 71 | 12 J | 127 | ST003 | 37.8 | 16.5 | 50 | 106 | 2.22 U | 127 | ST003 | 27.6 | 13.2 J | 44.3 | 95 |
| PCB007 & 009 | pg/g | 7 | 2 | 29 | 7.9 J | 61 | ST003 | 34.5 | 34.5 J | 37.5 | 58.3 J | 4.63 U | 61 | ST003 | 13.2 | 4.63 U | 21.1 | 45.1 J |
| PCB011 | pg/g | 7 | 7 | 100 | 233 | 375 | ST005 | 331 | 357 | 53.1 | 374 | 233 | 375 | ST005 | 331 | 357 | 53.1 | 374 |
| PCB012 & 013 | pg/g | 7 | 3 | 43 | 7.57 J | 12 | ST007 | 9.68 | 9.48 J | 2.22 | 11.7 J | 6.05 U | 12 | ST007 | 7.61 | 6.05 U | 2.33 | 11.2 J |
| PCB014 | pg/g | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.98 U | 2.98 U | ST001; ST002; ST003; ST004; ST005; ST006; ST007 | 2.98 | 2.98 U | 0.0000000368 | 2.98 U |
| PCB015 | pg/g | 7 | 7 | 100 | 42.4 | 215 | ST003 | 79.2 | 54.8 | 61 | 173 | 42.4 | 215 | ST003 | 79.2 | 54.8 | 61 | 173 |
| PCB016 & 032 | pg/g | 7 | 7 | 100 | 85.7 | 2560 | ST003 | 498 | 171 | 910 | 1860 | 85.7 | 2560 | ST003 | 498 | 171 | 910 | 1860 |
| PCB017 | pg/g | 7 | 7 | 100 | 74.7 | 4110 | ST003 | 754 | 221 | 1480 | 2980 | 74.7 | 4110 | ST003 | 754 | 221 | 1480 | 2980 |
| PCB018 | pg/g | 7 | 7 | 100 | 95 | 1140 | ST003 | 287 | 159 | 377 | 854 | 95 | 1140 | ST003 | 287 | 159 | 377 | 854 |
| PCB019 | pg/g | 7 | 7 | 100 | 32.9 | 13000 | ST003 | 2200 | 505 | 4770 | 9390 | 32.9 | 13000 | ST003 | 2200 | 505 | 4770 | 9390 |
| PCB020 & 021 & 033 | pg/g | 7 | 7 | 100 | 68.8 | 1170 | ST003 | 268 | 126 | 398 | 861 | 68.8 | 1170 | ST003 | 268 | 126 | 398 | 861 |
| PCB022 | pg/g | 7 | 7 | 100 | 40.4 | 979 | ST003 | 203 | 80.8 | 342 | 715 | 40.4 | 979 | ST003 | 203 | 80.8 | 342 | 715 |

Table D2.2-5. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Third Quarter (Summer 2009).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| PCB023 | pg/g | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.707 U | 0.707 U | ST001; ST002; ST003; ST004; ST005; ST006; ST007 | 0.707 | 0.707 U | 0.0000000092 | 0.707 U |
| PCB024 & 027 | pg/g | 7 | 7 | 100 | 16.5 | 1170 | ST003 | 213 | 62.5 | 423 | 851 | 16.5 | 1170 | ST003 | 213 | 62.5 | 423 | 851 |
| PCB025 | pg/g | 7 | 7 | 100 | 19.5 | 221 | ST003 | 54.6 | 28.9 | 73.5 | 164 | 19.5 | 221 | ST003 | 54.6 | 28.9 | 73.5 | 164 |
| PCB026 | pg/g | 7 | 7 | 100 | 30 | 401 | ST003 | 99 | 54.5 | 134 | 299 | 30 | 401 | ST003 | 99 | 54.5 | 134 | 299 |
| PCB028 | pg/g | 7 | 7 | 100 | 143 | 891 | ST003 | 309 | 206 | 262 | 715 | 143 | 891 | ST003 | 309 | 206 | 262 | 715 |
| PCB029 | pg/g | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.615 U | 0.615 U | ST001; ST002; ST003; ST004; ST005; ST006; ST007 | 0.615 | 0.615 U | 0.000000013 | 0.615 U |
| PCB030 | pg/g | 7 | 1 | 14 | 19 | 19 | ST003 | 19 | 19 | -- | 19 | 0.906 U | 19 | ST003 | 3.49 | 0.906 U | 6.84 | 13.6 |
| PCB031 | pg/g | 7 | 7 | 100 | 101 | 579 | ST003 | 214 | 141 | 168 | 475 | 101 | 579 | ST003 | 214 | 141 | 168 | 475 |
| PCB034 | pg/g | 7 | 4 | 57 | 6.3 J | 110 | ST003 | 33.9 | 9.73 J | 50.8 | 95.3 J | 0.93 U | 110 | ST003 | 19.8 | 6.3 J | 40 | 80.7 J |
| PCB035 | pg/g | 7 | 4 | 57 | 5.94 J | 9.36 J | ST001 | 7.57 | 7.49 J | 1.42 | 9.12 J | 0.41 U | 9.36 J | ST001 | 4.5 | 5.94 J | 3.96 | 8.88 J |
| PCB036 | pg/g | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.885 U | 0.885 U | ST001; ST002; ST003; ST004; ST005; ST006; ST007 | 0.885 | 0.885 U | 0.000000013 | 0.885 U |
| PCB037 | pg/g | 7 | 7 | 100 | 49.5 | 156 | ST003 | 79.9 | 67.2 | 36.5 | 136 | 49.5 | 156 | ST003 | 79.9 | 67.2 | 36.5 | 136 |
| PCB038 | pg/g | 7 | 7 | 100 | 9.9 | 1460 | ST003 | 248 | 52.3 | 536 | 1050 | 9.9 | 1460 | ST003 | 248 | 52.3 | 536 | 1050 |
| PCB039 | pg/g | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.6 U | 0.6 U | ST001; ST002; ST003; ST004; ST005; ST006; ST007 | 0.6 | 0.6 U | 0.0000000092 | 0.6 U |
| PCB040 | pg/g | 7 | 7 | 100 | 27 | 99.1 | ST003 | 42.4 | 33.1 | 25.6 | 82.3 | 27 | 99.1 | ST003 | 42.4 | 33.1 | 25.6 | 82.3 |
| PCB041 & 064 & 071 & 072 | pg/g | 7 | 7 | 100 | 199 | 2520 | ST003 | 601 | 278 | 849 | 1880 | 199 | 2520 | ST003 | 601 | 278 | 849 | 1880 |
| PCB042 & 059 | pg/g | 7 | 7 | 100 | 62.8 | 470 | ST003 | 138 | 81.8 | 147 | 359 | 62.8 | 470 | ST003 | 138 | 81.8 | 147 | 359 |
| PCB043 & 049 | pg/g | 7 | 7 | 100 | 257 | 14900 | ST003 | 2730 | 778 | 5380 | 10800 | 257 | 14900 | ST003 | 2730 | 778 | 5380 | 10800 |
| PCB044 | pg/g | 7 | 7 | 100 | 209 | 1200 | ST003 | 396 | 270 | 356 | 930 | 209 | 1200 | ST003 | 396 | 270 | 356 | 930 |
| PCB045 | pg/g | 7 | 7 | 100 | 22 | 90.9 | ST003 | 38.2 | 30.2 | 23.8 | 75.4 | 22 | 90.9 | ST003 | 38.2 | 30.2 | 23.8 | 75.4 |
| PCB046 | pg/g | 7 | 7 | 100 | 16.2 | 490 | ST003 | 96.2 | 31.7 | 174 | 359 | 16.2 | 490 | ST003 | 96.2 | 31.7 | 174 | 359 |
| PCB047 | pg/g | 7 | 7 | 100 | 155 | 15800 | ST003 | 2800 | 714 | 5750 | 11500 | 155 | 15800 | ST003 | 2800 | 714 | 5750 | 11500 |
| PCB048 & 075 | pg/g | 7 | 7 | 100 | 39.3 | 626 | ST003 | 135 | 60.6 | 217 | 458 | 39.3 | 626 | ST003 | 135 | 60.6 | 217 | 458 |
| PCB050 | pg/g | 7 | 6 | 86 | 5.82 | 497 | ST003 | 107 | 36.9 | 192 | 385 | 1.5 U | 497 | ST003 | 91.7 | 27.2 | 180 | 362 |
| PCB051 | pg/g | 7 | 7 | 100 | 46 | 9190 | ST003 | 1560 | 334 | 3370 | 6620 | 46 | 9190 | ST003 | 1560 | 334 | 3370 | 6620 |
| PCB052 & 069 | pg/g | 7 | 7 | 100 | 355 | 12400 | ST003 | 2450 | 845 | 4400 | 9080 | 355 | 12400 | ST003 | 2450 | 845 | 4400 | 9080 |
| PCB053 | pg/g | 7 | 7 | 100 | 67.1 | 9820 | ST003 | 1750 | 473 | 3570 | 7120 | 67.1 | 9820 | ST003 | 1750 | 473 | 3570 | 7120 |
| PCB054 | pg/g | 7 | 7 | 100 | 5.66 | 2640 | ST003 | 455 | 119 | 966 | 1900 | 5.66 | 2640 | ST003 | 455 | 119 | 966 | 1900 |
| PCB055 | pg/g | 7 | 7 | 100 | 8.7 | 360 | ST003 | 69.8 | 21.6 | 129 | 266 | 8.7 | 360 | ST003 | 69.8 | 21.6 | 129 | 266 |
| PCB056 & 060 | pg/g | 7 | 7 | 100 | 107 | 255 | ST003 | 153 | 134 | 50.2 | 233 | 107 | 255 | ST003 | 153 | 134 | 50.2 | 233 |
| PCB057 | pg/g | 7 | 6 | 86 | 3.88 J | 184 | ST003 | 38.5 | 10.5 J | 71.4 | 142 | 1.18 U | 184 | ST003 | 33.2 | 9.2 J | 66.7 | 134 |
| PCB058 | pg/g | 7 | 2 | 29 | 3.55 J | 5.15 J | ST004 | 4.35 | 4.35 J | 1.13 | 5.07 J | 1.22 U | 5.15 J | ST004 | 2.11 | 1.22 U | 1.6 | 4.67 J |
| PCB061 & 070 | pg/g | 7 | 7 | 100 | 316 | 1450 | ST003 | 526 | 394 | 409 | 1140 | 316 | 1450 | ST003 | 526 | 394 | 409 | 1140 |
| PCB062 | pg/g | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.895 U | 0.895 U | ST001; ST002; ST003; ST004; ST005; ST006; ST007 | 0.895 | 0.895 U | 0.0000000184 | 0.895 U |
| PCB063 | pg/g | 7 | 7 | 100 | 10 J | 69.3 | ST003 | 20.9 | 12.2 | 21.5 | 54 | 10 J | 69.3 | ST003 | 20.9 | 12.2 | 21.5 | 54 |
| PCB065 | pg/g | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.3 U | 1.3 U | ST001; ST002; ST003; ST004; ST005; ST006; ST007 | 1.3 | 1.3 U | 0.0000000184 | 1.3 U |
| PCB066 & 076 | pg/g | 7 | 7 | 100 | 232 | 1910 | ST003 | 543 | 323 | 607 | 1470 | 232 | 1910 | ST003 | 543 | 323 | 607 | 1470 |
| PCB067 | pg/g | 7 | 7 | 100 | 8.22 J | 202 | ST003 | 42.7 | 18.1 | 70.6 | 150 | 8.22 J | 202 | ST003 | 42.7 | 18.1 | 70.6 | 150 |
| PCB068 | pg/g | 7 | 6 | 86 | 3.96 J | 195 | ST003 | 45.9 | 17.9 | 73.7 | 154 | 1.34 U | 195 | ST003 | 39.5 | 15.4 | 69.4 | 146 |
| PCB073 | pg/g | 7 | 5 | 71 | 12.5 J | 454 | ST003 | 118 | 37.7 | 189 | 375 | 0.724 U | 454 | ST003 | 84.3 | 24.1 | 164 | 336 |
| PCB074 | pg/g | 7 | 7 | 100 | 105 | 350 | ST003 | 150 | 118 | 88.5 | 284 | 105 | 350 | ST003 | 150 | 118 | 88.5 | 284 |
| PCB077 | pg/g | 7 | 7 | 100 | 25.8 | 38.9 | ST007 | 31.3 | 30.9 | 4.11 | 37.1 | 25.8 | 38.9 | ST007 | 31.3 | 30.9 | 4.11 | 37.1 |
| PCB078 | pg/g | 7 | 1 | 14 | 3.07 J | 3.07 J | ST007 | 3.07 | 3.07 J | -- | 3.07 J | 2.81 U | 3.07 J | ST007 | 2.85 | 2.81 U | 0.0983 | 2.99 J |
| PCB079 | pg/g | 7 | 7 | 100 | 9.83 | 170 | ST003 | 40.2 | 19.3 | 57.9 | 129 | 9.83 | 170 | ST003 | 40.2 | 19.3 | 57.9 | 129 |
| PCB080 | pg/g | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.85 U | 0.85 U | ST001; ST002; ST003; ST004; ST005; ST006; ST007 | 0.85 | 0.85 U | 0.0000000184 | 0.85 U |
| PCB081 | pg/g | 7 | 7 | 100 | 5.34 J | 30.3 | ST001 | 13.9 | 12.5 J | 9.68 | 28.2 | 5.34 J | 30.3 | ST001 | 13.9 | 12.5 J | 9.68 | 28.2 |
| PCB082 | pg/g | 7 | 7 | 100 | 59 | 292 | ST003 | 107 | 74.3 | 82.6 | 233 | 59 | 292 | ST003 | 107 | 74.3 | 82.6 | 233 |

Table D2.2-5. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Third Quarter (Summer 2009).

| | | | | | Detected Concentrations | | | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Analyte | Units | # Analyzed | # Detected | % Detected | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | Standard Deviation | 95th Percentile[b] | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (full DL) | Median (full DL)[b] | Standard Deviation (full DL) | 95th Percentile (full DL)[b] |
| PCB083 | pg/g | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.904 U | 0.904 U | ST001; ST002; ST003; ST004; ST005; ST006; ST007 | 0.904 | 0.904 U | 0 | 0.904 U |
| PCB084 & 092 | pg/g | 7 | 7 | 100 | 274 | 4510 | ST003 | 1080 | 632 | 1530 | 3400 | 274 | 4510 | ST003 | 1080 | 632 | 1530 | 3400 |
| PCB085 & 116 | pg/g | 7 | 7 | 100 | 85.7 | 505 | ST003 | 164 | 107 | 151 | 397 | 85.7 | 505 | ST003 | 164 | 107 | 151 | 397 |
| PCB086 | pg/g | 7 | 1 | 14 | 6.35 J | 6.35 J | ST005 | 6.35 | 6.35 J | -- | 6.35 J | 1.78 U | 6.35 J | ST005 | 2.43 | 1.78 U | 1.73 | 4.98 J |
| PCB087 & 117 & 125 | pg/g | 7 | 7 | 100 | 199 | 2220 | ST003 | 604 | 352 | 723 | 1720 | 199 | 2220 | ST003 | 604 | 352 | 723 | 1720 |
| PCB088 & 091 | pg/g | 7 | 7 | 100 | 124 | 8050 | ST003 | 1490 | 420 | 2910 | 5920 | 124 | 8050 | ST003 | 1490 | 420 | 2910 | 5920 |
| PCB089 | pg/g | 7 | 6 | 86 | 5.99 | 47 | ST003 | 15 | 8.91 J | 15.8 | 38.1 J | 0.692 U | 47 | ST003 | 13 | 8.33 J | 15.4 | 36.3 J |
| PCB090 & 101 | pg/g | 7 | 7 | 100 | 780 | 15000 | ST003 | 3870 | 2660 | 5060 | 11600 | 780 | 15000 | ST003 | 3870 | 2660 | 5060 | 11600 |
| PCB093 | pg/g | 7 | 1 | 14 | 24.6 | 24.6 | ST004 | 24.6 | 24.6 | -- | 24.6 | 1.53 U | 24.6 | ST004 | 4.83 | 1.53 U | 8.72 | 17.7 |
| PCB094 | pg/g | 7 | 7 | 100 | 8.39 | 973 | ST003 | 173 | 42.8 | 354 | 710 | 8.39 | 973 | ST003 | 173 | 42.8 | 354 | 710 |
| PCB095 & 098 & 102 | pg/g | 7 | 7 | 100 | 609 | 16700 | ST003 | 3760 | 2200 | 5790 | 12600 | 609 | 16700 | ST003 | 3760 | 2200 | 5790 | 12600 |
| PCB096 | pg/g | 7 | 7 | 100 | 5.38 | 1640 | ST003 | 278 | 58.7 | 602 | 1180 | 5.38 | 1640 | ST003 | 278 | 58.7 | 602 | 1180 |
| PCB097 | pg/g | 7 | 7 | 100 | 153 | 1080 | ST003 | 328 | 208 | 334 | 841 | 153 | 1080 | ST003 | 328 | 208 | 334 | 841 |
| PCB099 | pg/g | 7 | 7 | 100 | 323 | 5270 | ST003 | 1190 | 540 | 1810 | 3940 | 323 | 5270 | ST003 | 1190 | 540 | 1810 | 3940 |
| PCB100 | pg/g | 7 | 7 | 100 | 19.7 | 4070 | ST003 | 728 | 135 | 1480 | 3010 | 19.7 | 4070 | ST003 | 728 | 135 | 1480 | 3010 |
| PCB103 | pg/g | 7 | 7 | 100 | 18.3 | 3530 | ST003 | 617 | 124 | 1290 | 2560 | 18.3 | 3530 | ST003 | 617 | 124 | 1290 | 2560 |
| PCB104 | pg/g | 7 | 6 | 86 | 4.1 J | 531 | ST003 | 105 | 21 | 209 | 410 | 0.506 U | 531 | ST003 | 90.4 | 15.1 | 195 | 386 |
| PCB105 | pg/g | 7 | 7 | 100 | 211 | 1320 | ST003 | 442 | 291 | 394 | 1050 | 211 | 1320 | ST003 | 442 | 291 | 394 | 1050 |
| PCB106 & 118 | pg/g | 7 | 7 | 100 | 543 | 4760 | ST003 | 1440 | 918 | 1500 | 3730 | 543 | 4760 | ST003 | 1440 | 918 | 1500 | 3730 |
| PCB107 & 109 | pg/g | 7 | 7 | 100 | 47.6 | 477 | ST003 | 127 | 65.6 | 156 | 365 | 47.6 | 477 | ST003 | 127 | 65.6 | 156 | 365 |
| PCB108 & 112 | pg/g | 7 | 7 | 100 | 24.8 | 221 | ST003 | 61.7 | 35.7 | 70.8 | 169 | 24.8 | 221 | ST003 | 61.7 | 35.7 | 70.8 | 169 |
| PCB110 | pg/g | 7 | 7 | 100 | 723 | 8780 | ST003 | 2370 | 1500 | 2880 | 6810 | 723 | 8780 | ST003 | 2370 | 1500 | 2880 | 6810 |
| PCB111 & 115 | pg/g | 7 | 7 | 100 | 11.1 | 79.4 | ST003 | 24.1 | 14.9 | 24.6 | 61.5 | 11.1 | 79.4 | ST003 | 24.1 | 14.9 | 24.6 | 61.5 |
| PCB113 | pg/g | 7 | 4 | 57 | 9.88 J | 156 | ST003 | 62.5 | 42.1 | 64.2 | 139 | 1.04 U | 156 | ST003 | 36.2 | 9.88 J | 56 | 122 |
| PCB114 | pg/g | 7 | 7 | 100 | 10.4 | 42.5 | ST003 | 16.7 | 12.7 | 11.5 | 34.3 | 10.4 | 42.5 | ST003 | 16.7 | 12.7 | 11.5 | 34.3 |
| PCB119 | pg/g | 7 | 7 | 100 | 24.3 | 1690 | ST003 | 321 | 85.7 | 608 | 1250 | 24.3 | 1690 | ST003 | 321 | 85.7 | 608 | 1250 |
| PCB120 | pg/g | 7 | 7 | 100 | 2.59 J | 49.2 | ST003 | 17.1 | 13.6 | 16.6 | 41.4 | 2.59 J | 49.2 | ST003 | 17.1 | 13.6 | 16.6 | 41.4 |
| PCB121 | pg/g | 7 | 4 | 57 | 3.14 J | 253 | ST003 | 76.9 | 25.7 J | 119 | 221 | 0.876 U | 253 | ST003 | 44.3 | 3.14 J | 93.2 | 190 |
| PCB122 | pg/g | 7 | 6 | 86 | 6.52 | 22.4 | ST003 | 10.1 | 7.46 J | 6.13 | 19.2 J | 0.984 U | 22.4 | ST003 | 8.76 | 7.42 J | 6.57 | 18.5 J |
| PCB123 | pg/g | 7 | 7 | 100 | 8.1 J | 41.2 | ST003 | 14.8 | 11.2 J | 11.8 | 32.7 | 8.1 J | 41.2 | ST003 | 14.8 | 11.2 J | 11.8 | 32.7 |
| PCB124 | pg/g | 7 | 7 | 100 | 24.4 | 374 | ST003 | 93 | 34.8 | 128 | 295 | 24.4 | 374 | ST003 | 93 | 34.8 | 128 | 295 |
| PCB126 | pg/g | 7 | 7 | 100 | 4.7 J | 34.3 | ST003 | 12.2 | 7.96 | 10.2 | 28.1 | 4.7 J | 34.3 | ST003 | 12.2 | 7.96 | 10.2 | 28.1 |
| PCB127 | pg/g | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.78 U | 0.78 U | ST001; ST002; ST003; ST004; ST005; ST006; ST007 | 0.78 | 0.78 U | 0.0000000092 | 0.78 U |
| PCB128 & 162 | pg/g | 7 | 7 | 100 | 150 | 1810 | ST003 | 527 | 318 | 589 | 1430 | 150 | 1810 | ST003 | 527 | 318 | 589 | 1430 |
| PCB129 | pg/g | 7 | 7 | 100 | 38.3 | 474 | ST003 | 145 | 88.3 | 154 | 380 | 38.3 | 474 | ST003 | 145 | 88.3 | 154 | 380 |
| PCB130 | pg/g | 7 | 7 | 100 | 53 | 929 | ST003 | 252 | 158 | 311 | 726 | 53 | 929 | ST003 | 252 | 158 | 311 | 726 |
| PCB131 | pg/g | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.54 U | 2.54 U | ST001; ST002; ST003; ST004; ST005; ST006; ST007 | 2.54 | 2.54 U | 0.0000000368 | 2.54 U |
| PCB132 & 161 | pg/g | 7 | 7 | 100 | 319 | 7020 | ST003 | 1910 | 1160 | 2380 | 5560 | 319 | 7020 | ST003 | 1910 | 1160 | 2380 | 5560 |
| PCB133 & 142 | pg/g | 7 | 7 | 100 | 42.7 | 980 | ST003 | 249 | 192 | 332 | 753 | 42.7 | 980 | ST003 | 249 | 192 | 332 | 753 |
| PCB134 & 143 | pg/g | 7 | 7 | 100 | 60.2 | 1440 | ST003 | 367 | 218 | 492 | 1120 | 60.2 | 1440 | ST003 | 367 | 218 | 492 | 1120 |
| PCB135 | pg/g | 7 | 7 | 100 | 188 | 5600 | ST003 | 1440 | 899 | 1920 | 4380 | 188 | 5600 | ST003 | 1440 | 899 | 1920 | 4380 |
| PCB136 | pg/g | 7 | 7 | 100 | 188 | 7670 | ST003 | 1800 | 991 | 2670 | 5880 | 188 | 7670 | ST003 | 1800 | 991 | 2670 | 5880 |
| PCB137 | pg/g | 7 | 7 | 100 | 32.8 | 335 | ST003 | 90.3 | 49.2 | 109 | 255 | 32.8 | 335 | ST003 | 90.3 | 49.2 | 109 | 255 |
| PCB138 & 163 & 164 | pg/g | 7 | 7 | 100 | 1310 | 31100 | ST003 | 8270 | 4980 | 10600 | 24600 | 1310 | 31100 | ST003 | 8270 | 4980 | 10600 | 24600 |
| PCB139 & 149 | pg/g | 7 | 7 | 100 | 1070 | 34300 | ST003 | 8870 | 4940 | 11900 | 27000 | 1070 | 34300 | ST003 | 8870 | 4940 | 11900 | 27000 |
| PCB140 | pg/g | 7 | 6 | 86 | 9.31 | 281 | ST003 | 89.4 | 72 | 98.8 | 232 | 1 U | 281 | ST003 | 76.8 | 69.1 | 96.1 | 222 |
| PCB141 | pg/g | 7 | 7 | 100 | 265 | 7920 | ST003 | 2110 | 1160 | 2740 | 6320 | 265 | 7920 | ST003 | 2110 | 1160 | 2740 | 6320 |
| PCB144 | pg/g | 7 | 7 | 100 | 54.6 | 1810 | ST003 | 496 | 260 | 631 | 1470 | 54.6 | 1810 | ST003 | 496 | 260 | 631 | 1470 |
| PCB145 | pg/g | 7 | 1 | 14 | 3.86 J | 3.86 J | ST003 | 3.86 | 3.86 J | -- | 3.86 J | 1.06 U | 3.86 J | ST003 | 1.46 | 1.06 U | 1.06 | 3.02 J |
| PCB146 & 165 | pg/g | 7 | 7 | 100 | 224 | 5660 | ST003 | 1480 | 1100 | 1920 | 4390 | 224 | 5660 | ST003 | 1480 | 1100 | 1920 | 4390 |
| PCB147 | pg/g | 7 | 7 | 100 | 31.9 | 2810 | ST003 | 545 | 170 | 1010 | 2100 | 31.9 | 2810 | ST003 | 545 | 170 | 1010 | 2100 |
| PCB148 | pg/g | 7 | 6 | 86 | 9.14 | 264 | ST003 | 72.2 | 36.9 | 96.7 | 216 | 1.1 U | 264 | ST003 | 62 | 27 | 92.3 | 206 |
| PCB150 | pg/g | 7 | 7 | 100 | 5.07 | 587 | ST003 | 115 | 32.3 | 211 | 440 | 5.07 | 587 | ST003 | 115 | 32.3 | 211 | 440 |
| PCB151 | pg/g | 7 | 7 | 100 | 327 | 12700 | ST003 | 3190 | 1750 | 4410 | 9930 | 327 | 12700 | ST003 | 3190 | 1750 | 4410 | 9930 |
| PCB152 | pg/g | 7 | 5 | 71 | 4.22 J | 214 | ST003 | 52.9 | 16.7 | 90.2 | 175 | 1.25 U | 214 | ST003 | 38.2 | 11.4 J | 77.8 | 155 |
| PCB153 | pg/g | 7 | 7 | 100 | 1400 | 40400 J | ST003 | 10500 | 6390 | 13900 | 31800 J | 1400 | 40400 J | ST003 | 10500 | 6390 | 13900 | 31800 J |
| PCB154 | pg/g | 7 | 7 | 100 | 28.4 | 1070 | ST003 | 256 | 101 | 373 | 846 | 28.4 | 1070 | ST003 | 256 | 101 | 373 | 846 |
| PCB155 | pg/g | 7 | 5 | 71 | 3.06 J | 56.9 | ST003 | 16.4 | 7.44 J | 22.9 | 47.7 J | 0.852 U | 56.9 | ST003 | 11.9 | 3.25 J | 20.2 | 43.2 J |

Table D2.2-5. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Third Quarter (Summer 2009).

| | | | | | Detected Concentrations | | | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| PCB156 | pg/g | 7 | 7 | 100 | 104 | 2000 | ST003 | 541 | 311 | 675 | 1580 | 104 | 2000 | ST003 | 541 | 311 | 675 | 1580 |
| PCB157 | pg/g | 7 | 7 | 100 | 18.4 | 151 | ST003 | 50.4 | 32.8 | 46.3 | 121 | 18.4 | 151 | ST003 | 50.4 | 32.8 | 46.3 | 121 |
| PCB158 & 160 | pg/g | 7 | 7 | 100 | 123 | 2770 | ST003 | 765 | 444 | 944 | 2220 | 123 | 2770 | ST003 | 765 | 444 | 944 | 2220 |
| PCB159 | pg/g | 7 | 4 | 57 | 20.7 | 177 | ST001 | 95.7 | 92.6 | 86.5 | 175 | 0.465 U | 177 | ST001 | 54.9 | 20.7 | 79.6 | 173 |
| PCB166 | pg/g | 7 | 5 | 71 | 3.6 J | 46.3 | ST002 | 20.3 | 4.9 J | 22 | 45.5 | 0.61 U | 46.3 | ST002 | 14.6 | 4.29 J | 20.3 | 45.1 |
| PCB167 | pg/g | 7 | 7 | 100 | 43.2 | 729 | ST003 | 202 | 122 | 244 | 578 | 43.2 | 729 | ST003 | 202 | 122 | 244 | 578 |
| PCB168 | pg/g | 7 | 6 | 86 | 5.61 | 148 | ST003 | 52.9 | 43.7 | 52.1 | 128 | 0.43 U | 148 | ST003 | 45.4 | 43.7 | 51.5 | 124 |
| PCB169 | pg/g | 7 | 1 | 14 | 0.768 J | 0.768 J | ST005 | 0.768 | 0.768 J | -- | 0.768 J | 0.768 J | 0.768 J | ST001; ST002; ST003; ST004; ST005; ST006; ST007 | 0.768 | 0.768 U | 0.0000000092 | 0.768 U |
| PCB170 | pg/g | 7 | 7 | 100 | 454 | 16100 | ST003 | 4000 | 2240 | 5570 | 12500 | 454 | 16100 | ST003 | 4000 | 2240 | 5570 | 12500 |
| PCB171 | pg/g | 7 | 7 | 100 | 138 | 4560 | ST003 | 1170 | 664 | 1580 | 3600 | 138 | 4560 | ST003 | 1170 | 664 | 1580 | 3600 |
| PCB172 | pg/g | 7 | 7 | 100 | 78.3 | 2540 | ST003 | 660 | 386 | 876 | 2000 | 78.3 | 2540 | ST003 | 660 | 386 | 876 | 2000 |
| PCB173 | pg/g | 7 | 7 | 100 | 10.5 J | 357 | ST003 | 93.4 | 51.1 | 123 | 283 | 10.5 J | 357 | ST003 | 93.4 | 51.1 | 123 | 283 |
| PCB174 | pg/g | 7 | 7 | 100 | 512 | 17300 | ST003 | 4560 | 2540 | 5990 | 13800 | 512 | 17300 | ST003 | 4560 | 2540 | 5990 | 13800 |
| PCB175 | pg/g | 7 | 7 | 100 | 16.9 | 705 | ST003 | 182 | 106 | 244 | 556 | 16.9 | 705 | ST003 | 182 | 106 | 244 | 556 |
| PCB176 | pg/g | 7 | 7 | 100 | 65.3 | 2310 | ST003 | 595 | 328 | 802 | 1820 | 65.3 | 2310 | ST003 | 595 | 328 | 802 | 1820 |
| PCB177 | pg/g | 7 | 7 | 100 | 368 | 11200 | ST003 | 2890 | 1650 | 3870 | 8870 | 368 | 11200 | ST003 | 2890 | 1650 | 3870 | 8870 |
| PCB178 | pg/g | 7 | 7 | 100 | 115 | 3930 | ST003 | 995 | 606 | 1350 | 3060 | 115 | 3930 | ST003 | 995 | 606 | 1350 | 3060 |
| PCB179 | pg/g | 7 | 7 | 100 | 252 | 8780 | ST003 | 2210 | 1260 | 3040 | 6850 | 252 | 8780 | ST003 | 2210 | 1260 | 3040 | 6850 |
| PCB180 | pg/g | 7 | 7 | 100 | 1180 | 41100 J | ST003 | 10300 | 5910 | 14200 | 32200 J | 1180 | 41100 J | ST003 | 10300 | 5910 | 14200 | 32200 J |
| PCB181 | pg/g | 7 | 2 | 29 | 4.29 J | 23.6 | ST004 | 13.9 | 13.9 J | 13.7 | 22.6 J | 0.798 U | 23.6 | ST004 | 4.55 | 0.798 U | 8.5 | 17.8 J |
| PCB182 & 187 | pg/g | 7 | 7 | 100 | 703 | 22200 | ST003 | 5720 | 3580 | 7650 | 17400 | 703 | 22200 | ST003 | 5720 | 3580 | 7650 | 17400 |
| PCB183 | pg/g | 7 | 7 | 100 | 281 | 9860 | ST003 | 2530 | 1480 | 3410 | 7760 | 281 | 9860 | ST003 | 2530 | 1480 | 3410 | 7760 |
| PCB184 | pg/g | 7 | 1 | 14 | 8.41 J | 8.41 J | ST003 | 8.41 | 8.41 J | -- | 8.41 J | 0.482 U | 8.41 J | ST003 | 1.61 | 0.482 U | 3 | 6.03 J |
| PCB185 | pg/g | 7 | 7 | 100 | 65.8 | 2150 | ST003 | 561 | 313 | 744 | 1710 | 65.8 | 2150 | ST003 | 561 | 313 | 744 | 1710 |
| PCB186 | pg/g | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.786 U | 0.786 U | ST001; ST002; ST003; ST004; ST005; ST006; ST007 | 0.786 | 0.786 U | 0 | 0.786 U |
| PCB188 | pg/g | 7 | 5 | 71 | 3.37 J | 85.2 | ST003 | 25.4 | 13.8 | 33.9 | 71.6 | 0.534 U | 85.2 | ST003 | 18.3 | 7.23 J | 30.2 | 64.8 |
| PCB189 | pg/g | 7 | 7 | 100 | 16.8 | 541 | ST003 | 134 | 74.8 | 187 | 420 | 16.8 | 541 | ST003 | 134 | 74.8 | 187 | 420 |
| PCB190 | pg/g | 7 | 7 | 100 | 113 | 4470 | ST003 | 1040 | 547 | 1560 | 3410 | 113 | 4470 | ST003 | 1040 | 547 | 1560 | 3410 |
| PCB191 | pg/g | 7 | 7 | 100 | 18.1 | 551 | ST003 | 151 | 90.1 | 190 | 441 | 18.1 | 551 | ST003 | 151 | 90.1 | 190 | 441 |
| PCB192 | pg/g | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.802 U | 0.802 U | ST001; ST002; ST003; ST004; ST005; ST006; ST007 | 0.802 | 0.802 U | 0.0000000159 | 0.802 U |
| PCB193 | pg/g | 7 | 7 | 100 | 70.1 | 2190 | ST003 | 556 | 328 | 756 | 1710 | 70.1 | 2190 | ST003 | 556 | 328 | 756 | 1710 |
| PCB194 | pg/g | 7 | 7 | 100 | 235 | 6820 | ST003 | 1770 | 1100 | 2340 | 5380 | 235 | 6820 | ST003 | 1770 | 1100 | 2340 | 5380 |
| PCB195 | pg/g | 7 | 7 | 100 | 106 | 4070 | ST003 | 991 | 586 | 1410 | 3180 | 106 | 4070 | ST003 | 991 | 586 | 1410 | 3180 |
| PCB196 & 203 | pg/g | 7 | 7 | 100 | 310 | 8710 | ST003 | 2280 | 1360 | 2990 | 6920 | 310 | 8710 | ST003 | 2280 | 1360 | 2990 | 6920 |
| PCB197 | pg/g | 7 | 7 | 100 | 10.3 J | 318 | ST003 | 80.7 | 46.7 | 110 | 251 | 10.3 J | 318 | ST003 | 80.7 | 46.7 | 110 | 251 |
| PCB198 | pg/g | 7 | 7 | 100 | 11.1 | 342 | ST003 | 89.4 | 52.6 | 118 | 275 | 11.1 | 342 | ST003 | 89.4 | 52.6 | 118 | 275 |
| PCB199 | pg/g | 7 | 7 | 100 | 242 | 5770 | ST003 | 1630 | 1030 | 1970 | 4700 | 242 | 5770 | ST003 | 1630 | 1030 | 1970 | 4700 |
| PCB200 | pg/g | 7 | 7 | 100 | 26.5 | 717 | ST003 | 207 | 121 | 246 | 591 | 26.5 | 717 | ST003 | 207 | 121 | 246 | 591 |
| PCB201 | pg/g | 7 | 7 | 100 | 40.3 | 1150 | ST003 | 295 | 167 | 394 | 899 | 40.3 | 1150 | ST003 | 295 | 167 | 394 | 899 |
| PCB202 | pg/g | 7 | 7 | 100 | 82.8 | 1670 | ST003 | 443 | 301 | 563 | 1300 | 82.8 | 1670 | ST003 | 443 | 301 | 563 | 1300 |
| PCB204 | pg/g | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.737 U | 0.737 U | ST001; ST002; ST003; ST004; ST005; ST006; ST007 | 0.737 | 0.737 U | 0.0000000092 | 0.737 U |
| PCB205 | pg/g | 7 | 7 | 100 | 8.03 | 289 | ST003 | 74.5 | 47.5 | 99.8 | 229 | 8.03 | 289 | ST003 | 74.5 | 47.5 | 99.8 | 229 |
| PCB206 | pg/g | 7 | 7 | 100 | 144 | 1550 | ST003 | 510 | 457 | 488 | 1260 | 144 | 1550 | ST003 | 510 | 457 | 488 | 1260 |
| PCB207 | pg/g | 7 | 7 | 100 | 16.6 | 197 | ST003 | 61.9 | 56.2 | 62.6 | 156 | 16.6 | 197 | ST003 | 61.9 | 56.2 | 62.6 | 156 |
| PCB208 | pg/g | 7 | 7 | 100 | 36.5 | 235 | ST003 | 97.8 | 77.4 | 72.1 | 210 | 36.5 | 235 | ST003 | 97.8 | 77.4 | 72.1 | 210 |
| PCB209 | pg/g | 7 | 7 | 100 | 91.1 | 672 | ST004 | 201 | 128 | 209 | 521 | 91.1 | 672 | ST004 | 201 | 128 | 209 | 521 |
| Total PCB Congeners | µg/kg | 7 | 7 | 100 | 22.1 JT | 549 JT | ST003 | 133 | 78.6 JT | 188 | 420 J | 22.1 JT | 549 JT | ST003 | 133 | 78.6 JT | 188 | 420 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 7 | 7 | 100 | 0.000529 JT | 0.00373 T | ST003 | 0.00131 | 0.000839 T | 0.00111 | 0.00304 J | 0.000529 JT | 0.00373 T | ST003 | 0.00131 | 0.000839 T | 0.00111 | 0.00304 J |
| **PCBs[c]** | | | | | | | | | | | | | | | | | | |
| Total PCBs | µg/kg | 7 | 7 | 100 | 22.1 JT | 549 JT | ST003 | 133 | 78.6 JT | 188 | 420 J | 22.1 JT | 549 JT | ST003 | 133 | 78.6 JT | 188 | 420 J |
| **PCB Homologs** | | | | | | | | | | | | | | | | | | |
| Dichlorobiphenyl homologs | pg/g | 7 | 7 | 100 | 509 T | 7230 T | ST003 | 1570 | 649 JT | 2500 | 5310 | 509 T | 7230 T | ST003 | 1570 | 649 JT | 2500 | 5310 |
| Heptachlorobiphenyl homologs | pg/g | 7 | 7 | 100 | 4590 JT | 151000 JT | ST003 | 38400 | 22200 T | 52200 | 118000 J | 4590 JT | 151000 JT | ST003 | 38400 | 22200 T | 52200 | 118000 J |
| Hexachlorobiphenyl homologs | pg/g | 7 | 7 | 100 | 6250 JT | 171000 JT | ST003 | 44500 | 26700 JT | 58700 | 134000 J | 6250 JT | 171000 JT | ST003 | 44500 | 26700 JT | 58700 | 134000 J |

Table D2.2-5. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Third Quarter (Summer 2009).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| Monochlorobiphenyl homologs | pg/g | 7 | 7 | 100 | 35.8 T | 228 T | ST003 | 67.6 | 40.6 T | 70.9 | 174 J | 35.8 T | 228 T | ST003 | 67.6 | 40.6 T | 70.9 | 174 J |
| Nonachlorobiphenyl homologs | pg/g | 7 | 7 | 100 | 200 T | 1980 T | ST003 | 669 | 596 T | 619 | 1620 | 200 T | 1980 T | ST003 | 669 | 596 T | 619 | 1620 |
| Octachlorobiphenyl homologs | pg/g | 7 | 7 | 100 | 1110 JT | 29900 T | ST003 | 7870 | 4810 T | 10200 | 23700 | 1110 JT | 29900 T | ST003 | 7870 | 4810 T | 10200 | 23700 |
| Pentachlorobiphenyl homologs | pg/g | 7 | 7 | 100 | 4520 JT | 82700 T | ST003 | 19500 | 12300 JT | 28200 | 62400 J | 4520 JT | 82700 T | ST003 | 19500 | 12300 JT | 28200 | 62400 J |
| Tetrachlorobiphenyl homologs | pg/g | 7 | 7 | 100 | 2670 JT | 76400 T | ST003 | 15000 | 5260 JT | 27100 | 55900 J | 2670 JT | 76400 T | ST003 | 15000 | 5260 JT | 27100 | 55900 J |
| Trichlorobiphenyl homologs | pg/g | 7 | 7 | 100 | 952 JT | 28000 JT | ST003 | 5450 | 1880 JT | 9960 | 20300 J | 952 JT | 28000 JT | ST003 | 5450 | 1880 JT | 9960 | 20300 J |
| **Dioxins/Furans Homologs** | | | | | | | | | | | | | | | | | | |
| Heptachlorodibenzofuran homologs | pg/g | 6 | 6 | 100 | 11.5 J | 69.6 | ST001 | 37.7 | 33.5 | 19.7 | 64.4 | 11.5 J | 69.6 | ST001 | 37.7 | 33.5 | 19.7 | 64.4 |
| Heptachlorodibenzo-p-dioxin homologs | pg/g | 6 | 6 | 100 | 51.9 | 247 | ST001 | 154 | 176 | 73.5 | 234 | 51.9 | 247 | ST001 | 154 | 176 | 73.5 | 234 |
| Hexachlorodibenzofuran homologs | pg/g | 6 | 6 | 100 | 4.25 J | 24.1 | ST001 | 16.6 | 18.8 | 7.16 | 23.3 | 4.25 J | 24.1 | ST001 | 16.6 | 18.8 | 7.16 | 23.3 |
| Hexachlorodibenzo-p-dioxin homologs | pg/g | 6 | 6 | 100 | 6.67 J | 23.1 | ST001 | 16.7 | 19.1 | 6.97 | 22.9 | 6.67 J | 23.1 | ST001 | 16.7 | 19.1 | 6.97 | 22.9 |
| Octachlorodibenzofuran | pg/g | 6 | 6 | 100 | 15.7 J | 88.4 | ST001 | 48 | 43.2 | 26.3 | 83.3 | 15.7 J | 88.4 | ST001 | 48 | 43.2 | 26.3 | 83.3 |
| Octachlorodibenzo-p-dioxin | pg/g | 6 | 6 | 100 | 199 | 1180 | ST001 | 676 | 718 | 369 | 1110 | 199 | 1180 | ST001 | 676 | 718 | 369 | 1110 |
| Pentachlorodibenzofuran homologs | pg/g | 6 | 6 | 100 | 1.7 J | 11.3 J | ST004 | 5.38 | 4.3 J | 3.79 | 10.6 J | 1.7 J | 11.3 J | ST004 | 5.38 | 4.3 J | 3.79 | 10.6 J |
| Pentachlorodibenzo-p-dioxin homologs | pg/g | 6 | 2 | 33 | 0.752 J | 1.89 J | ST004 | 1.32 | 1.32 J | 0.805 | 1.83 J | 0.0635 U | 1.89 J | ST004 | 0.512 | 0.148 U | 0.724 | 1.61 J |
| Tetrachlorodibenzofuran homologs | pg/g | 6 | 5 | 83 | 0.905 J | 2.71 | ST004 | 1.65 | 1.34 J | 0.731 | 2.58 J | 0.0196 U | 2.71 | ST004 | 1.37 | 1.28 J | 0.931 | 2.55 J |
| Tetrachlorodibenzo-p-dioxin homologs | pg/g | 6 | 5 | 83 | 1.45 J | 3.95 | ST007 | 3.02 | 3.55 | 1.1 | 3.93 | 0.0336 U | 3.95 | ST007 | 2.52 | 2.92 | 1.57 | 3.93 |
| **PCDD/Fs Homologs** | | | | | | | | | | | | | | | | | | |
| Total PCDD/Fs | pg/g | 6 | 6 | 100 | 294 JT | 1640 JT | ST001 | 960 | 1010 J | 498 | 1550 J | 294 JT | 1640 JT | ST001 | 960 | 1010 J | 498 | 1550 J |
| **Dioxins/Furans** | | | | | | | | | | | | | | | | | | |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran | pg/g | 6 | 6 | 100 | 3.62 J | 18.4 | ST001 | 11 | 11 J | 4.95 | 17.2 | 3.62 J | 18.4 | ST001 | 11 | 11 J | 4.95 | 17.2 |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxir | pg/g | 6 | 6 | 100 | 22.2 | 116 | ST001 | 75.1 | 84.8 | 37.4 | 113 | 22.2 | 116 | ST001 | 75.1 | 84.8 | 37.4 | 113 |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran | pg/g | 6 | 3 | 50 | 0.604 J | 0.838 J | ST001 | 0.736 | 0.767 J | 0.12 | 0.831 J | 0.274 U | 0.838 J | ST001 | 0.592 | 0.631 J | 0.214 | 0.82 J |
| 1,2,3,4,7,8-Hexachlorodibenzofuran | pg/g | 6 | 5 | 83 | 0.978 J | 1.5 J | ST003 | 1.18 | 1.12 J | 0.202 | 1.45 J | 0.345 U | 1.5 J | ST003 | 1.04 | 1.1 J | 0.386 | 1.44 J |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 6 | 6 | 100 | 0.276 J | 0.858 J | ST003 | 0.572 | 0.587 J | 0.192 | 0.805 J | 0.276 J | 0.858 J | ST003 | 0.572 | 0.587 J | 0.192 | 0.805 J |
| 1,2,3,6,7,8-Hexachlorodibenzofuran | pg/g | 6 | 5 | 83 | 0.367 J | 0.682 J | ST003 | 0.52 | 0.504 J | 0.144 | 0.676 J | 0.134 U | 0.682 J | ST003 | 0.456 | 0.45 J | 0.203 | 0.674 J |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 6 | 6 | 100 | 1.18 J | 5.56 J | ST003 | 3.49 | 3.74 J | 1.73 | 5.36 J | 1.18 J | 5.56 J | ST003 | 3.49 | 3.74 J | 1.73 | 5.36 J |
| 1,2,3,7,8,9-Hexachlorodibenzofuran | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.172 U | 0.485 U | ST007 | 0.36 | 0.382 U | 0.104 | 0.464 U |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | pg/g | 6 | 6 | 100 | 0.569 J | 2.21 J | ST003 | 1.55 | 1.78 J | 0.606 | 2.13 J | 0.569 J | 2.21 J | ST003 | 1.55 | 1.78 J | 0.606 | 2.13 J |
| 1,2,3,7,8-Pentachlorodibenzofuran | pg/g | 6 | 1 | 17 | 0.196 J | 0.196 J | ST001 | 0.196 | 0.196 J | -- | 0.196 J | 0.053 U | 0.233 U | ST004 | 0.126 | 0.0986 U | 0.0726 | 0.224 J |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | pg/g | 6 | 3 | 50 | 0.346 J | 0.536 J | ST004 | 0.435 | 0.422 J | 0.0956 | 0.525 J | 0.0718 U | 0.536 J | ST004 | 0.279 | 0.275 J | 0.187 | 0.508 J |
| 2,3,4,6,7,8-Hexachlorodibenzofuran | pg/g | 6 | 6 | 100 | 0.274 J | 0.781 J | ST003 | 0.597 | 0.657 J | 0.178 | 0.757 J | 0.274 J | 0.781 J | ST003 | 0.597 | 0.657 J | 0.178 | 0.757 J |
| 2,3,4,7,8-Pentachlorodibenzofuran | pg/g | 6 | 3 | 50 | 0.303 J | 0.358 J | ST004 | 0.323 | 0.308 J | 0.0304 | 0.353 J | 0.0421 U | 0.358 J | ST004 | 0.199 | 0.204 J | 0.139 | 0.346 J |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.0196 U | 0.855 U | ST003 | 0.341 | 0.207 U | 0.321 | 0.794 U |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | pg/g | 6 | 3 | 50 | 0.275 J | 0.4 J | ST006 | 0.35 | 0.376 J | 0.0663 | 0.398 J | 0.017 U | 0.4 J | ST006 | 0.197 | 0.185 J | 0.176 | 0.394 J |
| **PCDD/Fs** | | | | | | | | | | | | | | | | | | |
| TCDD TEQ (ND=0) | pg/g | 6 | 6 | 100 | 0.553 JT | 3.3 JT | ST004 | 2.29 | 2.81 J | 1.15 | 3.25 J | 0.553 JT | 3.3 JT | ST004 | 2.29 | 2.81 J | 1.15 | 3.25 J |
| **TCDD TEQ** | | | | | | | | | | | | | | | | | | |
| Total TCDD TEQ (ND = 0) | pg/g | 7 | 7 | 100 | 0.529 JA | 6.73 JT | ST003 | 3.27 | 3.23 JT | 2.03 | 6.02 J | 0.529 JA | 6.73 JT | ST003 | 3.27 | 3.23 JT | 2.03 | 6.02 J |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| 2,4'-DDD | µg/kg | 7 | 4 | 57 | 0.63 | 14 | ST003 | 4.35 | 1.39 | 6.45 | 12.2 | 0.085 U | 14 | ST003 | 2.57 | 0.63 | 5.07 | 10.3 |
| 2,4'-DDE | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.088 U | 3.3 U | ST003 | 0.64 | 0.12 U | 1.18 | 2.43 U |
| 2,4'-DDT | µg/kg | 7 | 2 | 29 | 0.27 J | 0.47 | ST007 | 0.37 | 0.37 J | 0.141 | 0.46 J | 0.27 J | 7.2 U | ST003 | 1.46 | 0.47 | 2.54 | 5.32 U |
| 4,4'-DDD | µg/kg | 7 | 1 | 14 | 0.71 J | 0.71 J | ST007 | 0.71 | 0.71 J | -- | 0.71 J | 0.28 U | 0.71 J | ST005; ST007 | 0.47 | 0.39 U | 0.2 | 0.71 J |
| 4,4'-DDE | µg/kg | 7 | 5 | 71 | 0.58 J | 1 J | ST004 | 0.804 | 0.81 J | 0.149 | 0.966 J | 0.28 U | 1 J | ST004 | 0.673 | 0.8 | 0.258 | 0.949 J |
| 4,4'-DDT | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.081 U | 5.7 U | ST003 | 1.15 | 0.41 U | 2.01 | 4.19 U |
| Aldrin | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.065 U | 0.41 U | ST005 | 0.227 | 0.28 U | 0.15 | 0.398 U |
| alpha-Endosulfan | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.08 U | 0.28 U | ST003 | 0.169 | 0.12 U | 0.0821 | 0.274 U |
| alpha-Hexachlorocyclohexane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.081 U | 0.12 U | ST005 | 0.0974 | 0.09 U | 0.0156 | 0.117 U |
| beta-Endosulfan | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.13 U | 1.4 U | ST003 | 0.357 | 0.16 U | 0.466 | 1.09 U |
| beta-Hexachlorocyclohexane | µg/kg | 7 | 1 | 14 | 0.6 | 0.6 | ST003 | 0.6 | 0.6 | -- | 0.6 | 0.28 U | 0.6 | ST003 | 0.386 | 0.37 U | 0.109 | 0.543 |
| Chlordane (technical) | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 14 U | 21 U | ST005 | 17.1 | 16 U | 2.54 | 20.4 U |
| cis-Chlordane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.089 U | 4.3 U | ST003 | 0.784 | 0.17 U | 1.55 | 3.12 U |
| cis-Nonachlor | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.2 U | 3.2 U | ST001 | 0.86 | 0.31 U | 1.08 | 2.53 U |
| delta-Hexachlorocyclohexane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.099 U | 0.78 U | ST003 | 0.216 | 0.13 U | 0.249 | 0.591 U |
| Dieldrin | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.073 U | 0.71 U | ST004 | 0.294 | 0.13 U | 0.253 | 0.653 U |
| Endosulfan sulfate | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.071 U | 0.37 U | ST006 | 0.126 | 0.082 U | 0.108 | 0.292 U |
| Endrin | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.081 U | 0.28 U | ST003 | 0.137 | 0.11 U | 0.0693 | 0.247 U |
| Endrin aldehyde | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.088 U | 4.6 U | ST003 | 0.859 | 0.22 U | 1.66 | 3.39 U |
| Endrin ketone | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.075 U | 11 U | ST003 | 1.74 | 0.098 U | 4.09 | 7.92 U |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 7 | 1 | 14 | 0.32 J | 0.32 J | ST004 | 0.32 | 0.32 J | -- | 0.32 J | 0.079 U | 0.32 J | ST004 | 0.192 | 0.17 U | 0.103 | 0.311 J |
| Heptachlor | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.064 U | 0.093 U | ST005 | 0.0763 | 0.071 U | 0.0113 | 0.0906 U |
| Heptachlor epoxide | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.22 U | 0.6 U | ST004 | 0.423 | 0.37 U | 0.162 | 0.597 U |
| Methoxychlor | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.21 U | 0.31 U | ST005 | 0.253 | 0.24 U | 0.0373 | 0.301 U |

Table D2.2-5. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Third Quarter (Summer 2009).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| Mirex | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.058 U | 0.083 U | ST005 | 0.0681 | 0.064 U | 0.00982 | 0.0809 U |
| Oxychlordane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.058 U | 0.95 U | ST005 | 0.361 | 0.33 U | 0.299 | 0.797 U |
| Total chlordanes | µg/kg | 7 | 2 | 29 | 0.21 JT | 0.36 JT | ST002 | 0.285 | 0.285 J | 0.106 | 0.353 J | 0.21 JT | 4.3 UT | ST003 | 1.39 | 0.37 UT | 1.66 | 3.97 U |
| Total DDD | µg/kg | 7 | 5 | 71 | 0.63 T | 14 T | ST003 | 3.62 | 0.98 T | 5.82 | 11.6 | 0.28 UT | 14 T | ST003 | 2.73 | 0.71 UT | 4.99 | 10.3 |
| Total DDE | µg/kg | 7 | 5 | 71 | 0.58 JT | 1 JT | ST004 | 0.804 | 0.81 JT | 0.149 | 0.966 J | 0.41 UT | 3.3 UT | ST003 | 1.1 | 0.81 JT | 0.987 | 2.61 J |
| Total DDT | µg/kg | 7 | 2 | 29 | 0.27 JT | 0.47 T | ST007 | 0.37 | 0.37 J | 0.141 | 0.46 J | 0.27 JT | 7.2 UT | ST003 | 1.46 | 0.47 T | 2.54 | 5.32 U |
| DDx | µg/kg | 7 | 6 | 86 | 1.1 JT | 14 T | ST003 | 3.81 | 1.77 J | 5.02 | 11.2 J | 0.71 UT | 14 T | ST003 | 3.37 | 1.56 JT | 4.73 | 10.6 J |
| Total Endosulfan | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.13 UT | 1.4 UT | ST003 | 0.416 | 0.26 UT | 0.443 | 1.09 U |
| Toxaphene | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 37 U | 550 U | ST003 | 129 | 45 U | 189 | 424 U |
| trans-Chlordane | µg/kg | 7 | 2 | 29 | 0.21 J | 0.36 J | ST002 | 0.285 | 0.285 J | 0.106 | 0.353 J | 0.087 U | 1.1 U | ST003 | 0.328 | 0.21 J | 0.356 | 0.878 J |
| trans-Nonachlor | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.081 U | 0.59 U | ST003 | 0.189 | 0.11 U | 0.187 | 0.491 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| 1-Methylnaphthalene | µg/kg | 7 | 7 | 100 | 2 J | 6 | ST003 | 4.29 | 4.7 | 1.56 | 5.91 | 2 J | 6 | ST003 | 4.29 | 4.7 | 1.56 | 5.91 |
| 2-Methylnaphthalene | µg/kg | 7 | 7 | 100 | 3.8 J | 12 | ST003 | 7.96 | 8.5 | 2.99 | 11.3 | 3.8 J | 12 | ST003 | 7.96 | 8.5 | 2.99 | 11.3 |
| Acenaphthene | µg/kg | 7 | 7 | 100 | 2.7 J | 15 | ST001 | 7.33 | 5.6 | 5.05 | 14.7 | 2.7 J | 15 | ST001 | 7.33 | 5.6 | 5.05 | 14.7 |
| Acenaphthylene | µg/kg | 7 | 7 | 100 | 2.5 J | 7.8 | ST003 | 4.71 | 3.3 J | 2.3 | 7.53 | 2.5 J | 7.8 | ST003 | 4.71 | 3.3 J | 2.3 | 7.53 |
| Anthracene | µg/kg | 7 | 7 | 100 | 3.9 J | 25 | ST007 | 11.8 | 10 | 7.18 | 22.6 | 3.9 J | 25 | ST007 | 11.8 | 10 | 7.18 | 22.6 |
| Benzo(a)anthracene | µg/kg | 7 | 7 | 100 | 17 | 63 | ST003 | 35.4 | 27 | 16.7 | 59.1 | 17 | 63 | ST003 | 35.4 | 27 | 16.7 | 59.1 |
| Benzo(a)pyrene | µg/kg | 7 | 7 | 100 | 24 | 85 | ST003 | 45.1 | 41 | 20.9 | 75.1 | 24 | 85 | ST003 | 45.1 | 41 | 20.9 | 75.1 |
| Benzo(b)fluoranthene | µg/kg | 7 | 7 | 100 | 32 | 120 | ST003 | 61.4 | 47 | 29.9 | 107 | 32 | 120 | ST003 | 61.4 | 47 | 29.9 | 107 |
| Benzo(e)pyrene | µg/kg | 7 | 7 | 100 | 21 | 75 | ST003 | 40.7 | 38 | 17.6 | 67.5 | 21 | 75 | ST003 | 40.7 | 38 | 17.6 | 67.5 |
| Benzo(g,h,i)perylene | µg/kg | 7 | 7 | 100 | 26 | 73 | ST003 | 41.4 | 36 | 16.8 | 67.6 | 26 | 73 | ST003 | 41.4 | 36 | 16.8 | 67.6 |
| Benzo(k)fluoranthene | µg/kg | 7 | 7 | 100 | 9.6 | 39 | ST003 | 19.8 | 15 | 10.3 | 35.1 | 9.6 | 39 | ST003 | 19.8 | 15 | 10.3 | 35.1 |
| C1-Chrysene | µg/kg | 7 | 7 | 100 | 28 | 73 | ST002 | 50.4 | 49 | 16.6 | 71.2 | 28 | 73 | ST002 | 50.4 | 49 | 16.6 | 71.2 |
| C1-Dibenzothiophene | µg/kg | 7 | 4 | 57 | 8.4 | 30 | ST002 | 14.8 | 10.5 | 10.2 | 27.2 | 5 U | 30 | ST002 | 10.6 | 8.4 | 8.9 | 24.3 |
| C1-Fluoranthene/pyrene | µg/kg | 7 | 7 | 100 | 24 | 74 | ST003 | 52.4 | 54 | 16.2 | 71.6 | 24 | 74 | ST003 | 52.4 | 54 | 16.2 | 71.6 |
| C1-Fluorene | µg/kg | 7 | 6 | 86 | 5.2 | 10 | ST003 | 7.82 | 8 | 1.64 | 9.68 | 5.1 U | 10 | ST003 | 7.43 | 7.6 | 1.82 | 9.61 |
| C1-Phenanthrene/anthracene | µg/kg | 7 | 7 | 100 | 18 | 74 | ST002 | 45 | 40 | 20.7 | 71.9 | 18 | 74 | ST002 | 45 | 40 | 20.7 | 71.9 |
| C2-Chrysene | µg/kg | 7 | 7 | 100 | 28 | 130 | ST002 | 62.6 | 61 | 33.9 | 111 | 28 | 130 | ST002 | 62.6 | 61 | 33.9 | 111 |
| C2-Dibenzothiophene | µg/kg | 7 | 7 | 100 | 6.5 | 27 | ST003 | 15.9 | 16 | 8.33 | 26.7 | 6.5 | 27 | ST003 | 15.9 | 16 | 8.33 | 26.7 |
| C2-Fluoranthene/pyrene | µg/kg | 7 | 7 | 100 | 19 | 77 | ST002 | 46 | 49 | 18.6 | 69.2 | 19 | 77 | ST002 | 46 | 49 | 18.6 | 69.2 |
| C2-Fluorene | µg/kg | 7 | 7 | 100 | 7.3 | 26 | ST002 | 15.7 | 18 | 6.75 | 23.9 | 7.3 | 26 | ST002 | 15.7 | 18 | 6.75 | 23.9 |
| C2-Naphthalene | µg/kg | 7 | 7 | 100 | 5.5 | 20 | ST002 | 12.8 | 15 | 5.58 | 19.1 | 5.5 | 20 | ST002 | 12.8 | 15 | 5.58 | 19.1 |
| C2-Phenanthrene/anthracene | µg/kg | 7 | 7 | 100 | 16 | 120 | ST002 | 62 | 66 | 34.2 | 106 | 16 | 120 | ST002 | 62 | 66 | 34.2 | 106 |
| C3-Chrysene | µg/kg | 7 | 7 | 100 | 26 | 140 | ST002 | 63.1 | 57 | 40.4 | 123 | 26 | 140 | ST002 | 63.1 | 57 | 40.4 | 123 |
| C3-Dibenzothiophene | µg/kg | 7 | 7 | 100 | 9.7 | 48 | ST002 | 23.7 | 24 | 12.7 | 41.7 | 9.7 | 48 | ST002 | 23.7 | 24 | 12.7 | 41.7 |
| C3-Fluoranthene/pyrene | µg/kg | 7 | 7 | 100 | 17 | 99 | ST002 | 46.3 | 49 | 27.7 | 85.8 | 17 | 99 | ST002 | 46.3 | 49 | 27.7 | 85.8 |
| C3-Fluorene | µg/kg | 7 | 7 | 100 | 10 | 42 | ST002 | 26.3 | 31 | 13.1 | 40.8 | 10 | 42 | ST002 | 26.3 | 31 | 13.1 | 40.8 |
| C3-Naphthalene | µg/kg | 7 | 6 | 86 | 7.1 | 23 | ST002 | 13.8 | 15 | 5.87 | 21 | 5.1 U | 23 | ST002 | 12.5 | 15 | 6.28 | 20.6 |
| C3-Phenanthrene/anthracene | µg/kg | 7 | 7 | 100 | 22 | 200 | ST002 | 85.3 | 84 | 59.4 | 170 | 22 | 200 | ST002 | 85.3 | 84 | 59.4 | 170 |
| C4-Chrysene | µg/kg | 7 | 7 | 100 | 23 | 140 | ST002 | 57 | 44 | 42.2 | 122 | 23 | 140 | ST002 | 57 | 44 | 42.2 | 122 |
| C4-Naphthalene | µg/kg | 7 | 7 | 100 | 5.1 | 33 | ST002 | 14.6 | 15 | 9.71 | 28.5 | 5.1 | 33 | ST002 | 14.6 | 15 | 9.71 | 28.5 |
| C4-Phenanthrene/anthracene | µg/kg | 7 | 7 | 100 | 15 | 94 | ST002 | 40.6 | 40 | 26.5 | 80.2 | 15 | 94 | ST002 | 40.6 | 40 | 26.5 | 80.2 |
| Chrysene | µg/kg | 7 | 7 | 100 | 26 | 86 | ST003 | 51.1 | 41 | 22.4 | 80.6 | 26 | 86 | ST003 | 51.1 | 41 | 22.4 | 80.6 |
| Dibenzo(a,h)anthracene | µg/kg | 7 | 7 | 100 | 3.8 J | 12 | ST003 | 6.9 | 6.1 | 2.89 | 11.2 | 3.8 J | 12 | ST003 | 6.9 | 6.1 | 2.89 | 11.2 |
| Dibenzothiophene | µg/kg | 7 | 7 | 100 | 1.5 J | 8.9 | ST003 | 4.39 | 3.3 J | 2.52 | 8 | 1.5 J | 8.9 | ST003 | 4.39 | 3.3 J | 2.52 | 8 |
| Fluoranthene | µg/kg | 7 | 7 | 100 | 56 | 220 | ST003 | 114 | 100 | 57 | 202 | 56 | 220 | ST003 | 114 | 100 | 57 | 202 |
| Fluorene | µg/kg | 7 | 7 | 100 | 3.2 J | 19 | ST003 | 9.74 | 8 | 6.06 | 18.4 | 3.2 J | 19 | ST003 | 9.74 | 8 | 6.06 | 18.4 |
| Total HPAH | µg/kg | 7 | 7 | 100 | 255 JT | 932 T | ST003 | 500 | 397 T | 229 | 853 | 255 JT | 932 T | ST003 | 500 | 397 T | 229 | 853 |
| Indeno(1,2,3-cd)pyrene | µg/kg | 7 | 7 | 100 | 19 | 64 | ST003 | 32.4 | 27 | 16 | 57.7 | 19 | 64 | ST003 | 32.4 | 27 | 16 | 57.7 |
| Total LPAH | µg/kg | 7 | 7 | 100 | 53.3 JT | 224 T | ST003 | 144 | 113 T | 70.2 | 223 J | 53.3 JT | 224 T | ST003 | 144 | 113 T | 70.2 | 223 J |
| Naphthalene | µg/kg | 7 | 7 | 100 | 13 | 80 | ST001 | 39.4 | 29 | 25.3 | 76.7 | 13 | 80 | ST001 | 39.4 | 29 | 25.3 | 76.7 |
| Perylene | µg/kg | 7 | 7 | 100 | 16 | 40 | ST007 | 27 | 27 | 8.29 | 37.9 | 16 | 40 | ST007 | 27 | 27 | 8.29 | 37.9 |
| Phenanthrene | µg/kg | 7 | 7 | 100 | 24 | 130 | ST003 | 63.6 | 47 | 37 | 116 | 24 | 130 | ST003 | 63.6 | 47 | 37 | 116 |
| Pyrene | µg/kg | 7 | 7 | 100 | 42 | 170 | ST003 | 92.7 | 83 | 43.5 | 158 | 42 | 170 | ST003 | 92.7 | 83 | 43.5 | 158 |
| Total cPAH (BaPEq) | µg/kg | 7 | 7 | 100 | 34.7 JT | 122 T | ST003 | 65.2 | 58.5 T | 29.5 | 109 | 34.7 JT | 122 T | ST003 | 65.2 | 58.5 T | 29.5 | 109 |
| Total cPAHs | µg/kg | 7 | 7 | 100 | 131 JT | 469 T | ST003 | 252 | 213 T | 115 | 426 | 131 JT | 469 T | ST003 | 252 | 213 T | 115 | 426 |
| Total PAHs | µg/kg | 7 | 7 | 100 | 309 JT | 1160 T | ST003 | 645 | 510 T | 292 | 1070 | 309 JT | 1160 T | ST003 | 645 | 510 T | 292 | 1070 |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl) phthalate | µg/kg | 6 | 6 | 100 | 180 J | 920 | ST006 | 395 | 245 | 304 | 840 J | 180 J | 920 | ST006 | 395 | 245 | 304 | 840 J |
| Butylbenzyl phthalate | µg/kg | 6 | 1 | 17 | 20 | 20 | ST001 | 20 | 20 | -- | 20 | 5.9 U | 120 U | ST007 | 42.2 | 24 U | 42 | 105 U |
| Dibutyl phthalate | µg/kg | 6 | 2 | 33 | 16 | 19 | ST002 | 17.5 | 17.5 | 2.12 | 18.9 | 16 | 290 U | ST007 | 98.5 | 58 U | 106 | 255 U |
| Diethyl phthalate | µg/kg | 6 | 1 | 17 | 2.9 J | 2.9 J | ST001 | 2.9 | 2.9 J | -- | 2.9 J | 2.4 U | 47 U | ST007 | 15.9 | 9.5 U | 17.1 | 41.3 U |
| Dimethyl phthalate | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.6 U | 36 U | ST007 | 12.2 | 7.35 U | 13.3 | 31.8 U |

Table D2.2-5. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Third Quarter (Summer 2009).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| Di-n-octyl phthalate | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.7 U | 61 U | ST007 | 20.7 | 12.5 U | 22.4 | 53.8 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.1 U | 93 U | ST007 | 31.5 | 19.5 U | 34.1 | 81.8 U |
| 1,2-Dichlorobenzene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.5 U | 110 U | ST007 | 36.3 | 22 U | 40.3 | 96 U |
| 1,3-Dichlorobenzene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.7 U | 110 U | ST007 | 36.7 | 22 U | 40.4 | 96.5 U |
| 1,4-Dichlorobenzene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.5 U | 110 U | ST007 | 36.3 | 22 U | 40.3 | 96 U |
| 2,4-Dinitrotoluene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.4 U | 54 U | ST007 | 18.4 | 11.5 U | 19.8 | 47.5 U |
| 2,6-Dinitrotoluene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.1 U | 71 U | ST007 | 24.1 | 15 U | 26 | 62.5 U |
| 2-Chloronaphthalene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 57 U | ST007 | 19.6 | 12.5 U | 20.9 | 50.3 U |
| 2-Nitroaniline | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 5 U | 120 U | ST007 | 39.7 | 24 U | 44 | 105 U |
| 3,3'-Dichlorobenzidine | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 5.8 U | 140 U | ST007 | 45.9 | 27.5 U | 51.3 | 122 U |
| 3-Nitroaniline | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.9 U | 89 U | ST007 | 30.3 | 19 U | 32.6 | 78.3 U |
| 4-Bromophenyl phenyl ether | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 57 U | ST007 | 19.6 | 12.5 U | 20.9 | 50.3 U |
| 4-Chloroaniline | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3 U | 68 U | ST007 | 23.1 | 14.5 U | 24.9 | 59.8 U |
| 4-Chlorophenyl phenyl ether | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.2 U | 50 U | ST007 | 16.9 | 10.4 U | 18.4 | 44 U |
| 4-Nitroaniline | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.8 U | 64 U | ST007 | 21.9 | 13.5 U | 23.5 | 56.5 U |
| Aniline | µg/kg | 6 | 2 | 33 | 53 J | 53 J | ST003; ST004 | 53 | 53 J | 0 | 53 J | 2.4 U | 54 U | ST007 | 32.2 | 40.5 J | 24.9 | 53.8 J |
| Azobenzene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.7 U | 40 U | ST007 | 13.5 | 8.05 U | 14.7 | 35.3 U |
| Benzoic acid | µg/kg | 6 | 2 | 33 | 220 J | 1800 J | ST006 | 1010 | 1010 J | 1120 | 1720 J | 180 U | 3500 U | ST007 | 1190 | 705 U | 1280 | 3080 J |
| Benzyl alcohol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.3 U | 75 U | ST007 | 25.4 | 15.5 U | 27.5 | 66 U |
| Bis(2-chloroethoxy) methane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.4 U | 54 U | ST007 | 18.4 | 11.5 U | 19.8 | 47.5 U |
| Bis(2-chloroethyl) ether | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3 U | 68 U | ST007 | 23.1 | 14.5 U | 24.9 | 59.8 U |
| Bis(2-chloroisopropyl) ether | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.1 U | 93 U | ST007 | 31.5 | 19.5 U | 34.1 | 81.8 U |
| Carbazole | µg/kg | 6 | 3 | 50 | 5.3 J | 15 J | ST003 | 9.3 | 7.6 J | 5.07 | 14.3 J | 5.3 J | 47 U | ST007 | 18.1 | 12.5 J | 15.6 | 41.3 U |
| Dibenzofuran | µg/kg | 7 | 7 | 100 | 2.8 J | 14 | ST003 | 7 | 5.7 | 4.03 | 13.1 | 2.8 J | 14 | ST003 | 7 | 5.7 | 4.03 | 13.1 |
| Hexachlorobenzene | µg/kg | 7 | 3 | 43 | 0.54 | 1 J | ST003 | 0.78 | 0.8 | 0.231 | 0.98 J | 0.15 U | 1 J | ST003 | 0.461 | 0.37 U | 0.334 | 0.94 J |
| Hexachlorobutadiene | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.11 U | 0.37 U | ST002 | 0.233 | 0.28 U | 0.104 | 0.352 U |
| Hexachlorocyclopentadiene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 45 U | 1100 U | ST007 | 363 | 220 U | 403 | 960 U |
| Hexachloroethane | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.053 U | 0.43 U | ST004 | 0.166 | 0.068 U | 0.174 | 0.424 U |
| Isophorone | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.6 U | 36 U | ST007 | 12.2 | 7.35 U | 13.3 | 31.8 U |
| Nitrobenzene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.4 U | 79 U | ST007 | 26.8 | 16.5 U | 29 | 69.5 U |
| N-Nitrosodimethylamine | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 9.4 U | 220 U | ST007 | 75.2 | 45 U | 81.4 | 195 U |
| N-Nitrosodiphenylamine | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 57 U | ST007 | 19.6 | 12.5 U | 20.9 | 50.3 U |
| N-Nitrosodipropylamine | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.7 U | 86 U | ST007 | 29.2 | 18 U | 31.6 | 75.8 U |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| 2,3,4,5-Tetrachlorophenol | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.1 U | 1.5 U | ST005 | 1.27 | 1.2 U | 0.16 | 1.47 U |
| 2,3,5,6-Tetrachlorophenol | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.9 U | 1.4 U | ST005 | 1.12 | 1.1 U | 0.19 | 1.37 U |
| 2,4,5-Trichlorophenol | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.92 U | 1.4 U | ST005 | 1.15 | 1.1 U | 0.183 | 1.37 U |
| 2,4,6-Trichlorophenol | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.2 U | 1.7 U | ST005 | 1.43 | 1.4 U | 0.206 | 1.67 U |
| 2,4-Dichlorophenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.6 U | 36 U | ST007 | 12.2 | 7.35 U | 13.3 | 31.8 U |
| 2,4-Dimethylphenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 8.5 U | 200 U | ST007 | 68.4 | 40.5 U | 74.2 | 178 U |
| 2,4-Dinitrophenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 27 U | 610 U | ST007 | 207 | 125 U | 224 | 538 U |
| 2-Chlorophenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.1 U | 71 U | ST007 | 24.1 | 15 U | 26 | 62.5 U |
| 2-Methylphenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.4 U | 54 U | ST007 | 18.4 | 11.5 U | 19.8 | 47.5 U |
| 2-Nitrophenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.4 U | 54 U | ST007 | 18.4 | 11.5 U | 19.8 | 47.5 U |
| 4,6-Dinitro-2-methylphenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.2 U | 50 U | ST007 | 16.9 | 10.4 U | 18.4 | 44 U |
| 4-Chloro-3-methylphenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.2 U | 50 U | ST007 | 16.9 | 10.4 U | 18.4 | 44 U |
| 4-Methylphenol | µg/kg | 6 | 4 | 67 | 17 J | 86 | ST003 | 45 | 38.5 J | 31.2 | 80.9 J | 17 J | 86 | ST003 | 43.7 | 40 J | 25.6 | 78 |
| 4-Nitrophenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 28 U | 640 U | ST007 | 219 | 135 U | 235 | 565 U |
| Pentachlorophenol | µg/kg | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.9 U | 2.8 U | ST005 | 2.36 | 2.5 U | 0.331 | 2.74 U |
| Phenol | µg/kg | 6 | 2 | 33 | 8.9 J | 14 J | ST001 | 11.5 | 11.5 J | 3.61 | 13.7 J | 8.9 J | 71 U | ST007 | 26.8 | 15 U | 23.8 | 62.5 U |

Table D2.2-5. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Third Quarter (Summer 2009).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) (silica gel method) | mg/kg | 7 | 7 | 100 | 65 J | 120 J | ST004 | 97.7 | 100 J | 18.5 | 117 J | 65 J | 120 J | ST004 | 97.7 | 100 J | 18.5 | 117 J |
| Total Petroleum Hydrocarbons (Residual) (silica gel method) | mg/kg | 7 | 7 | 100 | 190 J | 410 J | ST002 | 308 | 330 J | 83.7 | 404 J | 190 J | 410 J | ST002 | 308 | 330 J | 83.7 | 404 J |
| Total Petroleum Hydrocarbons (silica gel method) | mg/kg | 7 | 7 | 100 | 255 JA | 520 JA | ST002 | 406 | 440 JA | 99.2 | 511 J | 255 JA | 520 JA | ST002 | 406 | 440 JA | 99.2 | 511 J |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DDx - total of 2,4' and 4,4'-DDD, -DDE, -DDT
DL - detection limit
HPAH - high molecular weightpolycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
TOC - total organic carbon

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D2.2-6. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Fourth Quarter (Fall 2009).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| **Grain Size** | | | | | | | | | | | | | | | | | | |
| Clay | percent | 6 | 6 | 100 | 2.4 T | 6.5 | ST001 | 3.99 | 3.73 | 1.5 | 6.09 | 2.4 T | 6.5 | ST001 | 3.99 | 3.73 | 1.5 | 6.09 |
| Coarse sand | percent | 6 | 6 | 100 | 0.22 | 5.56 T | ST004 | 1.67 | 0.495 | 2.18 | 4.91 | 0.22 | 5.56 T | ST004 | 1.67 | 0.495 | 2.18 | 4.91 |
| Fine gravel | percent | 6 | 6 | 100 | 0 T | 25.1 | ST006 | 5.35 | 0.175 | 10 | 20.5 | 0 T | 25.1 | ST006 | 5.35 | 0.175 | 10 | 20.5 |
| Fine sand | percent | 6 | 6 | 100 | 4.68 T | 12.6 | ST003 | 8.6 | 8.88 | 2.98 | 12.1 | 4.68 T | 12.6 | ST003 | 8.6 | 8.88 | 2.98 | 12.1 |
| Fines | percent | 6 | 6 | 100 | 44.7 T | 91 T | ST002 | 69.5 | 71.1 | 17 | 89 | 44.7 T | 91 T | ST002 | 69.5 | 71.1 | 17 | 89 |
| Medium gravel | percent | 6 | 6 | 100 | 0 T | 21.9 JT | ST004 | 3.65 | 0 | 8.94 | 16.4 J | 0 T | 21.9 JT | ST004 | 3.65 | 0 | 8.94 | 16.4 J |
| Medium sand | percent | 6 | 6 | 100 | 0.45 T | 11.6 | ST003 | 3.57 | 0.69 | 4.81 | 10.6 | 0.45 T | 11.6 | ST003 | 3.57 | 0.69 | 4.81 | 10.6 |
| Silt | percent | 6 | 6 | 100 | 42.3 T | 88.3 T | ST002 | 65.5 | 67.4 | 16.7 | 85.3 | 42.3 T | 88.3 T | ST002 | 65.5 | 67.4 | 16.7 | 85.3 |
| Very coarse sand | percent | 6 | 6 | 100 | 0 | 4.7 T | ST004 | 1.11 | 0.53 | 1.79 | 3.74 | 0 | 4.7 T | ST004 | 1.11 | 0.53 | 1.79 | 3.74 |
| Very fine sand | percent | 6 | 6 | 100 | 2.85 JT | 7.41 | ST006 | 5.26 | 5.34 | 1.75 | 7.21 | 2.85 JT | 7.41 | ST006 | 5.26 | 5.34 | 1.75 | 7.21 |
| **Conventionals** | | | | | | | | | | | | | | | | | | |
| Total organic carbon | percent | 6 | 6 | 100 | 2.62 T | 13.6 | ST006 | 4.9 | 3.24 | 4.29 | 11.2 | 2.62 T | 13.6 | ST006 | 4.9 | 3.24 | 4.29 | 11.2 |
| Total solids | percent | 6 | 6 | 100 | 31.1 T | 43.2 T | ST004 | 34.5 | 32.6 | 4.65 | 41.4 | 31.1 T | 43.2 T | ST004 | 34.5 | 32.6 | 4.65 | 41.4 |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Aluminum | mg/kg | 6 | 6 | 100 | 16300 T | 22000 | ST001 | 19300 | 19300 | 2500 | 22000 | 16300 T | 22000 | ST001 | 19300 | 19300 | 2500 | 22000 |
| Antimony | mg/kg | 6 | 6 | 100 | 0.117 | 0.16 | ST001 | 0.133 | 0.132 | 0.0166 | 0.155 | 0.117 | 0.16 | ST001 | 0.133 | 0.132 | 0.0166 | 0.155 |
| Arsenic | mg/kg | 6 | 6 | 100 | 2.69 | 3.59 | ST002 | 3.08 | 3.02 | 0.374 | 3.54 | 2.69 | 3.59 | ST002 | 3.08 | 3.02 | 0.374 | 3.54 |
| Cadmium | mg/kg | 6 | 6 | 100 | 0.14 | 0.208 | ST001 | 0.185 | 0.193 | 0.0259 | 0.208 | 0.14 | 0.208 | ST001 | 0.185 | 0.193 | 0.0259 | 0.208 |
| Chromium | mg/kg | 6 | 6 | 100 | 16.9 | 24.8 | ST003 | 21.4 | 22.4 | 3.4 | 24.7 | 16.9 | 24.8 | ST003 | 21.4 | 22.4 | 3.4 | 24.7 |
| Copper | mg/kg | 6 | 6 | 100 | 25.4 | 35.4 | ST002 | 30.8 | 31 | 3.74 | 35.1 | 25.4 | 35.4 | ST002 | 30.8 | 31 | 3.74 | 35.1 |
| Lead | mg/kg | 6 | 6 | 100 | 8.16 | 18 T | ST004 | 12 | 11.5 | 3.26 | 16.6 | 8.16 | 18 T | ST004 | 12 | 11.5 | 3.26 | 16.6 |
| Mercury | mg/kg | 6 | 6 | 100 | 0.053 | 0.096 T | ST001 | 0.0688 | 0.065 | 0.0146 | 0.0898 | 0.053 | 0.096 T | ST001 | 0.0688 | 0.065 | 0.0146 | 0.0898 |
| Nickel | mg/kg | 6 | 6 | 100 | 14.6 | 20.5 | ST003 | 18.6 | 19.5 | 2.33 | 20.5 | 14.6 | 20.5 | ST003 | 18.6 | 19.5 | 2.33 | 20.5 |
| Selenium | mg/kg | 6 | 6 | 100 | 0.2 T | 0.36 | ST005 | 0.263 | 0.24 | 0.0671 | 0.353 | 0.2 T | 0.36 | ST005 | 0.263 | 0.24 | 0.0671 | 0.353 |
| Silver | mg/kg | 6 | 6 | 100 | 0.11 T | 0.296 | ST006 | 0.167 | 0.147 | 0.0664 | 0.264 | 0.11 T | 0.296 | ST006 | 0.167 | 0.147 | 0.0664 | 0.264 |
| Zinc | mg/kg | 6 | 6 | 100 | 63.4 | 82.1 | ST001 | 74.9 | 75.6 | 6.9 | 81.9 | 63.4 | 82.1 | ST001 | 74.9 | 75.6 | 6.9 | 81.9 |
| **Butyltins** | | | | | | | | | | | | | | | | | | |
| Butyltin ion | µg/kg | 6 | 6 | 100 | 0.97 JT | 4 J | ST001 | 1.93 | 1.45 J | 1.17 | 3.65 J | 0.97 JT | 4 J | ST001 | 1.93 | 1.45 J | 1.17 | 3.65 J |
| Dibutyltin ion | µg/kg | 6 | 6 | 100 | 0.78 J | 2.9 J | ST002 | 1.68 | 1.65 J | 0.783 | 2.7 J | 0.78 J | 2.9 J | ST002 | 1.68 | 1.65 J | 0.783 | 2.7 J |
| Tetrabutyltin | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.1 UT | 1.4 U | ST001; ST002; ST005; ST006 | 1.32 | 1.4 U | 0.133 | 1.4 U |
| Tributyltin ion | µg/kg | 6 | 3 | 50 | 1.8 J | 2.8 J | ST002 | 2.43 | 2.7 JT | 0.551 | 2.79 J | 1.3 U | 2.8 J | ST002 | 1.88 | 1.6 J | 0.697 | 2.78 J |
| **PCB Aroclors** | | | | | | | | | | | | | | | | | | |
| Aroclor 1016 | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.6 UT | 93 U | ST003 | 17.2 | 2.1 U | 37.2 | 70.3 U |
| Aroclor 1221 | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.1 U | 20 U | ST003 | 5.95 | 2.9 U | 7.01 | 16.4 U |
| Aroclor 1232 | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.7 UT | 170 U | ST003 | 30.4 | 2.1 U | 68.4 | 129 U |
| Aroclor 1242 | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2 U | 61 U | ST003 | 11.9 | 2.1 U | 24 | 46.3 U |
| Aroclor 1248 | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.6 UT | 31 U | ST003 | 7.1 | 2.35 U | 11.7 | 24.1 U |
| Aroclor 1254 | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.1 U | 9.2 U | ST002 | 5.7 | 4.95 U | 2.94 | 9.18 U |
| Aroclor 1260 | µg/kg | 6 | 5 | 83 | 8.5 | 1100 | ST003 | 252 | 14.5 T | 477 | 906 | 2 U | 1100 | ST003 | 211 | 11.9 | 438 | 858 |
| Aroclor 1262 | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.6 UT | 9.1 U | ST003 | 3.23 | 2.1 U | 2.89 | 7.43 U |
| Aroclor 1268 | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.6 UT | 9.1 U | ST003 | 3.17 | 2.1 U | 2.91 | 7.35 U |
| Aroclors | µg/kg | 6 | 5 | 83 | 8.5 T | 1100 T | ST003 | 252 | 14.5 T | 477 | 906 | 5.7 UT | 1100 T | ST003 | 211 | 11.9 | 438 | 858 |
| **PCB Congeners** | | | | | | | | | | | | | | | | | | |
| PCB001 | pg/g | 6 | 6 | 100 | 3.76 J | 8.87 J | ST005 | 6.28 | 5.9 J | 2.11 | 8.8 J | 3.76 J | 8.87 J | ST005 | 6.28 | 5.9 J | 2.11 | 8.8 J |
| PCB002 | pg/g | 6 | 6 | 100 | 2.27 J | 4.91 | ST005 | 3.29 | 2.93 J | 1.02 | 4.72 | 2.27 J | 4.91 | ST005 | 3.29 | 2.93 J | 1.02 | 4.72 |
| PCB003 | pg/g | 6 | 6 | 100 | 3.98 J | 7.99 J | ST005 | 5.14 | 4.5 J | 1.5 | 7.39 J | 3.98 J | 7.99 J | ST005 | 5.14 | 4.5 J | 1.5 | 7.39 J |
| PCB004 | pg/g | 6 | 6 | 100 | 17.1 J | 704 | ST003 | 171 | 79.8 J | 262 | 552 J | 17.1 J | 704 | ST003 | 171 | 79.8 J | 262 | 552 J |
| PCB005 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.39 UT | 5 U | ST005 | 3.79 | 3.82 U | 0.882 | 4.84 U |
| PCB006 | pg/g | 6 | 4 | 67 | 5.57 J | 13.4 J | ST005 | 9.29 | 9.1 J | 3.22 | 12.8 J | 3.46 U | 13.4 J | ST005 | 7.42 | 7.12 J | 3.83 | 12.4 J |
| PCB007 | pg/g | 6 | 1 | 17 | 3.64 JT | 3.64 JT | ST004 | 3.64 | 3.64 JT | -- | 3.64 JT | 3.21 U | 4.88 U | ST005 | 3.84 | 3.65 J | 0.584 | 4.69 U |
| PCB008 | pg/g | 6 | 2 | 33 | 71.8 JT | 88.3 J | ST005 | 80.1 | 80.1 J | 11.7 | 87.5 J | 24.2 U | 88.3 J | ST005 | 45.8 | 32.8 U | 27.6 | 84.2 J |
| PCB009 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.15 UT | 4.72 U | ST005 | 3.45 | 3.44 U | 0.857 | 4.52 U |
| PCB010 | pg/g | 6 | 2 | 33 | 5.01 JT | 25.9 | ST003 | 15.5 | 15.5 J | 14.8 | 24.9 J | 3.66 U | 25.9 | ST003 | 8.3 | 5.08 J | 8.67 | 21 |
| PCB011 | pg/g | 6 | 1 | 17 | 482 T | 482 T | ST004 | 482 | 482 T | -- | 482 T | 307 U | 626 U | ST005 | 389 | 307 U | 135 | 590 |
| PCB012 & 013 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.22 UT | 4.81 U | ST005 | 3.55 | 3.54 U | 0.865 | 4.61 U |
| PCB014 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.12 UT | 4.69 U | ST005 | 3.41 | 3.38 U | 0.856 | 4.48 U |
| PCB015 | pg/g | 6 | 6 | 100 | 18.5 J | 53.2 J | ST005 | 29 | 21.7 J | 14.6 | 50 J | 18.5 J | 53.2 J | ST005 | 29 | 21.7 J | 14.6 | 50 J |
| PCB016 | pg/g | 6 | 2 | 33 | 38.9 J | 43.9 T | ST004 | 41.4 | 41.4 J | 3.54 | 43.7 J | 20 U | 43.9 T | ST004 | 28.3 | 22.5 U | 10.4 | 42.7 J |
| PCB017 | pg/g | 6 | 5 | 83 | 53.2 J | 461 | ST003 | 141 | 66.8 J | 179 | 383 | 22.6 U | 461 | ST003 | 122 | 60.7 J | 167 | 364 |
| PCB018 & 030 | pg/g | 6 | 3 | 50 | 66.8 T | 113 J | ST003 | 84.6 | 74 J | 24.9 | 109 J | 35.7 U | 113 J | ST003 | 62.6 | 55 | 28.9 | 103 J |
| PCB019 | pg/g | 6 | 6 | 100 | 9.63 J | 1380 | ST003 | 301 | 102 | 531 | 1070 | 9.63 J | 1380 | ST003 | 301 | 102 | 531 | 1070 |
| PCB020 & 021 & 033 | pg/g | 6 | 3 | 50 | 38.8 J | 69.9 J | ST005 | 57.4 | 63.4 JT | 16.4 | 69.3 J | 24.8 U | 69.9 J | ST005 | 42.1 | 33.8 J | 19.7 | 68.3 J |
| PCB020 & 028 | pg/g | 6 | 4 | 67 | 77.2 J | 163 J | ST005 | 121 | 122 J | 39.6 | 160 J | 52.7 U | 163 J | ST005 | 99.1 | 88.1 J | 45.6 | 158 J |
| PCB022 | pg/g | 6 | 2 | 33 | 47.2 T | 52.2 J | ST005 | 49.7 | 49.7 J | 3.54 | 52 J | 17 U | 52.2 J | ST005 | 29.3 | 20.3 U | 15.9 | 51 J |

Table D2.2-6. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Fourth Quarter (Fall 2009).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| PCB023 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.08 U | 2.05 U | ST005 | 1.37 | 1.23 U | 0.361 | 1.91 U |
| PCB024 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.984 UT | 2.13 U | ST003 | 1.64 | 1.69 U | 0.377 | 2.04 U |
| PCB025 | pg/g | 6 | 5 | 83 | 5.37 J | 33.7 J | ST003 | 14.1 | 10.7 JT | 11.2 | 29.1 J | 3.83 U | 33.7 J | ST003 | 12.4 | 10.2 J | 10.9 | 28 J |
| PCB026 & 029 | pg/g | 6 | 4 | 67 | 12.3 J | 28.7 J | ST003 | 21.9 | 23.3 J | 7.33 | 28.4 J | 8.76 U | 28.7 J | ST003 | 18 | 16.3 J | 8.37 | 28.1 J |
| PCB027 | pg/g | 6 | 5 | 83 | 11.8 J | 113 | ST003 | 33.7 | 15 J | 44.4 | 93.7 J | 3.11 U | 113 | ST003 | 28.6 | 13.7 J | 41.6 | 88.9 J |
| PCB031 | pg/g | 6 | 3 | 50 | 65.6 J | 121 J | ST005 | 95.4 | 99.6 JT | 27.9 | 119 J | 41.8 U | 121 J | ST005 | 69.7 | 55.5 J | 33.3 | 116 J |
| PCB032 | pg/g | 6 | 5 | 83 | 25.3 J | 223 | ST003 | 71.1 | 34.3 J | 85.1 | 186 J | 13.2 U | 223 | ST003 | 61.4 | 33.5 J | 79.7 | 177 J |
| PCB034 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.963 U | 1.82 U | ST005 | 1.22 | 1.1 U | 0.319 | 1.7 U |
| PCB035 | pg/g | 6 | 3 | 50 | 2.02 J | 5.13 J | ST005 | 3.48 | 3.3 JT | 1.56 | 4.95 J | 1.02 U | 5.13 J | ST005 | 2.29 | 1.6 J | 1.64 | 4.67 J |
| PCB036 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.895 U | 1.7 U | ST005 | 1.13 | 1.02 U | 0.3 | 1.58 U |
| PCB037 | pg/g | 6 | 5 | 83 | 18.3 J | 48.6 J | ST005 | 31.1 | 22.8 J | 14.1 | 47.7 J | 16.3 U | 48.6 J | ST005 | 28.7 | 22.4 J | 14 | 47.5 J |
| PCB038 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.988 U | 1.9 U | ST005 | 1.26 | 1.12 U | 0.339 | 1.77 U |
| PCB039 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.959 U | 1.88 U | ST005 | 1.23 | 1.09 U | 0.34 | 1.74 U |
| PCB040 & 041 & 071 | pg/g | 6 | 6 | 100 | 36.9 J | 200 | ST003 | 82.6 | 68.6 J | 59.3 | 169 J | 36.9 J | 200 | ST003 | 82.6 | 68.6 J | 59.3 | 169 J |
| PCB042 | pg/g | 6 | 6 | 100 | 16.8 J | 39 J | ST003 | 25.5 | 24.2 J | 8.71 | 36.8 J | 16.8 J | 39 J | ST003 | 25.5 | 24.2 J | 8.71 | 36.8 J |
| PCB043 & 073 | pg/g | 6 | 5 | 83 | 4.18 J | 45.5 J | ST003 | 14.1 | 6.9 JT | 17.6 | 38.2 J | 0.917 U | 45.5 J | ST003 | 11.9 | 6.05 J | 16.7 | 36.3 J |
| PCB044 & 047 & 065 | pg/g | 6 | 5 | 83 | 176 J | 1150 | ST003 | 425 | 276 | 408 | 977 | 69.2 U | 1150 | ST003 | 365 | 256 | 392 | 934 |
| PCB045 & 051 | pg/g | 6 | 5 | 83 | 37.4 J | 861 | ST003 | 238 | 75.7 T | 351 | 720 | 12.7 U | 861 | ST003 | 200 | 67.4 J | 327 | 685 |
| PCB046 | pg/g | 6 | 6 | 100 | 4.06 J | 54.9 J | ST003 | 15.4 | 8.85 J | 19.5 | 43.9 J | 4.06 J | 54.9 J | ST003 | 15.4 | 8.85 J | 19.5 | 43.9 J |
| PCB048 | pg/g | 6 | 4 | 67 | 11.9 J | 23.4 J | ST005 | 17 | 16.3 J | 5.14 | 22.7 J | 9.86 U | 23.4 J | ST005 | 14.7 | 12.9 J | 5.36 | 22.2 J |
| PCB049 & 069 | pg/g | 6 | 5 | 83 | 110 J | 747 | ST003 | 272 | 155 T | 269 | 641 | 38.6 U | 747 | ST003 | 233 | 143 J | 258 | 614 |
| PCB050 & 053 | pg/g | 6 | 5 | 83 | 43.1 J | 1080 | ST003 | 292 | 100 T | 443 | 898 | 10.7 U | 1080 | ST003 | 245 | 83.6 J | 413 | 852 |
| PCB052 | pg/g | 6 | 5 | 83 | 217 | 956 | ST003 | 384 | 234 J | 321 | 822 J | 77.8 U | 956 | ST003 | 333 | 231 J | 313 | 789 J |
| PCB054 | pg/g | 6 | 5 | 83 | 9.5 J | 334 | ST003 | 86.2 | 28.3 JT | 139 | 275 J | 1.04 U | 334 | ST003 | 72 | 25 J | 129 | 260 J |
| PCB055 | pg/g | 6 | 2 | 33 | 0.938 JT | 1.72 J | ST005 | 1.33 | 1.33 J | 0.553 | 1.68 J | 0.593 U | 1.72 J | ST005 | 0.924 | 0.804 U | 0.408 | 1.52 J |
| PCB056 | pg/g | 6 | 6 | 100 | 13.4 J | 50.4 J | ST005 | 27.7 | 22.1 J | 14.4 | 47.8 J | 13.4 J | 50.4 J | ST005 | 27.7 | 22.1 J | 14.4 | 47.8 J |
| PCB057 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.512 U | 0.853 U | ST005 | 0.643 | 0.626 U | 0.132 | 0.821 U |
| PCB058 | pg/g | 6 | 3 | 50 | 8.6 J | 12.2 J | ST001 | 10.2 | 9.82 JT | 1.83 | 12 J | 0.54 U | 12.2 J | ST001 | 5.41 | 4.65 J | 5.38 | 11.6 J |
| PCB059 & 062 & 075 | pg/g | 6 | 6 | 100 | 5.18 J | 33.8 J | ST003 | 13.4 | 10.4 J | 10.3 | 28.3 J | 5.18 J | 33.8 J | ST003 | 13.4 | 10.4 J | 10.3 | 28.3 J |
| PCB060 | pg/g | 6 | 5 | 83 | 8.3 J | 37.2 J | ST001 | 20.8 | 19.9 JT | 11.5 | 35 J | 7.07 U | 37.2 J | ST001 | 18.5 | 16 J | 11.7 | 34.5 J |
| PCB061 & 070 & 074 & 076 | pg/g | 6 | 5 | 83 | 105 J | 504 | ST001 | 249 | 213 T | 151 | 450 | 79.8 U | 504 | ST001 | 221 | 202 | 151 | 436 |
| PCB063 | pg/g | 6 | 5 | 83 | 1.65 J | 15.7 J | ST001 | 5.7 | 3.81 JT | 5.77 | 13.6 J | 0.547 U | 15.7 J | ST001 | 4.84 | 2.96 J | 5.57 | 13.1 J |
| PCB064 | pg/g | 6 | 4 | 67 | 34.7 J | 53.1 J | ST005 | 44.7 | 45.4 J | 7.96 | 52.4 J | 24.4 U | 53.1 J | ST005 | 38.2 | 38.6 J | 11.8 | 51.9 J |
| PCB066 | pg/g | 6 | 5 | 83 | 57 J | 347 | ST001 | 144 | 108 JT | 116 | 301 J | 39.5 U | 347 | ST001 | 126 | 98.9 J | 112 | 290 J |
| PCB067 | pg/g | 6 | 4 | 67 | 1.11 J | 3.99 J | ST005 | 2.67 | 2.79 J | 1.2 | 3.84 J | 0.475 U | 3.99 J | ST005 | 1.95 | 1.85 J | 1.45 | 3.74 J |
| PCB068 | pg/g | 6 | 4 | 67 | 3.66 J | 9.37 J | ST003 | 5.64 | 4.76 J | 2.61 | 8.79 J | 0.646 U | 9.37 J | ST003 | 4.41 | 3.85 J | 2.89 | 8.4 J |
| PCB072 | pg/g | 6 | 5 | 83 | 1.52 J | 4.53 J | ST003 | 2.59 | 2.25 J | 1.18 | 4.18 J | 0.64 U | 4.53 J | ST003 | 2.27 | 2.06 J | 1.32 | 4.1 J |
| PCB077 | pg/g | 6 | 6 | 100 | 4.43 J | 16.6 J | ST005 | 9.68 | 9.03 J | 4.86 | 15.7 J | 4.43 J | 16.6 J | ST005 | 9.68 | 9.03 J | 4.86 | 15.7 J |
| PCB078 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.565 U | 0.985 U | ST005 | 0.757 | 0.725 U | 0.186 | 0.977 U |
| PCB079 | pg/g | 6 | 5 | 83 | 1.25 J | 4.64 J | ST001 | 2.63 | 2.51 J | 1.24 | 4.23 J | 0.691 U | 4.64 J | ST001 | 2.31 | 2.35 J | 1.36 | 4.13 J |
| PCB080 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.491 U | 0.828 U | ST001 | 0.651 | 0.63 U | 0.152 | 0.825 U |
| PCB081 | pg/g | 6 | 1 | 17 | 0.678 JT | 0.678 JT | ST004 | 0.678 | 0.678 JT | -- | 0.678 JT | 0.678 JT | 1.1 U | ST001 | 0.88 | 0.865 U | 0.194 | 1.1 U |
| PCB082 | pg/g | 6 | 6 | 100 | 7.82 J | 31.5 JT | ST004 | 20.5 | 21.5 J | 9.79 | 30.6 J | 7.82 J | 31.5 JT | ST004 | 20.5 | 21.5 J | 9.79 | 30.6 J |
| PCB083 & 099 | pg/g | 6 | 5 | 83 | 160 J | 1450 | ST001 | 472 | 247 T | 552 | 1230 | 46.4 U | 1450 | ST001 | 401 | 206 J | 523 | 1170 |
| PCB084 | pg/g | 6 | 5 | 83 | 43.9 J | 162 J | ST003 | 86.7 | 69.1 J | 49.6 | 152 J | 23.9 U | 162 J | ST003 | 76.2 | 58.6 J | 51.3 | 149 J |
| PCB085 & 116 | pg/g | 6 | 6 | 100 | 12.3 J | 63.3 J | ST001 | 34.2 | 34.3 J | 18.7 | 58.5 J | 12.3 J | 63.3 J | ST001 | 34.2 | 34.3 J | 18.7 | 58.5 J |
| PCB086 & 087 & 097 & 109 & 119 & 125 | pg/g | 6 | 5 | 83 | 126 J | 480 | ST003 | 281 | 247 T | 142 | 457 | 54.3 U | 480 | ST003 | 243 | 217 J | 157 | 452 |
| PCB088 & 091 | pg/g | 6 | 5 | 83 | 49.2 J | 420 | ST003 | 153 | 111 J | 152 | 359 | 15.9 U | 420 | ST003 | 130 | 88.3 J | 147 | 344 |
| PCB089 | pg/g | 6 | 1 | 17 | 2.59 JT | 2.59 JT | ST004 | 2.59 | 2.59 JT | -- | 2.59 JT | 0.712 U | 2.59 JT | ST004 | 1.36 | 1.2 U | 0.673 | 2.33 J |
| PCB090 & 101 & 113 | pg/g | 6 | 5 | 83 | 271 J | 2220 | ST003 | 865 | 553 T | 796 | 1960 | 88.2 U | 2220 | ST003 | 735 | 461 J | 779 | 1890 |
| PCB092 | pg/g | 6 | 5 | 83 | 55.2 J | 285 | ST003 | 128 | 101 JT | 93.5 | 256 J | 15.8 U | 285 | ST003 | 110 | 82.1 J | 95.4 | 248 J |
| PCB093 & 100 | pg/g | 6 | 5 | 83 | 10.1 J | 169 J | ST003 | 61.4 | 48 J | 62.2 | 145 J | 1.49 U | 169 J | ST003 | 51.4 | 39.2 J | 60.8 | 139 J |
| PCB094 | pg/g | 6 | 4 | 67 | 3.96 J | 57.6 J | ST003 | 20.6 | 10.3 J | 24.9 | 50.6 J | 1.37 U | 57.6 J | ST003 | 14.2 | 6.95 J | 21.6 | 45.9 J |
| PCB095 | pg/g | 6 | 5 | 83 | 250 | 1980 | ST003 | 683 | 401 J | 732 | 1690 | 72.6 U | 1980 | ST003 | 581 | 339 J | 701 | 1610 |
| PCB096 | pg/g | 6 | 5 | 83 | 3.63 J | 81.2 J | ST003 | 24.2 | 11 JT | 32.2 | 68.3 J | 1.05 U | 81.2 J | ST003 | 20.3 | 9.56 J | 30.3 | 65.1 J |
| PCB098 & 102 | pg/g | 6 | 5 | 83 | 9.37 J | 58.1 J | ST003 | 24 | 20.7 JT | 19.8 | 50.7 J | 1.45 U | 58.1 J | ST003 | 20.2 | 15.8 J | 20 | 48.8 J |
| PCB103 | pg/g | 6 | 5 | 83 | 8.9 J | 100 J | ST003 | 37.5 | 24.9 JT | 35.9 | 86.2 J | 1.27 U | 100 J | ST003 | 31.4 | 23.8 J | 35.3 | 82.7 J |
| PCB104 | pg/g | 6 | 3 | 50 | 2.12 JT | 16.1 J | ST003 | 7.44 | 4.11 J | 7.56 | 14.9 J | 0.748 U | 16.1 J | ST003 | 4.19 | 1.61 J | 5.97 | 13.1 J |
| PCB105 | pg/g | 6 | 6 | 100 | 25.2 J | 1030 | ST001 | 237 | 93.7 | 391 | 806 | 25.2 J | 1030 | ST001 | 237 | 93.7 | 391 | 806 |
| PCB106 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.08 U | 5.34 U | ST003 | 2.39 | 1.58 U | 1.75 | 4.93 U |
| PCB107 | pg/g | 6 | 5 | 83 | 8.47 J | 205 J | ST001 | 54.9 | 18.9 JT | 84.1 | 169 J | 4.12 U | 205 J | ST001 | 46.4 | 18.5 J | 78 | 160 J |
| PCB108 & 124 | pg/g | 6 | 6 | 100 | 2.09 J | 69.1 J | ST001 | 17.5 | 9.15 J | 25.6 | 54.9 J | 2.09 J | 69.1 J | ST001 | 17.5 | 9.15 J | 25.6 | 54.9 J |
| PCB110 & 115 | pg/g | 6 | 5 | 83 | 222 J | 1170 | ST003 | 514 | 343 J | 380 | 1040 | 91.8 U | 1170 | ST003 | 443 | 337 J | 381 | 1000 |
| PCB111 | pg/g | 6 | 1 | 17 | 0.531 JT | 0.531 JT | ST004 | 0.531 | 0.531 JT | -- | 0.531 JT | 0.531 JT | 2.41 U | ST005 | 1.31 | 1.16 U | 0.764 | 2.31 U |
| PCB112 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.481 UT | 2.19 U | ST005 | 1.23 | 1.11 U | 0.705 | 2.13 U |
| PCB114 | pg/g | 6 | 3 | 50 | 3.83 JT | 72.5 J | ST001 | 27.3 | 5.51 J | 39.2 | 65.8 J | 1.13 U | 72.5 J | ST001 | 15 | 4.67 J | 28.3 | 55.8 J |

Table D2.2-6. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Fourth Quarter (Fall 2009).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| PCB117 | pg/g | 6 | 6 | 100 | 2.58 J | 139 | ST001 | 31.8 | 8.55 J | 53.2 | 111 J | 2.58 J | 139 | ST001 | 31.8 | 8.55 J | 53.2 | 111 J |
| PCB118 | pg/g | 6 | 6 | 100 | 61.2 J | 2940 | ST001 | 679 | 235 | 1120 | 2320 | 61.2 J | 2940 | ST001 | 679 | 235 | 1120 | 2320 |
| PCB120 | pg/g | 6 | 2 | 33 | 2.29 J | 2.48 JT | ST004 | 2.39 | 2.39 J | 0.134 | 2.47 J | 0.95 U | 2.48 JT | ST004 | 1.81 | 2.01 U | 0.637 | 2.43 J |
| PCB121 | pg/g | 6 | 2 | 33 | 0.889 JT | 2.36 J | ST002 | 1.62 | 1.62 J | 1.04 | 2.29 J | 0.889 JT | 2.38 U | ST005 | 1.65 | 1.63 U | 0.672 | 2.38 J |
| PCB122 | pg/g | 6 | 2 | 33 | 2.13 JT | 2.37 J | ST005 | 2.25 | 2.25 J | 0.17 | 2.36 J | 1.15 U | 5.57 U | ST003 | 2.71 | 2.25 J | 1.7 | 5.14 U |
| PCB123 | pg/g | 6 | 4 | 67 | 1.86 J | 40.8 J | ST001 | 12.3 | 3.26 J | 19 | 35.2 J | 1.11 U | 40.8 J | ST001 | 9.29 | 3.26 J | 15.5 | 32 J |
| PCB126 | pg/g | 6 | 1 | 17 | 1.05 JT | 1.05 JT | ST004 | 1.05 | 1.05 JT | -- | 1.05 JT | 1.05 JT | 5.56 U | ST003 | 2.33 | 1.22 U | 1.9 | 5.12 U |
| PCB127 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.11 U | 5.39 U | ST003 | 2.42 | 1.59 U | 1.76 | 4.97 U |
| PCB128 & 166 | pg/g | 6 | 6 | 100 | 14.5 J | 407 | ST003 | 159 | 75.8 J | 164 | 386 | 14.5 J | 407 | ST003 | 159 | 75.8 J | 164 | 386 |
| PCB129 & 138 & 163 | pg/g | 6 | 6 | 100 | 107 J | 5810 | ST001 | 2260 | 701 | 2740 | 5800 | 107 J | 5810 | ST001 | 2260 | 701 | 2740 | 5800 |
| PCB130 | pg/g | 6 | 6 | 100 | 5.22 J | 236 | ST001 | 77.2 | 29.8 J | 92.6 | 213 J | 5.22 J | 236 | ST001 | 77.2 | 29.8 J | 92.6 | 213 J |
| PCB131 | pg/g | 6 | 3 | 50 | 3.27 J | 20.4 J | ST003 | 9.77 | 5.63 JT | 9.29 | 18.9 J | 0.783 U | 20.4 J | ST003 | 5.31 | 2.08 J | 7.64 | 16.7 J |
| PCB132 | pg/g | 6 | 6 | 100 | 34.5 J | 1780 | ST003 | 424 | 172 J | 669 | 1400 | 34.5 J | 1780 | ST003 | 424 | 172 J | 669 | 1400 |
| PCB133 | pg/g | 6 | 5 | 83 | 8.68 J | 89.8 J | ST001 | 36.9 | 22.1 JT | 34.2 | 82.3 J | 0.741 U | 89.8 J | ST001 | 30.9 | 16.9 J | 34 | 80.5 J |
| PCB134 | pg/g | 6 | 6 | 100 | 4.55 J | 189 | ST003 | 60.6 | 31.5 J | 69.1 | 164 J | 4.55 J | 189 | ST003 | 60.6 | 31.5 J | 69.1 | 164 J |
| PCB135 & 151 | pg/g | 6 | 6 | 100 | 31.8 J | 2780 | ST003 | 782 | 328 | 1040 | 2350 | 31.8 J | 2780 | ST003 | 782 | 328 | 1040 | 2350 |
| PCB136 | pg/g | 6 | 6 | 100 | 12.6 J | 1030 | ST003 | 262 | 127 | 383 | 825 | 12.6 J | 1030 | ST003 | 262 | 127 | 383 | 825 |
| PCB137 | pg/g | 6 | 5 | 83 | 14.3 J | 283 J | ST001 | 71.9 | 19.3 JT | 118 | 232 J | 4.66 U | 283 J | ST001 | 60.7 | 16.8 J | 109 | 219 J |
| PCB139 & 140 | pg/g | 6 | 4 | 67 | 5.22 J | 14.5 J | ST001 | 9.61 | 9.37 J | 4.02 | 14 J | 0.687 U | 14.5 J | ST001 | 7.1 | 6.49 J | 5.06 | 13.6 J |
| PCB141 | pg/g | 6 | 6 | 100 | 17 J | 1550 | ST003 | 437 | 138 | 597 | 1330 | 17 J | 1550 | ST003 | 437 | 138 | 597 | 1330 |
| PCB142 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.754 UT | 3.98 U | ST003 | 1.42 | 0.887 U | 1.26 | 3.3 U |
| PCB143 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.677 U | 3.42 U | ST003 | 1.26 | 0.762 U | 1.08 | 2.87 U |
| PCB144 | pg/g | 6 | 6 | 100 | 3.82 J | 373 | ST003 | 111 | 42.6 J | 143 | 325 J | 3.82 J | 373 | ST003 | 111 | 42.6 J | 143 | 325 J |
| PCB145 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.503 U | 1.1 U | ST006 | 0.722 | 0.631 U | 0.24 | 1.06 U |
| PCB146 | pg/g | 6 | 6 | 100 | 12.3 J | 1080 | ST001 | 354 | 130 J | 434 | 984 | 12.3 J | 1080 | ST001 | 354 | 130 J | 434 | 984 |
| PCB147 & 149 | pg/g | 6 | 6 | 100 | 71.7 J | 5220 | ST003 | 1320 | 645 | 1940 | 4150 | 71.7 J | 5220 | ST003 | 1320 | 645 | 1940 | 4150 |
| PCB148 | pg/g | 6 | 5 | 83 | 1.86 J | 8.28 J | ST003 | 5.46 | 5.72 J | 2.37 | 7.93 J | 1.36 U | 8.28 J | ST003 | 4.77 | 5.32 J | 2.7 | 7.84 J |
| PCB150 | pg/g | 6 | 5 | 83 | 2.23 J | 24.7 J | ST003 | 9.73 | 8.54 JT | 9.03 | 21.8 J | 1.06 U | 24.7 J | ST003 | 8.28 | 5.81 J | 8.82 | 21.1 J |
| PCB152 | pg/g | 6 | 4 | 67 | 1.7 JT | 7.81 J | ST003 | 3.74 | 2.73 J | 2.85 | 7.18 J | 0.84 U | 7.81 J | ST003 | 2.79 | 1.77 J | 2.65 | 6.76 J |
| PCB153 & 168 | pg/g | 6 | 6 | 100 | 81.6 J | 6800 | ST001 | 2480 | 738 | 3090 | 6620 | 81.6 J | 6800 | ST001 | 2480 | 738 | 3090 | 6620 |
| PCB154 | pg/g | 6 | 5 | 83 | 9.28 J | 40.6 J | ST003 | 28.6 | 30.9 JT | 11.8 | 39.4 J | 1.16 U | 40.6 J | ST003 | 24 | 29.2 J | 15.4 | 39.1 J |
| PCB155 | pg/g | 6 | 1 | 17 | 0.658 JT | 0.658 JT | ST004 | 0.658 | 0.658 JT | -- | 0.658 JT | 0.419 U | 0.961 U | ST006 | 0.659 | 0.6 J | 0.219 | 0.941 U |
| PCB156 & 157 | pg/g | 6 | 6 | 100 | 10.1 J | 771 | ST001 | 207 | 52.4 J | 297 | 656 | 10.1 J | 771 | ST001 | 207 | 52.4 J | 297 | 656 |
| PCB158 | pg/g | 6 | 6 | 100 | 10.1 J | 470 | ST003 | 173 | 57.2 J | 206 | 454 | 10.1 J | 470 | ST003 | 173 | 57.2 J | 206 | 454 |
| PCB159 | pg/g | 6 | 5 | 83 | 2.88 J | 65.8 J | ST003 | 21.2 | 8.96 J | 25.8 | 56.8 J | 0.818 U | 65.8 J | ST003 | 17.8 | 8.14 J | 24.5 | 54.6 J |
| PCB160 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.543 UT | 2.88 U | ST003 | 1.03 | 0.643 U | 0.915 | 2.39 U |
| PCB161 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.498 UT | 2.71 U | ST003 | 0.963 | 0.604 U | 0.863 | 2.24 U |
| PCB162 | pg/g | 6 | 2 | 33 | 1.36 JT | 10.2 J | ST001 | 5.78 | 5.78 J | 6.25 | 9.76 J | 0.746 U | 10.2 J | ST001 | 2.63 | 1.08 J | 3.74 | 8.14 J |
| PCB164 | pg/g | 6 | 6 | 100 | 5.85 J | 374 | ST003 | 135 | 47.9 J | 160 | 356 | 5.85 J | 374 | ST003 | 135 | 47.9 J | 160 | 356 |
| PCB165 | pg/g | 6 | 1 | 17 | 1.56 JT | 1.56 JT | ST004 | 1.56 | 1.56 JT | -- | 1.56 JT | 0.574 U | 2.9 U | ST003 | 1.21 | 0.794 U | 0.905 | 2.57 J |
| PCB167 | pg/g | 6 | 6 | 100 | 3.01 J | 250 | ST001 | 71.6 | 21.2 J | 96.8 | 217 J | 3.01 J | 250 | ST001 | 71.6 | 21.2 J | 96.8 | 217 J |
| PCB169 | pg/g | 6 | 3 | 50 | 1.65 J | 7.99 J | ST003 | 5.01 | 5.38 J | 3.19 | 7.73 J | 0.741 UT | 7.99 J | ST003 | 2.91 | 1.28 J | 3.06 | 7.34 J |
| PCB170 | pg/g | 6 | 6 | 100 | 22.5 J | 2480 | ST003 | 861 | 349 | 1040 | 2320 | 22.5 J | 2480 | ST003 | 861 | 349 | 1040 | 2320 |
| PCB171 & 173 | pg/g | 6 | 6 | 100 | 6.28 J | 726 | ST003 | 230 | 98.3 J | 283 | 647 J | 6.28 J | 726 | ST003 | 230 | 98.3 J | 283 | 647 J |
| PCB172 | pg/g | 6 | 6 | 100 | 3.34 J | 418 | ST001 | 162 | 60.9 J | 195 | 415 | 3.34 J | 418 | ST001 | 162 | 60.9 J | 195 | 415 |
| PCB174 | pg/g | 6 | 6 | 100 | 20.3 J | 2610 | ST003 | 783 | 332 | 999 | 2280 | 20.3 J | 2610 | ST003 | 783 | 332 | 999 | 2280 |
| PCB175 | pg/g | 6 | 5 | 83 | 5.41 J | 109 J | ST003 | 48.7 | 18.4 J | 50.5 | 107 J | 0.729 U | 109 J | ST003 | 40.7 | 15.4 J | 49.2 | 106 J |
| PCB176 | pg/g | 6 | 6 | 100 | 2.34 J | 375 | ST003 | 92 | 45.2 J | 141 | 298 J | 2.34 J | 375 | ST003 | 92 | 45.2 J | 141 | 298 J |
| PCB177 | pg/g | 6 | 6 | 100 | 12.5 J | 1330 | ST003 | 477 | 185 J | 570 | 1270 | 12.5 J | 1330 | ST003 | 477 | 185 J | 570 | 1270 |
| PCB178 | pg/g | 6 | 6 | 100 | 5.67 J | 532 | ST003 | 209 | 83.6 J | 246 | 528 | 5.67 J | 532 | ST003 | 209 | 83.6 J | 246 | 528 |
| PCB179 | pg/g | 6 | 6 | 100 | 10.9 J | 1210 | ST003 | 316 | 154 J | 449 | 984 | 10.9 J | 1210 | ST003 | 316 | 154 J | 449 | 984 |
| PCB180 & 193 | pg/g | 6 | 6 | 100 | 48.8 J | 6480 | ST001 | 2350 | 827 | 2910 | 6270 | 48.8 J | 6480 | ST001 | 2350 | 827 | 2910 | 6270 |
| PCB181 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.19 U | 2.55 U | ST003 | 1.79 | 1.63 U | 0.609 | 2.54 U |
| PCB182 | pg/g | 6 | 1 | 17 | 1.28 JT | 1.28 JT | ST004 | 1.28 | 1.28 JT | -- | 1.28 JT | 0.582 U | 1.28 JT | ST004 | 0.791 | 0.721 U | 0.249 | 1.16 J |
| PCB183 | pg/g | 6 | 6 | 100 | 12 J | 1600 | ST003 | 575 | 213 J | 703 | 1540 | 12 J | 1600 | ST003 | 575 | 213 J | 703 | 1540 |
| PCB184 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.391 UT | 0.566 U | ST002 | 0.484 | 0.501 U | 0.0685 | 0.557 U |
| PCB185 | pg/g | 6 | 6 | 100 | 2.79 J | 197 J | ST003 | 66.4 | 30.1 J | 78 | 180 J | 2.79 J | 197 J | ST003 | 66.4 | 30.1 J | 78 | 180 J |
| PCB186 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.413 UT | 0.622 U | ST002 | 0.525 | 0.54 U | 0.0774 | 0.611 U |
| PCB187 | pg/g | 6 | 6 | 100 | 35 J | 3950 | ST001 | 1410 | 499 | 1740 | 3790 | 35 J | 3950 | ST001 | 1410 | 499 | 1740 | 3790 |
| PCB188 | pg/g | 6 | 2 | 33 | 1.17 JT | 1.79 J | ST002 | 1.48 | 1.48 J | 0.438 | 1.76 J | 0.48 U | 1.79 J | ST002 | 0.863 | 0.598 U | 0.518 | 1.64 J |
| PCB189 | pg/g | 6 | 5 | 83 | 4.14 J | 93.6 J | ST001 | 41.9 | 18.7 J | 43.2 | 91.6 J | 1.11 U | 93.6 J | ST001 | 35.1 | 13.9 J | 42.1 | 91.2 J |
| PCB190 | pg/g | 6 | 6 | 100 | 3.87 J | 529 | ST003 | 198 | 73.1 J | 241 | 517 | 3.87 J | 529 | ST003 | 198 | 73.1 J | 241 | 517 |
| PCB191 | pg/g | 6 | 5 | 83 | 3.87 J | 103 J | ST001 | 45.5 | 18 J | 48.1 | 101 J | 1.12 U | 103 J | ST001 | 38.1 | 14.1 J | 46.7 | 100 J |
| PCB192 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.02 U | 2.18 U | ST003 | 1.52 | 1.36 U | 0.521 | 2.17 U |
| PCB194 | pg/g | 6 | 6 | 100 | 19.6 J | 1320 | ST003 | 489 | 233 J | 559 | 1260 | 19.6 J | 1320 | ST003 | 489 | 233 J | 559 | 1260 |
| PCB195 | pg/g | 6 | 6 | 100 | 5.55 J | 548 | ST003 | 200 | 91.4 J | 234 | 521 | 5.55 J | 548 | ST003 | 200 | 91.4 J | 234 | 521 |

Table D2.2-6. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Fourth Quarter (Fall 2009).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| PCB196 | pg/g | 6 | 6 | 100 | 8.98 J | 650 | ST003 | 259 | 121 J | 295 | 642 | 8.98 J | 650 | ST003 | 259 | 121 J | 295 | 642 |
| PCB197 | pg/g | 6 | 5 | 83 | 2.35 J | 52.8 J | ST001 | 22.9 | 11.9 J | 23.1 | 50.7 J | 0.968 U | 52.8 J | ST001 | 19.3 | 8.5 J | 22.5 | 50.2 J |
| PCB198 & 199 | pg/g | 6 | 5 | 83 | 112 J | 1270 | ST003 | 608 | 350 | 546 | 1240 | 49.5 U | 1270 | ST003 | 515 | 268 | 539 | 1230 |
| PCB200 | pg/g | 6 | 5 | 83 | 9.98 J | 145 J | ST003 | 55.5 | 37.5 J | 54.4 | 129 J | 2.21 U | 145 J | ST003 | 46.6 | 28.3 J | 53.3 | 125 J |
| PCB201 | pg/g | 6 | 6 | 100 | 3.36 J | 138 J | ST003 | 55.4 | 27.3 J | 60.8 | 135 J | 3.36 J | 138 J | ST003 | 55.4 | 27.3 J | 60.8 | 135 J |
| PCB202 | pg/g | 6 | 5 | 83 | 24.9 J | 203 J | ST003 | 101 | 53.3 J | 86.5 | 200 J | 9.69 U | 203 J | ST003 | 85.8 | 45.2 J | 85.9 | 199 J |
| PCB203 | pg/g | 6 | 5 | 83 | 69.6 J | 805 | ST003 | 348 | 215 J | 314 | 752 | 28.6 U | 805 | ST003 | 295 | 164 J | 310 | 738 |
| PCB204 | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.521 UT | 0.899 U | ST005 | 0.679 | 0.622 U | 0.175 | 0.896 U |
| PCB205 | pg/g | 6 | 5 | 83 | 2.79 J | 58.9 J | ST003 | 23.7 | 15.1 J | 23.2 | 54.1 J | 0.96 U | 58.9 J | ST003 | 19.9 | 11.1 J | 22.7 | 52.9 J |
| PCB206 | pg/g | 6 | 4 | 67 | 154 JT | 288 J | ST003 | 199 | 177 J | 62.3 | 274 J | 85.1 U | 288 J | ST003 | 167 | 156 J | 69.7 | 265 J |
| PCB207 | pg/g | 6 | 4 | 67 | 15.2 J | 36 J | ST003 | 24.6 | 23.6 J | 10.9 | 35.4 J | 6.38 U | 36 J | ST003 | 19.2 | 15.3 J | 12 | 35 J |
| PCB208 | pg/g | 6 | 4 | 67 | 36.9 J | 58.2 J | ST003 | 49.7 | 51.9 J | 9.06 | 57.3 J | 27.9 U | 58.2 J | ST003 | 44.3 | 45.4 J | 11.5 | 56.7 J |
| PCB209 | pg/g | 6 | 4 | 67 | 35.5 J | 125 JT | ST004 | 66.8 | 53.3 J | 41.8 | 117 J | 29.7 U | 125 JT | ST004 | 55.4 | 36.4 J | 36.9 | 111 J |
| Total PCB Congeners | µg/kg | 6 | 6 | 100 | 0.925 JT | 71.9 JT | ST003 | 26.5 | 12.5 J | 28.9 | 67.3 J | 0.925 JT | 71.9 JT | ST003 | 26.5 | 12.5 J | 28.9 | 67.3 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | µg/kg | 6 | 6 | 100 | 0.00000343 JT | 0.000319 JT | ST001 | 0.000131 | 0.0000888 J | 0.000135 | 0.000308 J | 0.00000343 JT | 0.000319 JT | ST001 | 0.000131 | 0.0000888 J | 0.000135 | 0.000308 J |
| **PCBs[c]** | | | | | | | | | | | | | | | | | | |
| Total PCBs | µg/kg | 6 | 6 | 100 | 0.925 JT | 71.9 JT | ST003 | 26.5 | 12.5 J | 28.9 | 67.3 J | 0.925 JT | 71.9 JT | ST003 | 26.5 | 12.5 J | 28.9 | 67.3 J |
| **PCB Homologs** | | | | | | | | | | | | | | | | | | |
| Dichlorobiphenyl homologs | pg/g | 6 | 6 | 100 | 35.9 JT | 764 JT | ST003 | 319 | 169 J | 331 | 750 J | 35.9 JT | 764 JT | ST003 | 319 | 169 J | 331 | 750 J |
| Heptachlorobiphenyl homologs | pg/g | 6 | 6 | 100 | 186 JT | 21200 JT | ST003 | 7840 | 3000 J | 9450 | 20600 J | 186 JT | 21200 JT | ST003 | 7840 | 3000 J | 9450 | 20600 J |
| Hexachlorobiphenyl homologs | pg/g | 6 | 6 | 100 | 426 JT | 27500 JT | ST003 | 9470 | 3450 J | 11300 | 25600 J | 426 JT | 27500 JT | ST003 | 9470 | 3450 J | 11300 | 25600 J |
| Monochlorobiphenyl homologs | pg/g | 6 | 6 | 100 | 10.7 JT | 21.8 JT | ST005 | 14.7 | 14.1 J | 3.93 | 20.3 J | 10.7 JT | 21.8 JT | ST005 | 14.7 | 14.1 J | 3.93 | 20.3 J |
| Nonachlorobiphenyl homologs | pg/g | 6 | 4 | 67 | 210 JT | 382 JT | ST003 | 273 | 250 J | 78.7 | 367 J | 85.1 UT | 382 JT | ST003 | 217 | 216 J | 107 | 356 J |
| Octachlorobiphenyl homologs | pg/g | 6 | 6 | 100 | 37.5 JT | 5180 JT | ST003 | 1970 | 997 J | 2190 | 4950 J | 37.5 JT | 5180 JT | ST003 | 1970 | 997 J | 2190 | 4950 J |
| Pentachlorobiphenyl homologs | pg/g | 6 | 6 | 100 | 111 JT | 8380 JT | ST001 | 3880 | 2460 J | 3560 | 8350 J | 111 JT | 8380 JT | ST001 | 3880 | 2460 J | 3560 | 8350 J |
| Tetrachlorobiphenyl homologs | pg/g | 6 | 6 | 100 | 83.5 JT | 5900 JT | ST003 | 2000 | 1450 J | 2000 | 4900 J | 83.5 JT | 5900 JT | ST003 | 2000 | 1450 J | 2000 | 4900 J |
| Trichlorobiphenyl homologs | pg/g | 6 | 6 | 100 | 31.5 JT | 2570 JT | ST003 | 789 | 529 J | 926 | 2130 J | 31.5 JT | 2570 JT | ST003 | 789 | 529 J | 926 | 2130 J |
| **Dioxins/Furans Homologs** | | | | | | | | | | | | | | | | | | |
| Heptachlorodibenzofuran homologs | pg/g | 6 | 6 | 100 | 7.2 J | 39.5 J | ST005 | 18.2 | 15.6 J | 12 | 35.3 J | 7.2 J | 39.5 J | ST005 | 18.2 | 15.6 J | 12 | 35.3 J |
| Heptachlorodibenzo-p-dioxin homologs | pg/g | 6 | 6 | 100 | 25.7 J | 132 | ST001 | 72.8 | 58.6 | 48 | 131 | 25.7 J | 132 | ST001 | 72.8 | 58.6 | 48 | 131 |
| Hexachlorodibenzofuran homologs | pg/g | 6 | 6 | 100 | 2.78 J | 15.4 J | ST005 | 9.11 | 9.62 J | 5.09 | 14.9 J | 2.78 J | 15.4 J | ST005 | 9.11 | 9.62 J | 5.09 | 14.9 J |
| Hexachlorodibenzo-p-dioxin homologs | pg/g | 6 | 6 | 100 | 2.92 J | 17.3 J | ST005 | 8.37 | 7.69 J | 5.35 | 15.6 J | 2.92 J | 17.3 J | ST005 | 8.37 | 7.69 J | 5.35 | 15.6 J |
| Octachlorodibenzofuran | pg/g | 6 | 6 | 100 | 9.04 J | 60.8 | ST005 | 21.8 | 14.3 J | 19.8 | 51.3 J | 9.04 J | 60.8 | ST005 | 21.8 | 14.3 J | 19.8 | 51.3 J |
| Octachlorodibenzo-p-dioxin | pg/g | 6 | 6 | 100 | 107 | 605 | ST005 | 254 | 199 | 185 | 525 J | 107 | 605 | ST005 | 254 | 199 | 185 | 525 J |
| Pentachlorodibenzofuran homologs | pg/g | 6 | 5 | 83 | 0.239 J | 11.1 J | ST003 | 5.63 | 5.76 J | 4.45 | 10.6 J | 0.0887 U | 11.1 J | ST003 | 4.71 | 4.06 J | 4.58 | 10.5 J |
| Pentachlorodibenzo-p-dioxin homologs | pg/g | 6 | 3 | 50 | 0.149 J | 1.1 J | ST005 | 0.51 | 0.28 JT | 0.515 | 1.02 J | 0.0448 U | 1.1 J | ST005 | 0.333 | 0.215 J | 0.391 | 0.908 J |
| Tetrachlorodibenzofuran homologs | pg/g | 6 | 5 | 83 | 0.352 J | 1.6 J | ST005 | 1.02 | 1.14 JT | 0.47 | 1.52 J | 0.274 U | 1.6 J | ST005 | 0.898 | 0.972 J | 0.52 | 1.51 J |
| Tetrachlorodibenzo-p-dioxin homologs | pg/g | 6 | 3 | 50 | 0.782 J | 3.42 J | ST005 | 1.83 | 1.3 JT | 1.4 | 3.21 J | 0.0591 U | 3.42 J | ST005 | 0.986 | 0.531 J | 1.28 | 2.89 J |
| **PCDD/Fs Homologs** | | | | | | | | | | | | | | | | | | |
| Total PCDD/Fs | pg/g | 6 | 6 | 100 | 156 T | 879 T | ST005 | 391 | 325 J | 263 | 768 | 156 T | 879 T | ST005 | 391 | 325 J | 263 | 768 |
| **Dioxins/Furans** | | | | | | | | | | | | | | | | | | |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran | pg/g | 6 | 6 | 100 | 2.17 J | 12 J | ST005 | 5.8 | 5.4 J | 3.67 | 10.8 J | 2.17 J | 12 J | ST005 | 5.8 | 5.4 J | 3.67 | 10.8 J |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin | pg/g | 6 | 6 | 100 | 13.5 J | 65.7 | ST005 | 31 | 26 | 19.2 | 58.6 | 13.5 J | 65.7 | ST005 | 31 | 26 | 19.2 | 58.6 |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran | pg/g | 6 | 2 | 33 | 0.491 JT | 0.735 J | ST005 | 0.613 | 0.613 J | 0.173 | 0.723 J | 0.111 U | 0.735 J | ST005 | 0.343 | 0.297 U | 0.246 | 0.674 J |
| 1,2,3,4,7,8-Hexachlorodibenzofuran | pg/g | 6 | 5 | 83 | 0.173 J | 1.07 J | ST005 | 0.479 | 0.459 J | 0.358 | 0.952 J | 0.173 J | 1.07 J | ST005 | 0.439 | 0.35 J | 0.335 | 0.923 J |
| 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 6 | 3 | 50 | 0.191 J | 0.584 J | ST005 | 0.392 | 0.4 JT | 0.197 | 0.566 J | 0.0731 U | 0.584 J | ST005 | 0.263 | 0.209 J | 0.195 | 0.538 J |
| 1,2,3,6,7,8-Hexachlorodibenzofuran | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.109 U | 0.53 U | ST005 | 0.353 | 0.376 U | 0.159 | 0.521 U |
| 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin | pg/g | 6 | 6 | 100 | 0.701 J | 3.25 J | ST005 | 1.61 | 1.22 J | 0.945 | 2.99 J | 0.701 J | 3.25 J | ST005 | 1.61 | 1.22 J | 0.945 | 2.99 J |
| 1,2,3,7,8,9-Hexachlorodibenzofuran | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.0895 U | 0.313 U | ST003 | 0.163 | 0.131 U | 0.0809 | 0.283 U |
| 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin | pg/g | 6 | 5 | 83 | 0.433 J | 2.07 J | ST005 | 1.03 | 0.733 J | 0.664 | 1.92 J | 0.238 U | 2.07 J | ST005 | 0.9 | 0.679 J | 0.677 | 1.88 J |
| 1,2,3,7,8-Pentachlorodibenzofuran | pg/g | 6 | 2 | 33 | 0.189 J | 0.3 JT | ST004 | 0.245 | 0.245 J | 0.0785 | 0.294 J | 0.0556 U | 0.3 JT | ST004 | 0.159 | 0.136 J | 0.105 | 0.289 J |
| 1,2,3,7,8-Pentachlorodibenzo-p-dioxin | pg/g | 6 | 3 | 50 | 0.167 J | 0.453 J | ST005 | 0.308 | 0.303 JT | 0.143 | 0.438 J | 0.0448 U | 0.453 J | ST005 | 0.232 | 0.235 J | 0.156 | 0.422 J |
| 2,3,4,6,7,8-Hexachlorodibenzofuran | pg/g | 6 | 5 | 83 | 0.172 J | 0.854 J | ST005 | 0.597 | 0.67 J | 0.258 | 0.826 J | 0.12 U | 0.854 J | ST005 | 0.517 | 0.622 J | 0.302 | 0.819 J |
| 2,3,4,7,8-Pentachlorodibenzofuran | pg/g | 6 | 3 | 50 | 0.217 J | 0.263 J | ST005 | 0.246 | 0.258 JT | 0.0252 | 0.263 J | 0.0615 U | 0.263 J | ST005 | 0.19 | 0.234 J | 0.0906 | 0.262 J |
| 2,3,7,8-Tetrachlorodibenzofuran | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.149 U | 0.274 U | ST003 | 0.219 | 0.219 U | 0.0541 | 0.273 U |
| 2,3,7,8-Tetrachlorodibenzo-p-dioxin | pg/g | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.0496 U | 0.279 U | ST003 | 0.101 | 0.0694 U | 0.0878 | 0.23 U |
| **PCDD/Fs** | | | | | | | | | | | | | | | | | | |
| TCDD TEQ (ND=0) | pg/g | 6 | 6 | 100 | 0.339 JT | 2.3 JT | ST005 | 1 | 0.726 J | 0.743 | 2.09 J | 0.339 JT | 2.3 JT | ST005 | 1 | 0.726 J | 0.743 | 2.09 J |
| **TCDD TEQ** | | | | | | | | | | | | | | | | | | |
| Total TCDD TEQ (ND = 0) | pg/g | 6 | 6 | 100 | 0.343 JT | 2.32 JT | ST005 | 1.13 | 0.914 J | 0.701 | 2.13 J | 0.343 JT | 2.32 JT | ST005 | 1.13 | 0.914 J | 0.701 | 2.13 J |
| **Pesticides** | | | | | | | | | | | | | | | | | | |
| 2,4'-DDD | µg/kg | 6 | 2 | 33 | 0.48 JT | 20 | ST003 | 10.2 | 10.2 J | 13.8 | 19 J | 0.092 U | 20 | ST003 | 3.72 | 0.405 J | 7.99 | 15.3 |
| 2,4'-DDE | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.076 UT | 2.9 U | ST003 | 0.935 | 0.22 U | 1.24 | 2.7 U |
| 2,4'-DDT | µg/kg | 6 | 2 | 33 | 1.1 JT | 11 | ST001 | 6.05 | 6.05 J | 7 | 10.5 J | 0.31 U | 17 U | ST003 | 5.02 | 0.74 J | 7.22 | 15.5 |
| 4,4'-DDD | µg/kg | 6 | 3 | 50 | 0.27 J | 0.52 T | ST004 | 0.38 | 0.35 J | 0.128 | 0.503 J | 0.16 U | 0.56 U | ST001 | 0.36 | 0.325 J | 0.153 | 0.55 |

Table D2.2-6. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Fourth Quarter (Fall 2009).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| 4,4'-DDE | µg/kg | 6 | 5 | 83 | 0.66 T | 3.6 | ST001 | 1.54 | 0.69 | 1.3 | 3.3 J | 0.65 U | 3.6 | ST001 | 1.4 | 0.68 | 1.22 | 3.23 J |
| 4,4'-DDT | µg/kg | 6 | 1 | 17 | 1.9 JT | 1.9 JT | ST004 | 1.9 | 1.9 JT | -- | 1.9 JT | 0.092 U | 69 U | ST003 | 13.4 | 1.6 J | 27.4 | 53.7 U |
| Aldrin | µg/kg | 6 | 2 | 33 | 0.112 JT | 0.22 J | ST002 | 0.166 | 0.166 J | 0.0767 | 0.215 J | 0.095 U | 0.3 U | ST006 | 0.213 | 0.245 J | 0.089 | 0.295 U |
| alpha-Endosulfan | µg/kg | 6 | 4 | 67 | 0.087 JT | 0.7 J | ST001 | 0.254 | 0.115 J | 0.297 | 0.613 J | 0.078 U | 0.7 J | ST001 | 0.209 | 0.115 J | 0.242 | 0.565 J |
| alpha-Hexachlorocyclohexane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.071 UT | 0.18 U | ST006 | 0.114 | 0.0915 U | 0.0478 | 0.178 U |
| beta-Endosulfan | µg/kg | 6 | 1 | 17 | 0.15 J | 0.15 J | ST002 | 0.15 | 0.15 J | -- | 0.15 J | 0.13 UT | 1.3 U | ST003 | 0.413 | 0.26 J | 0.45 | 1.07 U |
| beta-Hexachlorocyclohexane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.28 U | 0.86 U | ST001 | 0.58 | 0.67 U | 0.239 | 0.823 U |
| Chlordane (technical) | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 17 U | 39 U | ST001 | 24 | 21.5 U | 8.44 | 36.3 U |
| cis-Chlordane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.25 UT | 0.96 U | ST001 | 0.505 | 0.39 U | 0.292 | 0.91 U |
| cis-Nonachlor | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.099 U | 86 U | ST003 | 14.7 | 0.46 U | 34.9 | 64.7 U |
| delta-Hexachlorocyclohexane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.11 U | 2.6 U | ST003 | 0.627 | 0.275 U | 0.973 | 2.05 U |
| Dieldrin | µg/kg | 6 | 1 | 17 | 0.16 JT | 0.16 JT | ST004 | 0.16 | 0.16 JT | -- | 0.16 JT | 0.071 U | 0.32 U | ST001 | 0.157 | 0.15 J | 0.0895 | 0.283 U |
| Endosulfan sulfate | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.25 UT | 4 U | ST003 | 0.92 | 0.315 U | 1.51 | 3.08 U |
| Endrin | µg/kg | 6 | 1 | 17 | 0.18 JT | 0.18 JT | ST004 | 0.18 | 0.18 JT | -- | 0.18 JT | 0.18 JT | 0.35 U | ST001 | 0.293 | 0.31 U | 0.0602 | 0.345 U |
| Endrin aldehyde | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.077 U | 5.8 U | ST003 | 1.16 | 0.27 U | 2.28 | 4.46 U |
| Endrin ketone | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.31 U | 120 U | ST003 | 22.3 | 0.86 U | 48.1 | 92.8 U |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg | 6 | 1 | 17 | 0.49 JT | 0.49 JT | ST004 | 0.49 | 0.49 JT | -- | 0.49 JT | 0.079 U | 0.49 JT | ST004 | 0.29 | 0.315 U | 0.135 | 0.448 J |
| Heptachlor | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.056 UT | 0.63 U | ST003 | 0.312 | 0.32 U | 0.223 | 0.59 U |
| Heptachlor epoxide | µg/kg | 6 | 1 | 17 | 2.5 J | 2.5 J | ST001 | 2.5 | 2.5 J | -- | 2.5 J | 0.28 UT | 2.5 J | ST001 | 0.708 | 0.32 U | 0.882 | 2.01 J |
| Methoxychlor | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.24 U | 6.5 U | ST003 | 1.36 | 0.28 U | 2.52 | 5.03 U |
| Mirex | µg/kg | 6 | 1 | 17 | 0.097 J | 0.097 J | ST003 | 0.097 | 0.097 J | -- | 0.097 J | 0.05 UT | 0.32 U | ST001 | 0.141 | 0.0815 J | 0.115 | 0.303 U |
| Oxychlordane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.053 U | 0.36 U | ST002 | 0.267 | 0.31 U | 0.111 | 0.35 U |
| Total chlordanes | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.3 UT | 86 UT | ST003 | 14.9 | 0.615 U | 34.9 | 64.8 U |
| Total DDD | µg/kg | 6 | 3 | 50 | 0.27 JT | 20.4 JT | ST003 | 7.22 | 1 JT | 11.4 | 18.5 J | 0.19 UT | 20.4 JT | ST003 | 3.89 | 0.65 J | 8.1 | 15.6 J |
| Total DDE | µg/kg | 6 | 5 | 83 | 0.66 T | 3.6 T | ST001 | 1.54 | 0.69 T | 1.3 | 3.3 J | 0.66 T | 3.6 T | ST001 | 1.77 | 1.4 J | 1.29 | 3.43 |
| Total DDT | µg/kg | 6 | 2 | 33 | 3 JT | 11 T | ST001 | 7 | 7 J | 5.66 | 10.6 J | 0.31 UT | 69 UT | ST003 | 14.2 | 2.15 J | 27.2 | 54.5 |
| DDx | µg/kg | 6 | 6 | 100 | 0.69 T | 20.4 JT | ST003 | 7.23 | 3.38 J | 8.28 | 19 J | 0.69 T | 20.4 JT | ST003 | 7.23 | 3.38 J | 8.28 | 19 J |
| Total Endosulfan | µg/kg | 6 | 4 | 67 | 0.087 JT | 0.7 JT | ST001 | 0.292 | 0.19 J | 0.284 | 0.636 J | 0.087 JT | 4 UT | ST003 | 0.923 | 0.32 J | 1.52 | 3.18 J |
| Toxaphene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 38 U | 1300 U | ST003 | 269 | 53 U | 506 | 1010 U |
| trans-Chlordane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.086 U | 1.3 U | ST001 | 0.473 | 0.22 U | 0.512 | 1.21 U |
| trans-Nonachlor | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.07 UT | 0.35 U | ST006 | 0.168 | 0.0895 U | 0.134 | 0.345 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | |
| 1-Methylnaphthalene | µg/kg | 6 | 6 | 100 | 1.7 J | 18 T | ST004 | 5.75 | 2.75 J | 6.25 | 15.2 | 1.7 J | 18 T | ST004 | 5.75 | 2.75 J | 6.25 | 15.2 |
| 2-Methylnaphthalene | µg/kg | 6 | 6 | 100 | 2.6 J | 45 T | ST004 | 11.3 | 4.4 | 16.6 | 35.6 | 2.6 J | 45 T | ST004 | 11.3 | 4.4 | 16.6 | 35.6 |
| Acenaphthene | µg/kg | 6 | 6 | 100 | 1.7 J | 22.5 T | ST004 | 7.2 | 4.4 J | 7.72 | 18.7 | 1.7 J | 22.5 T | ST004 | 7.2 | 4.4 J | 7.72 | 18.7 |
| Acenaphthylene | µg/kg | 6 | 6 | 100 | 1.6 J | 8.7 | ST001 | 4.3 | 2.8 J | 3.11 | 8.48 | 1.6 J | 8.7 | ST001 | 4.3 | 2.8 J | 3.11 | 8.48 |
| Anthracene | µg/kg | 6 | 6 | 100 | 4.8 | 29 T | ST004 | 12.7 | 10.3 | 8.82 | 25.5 | 4.8 | 29 T | ST004 | 12.7 | 10.3 | 8.82 | 25.5 |
| Benzo(a)anthracene | µg/kg | 6 | 6 | 100 | 15 | 49 | ST001 | 28.3 | 23.5 | 13.9 | 47.3 | 15 | 49 | ST001 | 28.3 | 23.5 | 13.9 | 47.3 |
| Benzo(a)pyrene | µg/kg | 6 | 6 | 100 | 16 | 83 | ST001 | 36.8 | 27 | 25.8 | 74.8 | 16 | 83 | ST001 | 36.8 | 27 | 25.8 | 74.8 |
| Benzo(b)fluoranthene | µg/kg | 6 | 6 | 100 | 24 | 110 | ST001 | 49.7 | 37 | 32.5 | 98 | 24 | 110 | ST001 | 49.7 | 37 | 32.5 | 98 |
| Benzo(e)pyrene | µg/kg | 6 | 6 | 100 | 16 | 73 | ST001 | 34.8 | 26 | 22.8 | 67.5 | 16 | 73 | ST001 | 34.8 | 26 | 22.8 | 67.5 |
| Benzo(g,h,i)perylene | µg/kg | 6 | 6 | 100 | 18 | 93 | ST001 | 44 | 34 | 29.7 | 86 | 18 | 93 | ST001 | 44 | 34 | 29.7 | 86 |
| Benzo(k)fluoranthene | µg/kg | 6 | 6 | 100 | 7.6 | 36 | ST001 | 16.3 | 12.5 | 10.6 | 32 | 7.6 | 36 | ST001 | 16.3 | 12.5 | 10.6 | 32 |
| C1-Chrysene | µg/kg | 6 | 6 | 100 | 25 | 135 T | ST004 | 53.2 | 36 | 42 | 116 | 25 | 135 T | ST004 | 53.2 | 36 | 42 | 116 |
| C1-Dibenzothiophene | µg/kg | 6 | 4 | 67 | 5.5 | 37 T | ST004 | 13.7 | 6.15 | 15.5 | 32.4 | 5 U | 37 T | ST004 | 10.8 | 5.7 | 12.8 | 29.4 |
| C1-Fluoranthene/pyrene | µg/kg | 6 | 6 | 100 | 23 | 105 T | ST004 | 48.5 | 35.5 | 32.3 | 95.8 | 23 | 105 T | ST004 | 48.5 | 35.5 | 32.3 | 95.8 |
| C1-Fluorene | µg/kg | 6 | 2 | 33 | 7.7 | 20 T | ST004 | 13.9 | 13.9 | 8.7 | 19.4 | 5 U | 20 T | ST004 | 7.95 | 5 U | 6 | 16.9 |
| C1-Phenanthrene/anthracene | µg/kg | 6 | 6 | 100 | 15 | 79 T | ST004 | 37.5 | 24.5 | 26.7 | 75 | 15 | 79 T | ST004 | 37.5 | 24.5 | 26.7 | 75 |
| C2-Chrysene | µg/kg | 6 | 6 | 100 | 23 | 270 T | ST004 | 76.2 | 38 | 96 | 218 | 23 | 270 T | ST004 | 76.2 | 38 | 96 | 218 |
| C2-Dibenzothiophene | µg/kg | 6 | 6 | 100 | 9.1 | 48 T | ST004 | 18.5 | 11 | 15.2 | 41.5 | 9.1 | 48 T | ST004 | 18.5 | 11 | 15.2 | 41.5 |
| C2-Fluoranthene/pyrene | µg/kg | 6 | 6 | 100 | 19 | 140 T | ST004 | 45.7 | 27 | 46.9 | 115 | 19 | 140 T | ST004 | 45.7 | 27 | 46.9 | 115 |
| C2-Fluorene | µg/kg | 6 | 6 | 100 | 6.4 | 47 T | ST004 | 16 | 9.9 | 15.5 | 39 | 6.4 | 47 T | ST004 | 16 | 9.9 | 15.5 | 39 |
| C2-Naphthalene | µg/kg | 6 | 6 | 100 | 5.3 | 56 T | ST004 | 17 | 8.2 | 19.5 | 46.3 | 5.3 | 56 T | ST004 | 17 | 8.2 | 19.5 | 46.3 |
| C2-Phenanthrene/anthracene | µg/kg | 6 | 6 | 100 | 20 | 135 T | ST004 | 49.7 | 27.5 | 44.9 | 118 | 20 | 135 T | ST004 | 49.7 | 27.5 | 44.9 | 118 |
| C3-Chrysene | µg/kg | 6 | 6 | 100 | 26 | 330 T | ST004 | 85 | 40 | 120 | 259 | 26 | 330 T | ST004 | 85 | 40 | 120 | 259 |
| C3-Dibenzothiophene | µg/kg | 6 | 6 | 100 | 9.1 | 77 T | ST004 | 26.4 | 16 | 25.4 | 64.3 | 9.1 | 77 T | ST004 | 26.4 | 16 | 25.4 | 64.3 |
| C3-Fluoranthene/pyrene | µg/kg | 6 | 6 | 100 | 15 | 200 JT | ST004 | 53.8 | 29 | 72 | 158 J | 15 | 200 JT | ST004 | 53.8 | 29 | 72 | 158 J |
| C3-Fluorene | µg/kg | 6 | 6 | 100 | 9.1 | 115 T | ST004 | 30.9 | 13.5 | 41.5 | 92 | 9.1 | 115 T | ST004 | 30.9 | 13.5 | 41.5 | 92 |
| C3-Naphthalene | µg/kg | 6 | 6 | 100 | 5.5 | 43 T | ST004 | 14.6 | 8.3 | 14.4 | 36.3 | 5.5 | 43 T | ST004 | 14.6 | 8.3 | 14.4 | 36.3 |
| C3-Phenanthrene/anthracene | µg/kg | 6 | 6 | 100 | 20 | 220 T | ST004 | 62 | 29 | 78 | 177 | 20 | 220 T | ST004 | 62 | 29 | 78 | 177 |
| C4-Chrysene | µg/kg | 6 | 2 | 33 | 26 | 210 T | ST004 | 118 | 118 | 130 | 201 | 5 U | 210 T | ST004 | 42.7 | 5 U | 82.4 | 164 |
| C4-Naphthalene | µg/kg | 6 | 6 | 100 | 7.6 | 66 T | ST004 | 20.3 | 11.3 | 22.7 | 53.8 | 7.6 | 66 T | ST004 | 20.3 | 11.3 | 22.7 | 53.8 |
| C4-Phenanthrene/anthracene | µg/kg | 6 | 6 | 100 | 12 | 175 JT | ST004 | 44.5 | 18.5 | 64.1 | 138 J | 12 | 175 JT | ST004 | 44.5 | 18.5 | 64.1 | 138 J |
| Chrysene | µg/kg | 6 | 6 | 100 | 24 | 100 | ST001 | 48.3 | 44 | 28.4 | 88.3 | 24 | 100 | ST001 | 48.3 | 44 | 28.4 | 88.3 |
| Dibenzo(a,h)anthracene | µg/kg | 6 | 6 | 100 | 2.7 J | 13 T | ST004 | 6.7 | 4.7 | 4.6 | 12.8 | 2.7 J | 13 T | ST004 | 6.7 | 4.7 | 4.6 | 12.8 |
| Dibenzothiophene | µg/kg | 6 | 6 | 100 | 1.8 J | 14 | ST001 | 5.82 | 2.9 J | 5.29 | 13.3 | 1.8 J | 14 | ST001 | 5.82 | 2.9 J | 5.29 | 13.3 |

Table D2.2-6. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Fourth Quarter (Fall 2009).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| Fluoranthene | µg/kg | 6 | 6 | 100 | 46 | 210 | ST001 | 93.2 | 70 | 62.6 | 186 | 46 | 210 | ST001 | 93.2 | 70 | 62.6 | 186 |
| Fluorene | µg/kg | 6 | 6 | 100 | 2.3 J | 29 T | ST004 | 10.3 | 6.5 | 9.87 | 25 | 2.3 J | 29 T | ST004 | 10.3 | 6.5 | 9.87 | 25 |
| Total HPAH | µg/kg | 6 | 6 | 100 | 215 JT | 959 T | ST001 | 442 | 338 | 288 | 867 | 215 JT | 959 T | ST001 | 442 | 338 | 288 | 867 |
| Indeno(1,2,3-cd)pyrene | µg/kg | 6 | 6 | 100 | 14 | 76 | ST001 | 33.3 | 25.5 | 24.1 | 68.3 | 14 | 76 | ST001 | 33.3 | 25.5 | 24.1 | 68.3 |
| Total LPAH | µg/kg | 6 | 6 | 100 | 40 JT | 328 JT | ST004 | 142 | 76.8 J | 123 | 312 J | 40 JT | 328 JT | ST004 | 142 | 76.8 J | 123 | 312 J |
| Naphthalene | µg/kg | 6 | 6 | 100 | 5 | 90 JT | ST004 | 29.3 | 9.1 | 35 | 81 J | 5 | 90 JT | ST004 | 29.3 | 9.1 | 35 | 81 J |
| Perylene | µg/kg | 6 | 6 | 100 | 23 | 92 T | ST004 | 44.2 | 39 | 25 | 80.5 | 23 | 92 T | ST004 | 44.2 | 39 | 25 | 80.5 |
| Phenanthrene | µg/kg | 6 | 6 | 100 | 22 | 160 | ST001 | 66.7 | 41.5 | 54.5 | 146 | 22 | 160 | ST001 | 66.7 | 41.5 | 54.5 | 146 |
| Pyrene | µg/kg | 6 | 6 | 100 | 37 | 190 | ST001 | 85.8 | 59.5 | 60 | 174 | 37 | 190 | ST001 | 85.8 | 59.5 | 60 | 174 |
| Total cPAH (BaPEq) | µg/kg | 6 | 6 | 100 | 24.1 JT | 119 T | ST001 | 54.9 | 40.5 | 37 | 109 | 24.1 JT | 119 T | ST001 | 54.9 | 40.5 | 37 | 109 |
| Total cPAHs | µg/kg | 6 | 6 | 100 | 103 JT | 466 T | ST001 | 219 | 174 | 137 | 421 | 103 JT | 466 T | ST001 | 219 | 174 | 137 | 421 |
| Total PAHs | µg/kg | 6 | 6 | 100 | 255 JT | 1220 T | ST001 | 583 | 415 J | 394 | 1140 J | 255 JT | 1220 T | ST001 | 583 | 415 J | 394 | 1140 J |
| **Phthalates** | | | | | | | | | | | | | | | | | | |
| Bis(2-ethylhexyl) phthalate | µg/kg | 6 | 6 | 100 | 240 JT | 650 | ST001 | 422 | 355 | 161 | 635 | 240 JT | 650 | ST001 | 422 | 355 | 161 | 635 |
| Butylbenzyl phthalate | µg/kg | 6 | 1 | 17 | 15 J | 15 J | ST005 | 15 | 15 J | -- | 15 J | 4.5 U | 52 U | ST001 | 27.5 | 27 J | 21.8 | 51.3 U |
| Dibutyl phthalate | µg/kg | 6 | 3 | 50 | 12 J | 17 | ST002 | 15 | 16 | 2.65 | 16.9 | 12 J | 130 U | ST001; ST006 | 67 | 57 | 58.2 | 130 U |
| Diethyl phthalate | µg/kg | 6 | 3 | 50 | 3.9 J | 5.8 J | ST005 | 4.8 | 4.7 J | 0.954 | 5.69 J | 3.9 J | 21 U | ST001 | 11.9 | 10.9 J | 7.98 | 20.8 U |
| Dimethyl phthalate | µg/kg | 6 | 1 | 17 | 2.1 J | 2.1 J | ST005 | 2.1 | 2.1 J | -- | 2.1 J | 1.4 U | 16 U | ST001; ST006 | 8.35 | 7.55 J | 7.37 | 16 U |
| Di-n-octyl phthalate | µg/kg | 6 | 1 | 17 | 450 | 450 | ST006 | 450 | 450 | -- | 450 | 2.4 U | 450 | ST006 | 84.5 | 11.9 U | 179 | 345 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.7 U | 42 U | ST001 | 21 | 18.1 U | 18.9 | 41.5 U |
| 1,2-Dichlorobenzene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.1 U | 47 U | ST001 | 23.6 | 20.4 U | 21.3 | 46.5 U |
| 1,3-Dichlorobenzene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.2 U | 48 U | ST001 | 24.1 | 20.9 U | 21.7 | 47.5 U |
| 1,4-Dichlorobenzene | µg/kg | 6 | 1 | 17 | 7.6 J | 7.6 J | ST003 | 7.6 | 7.6 J | -- | 7.6 J | 4.5 U | 47 U | ST001 | 24.1 | 21.8 J | 20.7 | 46.5 U |
| 2,4-Dinitrotoluene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.1 U | 24 U | ST001 | 12.2 | 10.7 U | 10.9 | 23.8 U |
| 2,6-Dinitrotoluene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.8 U | 32 U | ST001 | 16.2 | 14.1 U | 14.6 | 31.8 U |
| 2-Chloronaphthalene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.3 U | 26 U | ST001 | 13.1 | 11.3 U | 11.8 | 25.8 U |
| 2-Nitroaniline | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 4.5 U | 52 U | ST001 | 25.8 | 22.1 U | 23.3 | 51.3 U |
| 3,3'-Dichlorobenzidine | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 5.2 U | 60 U | ST001 | 29.8 | 25.5 U | 26.9 | 59.3 U |
| 3-Nitroaniline | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.5 U | 40 U | ST001 | 20.2 | 17.5 U | 18.3 | 39.8 U |
| 4-Bromophenyl phenyl ether | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.3 U | 26 U | ST001 | 13.1 | 11.3 U | 11.8 | 25.8 U |
| 4-Chloroaniline | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.7 U | 31 U | ST001 | 15.5 | 13.6 U | 13.9 | 30.5 U |
| 4-Chlorophenyl phenyl ether | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2 U | 23 U | ST001 | 11.6 | 10.2 U | 10.5 | 22.8 U |
| 4-Nitroaniline | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.5 U | 29 U | ST001 | 14.5 | 12.5 U | 13.1 | 28.8 U |
| Aniline | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.1 U | 24 U | ST001 | 12.2 | 10.7 U | 10.9 | 23.8 U |
| Azobenzene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.6 U | 18 U | ST001 | 9.02 | 7.9 U | 8.12 | 17.8 U |
| Benzoic acid | µg/kg | 6 | 4 | 67 | 410 | 2100 J | ST001 | 1160 | 1060 J | 829 | 2030 J | 140 U | 2100 J | ST001 | 993 | 855 | 766 | 1980 J |
| Benzyl alcohol | µg/kg | 6 | 4 | 67 | 19 | 40 | ST005 | 30.5 | 31.5 J | 10.6 | 39.9 J | 19 | 40 | ST005 | 30.3 | 30 U | 8.59 | 39.8 J |
| Bis(2-chloroethoxy) methane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.1 U | 24 U | ST001 | 12.2 | 10.7 U | 10.9 | 23.8 U |
| Bis(2-chloroethyl) ether | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.7 U | 31 U | ST001 | 15.5 | 13.6 U | 13.9 | 30.5 U |
| Bis(2-chloroisopropyl) ether | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.7 U | 42 U | ST001 | 21 | 18.1 U | 18.9 | 41.5 U |
| Carbazole | µg/kg | 6 | 5 | 83 | 3.3 J | 30 J | ST001 | 13.4 | 5.5 J | 12.2 | 28.6 J | 3.3 J | 30 J | ST001 | 14.5 | 12.8 J | 11.2 | 28.3 J |
| Dibenzofuran | µg/kg | 6 | 6 | 100 | 2.4 J | 30 T | ST004 | 8.58 | 3.75 J | 10.7 | 24.6 | 2.4 J | 30 T | ST004 | 8.58 | 3.75 J | 10.7 | 24.6 |
| Hexachlorobenzene | µg/kg | 6 | 2 | 33 | 0.49 J | 2.9 | ST006 | 1.7 | 1.7 J | 1.7 | 2.78 J | 0.18 U | 2.9 | ST006 | 0.91 | 0.395 J | 1.06 | 2.5 |
| Hexachlorobutadiene | µg/kg | 6 | 1 | 17 | 1.1 J | 1.1 J | ST006 | 1.1 | 1.1 J | -- | 1.1 J | 0.13 UT | 1.1 J | ST006 | 0.427 | 0.28 U | 0.355 | 0.958 J |
| Hexachlorocyclopentadiene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 41 U | 470 U | ST001 | 236 | 204 U | 213 | 465 U |
| Hexachloroethane | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.052 U | 0.41 U | ST006 | 0.19 | 0.155 U | 0.154 | 0.385 U |
| Isophorone | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.4 U | 16 U | ST001; ST006 | 8.27 | 7.3 U | 7.46 | 16 U |
| Nitrobenzene | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.1 U | 36 U | ST001 | 17.9 | 15.3 U | 16.1 | 35.5 U |
| N-Nitrosodimethylamine | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 8.5 U | 98 U | ST001 | 49 | 42.4 U | 44.2 | 96.8 U |
| N-Nitrosodiphenylamine | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.3 U | 26 U | ST001 | 13.1 | 11.3 U | 11.8 | 25.8 U |
| N-Nitrosodipropylamine | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 3.4 U | 39 U | ST001 | 19.5 | 17 U | 17.6 | 38.5 U |
| **Phenols** | | | | | | | | | | | | | | | | | | |
| 2,3,4,5-Tetrachlorophenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.91 UT | 1.3 U | ST001; ST002 | 1.17 | 1.2 U | 0.147 | 1.3 U |
| 2,3,5,6-Tetrachlorophenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.8 UT | 1.1 U | ST001; ST002; ST005; ST006 | 1.02 | 1.1 U | 0.131 | 1.1 U |
| 2,4,5-Trichlorophenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 0.82 UT | 1.1 U | ST001; ST002; ST005; ST006 | 1.03 | 1.1 U | 0.12 | 1.1 U |
| 2,4,6-Trichlorophenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.1 UT | 1.4 U | ST001; ST002; ST006 | 1.3 | 1.35 U | 0.126 | 1.4 U |
| 2,4-Dichlorophenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 1.4 U | 16 U | ST001; ST006 | 8.27 | 7.3 U | 7.46 | 16 U |
| 2,4-Dimethylphenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 7.7 U | 88 U | ST001 | 44 | 37.9 U | 39.7 | 87 U |
| 2,4-Dinitrophenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 24 U | 280 U | ST001 | 138 | 119 U | 125 | 275 U |
| 2-Chlorophenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.8 U | 32 U | ST001 | 16.2 | 14.1 U | 14.6 | 31.8 U |
| 2-Methylphenol | µg/kg | 6 | 2 | 33 | 3 J | 4.2 J | ST005 | 3.6 | 3.6 J | 0.849 | 4.14 J | 2.1 U | 24 U | ST001 | 12.6 | 11.6 J | 10.5 | 23.8 U |
| 2-Nitrophenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2.1 U | 24 U | ST001 | 12.2 | 10.7 U | 10.9 | 23.8 U |
| 4,6-Dinitro-2-methylphenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2 U | 23 U | ST001 | 11.6 | 10.2 U | 10.5 | 22.8 U |

Table D2.2-6. Sediment Trap Sediment Chemistry Results for COIs and Physical Parameters, Fourth Quarter (Fall 2009).

| | | | | | Detected Concentrations | | | | | | | Detected and Not Detected Concentrations | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **Standard Deviation** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (full DL)** | **Median (full DL)[b]** | **Standard Deviation (full DL)** | **95th Percentile (full DL)[b]** |
| 4-Chloro-3-methylphenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 2 U | 23 U | ST001 | 11.6 | 10.2 U | 10.5 | 22.8 U |
| 4-Methylphenol | µg/kg | 6 | 6 | 100 | 230 | 33000 | ST001 | 6050 | 270 | 13200 | 25300 | 230 | 33000 | ST001 | 6050 | 270 | 13200 | 25300 |
| 4-Nitrophenol | µg/kg | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | -- | 25 U | 290 U | ST001 | 145 | 125 U | 131 | 288 U |
| Pentachlorophenol | µg/kg | 6 | 4 | 67 | 1.8 JT | 7 J | ST001; ST005 | 4.88 | 5.35 J | 2.57 | 7 J | 1.8 JT | 7 J | ST001; ST005 | 3.93 | 2.95 J | 2.47 | 7 J |
| Phenol | µg/kg | 6 | 6 | 100 | 25 JT | 820 | ST001 | 181 | 34 J | 316 | 650 J | 25 JT | 820 | ST001 | 181 | 34 J | 316 | 650 J |
| **Petroleum** | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) (silica gel method) | mg/kg | 6 | 6 | 100 | 33 J | 76 JT | ST001 | 51.2 | 49 J | 16.8 | 72.5 J | 33 J | 76 JT | ST001 | 51.2 | 49 J | 16.8 | 72.5 J |
| Total Petroleum Hydrocarbons (Residual) (silica gel method) | mg/kg | 6 | 6 | 100 | 170 J | 375 JT | ST004 | 242 | 220 J | 77.8 | 352 J | 170 J | 375 JT | ST004 | 242 | 220 J | 77.8 | 352 J |
| Total Petroleum Hydrocarbons (silica gel method) | mg/kg | 6 | 6 | 100 | 208 JA | 437 JA | ST004 | 293 | 269 J | 91.3 | 418 J | 208 JA | 437 JA | ST004 | 293 | 269 J | 91.3 | 418 J |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DDx - total of 2,4' and 4,4'-DDD, -DDE, -DDT
DL - detection limit
HPAH - high molecular weightpolycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
TOC - total organic carbon

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D2.3
# PATTERNS AND TRENDS OF PCBS, PCDD/FS, DDX, AND PAHS IN SEDIMENT TRAPS

**FINAL**

February 8, 2016

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# APPENDIX D2.3 PATTERNS AND TRENDS OF PCBS, PCDD/FS, DDX, AND PAHS IN MOBILE SEDIMENT

## D2.3.1 Introduction

This appendix provides additional details on the nature of the four grouped indicator contaminants, polychlorinated biphenyls (PCBs), polychlorinated dibenzo-p-dioxins/furans (PCDD/Fs), DDx, and polycyclic aromatic hydrocarbons (PAHs), by examining the spatial patterns in the occurrence of the constituent contaminants that make up these compound groups.

## D2.3.2 Patterns and Trends of PCBs in Mobile Sediment

The distribution of detected PCB homologs and Aroclors is shown in stacked bar charts in Figures D2.3-1a-b and D2.3-2a-b, respectively. The bar charts show the percent composition of individual PCB homologs and Aroclors for each sample, while the total concentration of the indicator contaminant is displayed as a line on a logarithmic scale. Station location labels are provided on the x-axis, and river mile is indicated on the secondary x-axis along the top of the chart. Station location labels are provided on the x-axis for the 2007 locations. Note that all 2009 locations are from RM 11E.

Tetrachlorobiphenyls (tetraCBs), pentachlorobiphenyls (pentaCBs), hexachlorobiphenyls (hexaCBs), and heptachlorobiphenyls (heptaCBs) were the predominant homolog groups in the sediment trap samples. Aroclors 1254 and 1260 accounted for most of the reported Aroclors, which is consistent with the homolog composition. Aroclor 1254 consists primarily of pentaCBs followed by tetraCBs and hexaCBs, and Aroclor 1260 contains mostly hexaCBs and heptaCBs (Figures D2.3-1a-b). DiCBs and triCBs were detected in most samples and are consistent with patterns displayed by weathered Aroclors 1254 and 1260.

In addition to Aroclors 1254 and 1260, Aroclors 1221 and 1242 were reported in eight instances. Aroclor 1221 was reported once, in the Quarter 3 sample from ST011 (RM 3.5E) at a concentration just above the method detection limit and with qualifiers "NJ" (i.e., tentatively identified and estimated). Aroclor 1242 was identified in seven samples from Quarter 2, all at concentrations below the method reporting limit of approximately 10 µg/kg, but was not identified during other sampling periods. Considering the low levels at which these Aroclors were detected and the regular occurrence of weathered Aroclor components among samples, it is conceivable that the partially dechlorinated PCBs in these samples led to misidentifications as Aroclors 1221 and 1242.

The higher concentrations and apparent increased dominance by hexaCBs and heptaCBs in samples from ST007 during Quarters 2, 3, and 4 (Figures D2.3-1a-b) suggests that the dominance of higher chlorinated PCBs may increase with increasing

concentrations. A covariance matrix[1] of the sediment trap data set was constructed and investigated, both graphically and quantitatively. The data were log-transformed, centered and scaled to conform to the assumptions of normality and equal variance required for the parametric correlation metric used (Pearson's R).

The congener results showed a very uniform correlation structure, indicating that the relative homolog ratios were statistically similar among all samples regardless of total concentration. All of the PCB homologs had strong (Pearson's R in the 0.9 range) and significant positive relationships throughout the entire data set (Figure D2.3-3). Only decaCBs (otherwise a minor contributor to the total PCB concentration in all samples; Figures D2.3-1a-b) had slightly lower correlations (Pearson's R in the 0.6 range) to the other nine homologs. Taken together, these results strongly suggest that across the entire range of total PCBs concentrations within this data set, the relative proportions of all 10 PCB homolog groups are essentially constant.

Four homolog groups (tetraCBs, pentaCBs, hexaCBs, and heptaCBs) clearly dominate the PCB composition of all sediment trap samples (Figures D2.3-1a-b), constituting 80 to 90 percent of total PCBs throughout the data set. Though the three samples (from Quarters 2, 3, and 4) collected at station ST007 visually appear to have slightly more hexaCBs and heptaCBs than others, quantitative analysis of these data indicates that the overall composition of these ST007 samples falls in line with the rest of the data set (Figures D2.3-3 and D2.3-4).

The relationship between PCB homolog concentrations and the calculated net deposition rate of the sediment trap samples was examined (the deposition rate data variable is coded "DEPRT" in Figure D2.3-3). None of the PCB homologs, or total PCB concentrations, was significantly correlated to the solids deposition rates in the sediment traps (Figure D2.3-3).

PCB homolog distributions in sediment trap samples were generally consistent from quarter to quarter at each location resulting in a high degree of similarity among the samples in this data set (Figures D2.3-1a-b). The PCB composition of all samples was dominated by tetraCBs, pentaCBs, hexaCBs, and heptaCBs (80–90 percent of total), but minor localized or temporal variations were also noticeable. These small-scale deviations may be indicative of potential localized sources, but also may be within the range of normal data variability. Detailed forensic analyses would be required to determine whether or not these minor variations represent statistically significant departures from the overall PCB pattern, which may be linked to local sources. Variations apparent in the stacked bar charts and a comparison of the paired sediment trap samples are discussed below:

- The sample from Quarter 1 of the 2006/2007 sampling event at ST009 (RM 15.7E) had a slight increase in the proportion of pentaCBs and hexaCBs,

[1] A regression analysis was not selected because homolog concentrations and total PCB concentrations are not independent variables, i.e., both are calculated from the same congener data set.

along with consistent contributions from tetraCBs and octachlorinated biphenyls (octaCBs). Samples at this station from the other three quarters had slightly greater contributions from diCBs, triCBs, tetraCBs, and octaCBs. ST010 (RM 15.6W) is located west of ST009, and the Quarter 1 sample from this station showed a slightly greater proportion of pentaCBs compared to other quarters, but to a lesser degree than was seen at ST009.

- HexaCBs and heptaCBs appeared to contribute increased proportions to the PCB concentrations at ST007 (RM 11.3E) as total concentrations increased in Quarters 2, 3, and 4 of the 2006/2007 sampling event. The proportion of octaCBs was also slightly higher in these samples, and the proportion of tetraCBs and pentaCBs was slightly lower, in comparison to those from upstream locations. This small-scale change in PCB pattern, combined with the high concentrations, may indicate the presence of a localized source of PCBs in this vicinity during Quarters 2, 3, and 4.[2] The PCBs in Quarter 1 at this location were different from the subsequent quarters, with relatively higher percentages of triCB and tetraCB fractions, relatively lower hexaCB, octaCB, and heptaCB fractions, and a much lower total PCBs concentration. However, the overall composition profile and magnitude of the total PCBs concentration at ST007 are, in fact, closer to the other samples in this data set.
- The PCB patterns at ST008 (RM 11.5W), across from ST007, appeared slightly different from ST007, and the PCB concentrations were lower; ST008 does not appear to exhibit significant influence from ST007 in terms of PCB composition.
- The PCB homolog distributions (Figure D2.3-1b) were generally similar from quarter to quarter at each location during the 2009 sampling event, as was observed in the LWG sediment trap study. The sediment traps at station ST001, the Quarter 3 sample from ST002, and Quarter 4 sample from ST003 and ST006 were predominantly hexaCBs and heptaCBs, similar to the homolog distributions seen in the LWG sediment traps at RM 11.3E in Quarter 2 through Quarter 4 as noted above. Other sediment traps exhibited higher percentages of the lower chlorinated homolog groups, primarily tetraCBs and pentaCBs.
- A small shift of the pattern of higher chlorinated PCBs was consistently seen at ST006 (Swan Island Lagoon), ST015 (RM 9.7W), and ST016 (RM 9.9E). All samples from these stations were predominated by pentaCBs, hexaCBs, and heptaCBs.
- ST013 (RM 6.7E) in Willamette Cove was composed primarily of moderately chlorinated homologs (tetra- through heptaCBs), with relatively high contributions from octaCBs in all three quarters sampled. While the PCB homolog distribution was consistent for all samples from this location, the total

[2] ST007 is located between two facilities with active, deep draft docks (i.e., between RM 11.3E and 11.4E).

PCB congener concentration in the Quarter 4 sample was 5 times higher than during Quarter 1.

- The pattern of the Quarter 1 sample at ST004 (RM 6.0E) appeared slightly shifted towards higher contributions of hexaCBs and heptaCBs, whereas samples from other quarters at this station more closely matched the tetraCB, pentaCB, hexaCB, and heptaCB distribution of the other stations. ST005 (RM 6.0W), opposite ST004, had a relatively higher proportion of tetraCBs and pentaCBs, and lower abundance of heptaCBs compared to ST004. TriCBs made up a larger proportion of the samples from ST011 in Quarters 1 and 2 in comparison to other locations. The octaCB proportion appeared elevated in the Quarter 4 sample from this station. Quarter 3 and 4 samples from ST011 had total PCB congener concentrations 2 to 3 times higher than the Quarter 1 and 2 samples.

### D2.3.3 Patterns and Trends of Total PCDD/Fs and TCDD TEQ in Mobile Sediment

Homolog patterns for sediment trap samples showed octachlorodibenzo-p-dioxin (OCDD) as the dominant homolog in almost all sediment trap samples, with heptachlorodibenzo-p-dioxins (HpCDDs) present to a substantial degree in most samples (Figures D2.3-5a-b). Polychlorinated dibenzofurans (PCDFs) generally accounted for less than about 20 percent of the total PCDD/Fs in most of the samples. Octachlorodibenzofuran (OCDF) typically accounted for the highest furan concentrations, followed by heptachlorodibenzofurans (HpCDFs).

Samples with homolog patterns apparently different from the prevailing pattern were observed at several locations during the 2006/2007 sampling event, but these patterns are obscured because U-qualifiers were applied during data validation in most cases; non-detects are treated as zero in the graphs of chemical patterns. However, the Quarter 2 sample from ST008 (RM 11.5W) was notable for its relatively high proportions of OCDF and relatively low proportions of OCDD compared to other samples.

The following samples from the 2006/2007 sampling event have incomplete PCDD/F patterns because some of the PCDD/F homolog data were qualified as not detected during validation (Anchor and Integral 2008): ST010, Quarter 2 (HpCDDs not detected) and Quarter 4 (HpCDFs and OCDF not detected); ST003 (Multnomah Channel), Quarter 2 (hexachlorodibenzo-p-dioxins [HxCDDs], hexachlorodibenzofurans [HxCDFs], HpCDDs, HpCDFs, and OCDD not detected); ST008, Quarter 4 (HpCDFs and OCDF not detected); and ST016 (RM 9.9E), Quarter 4 (HpCDFs not detected).

Toxic equivalent (TEQ) concentrations derived from PCDD/Fs closely track total PCDD/F homolog concentrations, both geographically and seasonally. The close parallel is due to the resemblance in homolog patterns among samples. TEQ

concentrations are generally 2 to 3 orders of magnitude lower than total PCDD/F homolog concentrations due to the abundance of higher chlorinated 2,3,7,8-substituted dioxins and furans, which have less toxic equivalency than tetra- and penta-chlorinated congeners.

### D2.3.4 Patterns and Trends of DDX in Mobile Sediment

The relative concentration of DDD, DDE, and DDT varied widely among samples. Among the 2,4´- and 4,4´-isomers, the 4,4´-isomers generally predominated (Figures D2.3-6a-b). On average, 4,4´-DDT comprised the largest proportion of DDx in samples from the 2006/2007 sampling event, followed by 4,4´-DDE and 4,4´-DDD. Among the 2,4´-isomers, 2,4´-DDT was found at the highest percentage of DDx, followed by 2,4´-DDD and 2,4´-DDE. Among the 2009 samples, 4,4´-DDE generally comprised the largest portion of the DDx in samples where it was detected, followed by 2,4´-DDD and 2,4´-DDT.

During the 2006/2007 sampling event Stations ST007 and ST015 (RM 9.7E) had the highest proportion of 2,4´-DDx compounds due to comparatively high percentages of 2,4´-DDD and 2,4´-DDT. Station ST013 (RM 6.7W) also had a high percentage of 2,4´-DDT in the Quarter 4 sample. Upstream samples were primarily composed of 4,4´-DDx isomers.

The DDD isomers exhibited variability in both their concentration and relative contributions at most stations. No seasonal or geographic trends were evident during the 2006/2007 sampling event; however, 2,4´-DDD was dominant in the Quarter 3 2009 samples from ST001, ST002, and ST004 at RM 11E, and in both the Quarter 3 and 4 samples at ST003.

During the 2006/2007 sampling event DDT isomers appeared to have the highest relative concentrations during Quarter 1, although no geographical trends were apparent. A more seasonal trend was observed for DDE isomers, which were reported at detectable concentrations in all but two of the samples from Quarters 2 through 4, yet were detected in only 3 of the 13 samples from Quarter 1. Relative contributions of DDE compounds to DDx were generally highest during Quarter 4.

DDx at ST007 in Quarter 3 and 4 samples from the 2006/2007 sampling event (24 and 150 µg/kg, respectively) was composed entirely of 2,4´-DDD. However, 2,4´-DDD reported by the laboratory in these cases may be artifacts of PCB interference. High concentrations of Aroclor 1260 were also detected at this station in these samples (1,800 and 2,600 µg/kg, respectively). Aroclors have the potential to interfere with the analysis of DDx due to co-elution of Aroclor peaks with DDx compounds. While the 2,4´-DDD results were not N-qualified during data validation, the results for other isomers (2,4'-DDT and 4,4´-DDT in both Quarters 3 and 4, and 2,4´-DDE in Quarter 4) were N-qualified. It is possible that the reported results were affected by Aroclor interferences.

### D2.3.5 Patterns and Trends of PAHs in Mobile Sediment

Paired samples from the 2006/2007 sampling event generally did not display substantial differences in total PAHs concentrations, with two notable exceptions. There were large differences between total PAHs concentrations at ST005 and its cross-river counterpart (ST004, RM 6.0E) during all quarters for which samples from both stations were analyzed. Total PAHs concentrations during Quarter 1 at ST010 were also higher than in the concurrent sample from ST009 (RM 15.7E).

An evaluation of the PAH composition among samples was done by combining the 17 individual PAH compounds into categories determined by their number of fused rings. Fused ring patterns did not appear to vary substantially among samples, with four-ring PAHs as the predominant component, followed by those with five rings (Figures D2.3-7a-b). High-molecular-weight polycyclic aromatic hydrocarbons (PAHs with four or more fused rings) generally accounted for more than 80 percent of total PAHs. A bar chart of all site PAHs (Figures D2.3-8a-b) shows that the four-ring PAHs consist primarily of fluoranthene and pyrene and the five-ring PAHs consist primarily of benzo(a)pyrene and benzo(b)fluoranthene.

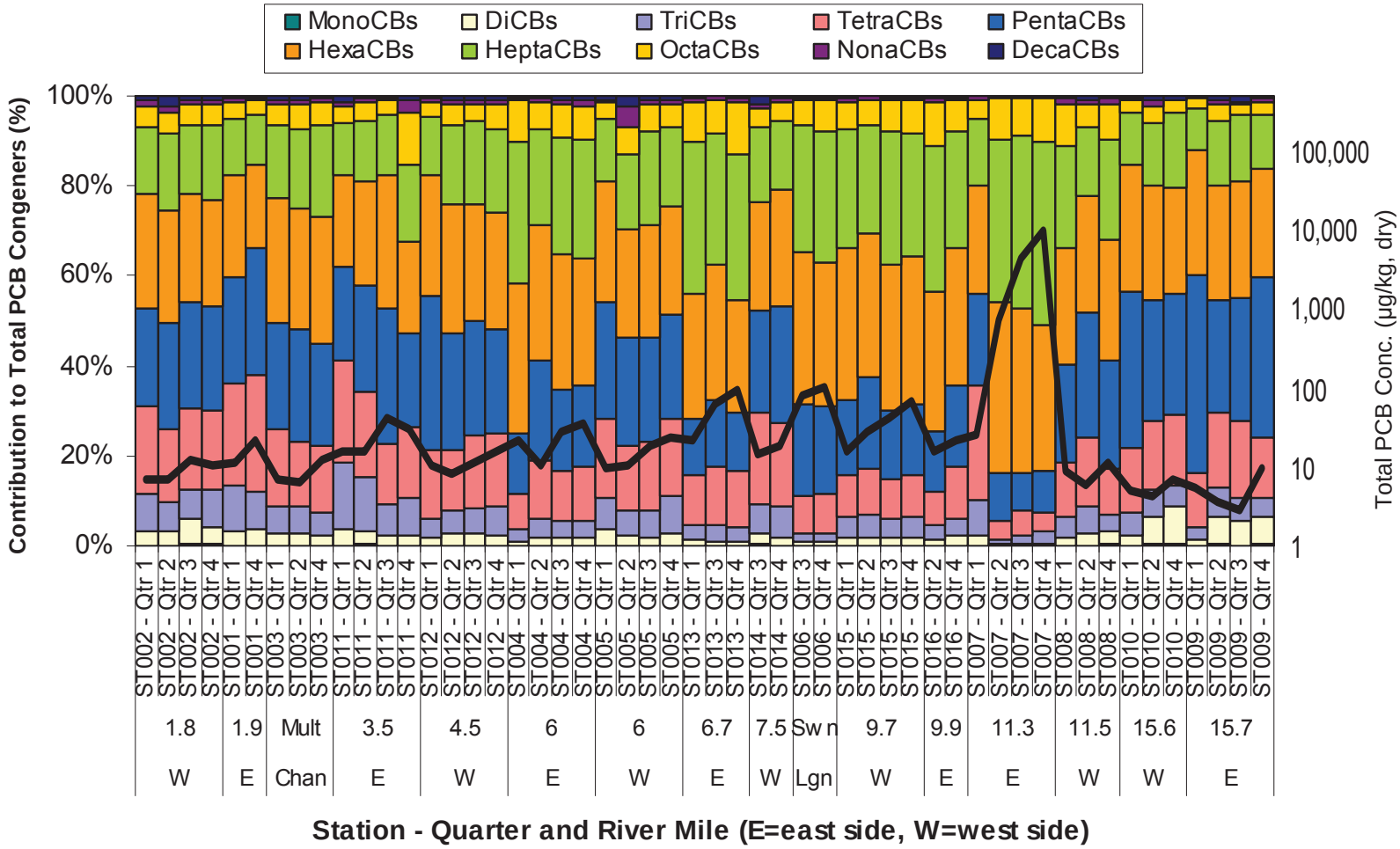
The PAH distributions at ST005, the location with the highest total PAHs concentrations, were similar to the prevailing pattern. Samples with PAH distributions that appeared to differ somewhat from the prevailing pattern were observed during the 2006/2007 sampling event at several locations:

- The Quarter 2 sample from ST009 (RM 15.7E) exhibited apparent increased contributions from five-ring PAHs, mainly BAP.
- At ST002 (RM 1.8W), the Quarter 2 and 3 samples exhibited apparent increased contributions from five-ring and six-ring PAHs. However, the distribution of the individual PAHs within the five-ring and six-ring PAH groups appeared similar to other samples.
- At ST003 (Multnomah Channel), apparent increased contributions from five-ring and six-ring PAHs were observed in the Quarter 2 and 4 samples. The distribution of the individual PAHs within the five-ring and six-ring PAH groups appeared similar to other samples.

The evaluation of the low-molecular-weight polycyclic aromatic hydrocarbon (LPAH) distributions is confounded by the fact that eight results for naphthalene (a two-ring PAH) from Quarter 2 were restated as not detected because of laboratory blank results (Anchor and Integral 2008). The levels of LPAHs in these Quarter 2 samples may be under-represented. With that caveat, samples from Quarter 1 at ST010 (RM 15.6W), Quarter 3 at ST011 (RM 3.5E), and Quarter 4 at ST003 (Multnomah Channel)—all with total PAH concentrations greater than 1,000 µg/kg (1,300 J µg/kg, 1,600 J µg/kg, and 2,700 J µg/kg, respectively)—are notable for their low contribution (less than 20 percent) of LPAHs to the total PAHs.

### D2.3.6 Reference

Anchor and Integral. 2008. Portland Harbor RI/FS Round 3A In-River Sediment Trap Sampling Data Report. AE08-09. Prepared for the Lower Willamette Group, Portland, OR. Anchor Environmental, L.L.C., Seattle, WA, and Integral Consulting Inc., Mercer Island, WA. July 18, 2008.




Note: Black line shows Total PCB homolog concentration on a logarithmic scale.

**Figure D2.3-1a**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of PCB Homolog Patterns
for In-River Sediment Traps, 2007

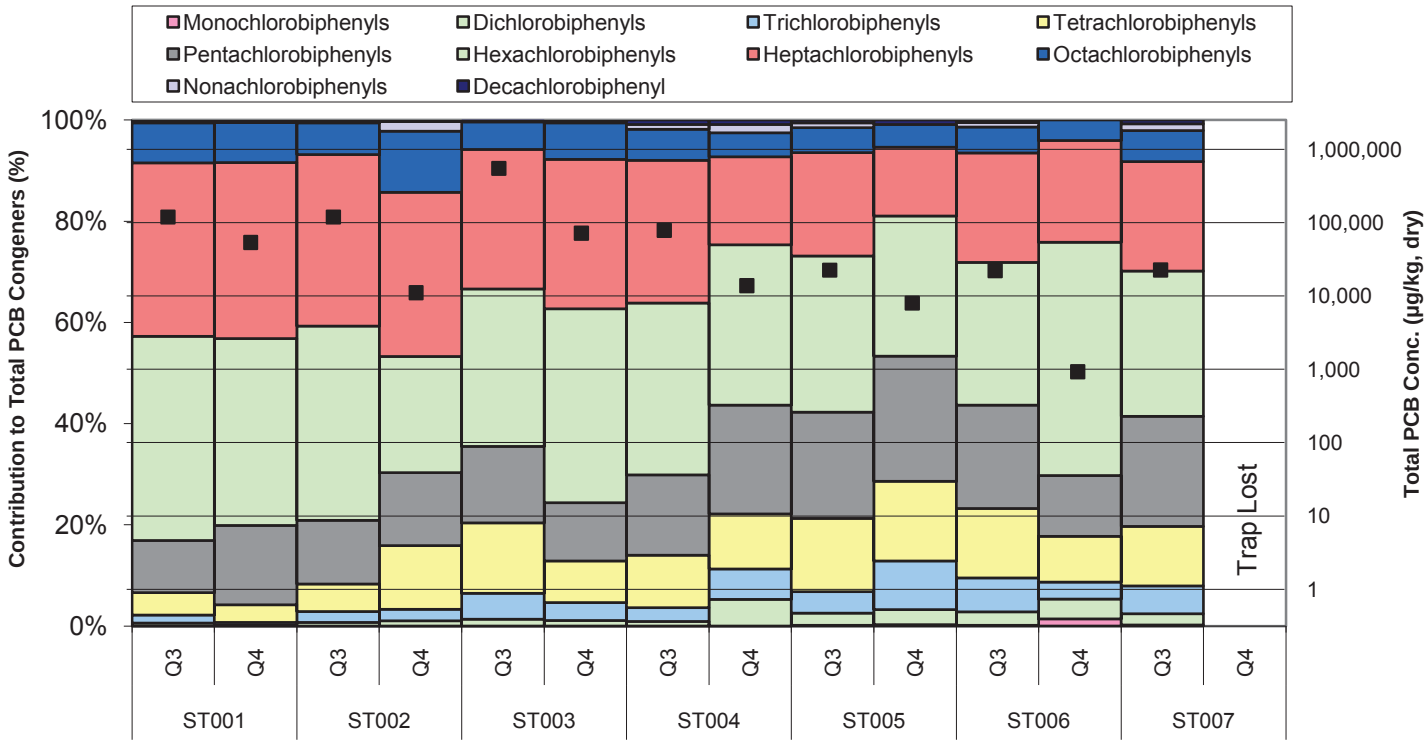
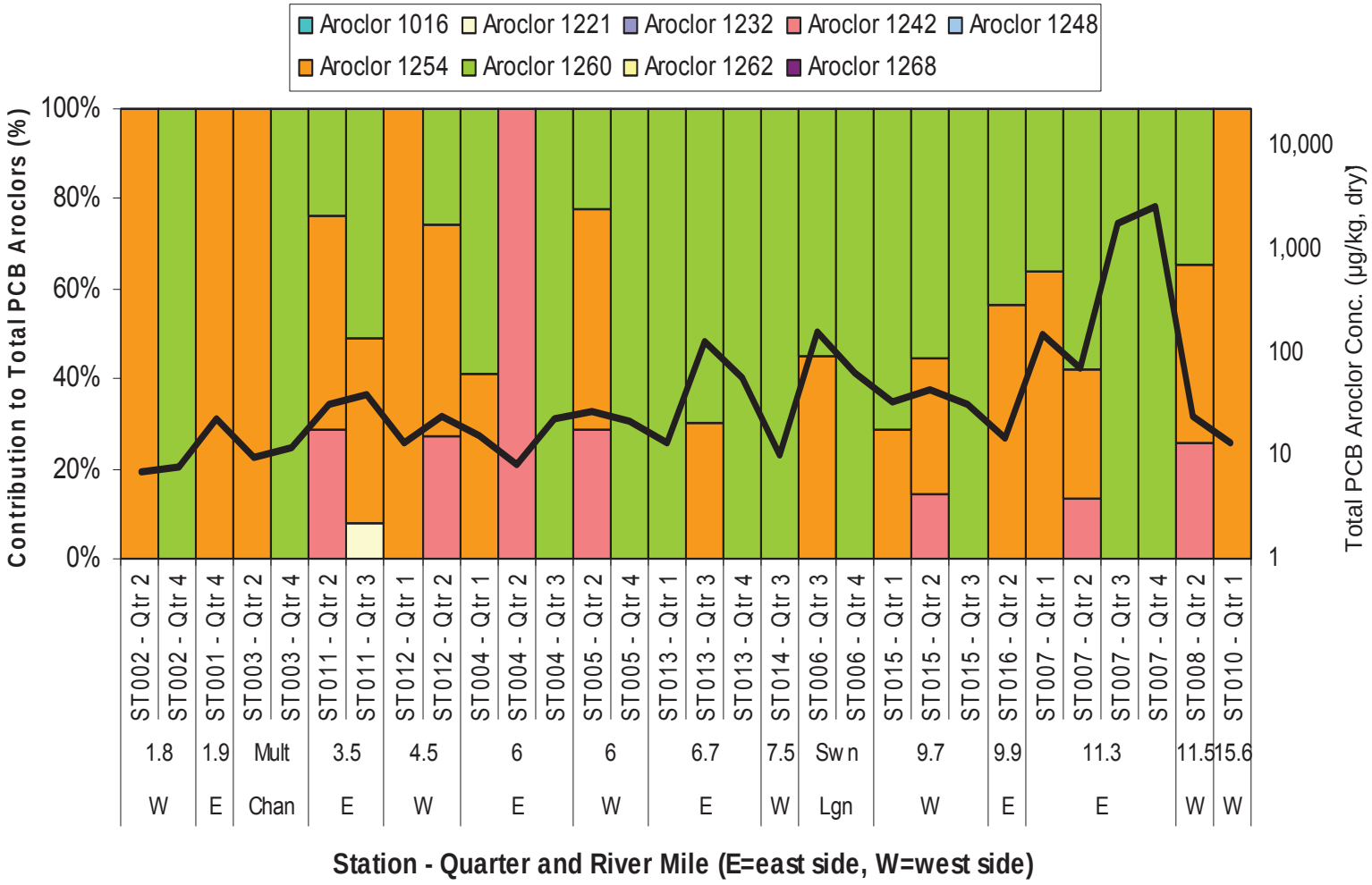



**Figure D2.3-1b**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of PCB Homolog Patterns
for In-River Sediment Traps, RM11E, 2009




Note: Black line shows Total PCB Aroclor concentration on a logarithmic scale.

**Figure D2.3-2a**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of PCB Aroclor Patterns
for In-River Sediment Traps, 2007

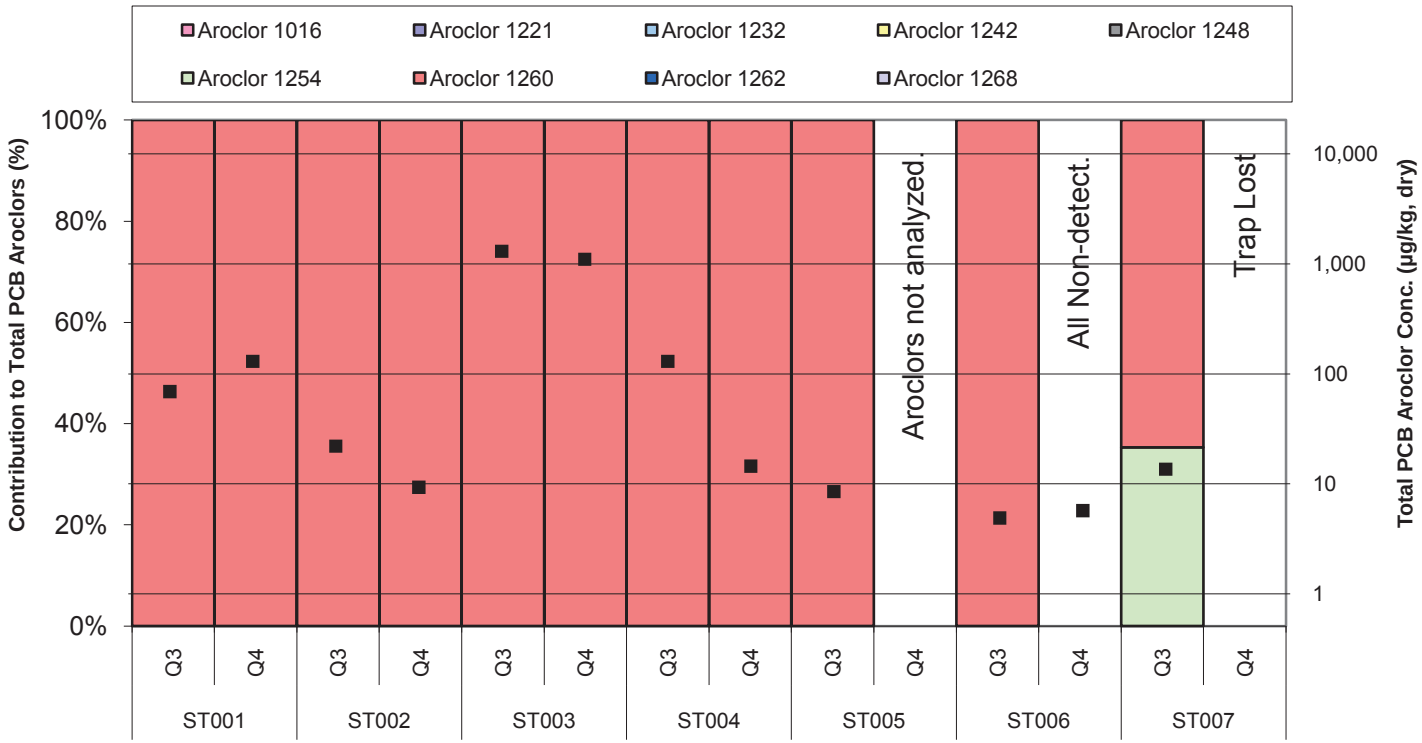
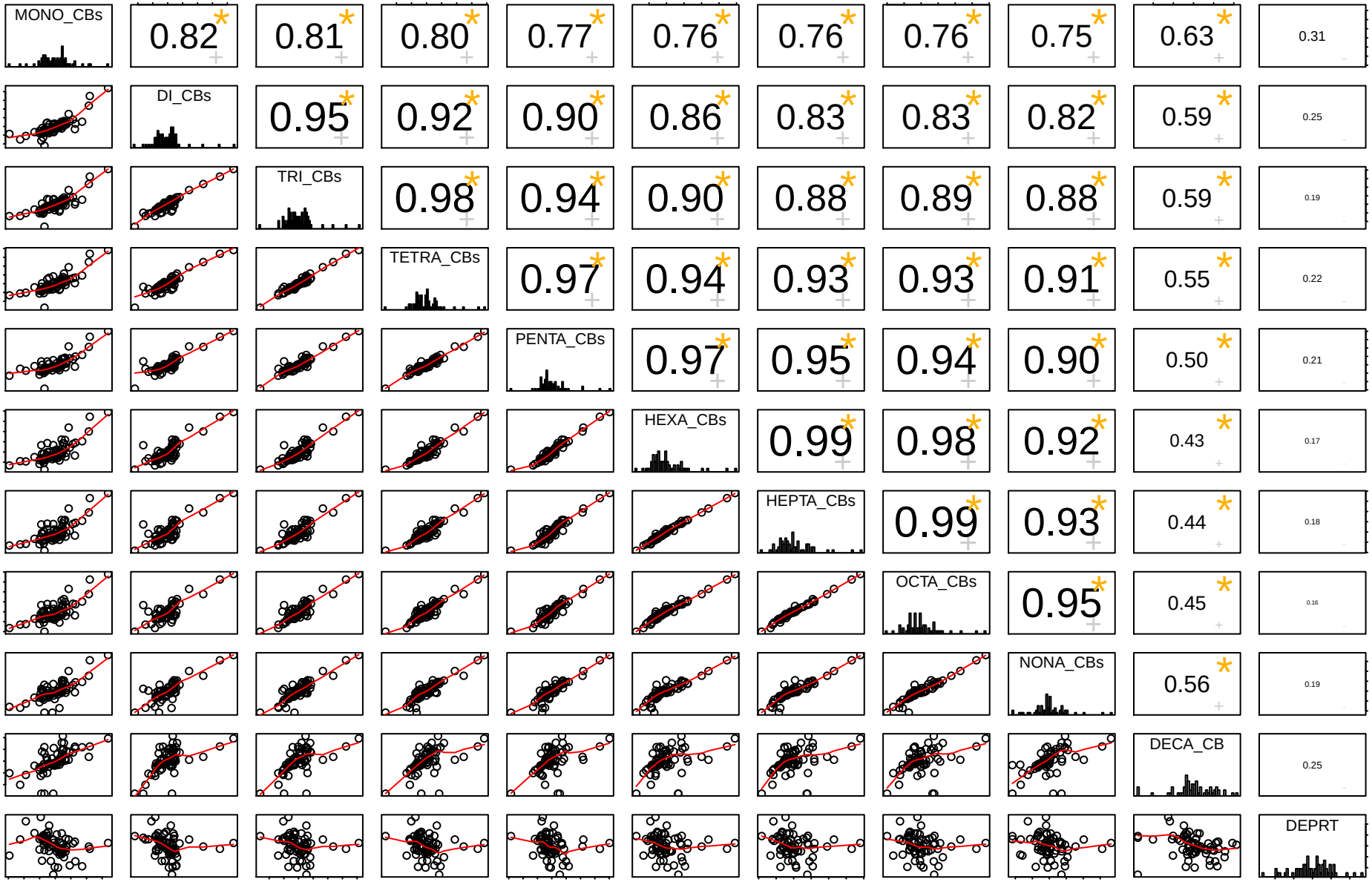



**Figure D2.3-2b**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of PCB Aroclor Patterns for
In-River Sediment Traps, RM 11E, 2009

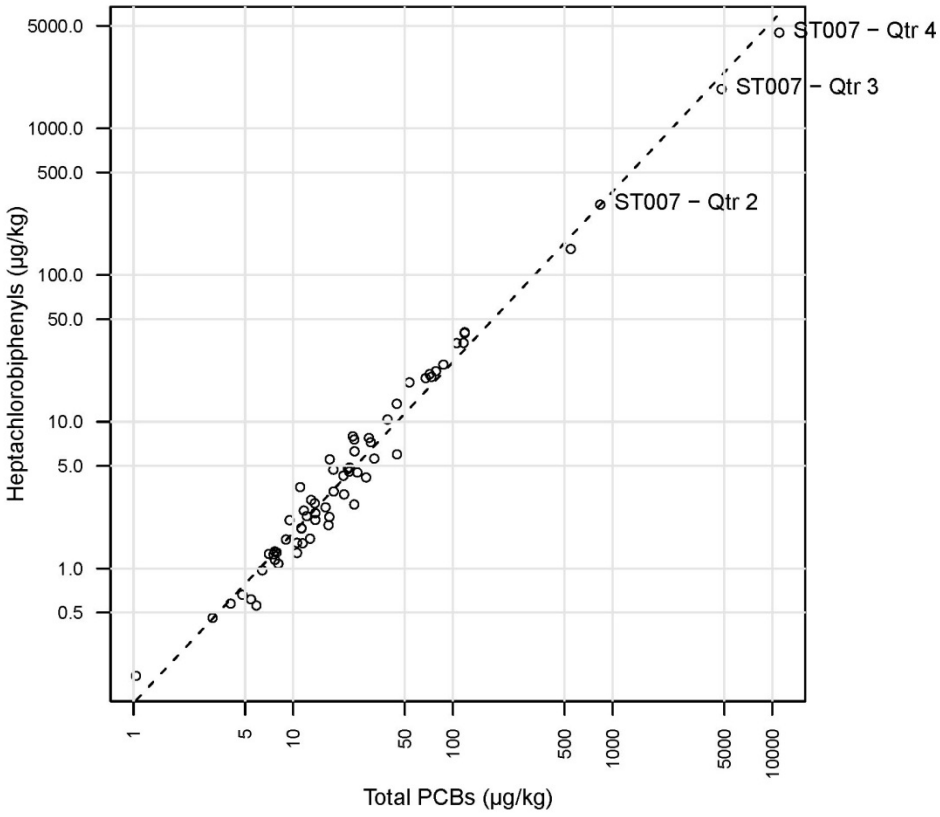



Note: The numbers displayed in boxes in the upper right portion of this matrix are Pearson's R values for the pair. The size of the font displayed is intended to visually denote the strength of the relationship between the two variables. Values appearing in very small font in the far right column for plots of the PCB homolog groups with deposition rate (i.e., DEPRT) range from 0.11 (for nona_CBs vs DEPRT) to 0.30 (for deca_CBs vs DEPRT); all plots of homologs to deposition rate show an overall negative relationship.

Asterisks (*) indicate statistically significantly significant correlation (P≤ 0.05). Plus signs (+) indicate that the direction of the relationship between the two variables is positive.

**Figure D2.3−3**

Portland Harbor RI/FS
Remedial Investigation Report
Covariance Matrix of PCB Homologs and Sediment
Accumulation Rates for In−River Sediment Traps



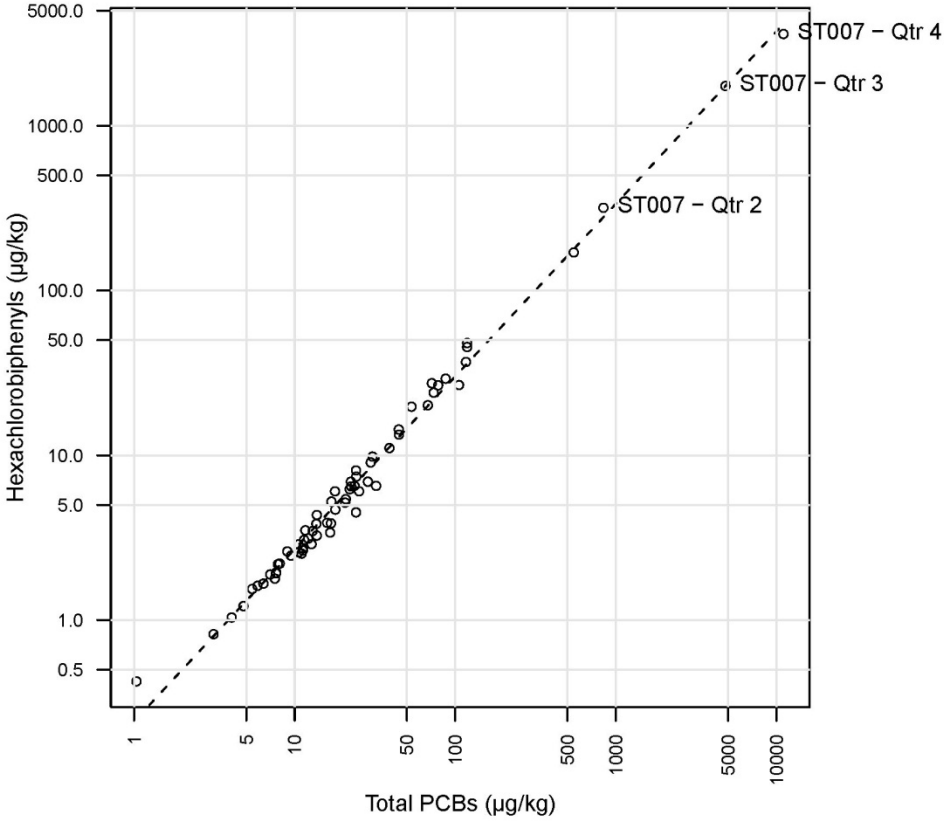
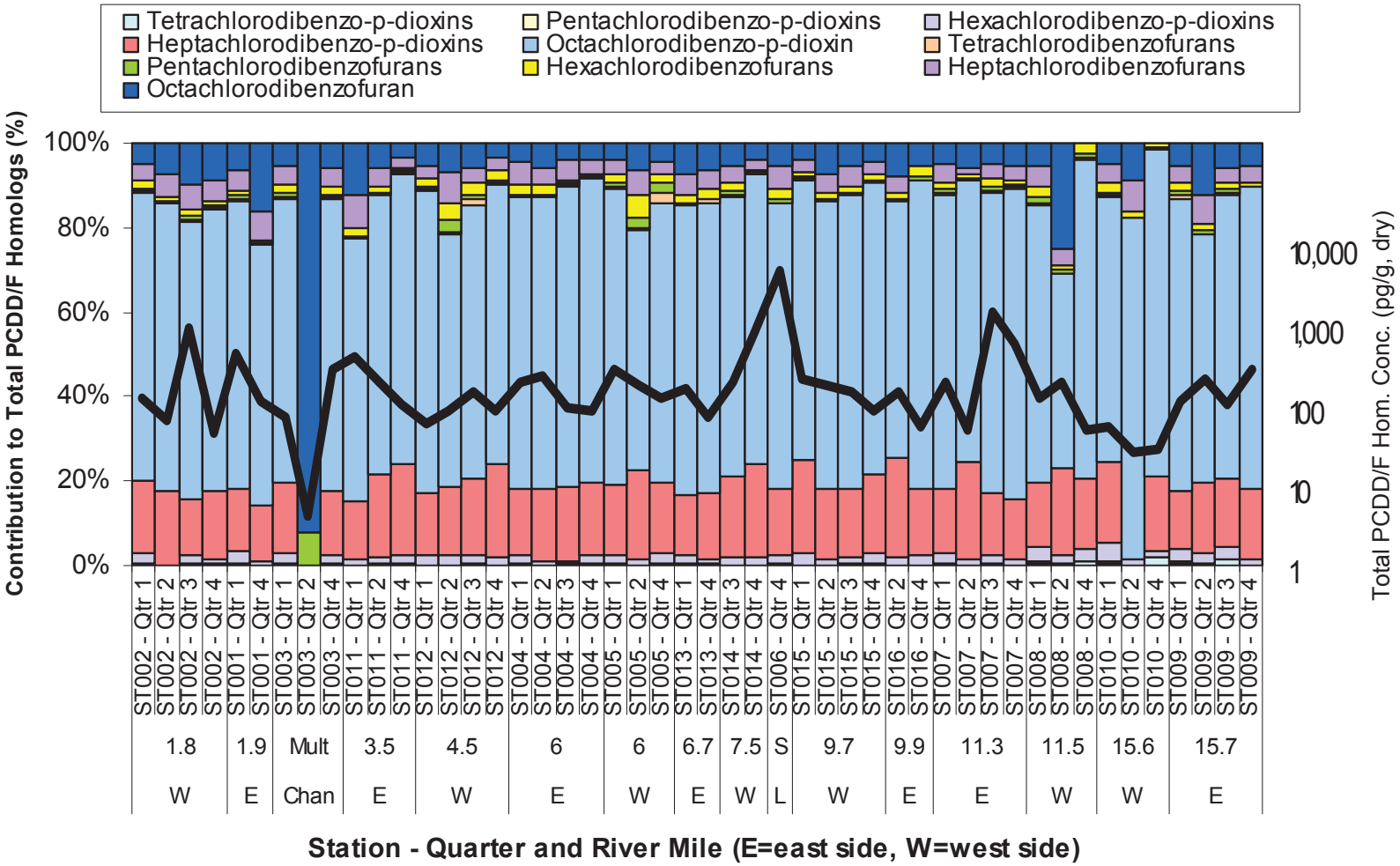




**Figure D2.3-4**
Portland Harbor RI/FS
Remedial Investigation Report
Relationships between hexaCBs and Total PCBs and
hepta CBs and Total PCBs for In-River Sediment Traps




Note: Black line shows Total PCD/F homolog concentration on a logarithmic scale.

**Figure D2.3-5a**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of PCDD/F Homolog Patterns
for In-River Sediment Traps, 2007

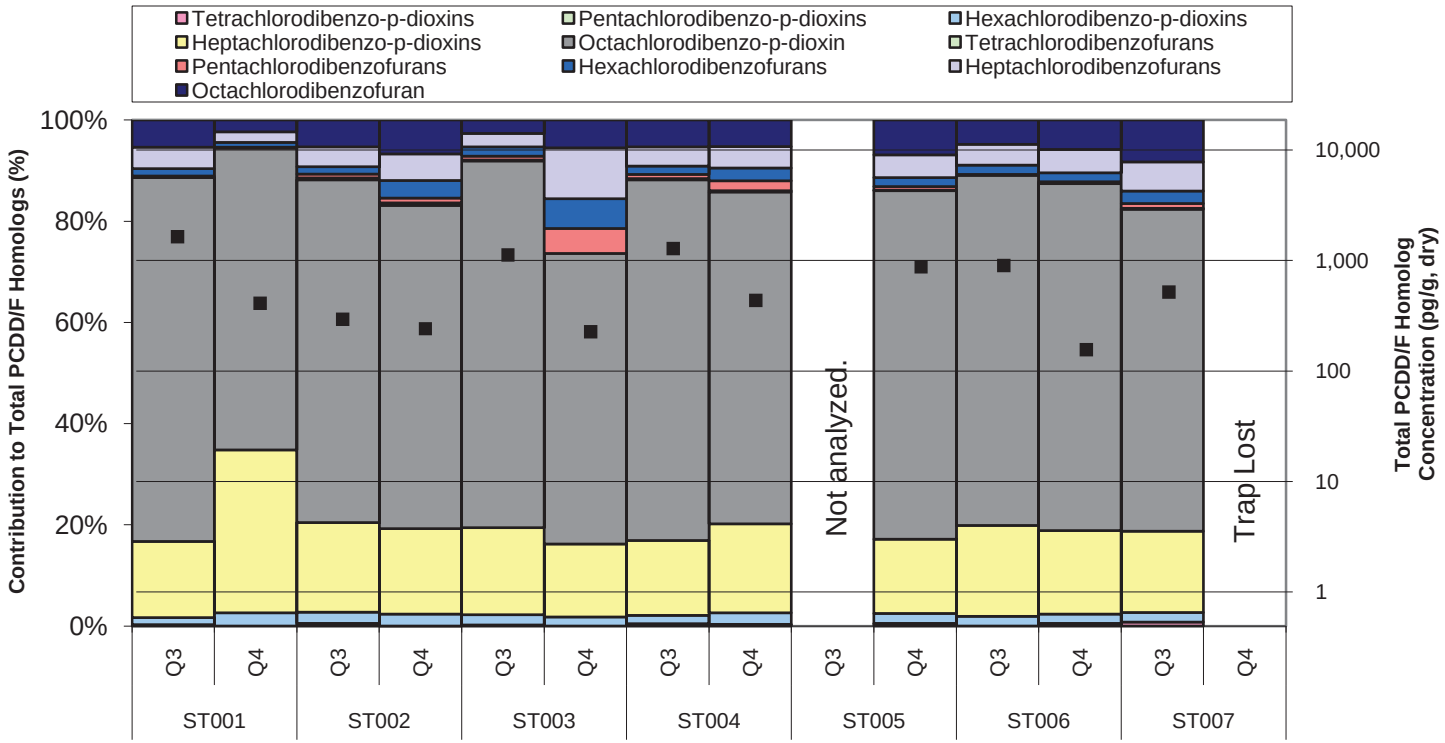
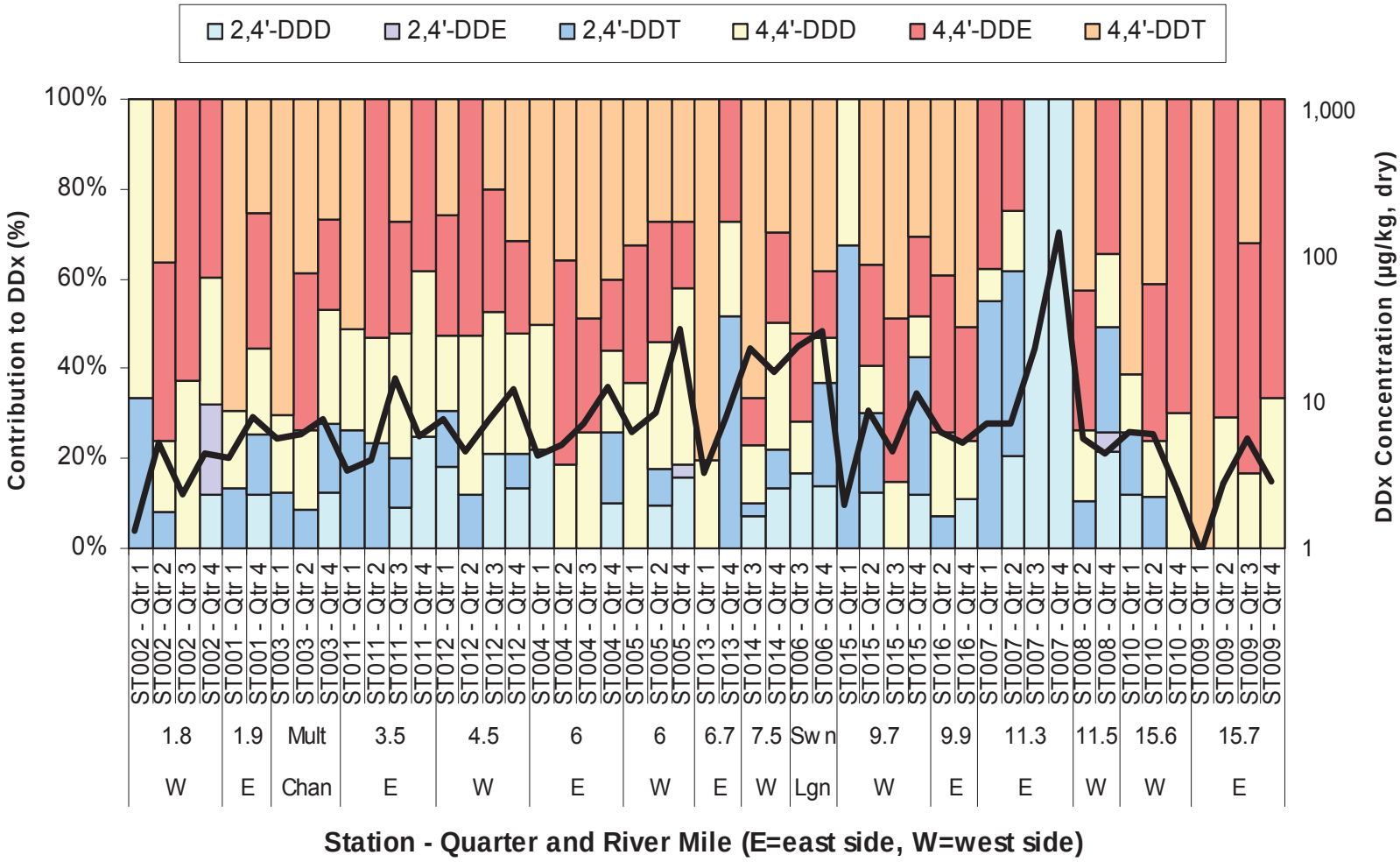



**Figure D2.3-5b**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of PCDD/F Homolog Patterns
for In-River Sediment Traps, RM 11E, 2009




Note: Black line shows DDx concentration on a logarithmic scale.

**Figure D2.3-6a**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of DDx Patterns
for In-River Sediment Traps, 2007

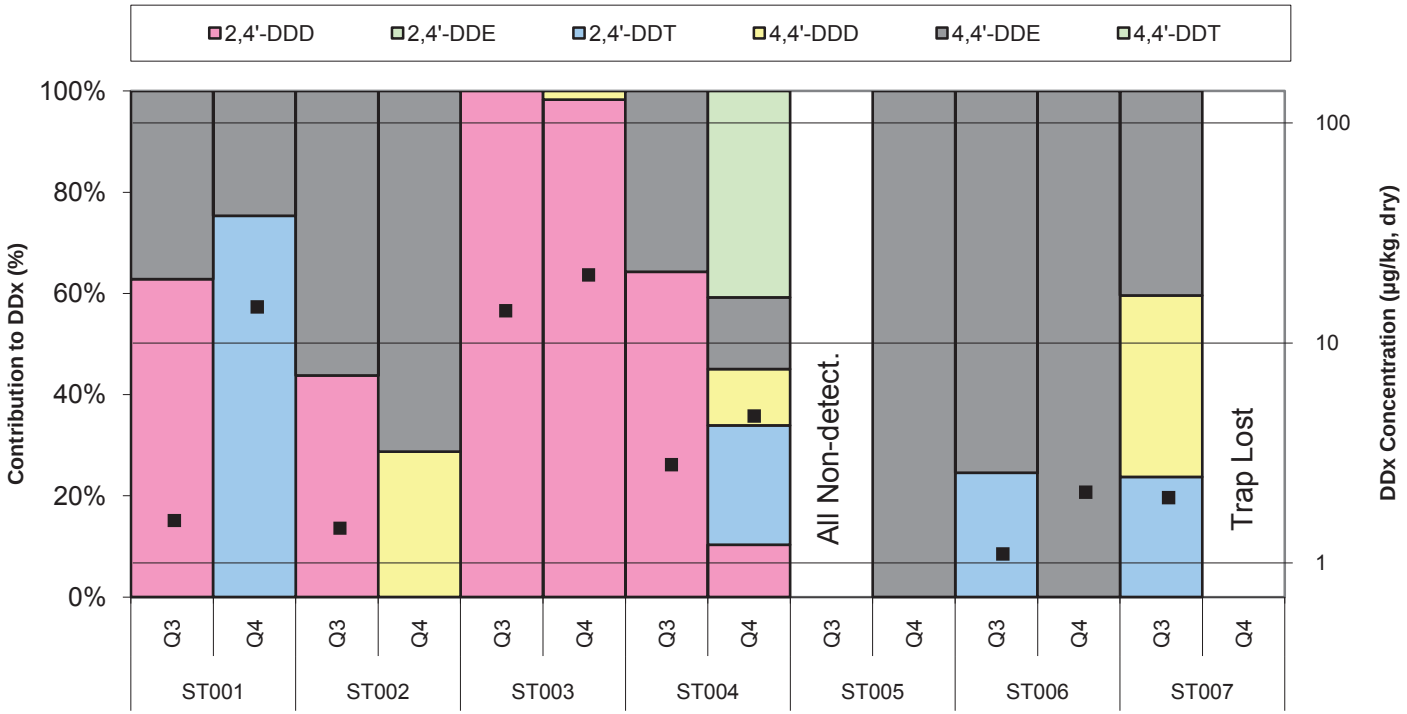
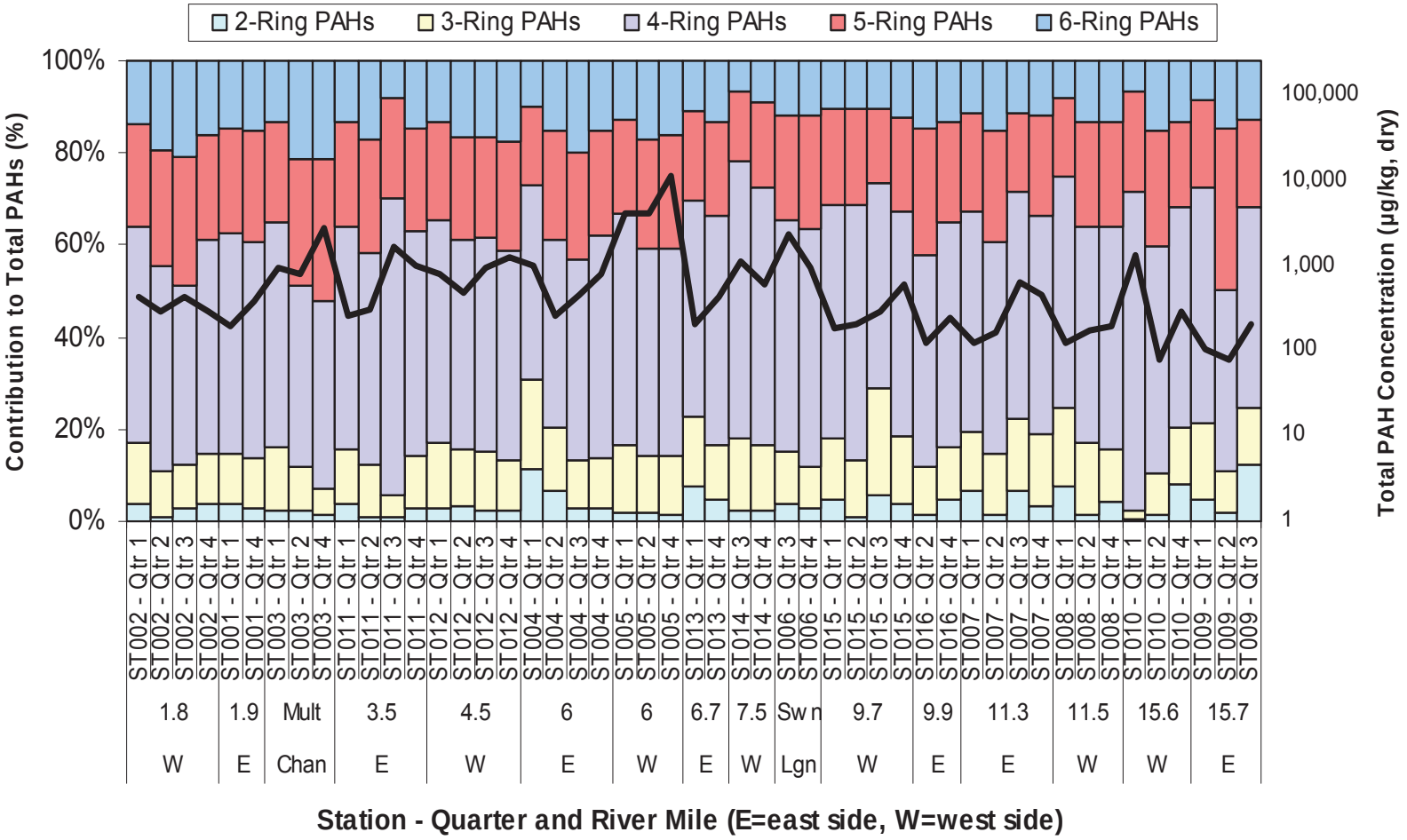



**Figure D2.3-6b**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of DDx Patterns
for In-River Sediment Traps, RM 11E, 2009




Note: Black line shows Total PAH concentration on a logarithmic scale.

**Figure D2.3-7a**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of PAH Patterns by Number of Rings
for In-River Sediment Traps, 2007

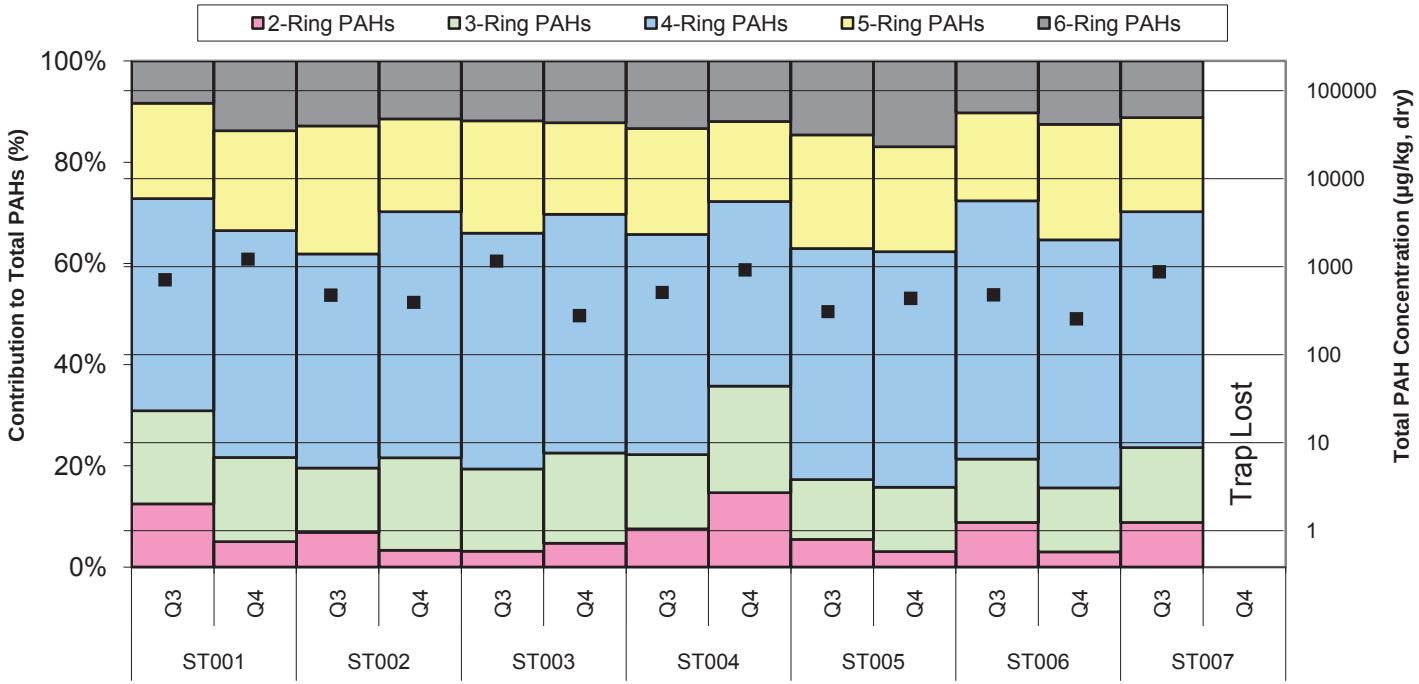
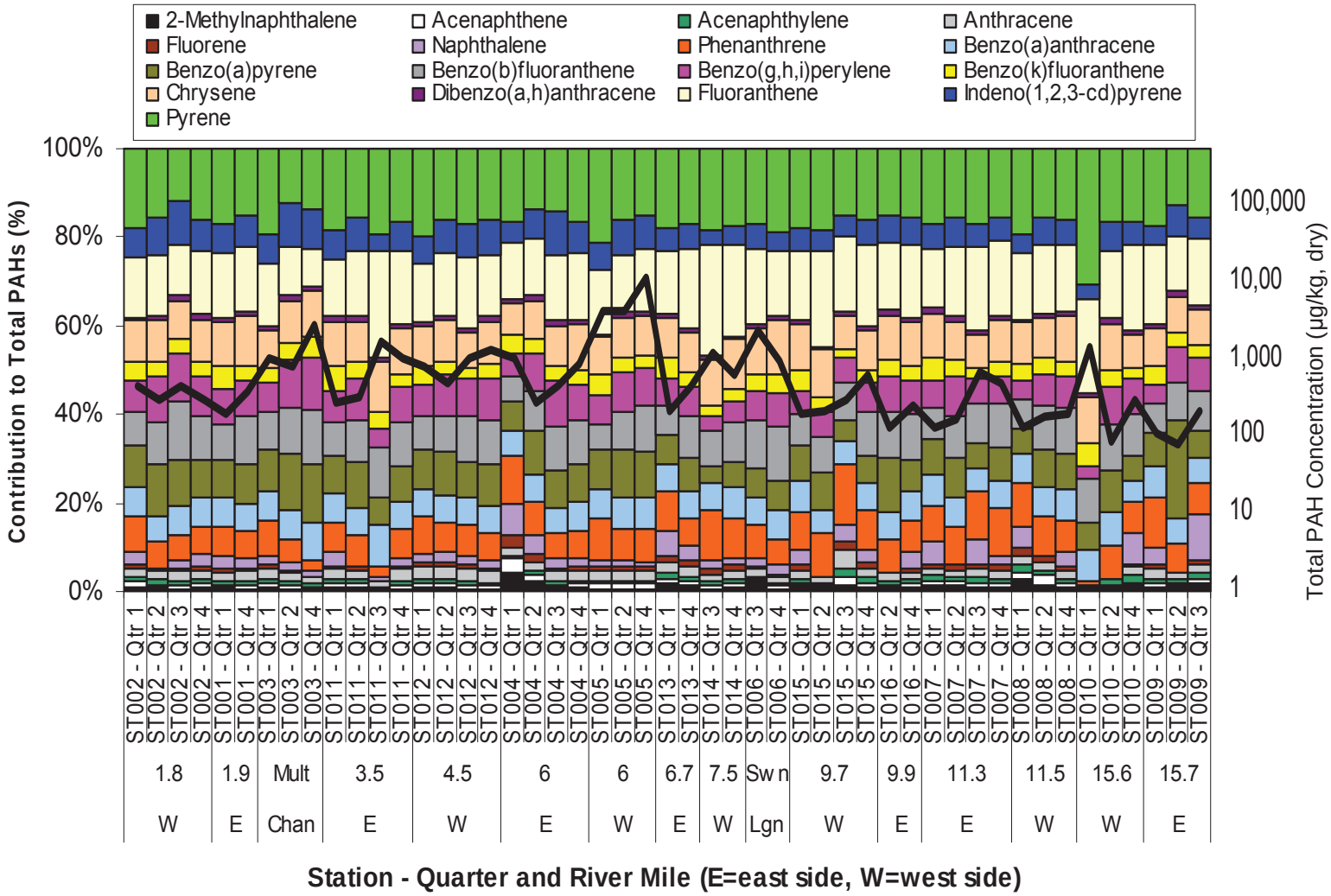



**Figure D2.3-7b**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of PAH Patterns by Number of Rings
for In-River Sediment Traps, RM 11E, 2009




Note: Black line shows Total PAH concentration on a logarithmic scale.

**Figure D2.3-8a**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of PAH Patterns
for In-River Sediment Traps, 2007

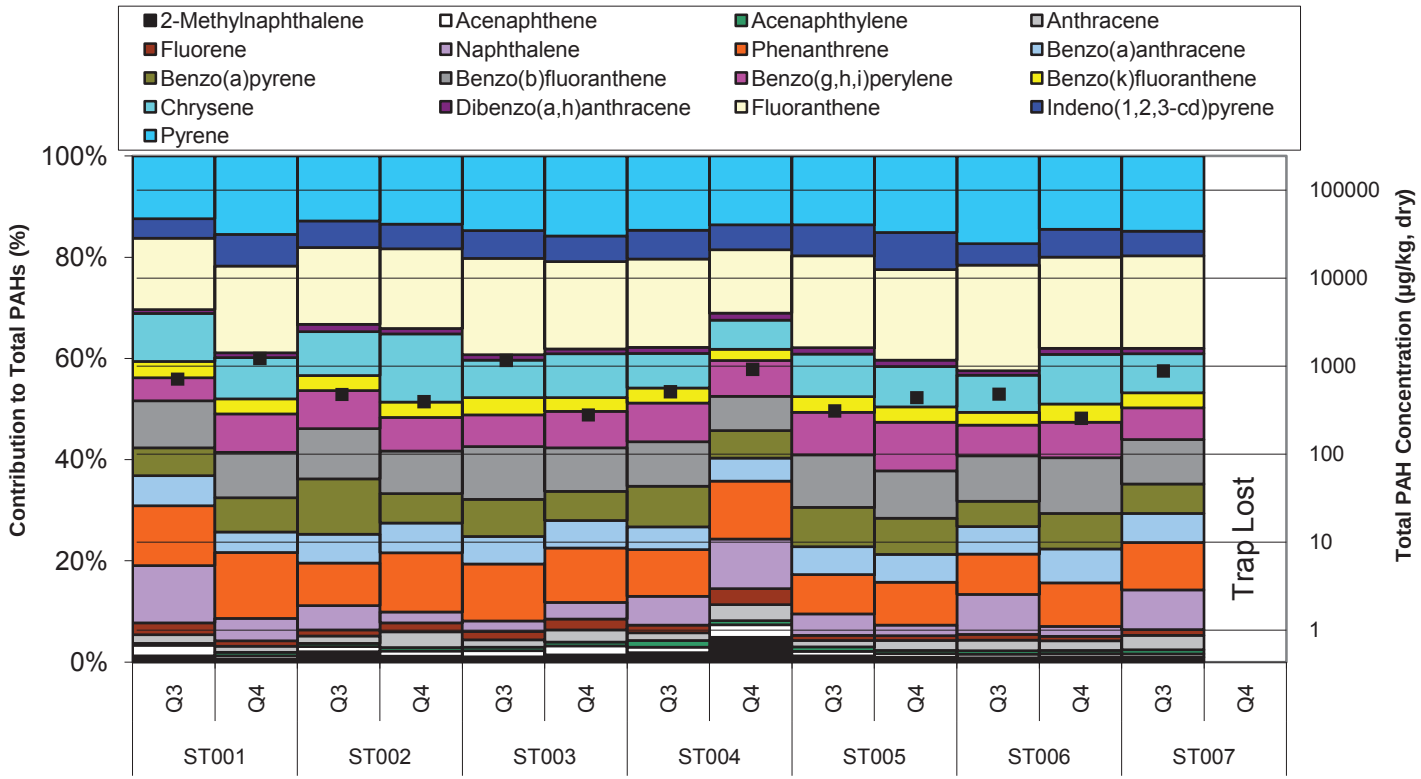



**Figure D2.3-8b**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of PAH Patterns
for In-River Sediment Traps, RM 11E, 2009

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D3
# SURFACE WATER

**FINAL**

February 8, 2016

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D3.1
# CONTAMINANTS IN SURFACE WATER—FIGURES

**FINAL**

February 8, 2016

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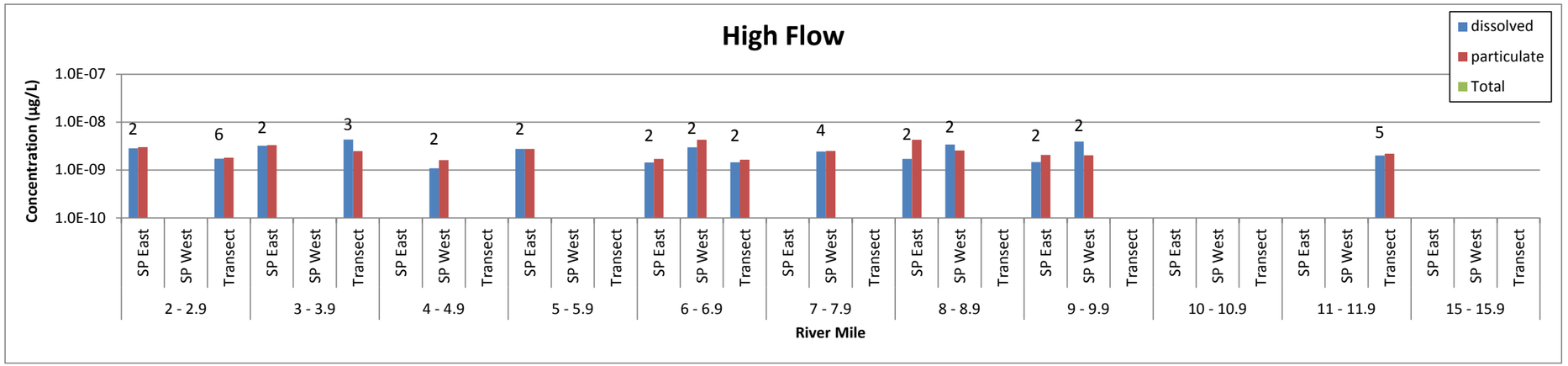
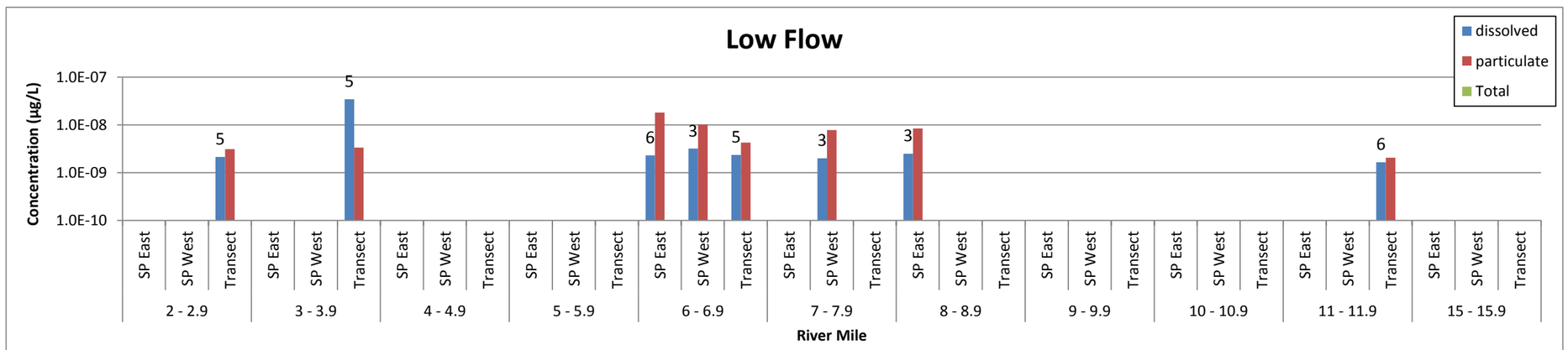
Figure D3.1-11. Histogram of Transect and Mean Single-Point Lead Concentrations in Surface Water by Flow Event (RM 2-16)



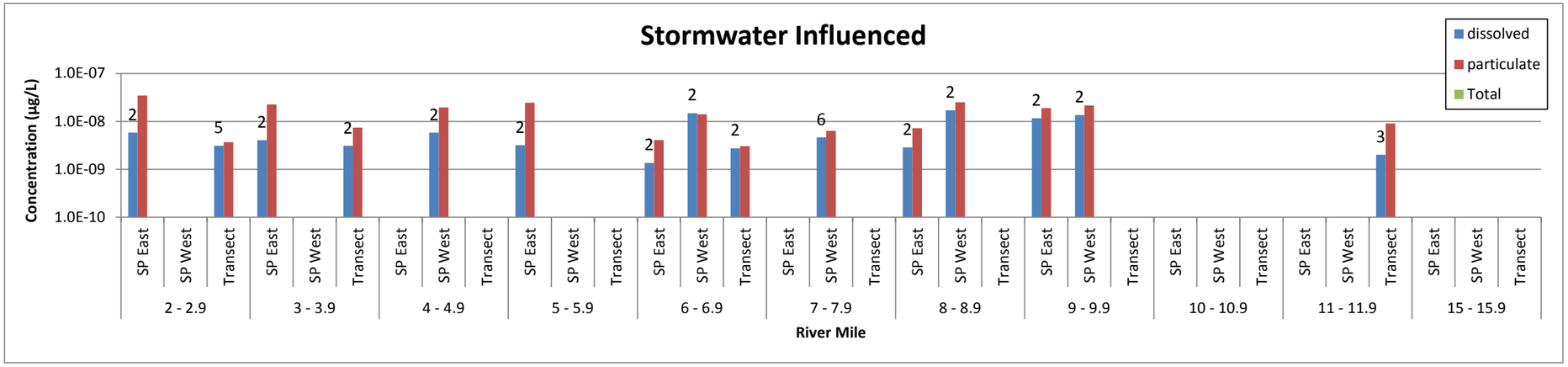
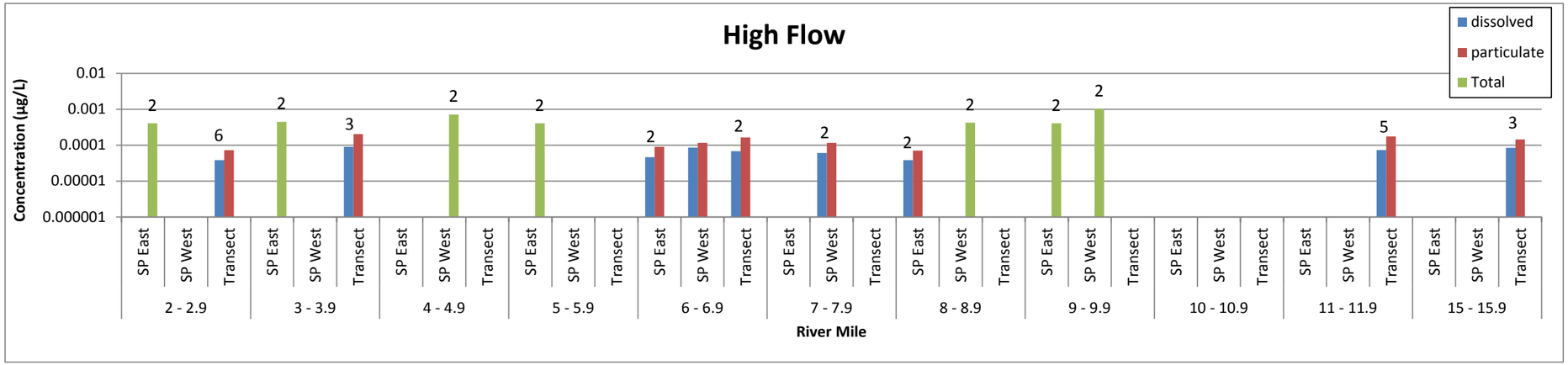
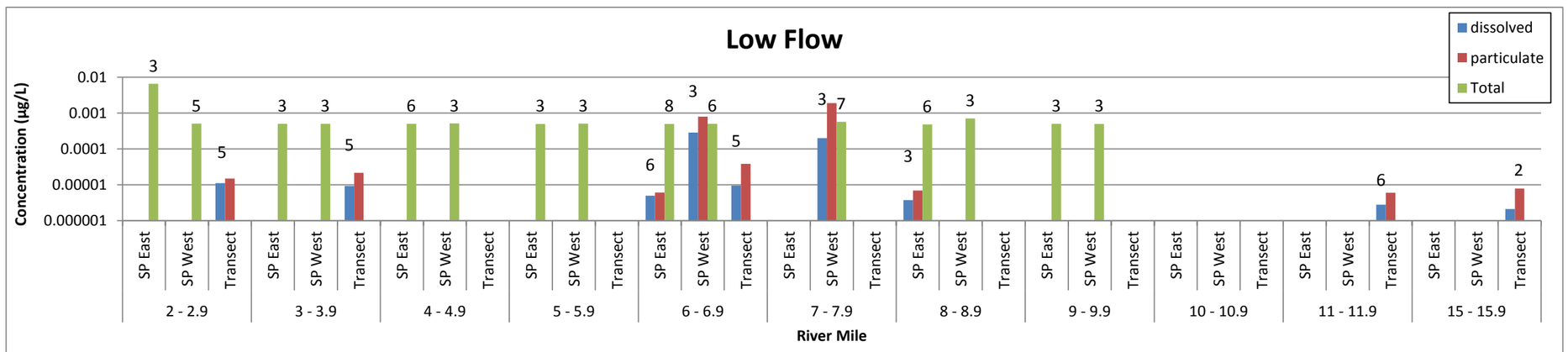




**Figure D3.1-1**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point PCB TEQ
Concentrations in Surface Water by Flow Event (RM 2-16)



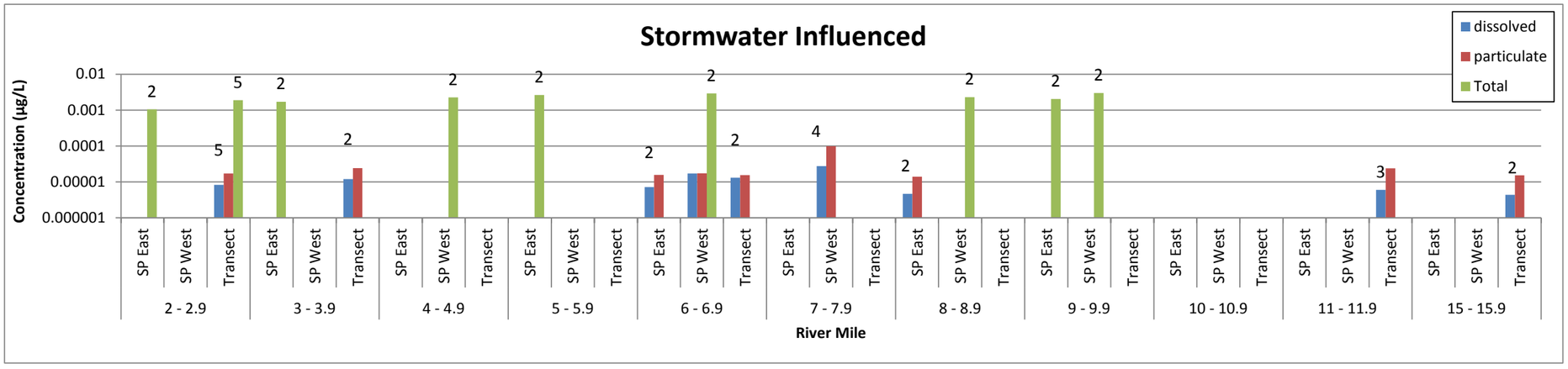
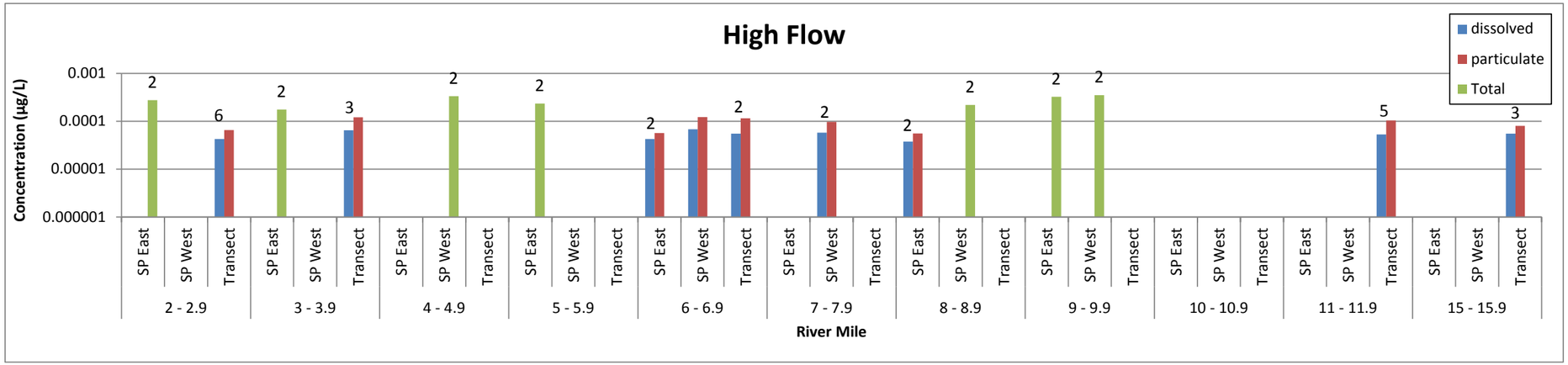
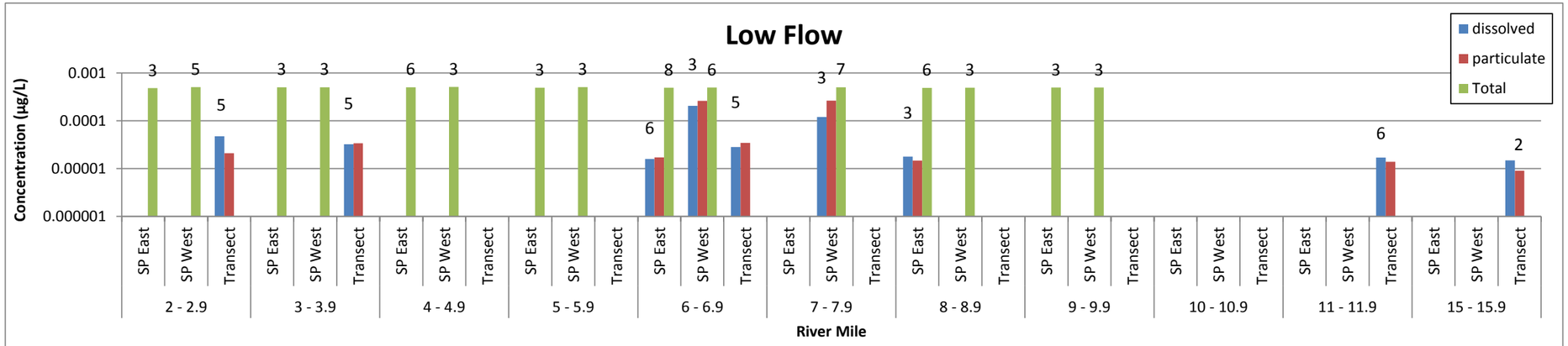




**Figure D3.1-2**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point Total DDT
Concentrations in Surface Water by Flow Event (RM 2-16)



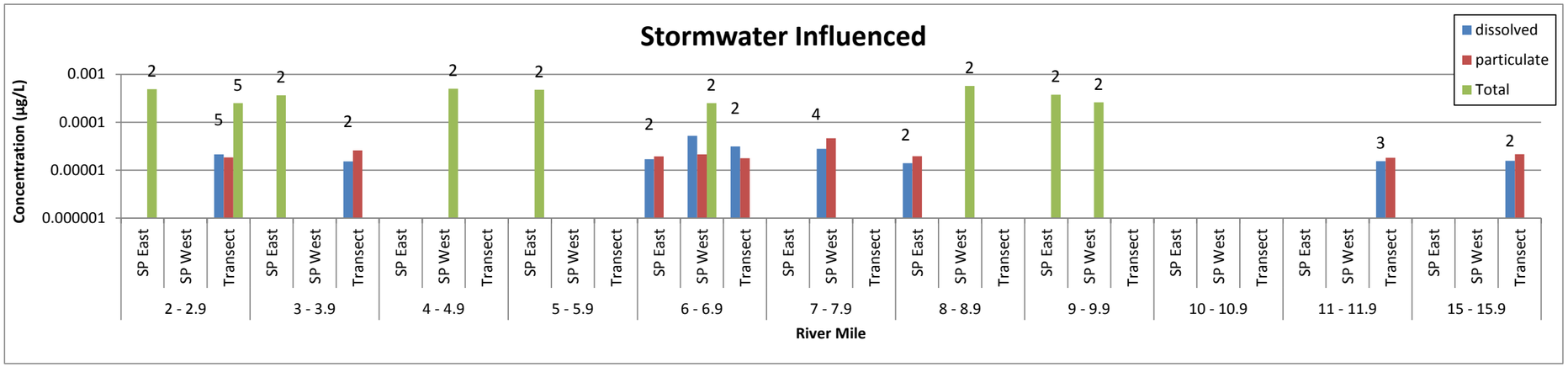
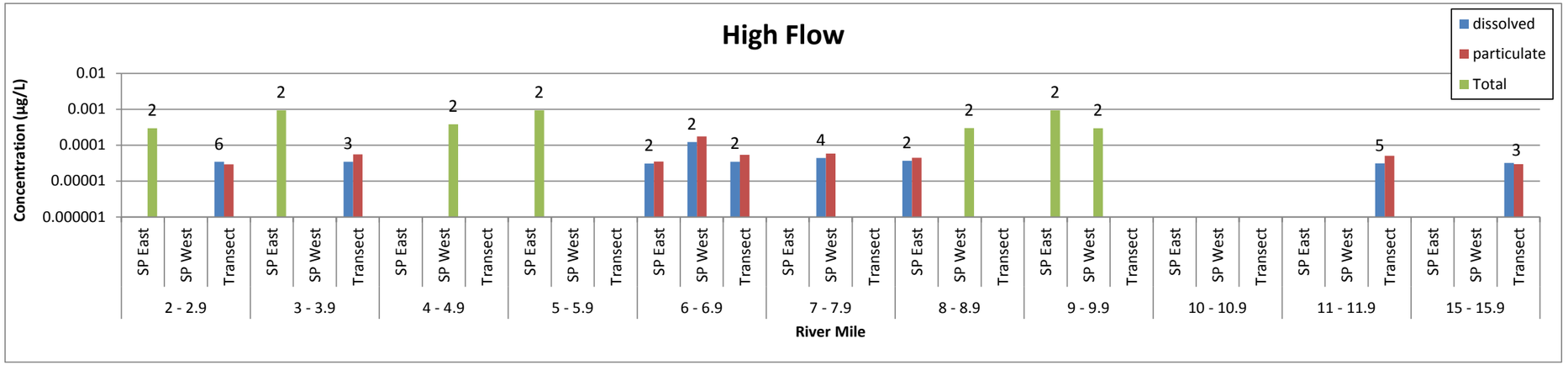
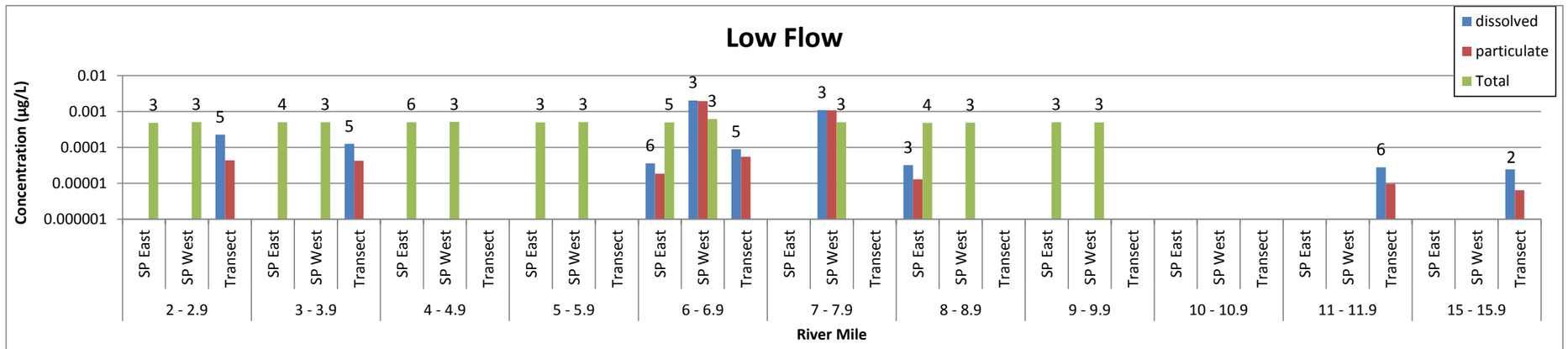




**Figure D3.1-3**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point Total DDE
Concentrations in Surface Water by Flow Event (RM 2-16)



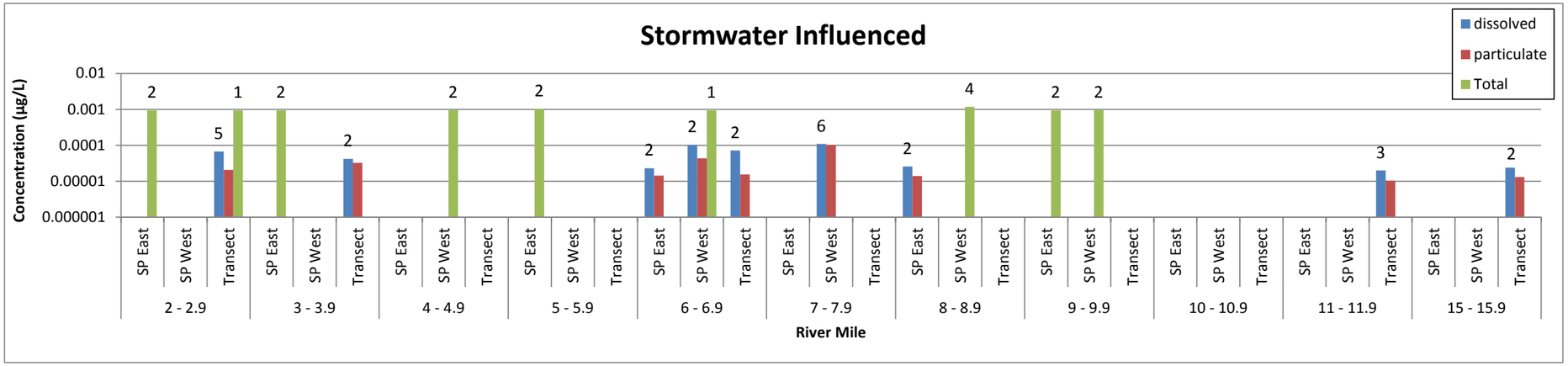
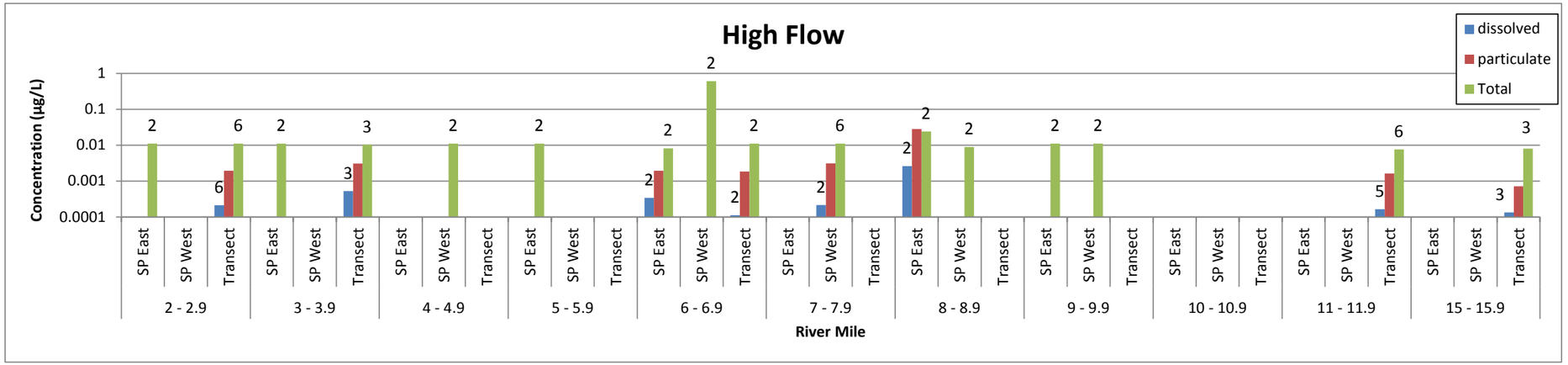
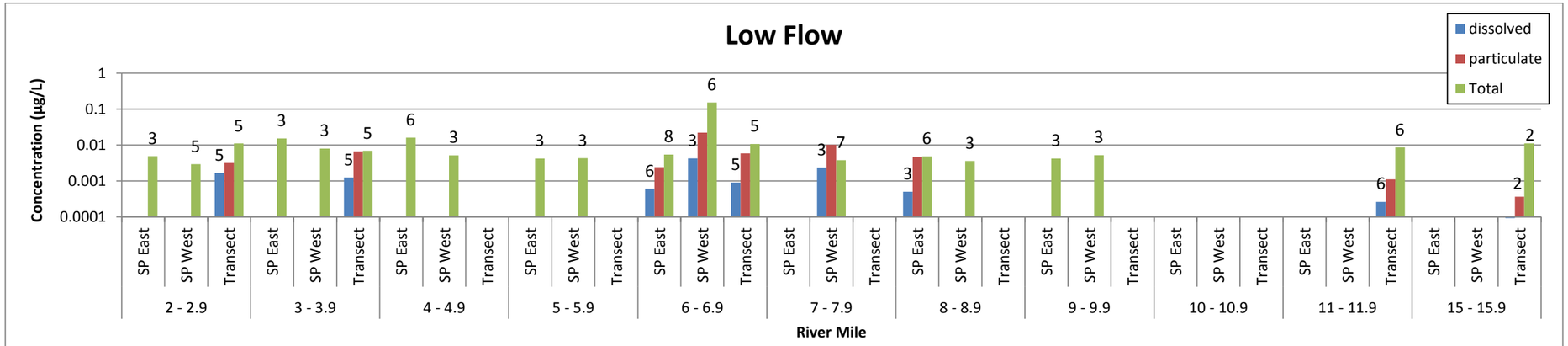




**Figure D3.1-4**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point Total DDD
Concentrations in Surface Water by Flow Event (RM 2-16)



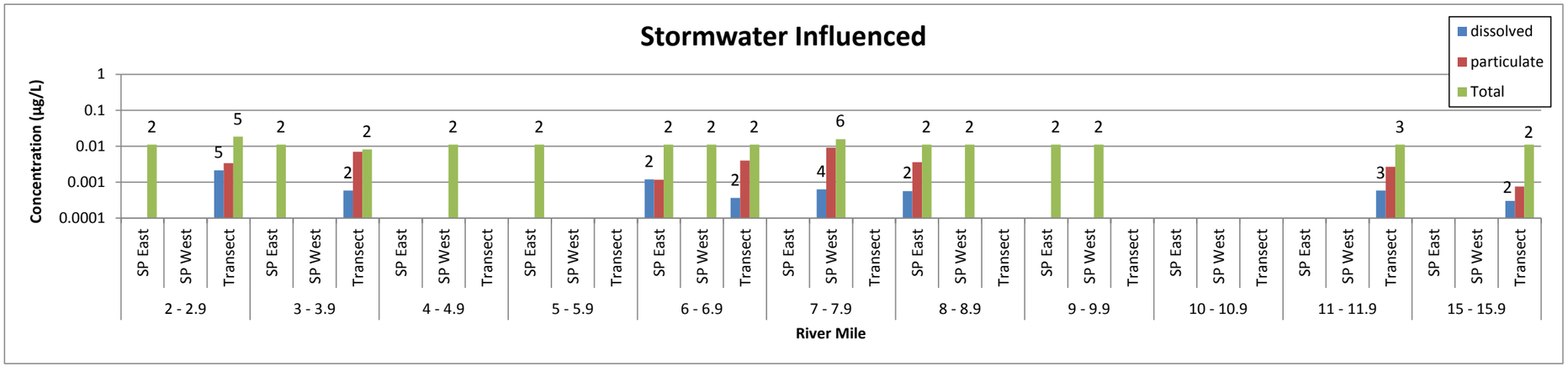
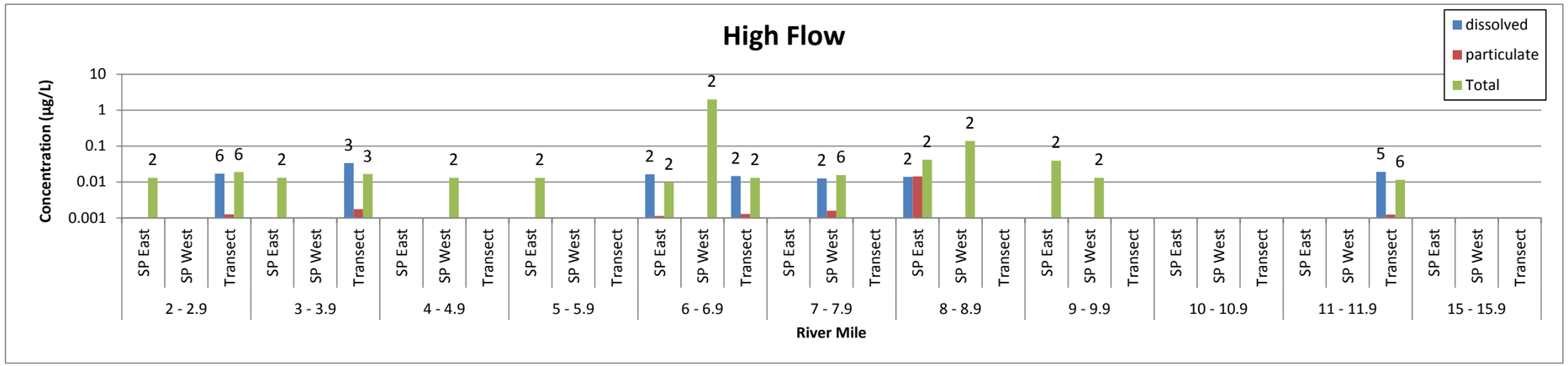
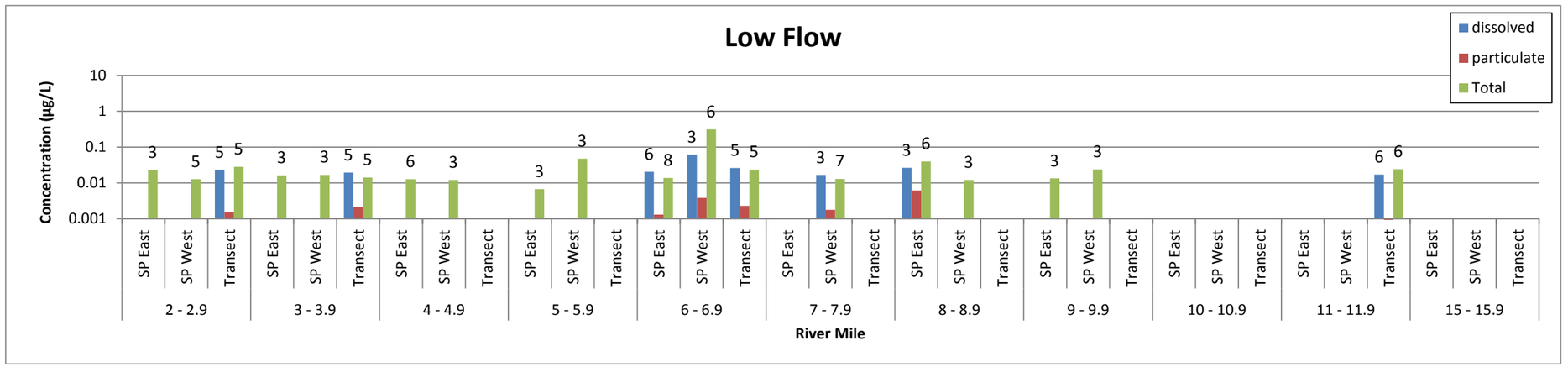




**Figure D3.1-5**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point Total Carcinogenic PAHs
Concentrations in Surface Water by Flow Event (RM 2-16)



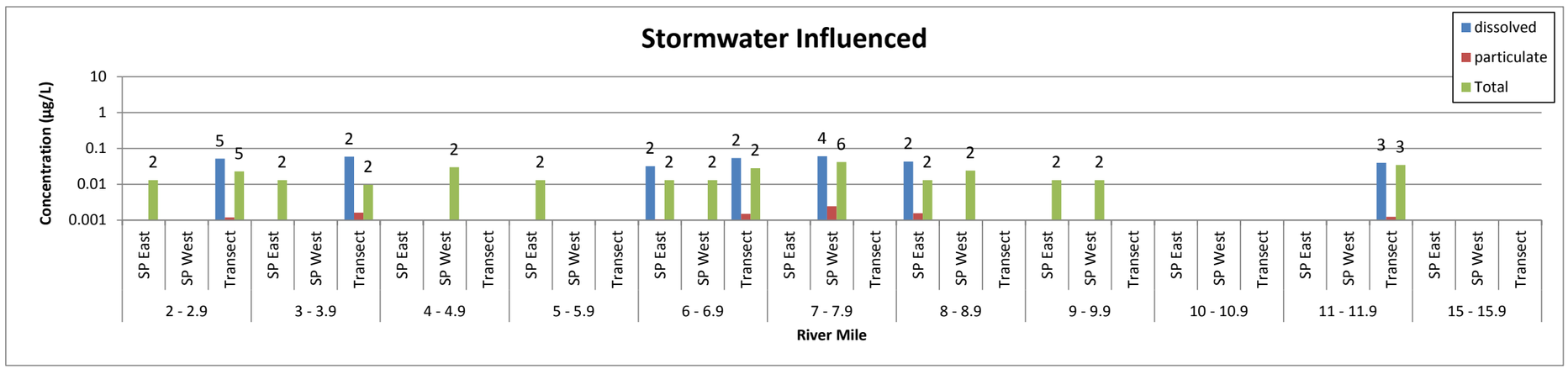
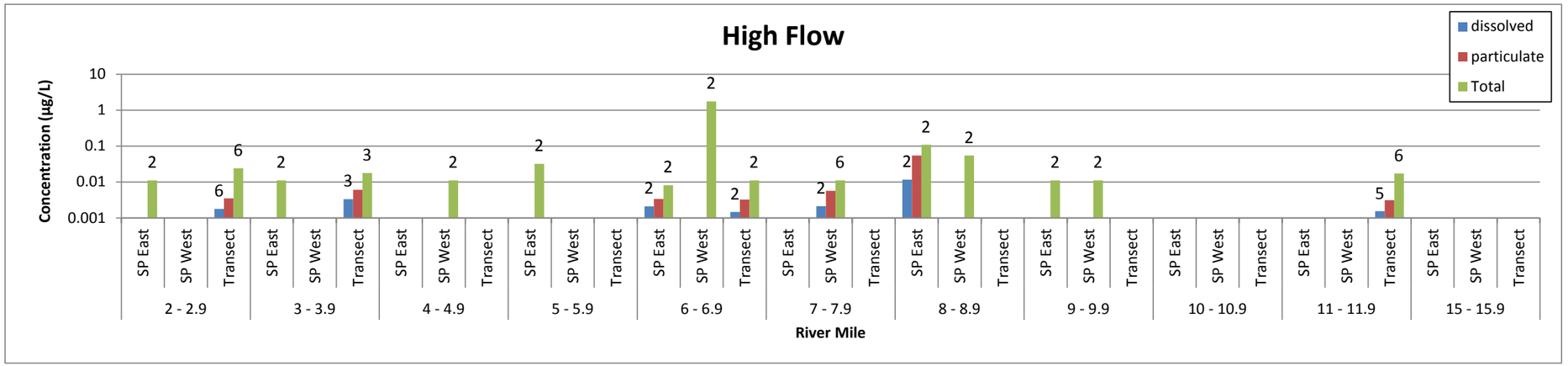
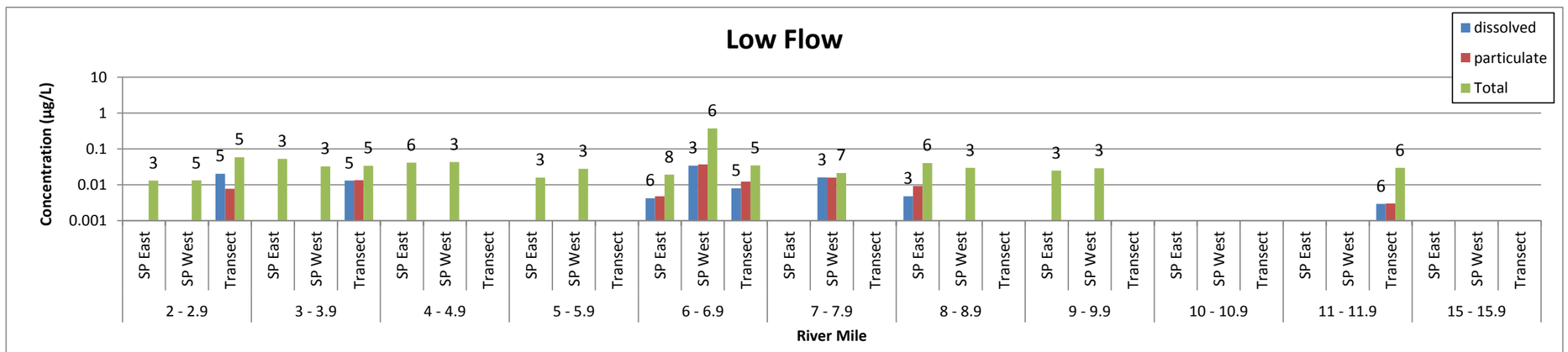




**Figure D3.1-6**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point Low Molecular Weight PAHs
Concentrations in Surface Water by Flow Event (RM 2-16)



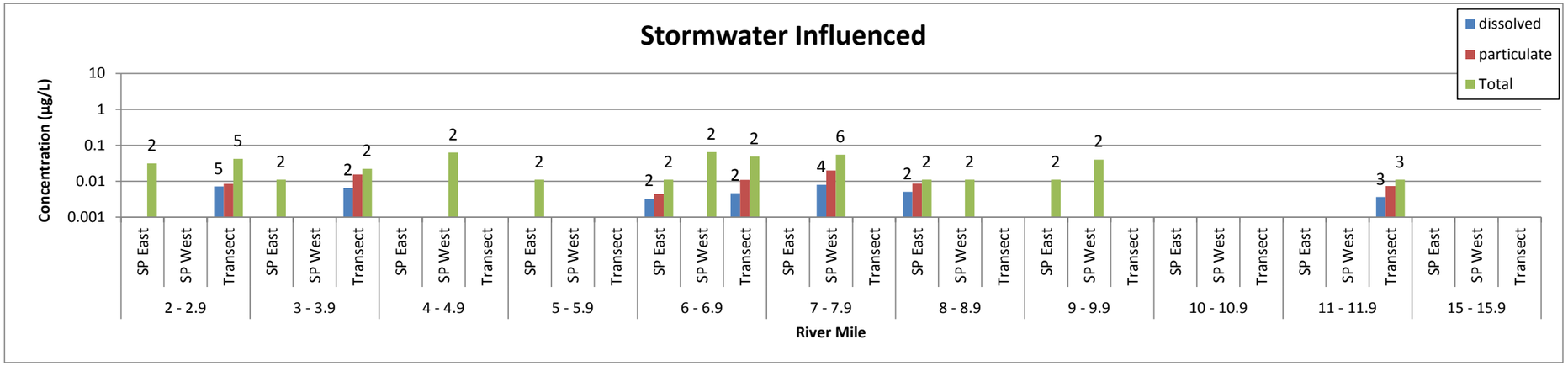
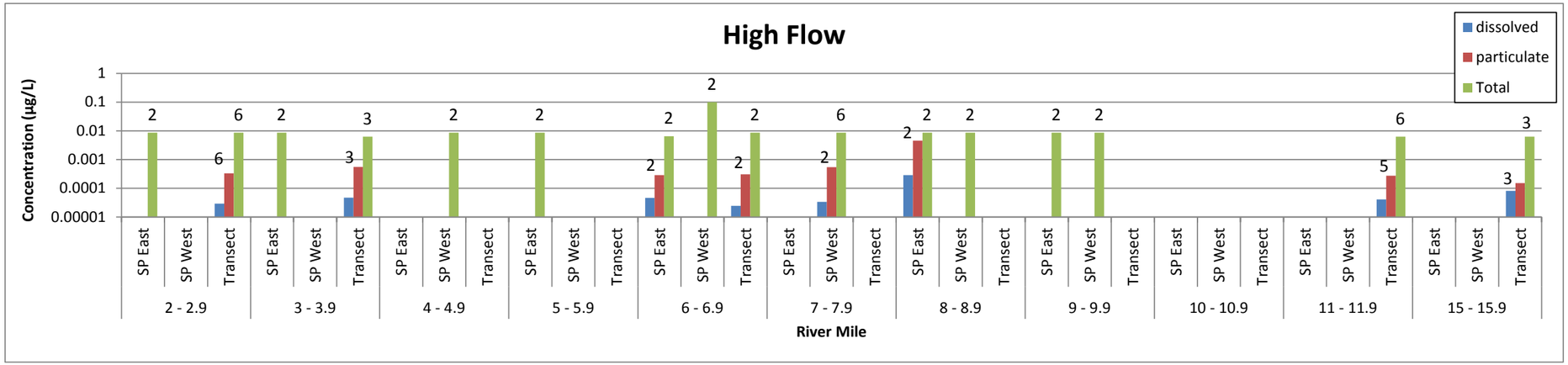
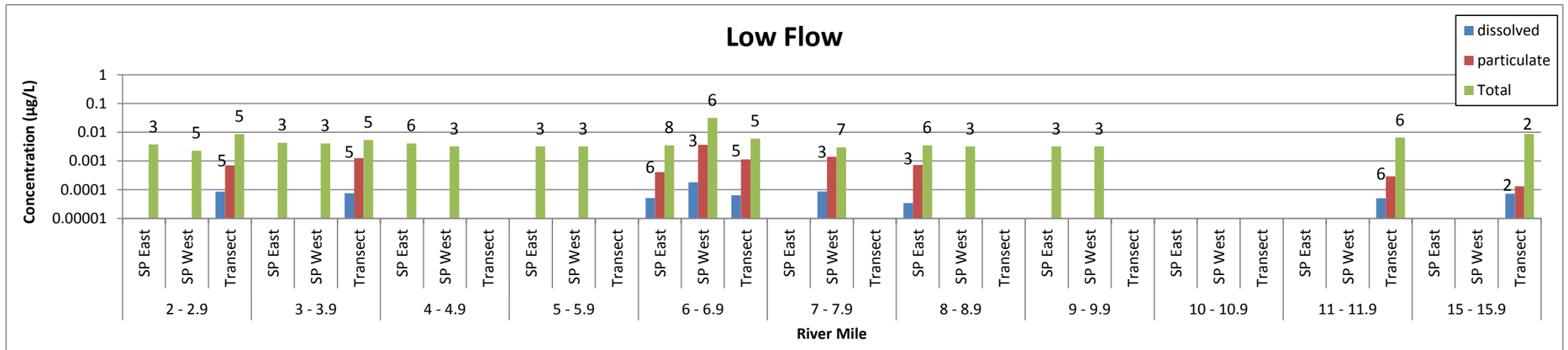




**Figure D3.1-7**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point High Molecular Weight PAHs
Concentrations in Surface Water by Flow Event (RM 2-16)



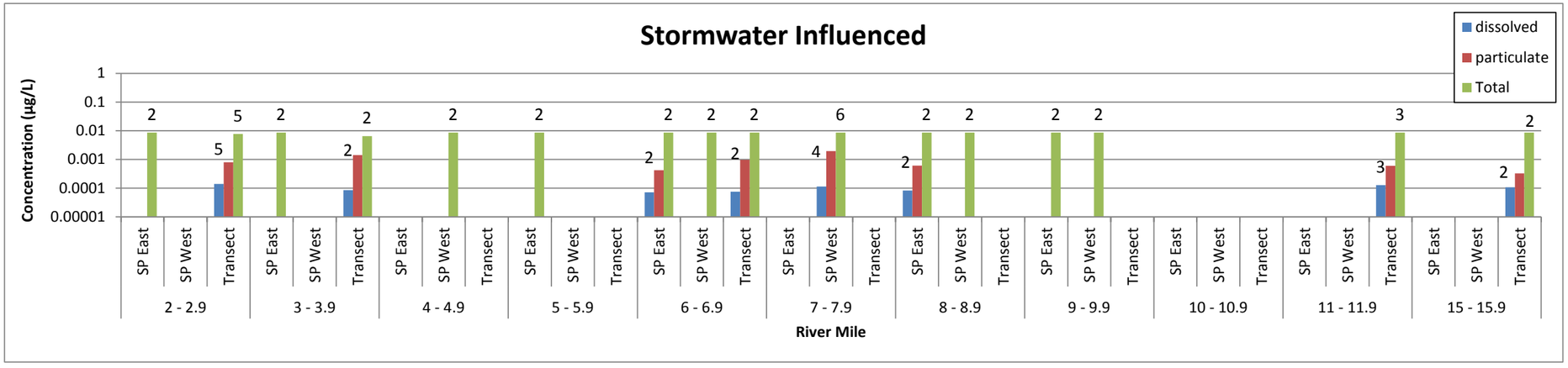
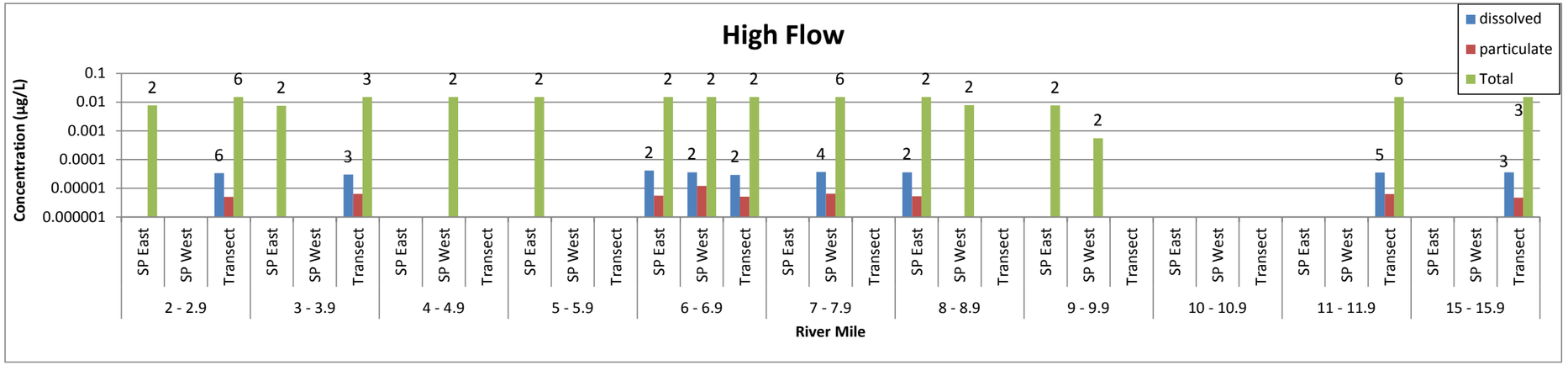
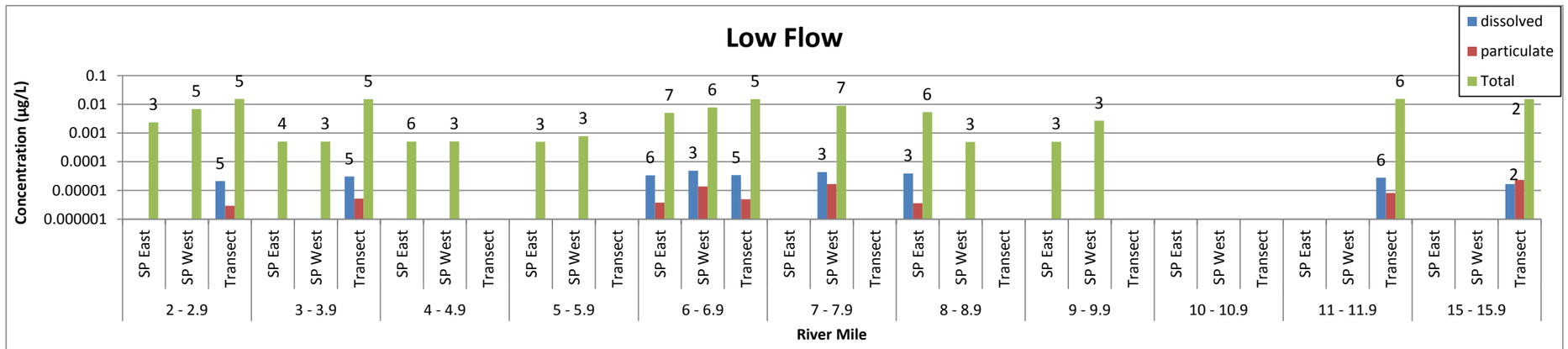




**Figure D3.1-8**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point Benzo(a)pyrene
Concentrations in Surface Water by Flow Event (RM 2-16)



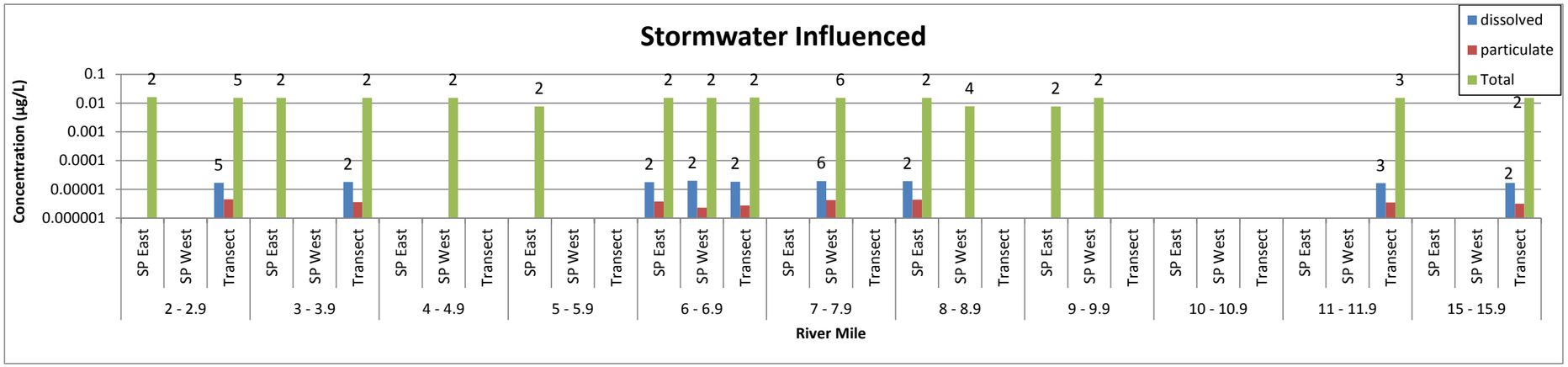
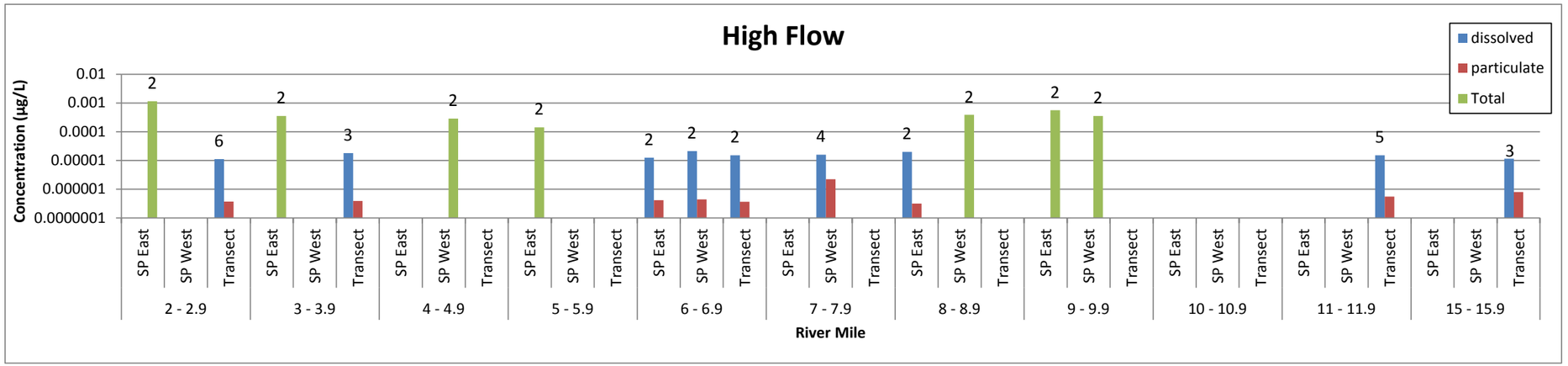
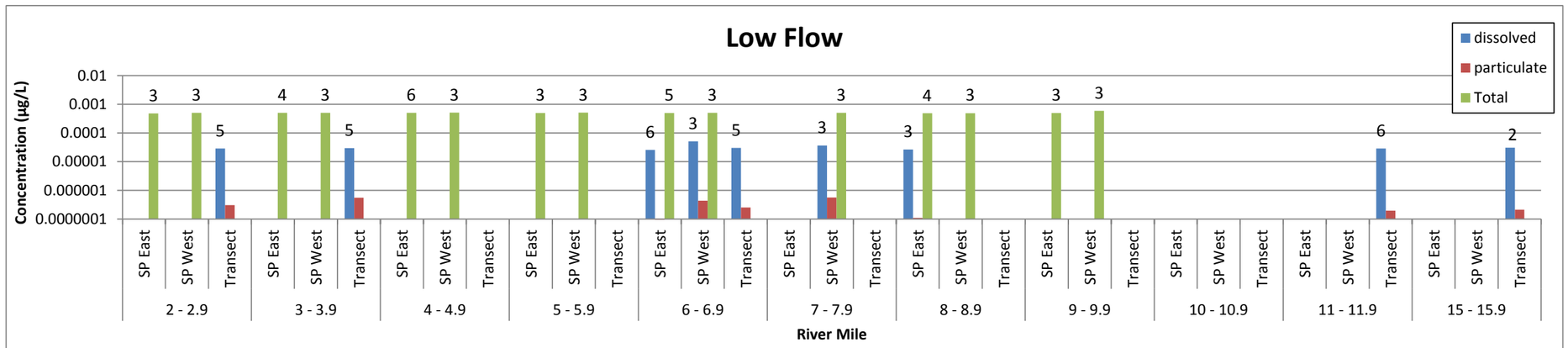




**Figure D3.1-9**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point Hexachlorobenzene
Concentrations in Surface Water by Flow Event (RM 2-16)



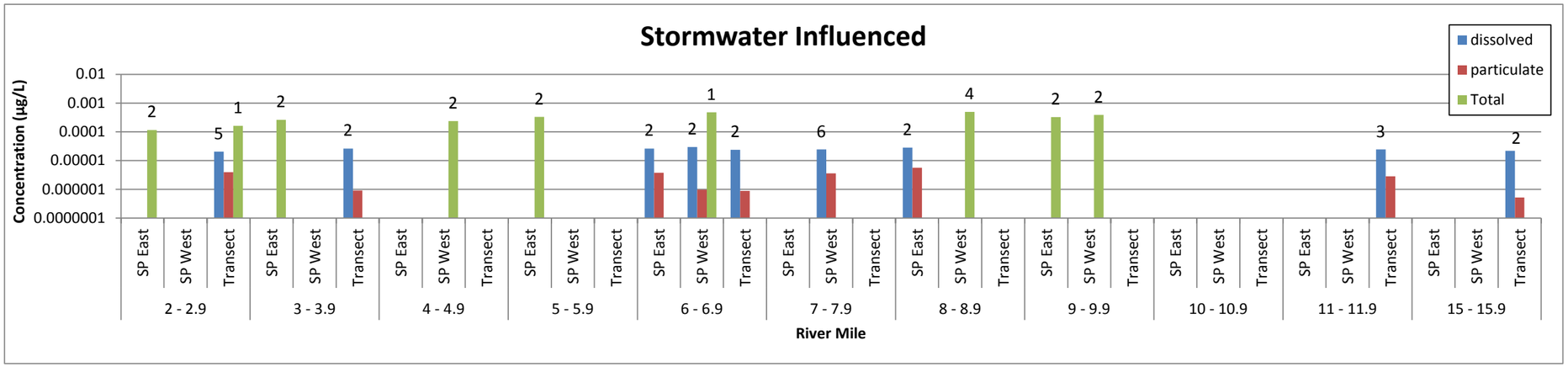
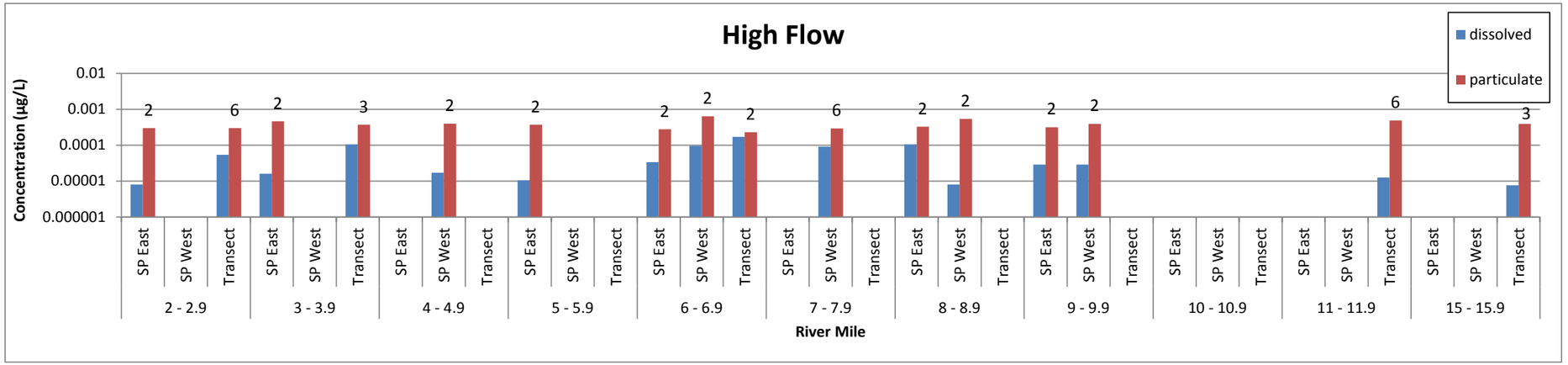
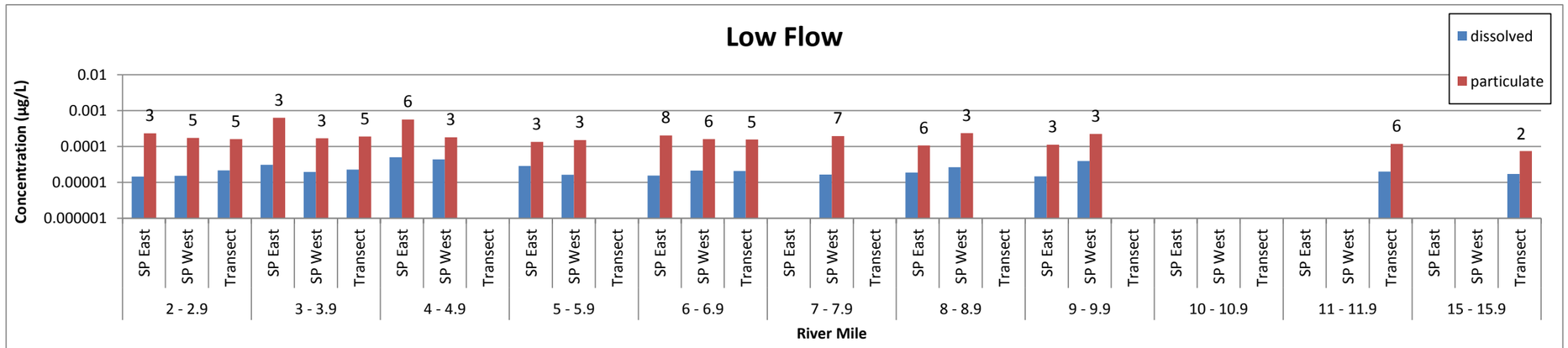




**Figure D3.1-10**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point gamma-Hexachlorocyclohexane (Lindane)
Concentrations in Surface Water by Flow Event (RM 2-16)



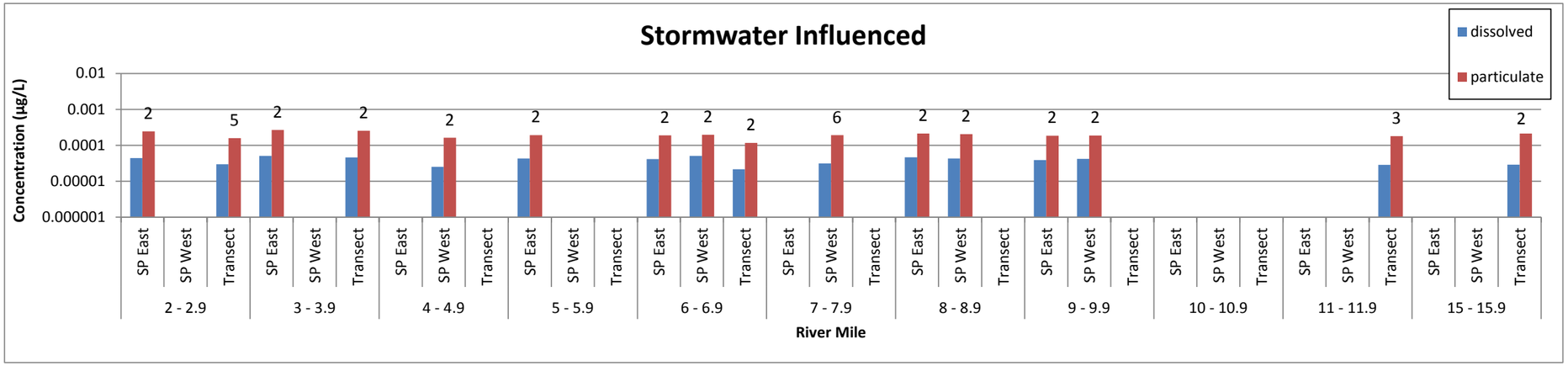




**Figure D3.1-11**
Portland Harbor RI/FS
Remedial Investigation Report
Histogram of Transect and Mean Single-Point Lead
Concentrations in Surface Water by Flow Event (RM 2-16)

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D3.2
# CONTAMINANT SUMMARY STATISTICS IN SURFACE WATER—TABLES

**FINAL**

February 8, 2016

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Table D3.2-1. Summary Statistics for COIs in Surface Water, High-Flow Events (Transect Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 20 | 20 | 100 | 0.184 | 0.281 J | W027 | 0.219 | 0.21 | 0.274 J |
| Arsenic | Peristaltic - particulate | µg/L | 20 | 20 | 100 | 0.05 | 0.33 | W005; W023 | 0.128 | 0.0905 | 0.33 |
| Arsenic | Peristaltic - total | µg/L | 20 | 20 | 100 | 0.254 T | 0.54 | W005; W023 | 0.347 | 0.321 J | 0.54 |
| Cadmium | Peristaltic - dissolved | µg/L | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 20 | 10 | 50 | 0.46 J | 0.83 | W024 | 0.612 | 0.57 J | 0.817 |
| Chromium | Peristaltic - particulate[d] | µg/L | 20 | 20 | 100 | 0 | 1.68 | W024 | 0.799 | 0.74 | 1.62 |
| Chromium | Peristaltic - total | µg/L | 20 | 20 | 100 | 0.58 | 1.73 | W027 | 1.11 | 0.995 | 1.68 |
| Copper | Peristaltic - dissolved | µg/L | 20 | 20 | 100 | 0.43 | 2.39 J | W023 | 0.844 | 0.665 J | 1.32 J |
| Copper | Peristaltic - particulate | µg/L | 20 | 20 | 100 | 0.57 | 2.89 J | W024 | 1.21 | 0.935 | 2.78 J |
| Copper | Peristaltic - total | µg/L | 20 | 20 | 100 | 1.1 | 3.68 J | W023 | 2.05 | 1.83 | 3.58 J |
| Lead | Peristaltic - dissolved | µg/L | 20 | 12 | 60 | 0.008 J | 0.179 | W011 | 0.0843 | 0.0765 | 0.174 |
| Lead | Peristaltic - particulate | µg/L | 20 | 20 | 100 | 0.167 | 0.833 | W023 | 0.377 | 0.314 J | 0.823 |
| Lead | Peristaltic - total | µg/L | 20 | 20 | 100 | 0.167 | 0.855 | W023 | 0.427 | 0.391 | 0.824 |
| Mercury | Peristaltic - dissolved | µg/L | 20 | 1 | 5 | 0.02 J | 0.02 J | W024 | 0.02 | 0.02 J | 0.02 J |
| Mercury | Peristaltic - particulate | µg/L | 20 | 3 | 15 | 0.02 J | 0.04 J | W023M; W025M | 0.0333 | 0.04 J | 0.04 J |
| Mercury | Peristaltic - total | µg/L | 20 | 3 | 15 | 0.04 J | 0.04 J | W023M; W024; W025M | 0.04 | 0.04 J | 0.04 J |
| Nickel | Peristaltic - dissolved | µg/L | 20 | 17 | 85 | 0.43 | 1.01 J | W024 | 0.678 | 0.71 | 0.906 J |
| Nickel | Peristaltic - particulate[d] | µg/L | 20 | 19 | 95 | 0 J | 1.5 | W024 | 0.65 | 0.58 | 1.38 |
| Nickel | Peristaltic - total | µg/L | 20 | 18 | 90 | 0.785 T | 1.93 | W024 | 1.27 | 1.22 | 1.9 |
| Zinc | Peristaltic - dissolved | µg/L | 20 | 1 | 5 | 2.5 | 2.5 | W005 | 2.5 | 2.5 | 2.5 |
| Zinc | Peristaltic - particulate | µg/L | 20 | 20 | 100 | 1.85 | 6.38 | W023; W024 | 3.95 | 4 | 6.38 |
| Zinc | Peristaltic - total | µg/L | 20 | 20 | 100 | 1.85 T | 6.38 | W023; W024 | 4.07 | 4.1 | 6.38 |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 19 | 19 | 100 | 0.0000346 JT | 0.0000996 JT | W027 | 0.0000653 | 0.0000674 JT | 0.0000995 J |
| Total PCBs | XAD Filter - particulate | µg/L | 19 | 19 | 100 | 0.00000733 JT | 0.000313 JT | W005 | 0.0000908 | 0.000076 JT | 0.00019 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 19 | 19 | 100 | 0.0000419 J | 0.000391 J | W005 | 0.000156 | 0.000137 J | 0.000287 J |
| **PCDD/F Homologs** | | | | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 19 | 19 | 100 | 0.00000141 JT | 0.00000443 JT | W024 | 0.00000297 | 0.00000331 JT | 0.00000416 J |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 19 | 19 | 100 | 0.0000032 JT | 0.0000402 T | W005 | 0.0000182 | 0.0000181 T | 0.0000306 |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 19 | 19 | 100 | 0.00000536 J | 0.000044 | W005 | 0.0000212 | 0.0000216 J | 0.0000338 J |
| **PCDD/Fs** | | | | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 19 | 19 | 100 | 0.00000000288 T | 0.0000000182 JT | W024 | 0.00000000865 | 0.00000000836 JT | 0.0000000153 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 19 | 19 | 100 | 0.00000000497 JT | 0.0000000763 JT | W023 | 0.0000000386 | 0.000000039 JT | 0.0000000717 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 19 | 19 | 100 | 0.0000000113 J | 0.0000000912 J | W023 | 0.0000000472 | 0.0000000474 J | 0.0000000867 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 19 | 19 | 100 | 0.0000000000325 T | 0.0000000000837 JT | W005 | 0.0000000000573 | 0.0000000000584 JT | 0.0000000000829 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 19 | 19 | 100 | 0.0000000000208 JT | 0.00000000295 JT | W027 | 0.00000000116 | 0.00000000124 JT | 0.00000000272 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 19 | 19 | 100 | 0.0000000000541 J | 0.00000000301 J | W027 | 0.00000000121 | 0.00000000131 J | 0.00000000278 J |

Table D3.2-1. Summary Statistics for COIs in Surface Water, High-Flow Events (Transect Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 19 | 19 | 100 | 0.00000124 J | 0.00000467 J | W025M | 0.00000232 | 0.00000206 J | 0.00000329 J |
| Aldrin | XAD Filter - particulate | µg/L | 19 | 17 | 89 | 0.000000415 J | 0.00000197 J | W023 | 0.0000011 | 0.000000943 J | 0.00000192 J |
| Aldrin | XAD Column+Filter - total | µg/L | 19 | 19 | 100 | 0.00000124 J | 0.00000599 J | W025M | 0.00000331 | 0.00000333 J | 0.00000487 J |
| Dieldrin | XAD Column - dissolved | µg/L | 19 | 19 | 100 | 0.0000632 | 0.00033 | W005 | 0.000142 | 0.000126 | 0.000305 |
| Dieldrin | XAD Filter - particulate | µg/L | 19 | 18 | 95 | 0.00000612 J | 0.0000537 | W005 | 0.0000205 | 0.0000176 J | 0.0000514 |
| Dieldrin | XAD Column+Filter - total | µg/L | 19 | 19 | 100 | 0.0000705 J | 0.000384 | W005 | 0.000162 | 0.000144 J | 0.000356 |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 19 | 19 | 100 | 0.00000573 J | 0.0000194 J | W023 | 0.0000138 | 0.0000151 J | 0.0000186 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 19 | 13 | 68 | 0.000000205 J | 0.00000119 J | W023E | 0.000000441 | 0.000000373 J | 0.000000822 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 19 | 19 | 100 | 0.00000573 J | 0.0000194 J | W023 | 0.0000141 | 0.0000155 J | 0.0000186 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 19 | 19 | 100 | 0.0000265 JT | 0.0000557 JT | W005 | 0.0000391 | 0.0000378 JT | 0.000054 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 19 | 19 | 100 | 0.00000291 JT | 0.0000434 JT | W023E | 0.0000225 | 0.0000253 JT | 0.0000408 J |
| Total chlordanes | XAD Column+Filter - total | µg/L | 19 | 19 | 100 | 0.0000336 J | 0.0000943 J | W005 | 0.0000616 | 0.0000663 J | 0.0000914 J |
| DDx | XAD Column - dissolved | µg/L | 19 | 19 | 100 | 0.0000959 JT | 0.00021 JT | W024 | 0.000152 | 0.000154 JT | 0.000201 J |
| DDx | XAD Filter - particulate | µg/L | 19 | 19 | 100 | 0.0000296 JT | 0.000436 JT | W023E | 0.000274 | 0.000323 JT | 0.00043 J |
| DDx | XAD Column+Filter - total | µg/L | 19 | 19 | 100 | 0.000162 J | 0.000618 J | W023E | 0.000426 | 0.000471 J | 0.000601 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 19 | 7 | 37 | 0.000023 J | 0.000061 J | W005 | 0.0000338 | 0.0000236 J | 0.0000569 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 19 | 15 | 79 | 0.00017 J | 0.000822 | W005 | 0.000378 | 0.000319 J | 0.000637 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 19 | 15 | 79 | 0.00017 J | 0.000883 J | W005 | 0.000394 | 0.00033 | 0.000671 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 19 | 19 | 100 | 0.000486 JT | 0.00439 JT | W005 | 0.00159 | 0.00127 JT | 0.00289 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 19 | 19 | 100 | 0.000144 JT | 0.00897 JT | W005 | 0.003 | 0.00294 JT | 0.00582 J |
| Total HPAHs | Peristaltic - total | µg/L | 20 | 6 | 30 | 0.0026 JT | 0.0263 JT | W005 | 0.0121 | 0.011 J | 0.0245 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 19 | 19 | 100 | 0.000648 J | 0.0134 J | W005 | 0.00459 | 0.00421 J | 0.00813 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 19 | 19 | 100 | 0.0046 T | 0.0439 T | W005 | 0.0109 | 0.00608 T | 0.0269 |
| Total LPAHs | XAD Filter - particulate | µg/L | 19 | 16 | 84 | 0.000237 JT | 0.0021 JT | W005 | 0.000986 | 0.000851 J | 0.00194 J |
| Total LPAHs | Peristaltic - total | µg/L | 20 | 5 | 25 | 0.0072 JT | 0.018 T | W024 | 0.0114 | 0.0099 JT | 0.0172 J |
| Total LPAHs | XAD Column+Filter - total | µg/L | 19 | 19 | 100 | 0.00504 J | 0.046 J | W005 | 0.0117 | 0.00709 J | 0.0288 J |
| Naphthalene | XAD Column - dissolved | µg/L | 19 | 3 | 16 | 0.0148 | 0.0229 | W005 | 0.0181 | 0.0166 | 0.0223 |
| Naphthalene | XAD Filter - particulate | µg/L | 19 | 2 | 11 | 0.000785 | 0.00102 | W023 | 0.000903 | 0.000903 | 0.00101 |
| Naphthalene | Peristaltic - total | µg/L | 20 | 2 | 10 | 0.014 J | 0.018 | W024 | 0.016 | 0.016 J | 0.0178 J |
| Naphthalene | XAD Column+Filter - total | µg/L | 19 | 3 | 16 | 0.0148 | 0.0237 | W005 | 0.0187 | 0.0176 | 0.0231 |
| Phenanthrene | XAD Column - dissolved | µg/L | 19 | 19 | 100 | 0.00113 | 0.00488 | W005 | 0.00194 | 0.00179 | 0.00289 |
| Phenanthrene | XAD Filter - particulate | µg/L | 19 | 15 | 79 | 0.000328 J | 0.00108 | W005 | 0.000676 | 0.000617 | 0.00103 |
| Phenanthrene | Peristaltic - total | µg/L | 20 | 2 | 10 | 0.0072 J | 0.0078 J | W027 | 0.0075 | 0.0075 J | 0.00777 J |
| Phenanthrene | XAD Column+Filter - total | µg/L | 19 | 19 | 100 | 0.00159 J | 0.00596 | W005 | 0.00247 | 0.00209 | 0.00366 |
| Total cPAHs | XAD Column - dissolved | µg/L | 19 | 16 | 84 | 0.000042 JT | 0.0007 JT | W005 | 0.000246 | 0.00023 J | 0.000543 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 19 | 19 | 100 | 0.00014 JT | 0.0041 JT | W005 | 0.00183 | 0.0018 JT | 0.00347 J |
| Total cPAHs | Peristaltic - total | µg/L | 20 | 2 | 10 | 0.0086 JT | 0.0091 JT | W005 | 0.00885 | 0.00885 J | 0.00908 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 19 | 19 | 100 | 0.00014 J | 0.0048 J | W005 | 0.00204 | 0.00192 J | 0.00377 J |
| Total PAHs | XAD Column - dissolved | µg/L | 19 | 19 | 100 | 0.00554 JT | 0.0483 JT | W005 | 0.0125 | 0.00809 JT | 0.0286 J |
| Total PAHs | XAD Filter - particulate | µg/L | 19 | 19 | 100 | 0.000144 JT | 0.0111 JT | W005 | 0.00383 | 0.00372 JT | 0.00723 J |
| Total PAHs | Peristaltic - total | µg/L | 20 | 8 | 40 | 0.0026 JT | 0.0362 JT | W005 | 0.0162 | 0.0175 J | 0.0305 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 19 | 19 | 100 | 0.00568 J | 0.0594 J | W005 | 0.0163 | 0.0115 J | 0.0356 J |

Table D3.2-1. Summary Statistics for COIs in Surface Water, High-Flow Events (Transect Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 20 | 6 | 30 | 1.1 J | 2.2 J | W011 | 1.57 | 1.45 J | 2.18 J |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 20 | 10 | 50 | 0.019 J | 0.2 J | W011 | 0.0446 | 0.026 J | 0.126 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 19 | 19 | 100 | 0.0000161 J | 0.0000547 | W023W | 0.0000335 | 0.0000341 | 0.0000546 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 19 | 15 | 79 | 0.00000304 J | 0.0000107 J | W023 | 0.00000621 | 0.00000603 J | 0.00000931 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 20 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 19 | 19 | 100 | 0.0000233 J | 0.000062 J | W023W | 0.0000384 | 0.0000386 J | 0.0000553 J |

Table D3.2-1. Summary Statistics for COIs in Surface Water, High-Flow Events (Transect Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.184 | 0.281 J | W027 | 0.219 | 0.21 | 0.274 J |
| Arsenic | Peristaltic - particulate | µg/L | 0.05 | 0.33 | W005; W023 | 0.128 | 0.0905 | 0.33 |
| Arsenic | Peristaltic - total | µg/L | 0.254 T | 0.54 | W005; W023 | 0.347 | 0.321 J | 0.54 |
| Cadmium | Peristaltic - dissolved | µg/L | 0.002 U | 0.02 U | W005; W011; W023E; W023M; W023W; W024; W025E; W025M; W025W; W027 | 0.00828 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.012 U | 0.02 U | W005; W011; W023E; W023M; W023W; W024; W025E; W025M; W025W; W027 | 0.0096 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - total | µg/L | 0.012 U | 0.02 U | W005; W011; W023E; W023M; W023W; W024; W025E; W025M; W025W; W027 | 0.0096 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.17 U | 0.83 | W024 | 0.37 | 0.318 J | 0.802 |
| Chromium | Peristaltic - particulate[d] | µg/L | 0 | 1.68 | W024 | 0.799 | 0.74 | 1.62 |
| Chromium | Peristaltic - total | µg/L | 0.58 | 1.73 | W027 | 1.11 | 0.995 | 1.68 |
| Copper | Peristaltic - dissolved | µg/L | 0.43 | 2.39 J | W023 | 0.844 | 0.665 J | 1.32 J |
| Copper | Peristaltic - particulate | µg/L | 0.57 | 2.89 J | W024 | 1.21 | 0.935 | 2.78 J |
| Copper | Peristaltic - total | µg/L | 1.1 | 3.68 J | W023 | 2.05 | 1.83 | 3.58 J |
| Lead | Peristaltic - dissolved | µg/L | 0.007 U | 0.179 | W011 | 0.0524 | 0.012 J | 0.17 |
| Lead | Peristaltic - particulate | µg/L | 0.167 | 0.833 | W023 | 0.377 | 0.314 J | 0.823 |
| Lead | Peristaltic - total | µg/L | 0.167 | 0.855 | W023 | 0.427 | 0.391 | 0.824 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 U | 0.08 U | W005; W023; W024 | 0.0165 | 0.01 U | 0.04 U |
| Mercury | Peristaltic - particulate | µg/L | 0.02 U | 0.08 U | W005; W023; W024 | 0.0195 | 0.01 U | 0.04 J |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.08 U | W005; W023; W024 | 0.0205 | 0.01 U | 0.04 J |
| Nickel | Peristaltic - dissolved | µg/L | 0.43 | 1.01 J | W024 | 0.61 | 0.64 | 0.887 J |
| Nickel | Peristaltic - particulate[d] | µg/L | 0 J | 1.5 | W024 | 0.638 | 0.565 | 1.38 |
| Nickel | Peristaltic - total | µg/L | 0.785 T | 1.93 | W024 | 1.19 | 1.15 | 1.89 |
| Zinc | Peristaltic - dissolved | µg/L | 0.6 U | 2.9 U | W011 | 0.85 | 0.775 U | 1.5 |
| Zinc | Peristaltic - particulate | µg/L | 1.85 | 6.38 | W023; W024 | 3.95 | 4 | 6.38 |
| Zinc | Peristaltic - total | µg/L | 1.85 T | 6.38 | W023; W024 | 4.07 | 4.1 | 6.38 |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.014 U | W023 | 0.00157 | 0.0003 U | 0.00653 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.0000346 JT | 0.0000996 JT | W027 | 0.0000653 | 0.0000674 JT | 0.0000995 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.00000733 JT | 0.000313 JT | W005 | 0.0000908 | 0.000076 JT | 0.00019 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.0000419 J | 0.000391 J | W005 | 0.000156 | 0.000137 J | 0.000287 J |
| **PCDD/F Homologs** | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 0.00000141 JT | 0.00000443 JT | W024 | 0.00000297 | 0.00000331 JT | 0.00000416 J |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 0.0000032 JT | 0.0000402 T | W005 | 0.0000182 | 0.0000181 T | 0.0000306 |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 0.00000536 J | 0.000044 | W005 | 0.0000212 | 0.0000216 J | 0.0000338 J |
| **PCDD/Fs** | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.00000000288 T | 0.0000000182 JT | W024 | 0.00000000865 | 0.00000000836 JT | 0.0000000153 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.00000000497 JT | 0.0000000763 JT | W023 | 0.0000000386 | 0.000000039 JT | 0.0000000717 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.0000000113 J | 0.0000000912 J | W023 | 0.0000000472 | 0.0000000474 J | 0.0000000867 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.0000000000325 T | 0.0000000000837 JT | W005 | 0.0000000000573 | 0.0000000000584 JT | 0.0000000000829 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.0000000000208 JT | 0.00000000295 JT | W027 | 0.00000000116 | 0.00000000124 JT | 0.00000000272 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.0000000000541 J | 0.00000000301 J | W027 | 0.00000000121 | 0.00000000131 J | 0.00000000278 J |

Table D3.2-1. Summary Statistics for COIs in Surface Water, High-Flow Events (Transect Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Pesticides** | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 0.00000124 J | 0.00000467 J | W025M | 0.00000232 | 0.00000206 J | 0.00000329 J |
| Aldrin | XAD Filter - particulate | µg/L | 0.000000415 J | 0.00000197 J | W023 | 0.00000101 | 0.000000917 J | 0.00000192 J |
| Aldrin | XAD Column+Filter - total | µg/L | 0.00000124 J | 0.00000599 J | W025M | 0.00000331 | 0.00000333 J | 0.00000487 J |
| Dieldrin | XAD Column - dissolved | µg/L | 0.0000632 | 0.00033 | W005 | 0.000142 | 0.000126 | 0.000305 |
| Dieldrin | XAD Filter - particulate | µg/L | 0.00000612 J | 0.0000537 | W005 | 0.0000196 | 0.0000175 J | 0.0000513 |
| Dieldrin | XAD Column+Filter - total | µg/L | 0.0000705 J | 0.000384 | W005 | 0.000162 | 0.000144 J | 0.000356 |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 0.00000573 J | 0.0000194 J | W023 | 0.0000138 | 0.0000151 J | 0.0000186 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 0.000000205 J | 0.00000197 U | W024 | 0.000000396 | 0.000000359 J | 0.00000101 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 0.00000573 J | 0.0000194 J | W023 | 0.0000141 | 0.0000155 J | 0.0000186 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 0.0000265 JT | 0.0000557 JT | W005 | 0.0000391 | 0.0000378 JT | 0.000054 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 0.00000291 JT | 0.0000434 JT | W023E | 0.0000225 | 0.0000253 JT | 0.0000408 J |
| Total chlordanes | XAD Column+Filter - total | µg/L | 0.0000336 J | 0.0000943 J | W005 | 0.0000616 | 0.0000663 J | 0.0000914 J |
| DDx | XAD Column - dissolved | µg/L | 0.0000959 JT | 0.00021 JT | W024 | 0.000152 | 0.000154 JT | 0.000201 J |
| DDx | XAD Filter - particulate | µg/L | 0.0000296 JT | 0.000436 JT | W023E | 0.000274 | 0.000323 JT | 0.00043 J |
| DDx | XAD Column+Filter - total | µg/L | 0.000162 J | 0.000618 J | W023E | 0.000426 | 0.000471 J | 0.000601 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 0.0000123 U | 0.0000915 U | W024 | 0.0000276 | 0.0000234 J | 0.0000486 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 0.000033 U | 0.000822 | W005 | 0.00031 | 0.000311 J | 0.000583 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0016 U | 0.0086 U | W005; W011; W023E; W023M; W023W; W024; W025E; W025M; W025W; W027 | 0.0036 | 0.0043 U | 0.0043 U |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 0.0000761 U | 0.000883 J | W005 | 0.000323 | 0.000311 J | 0.00061 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 0.000486 JT | 0.00439 JT | W005 | 0.00159 | 0.00127 JT | 0.00289 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 0.000144 JT | 0.00897 JT | W005 | 0.003 | 0.00294 JT | 0.00582 J |
| Total HPAHs | Peristaltic - total | µg/L | 0.0026 JT | 0.0263 JT | W005 | 0.0073 | 0.0055 U | 0.0194 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 0.000648 J | 0.0134 J | W005 | 0.00459 | 0.00421 J | 0.00813 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 0.0046 T | 0.0439 T | W005 | 0.0109 | 0.00608 T | 0.0269 |
| Total LPAHs | XAD Filter - particulate | µg/L | 0.000207 UT | 0.0021 JT | W005 | 0.000861 | 0.000793 JT | 0.00191 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.0064 UT | 0.018 T | W024 | 0.00734 | 0.0065 U | 0.0142 J |
| Total LPAHs | XAD Column+Filter - total | µg/L | 0.00504 J | 0.046 J | W005 | 0.0117 | 0.00709 J | 0.0288 J |
| Naphthalene | XAD Column - dissolved | µg/L | 0.0148 | 0.0382 U | W024 | 0.0127 | 0.012 U | 0.0195 |
| Naphthalene | XAD Filter - particulate | µg/L | 0.000207 U | 0.00102 | W023 | 0.000326 | 0.00027 U | 0.000809 |
| Naphthalene | Peristaltic - total | µg/L | 0.0064 U | 0.018 | W024 | 0.00707 | 0.0065 U | 0.0142 J |
| Naphthalene | XAD Column+Filter - total | µg/L | 0.0148 | 0.0382 U | W024 | 0.0128 | 0.012 U | 0.0196 |
| Phenanthrene | XAD Column - dissolved | µg/L | 0.00113 | 0.00488 | W005 | 0.00194 | 0.00179 | 0.00289 |
| Phenanthrene | XAD Filter - particulate | µg/L | 0.000188 U | 0.00108 | W005 | 0.000564 | 0.000549 | 0.00102 |
| Phenanthrene | Peristaltic - total | µg/L | 0.0039 U | 0.008 U | W005 | 0.00354 | 0.0032 U | 0.00723 J |
| Phenanthrene | XAD Column+Filter - total | µg/L | 0.00159 J | 0.00596 | W005 | 0.00247 | 0.00209 | 0.00366 |
| Total cPAHs | XAD Column - dissolved | µg/L | 0.000042 JT | 0.0007 JT | W005 | 0.000217 | 0.00016 JT | 0.000511 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 0.00014 JT | 0.0041 JT | W005 | 0.00183 | 0.0018 JT | 0.00347 J |
| Total cPAHs | Peristaltic - total | µg/L | 0.0021 UT | 0.011 UT | W005; W011; W023E; W023M; W023W; W024; W025E; W025M; W025W; W027 | 0.00517 | 0.0055 U | 0.00863 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 0.00014 J | 0.0048 J | W005 | 0.00204 | 0.00192 J | 0.00377 J |
| Total PAHs | XAD Column - dissolved | µg/L | 0.00554 JT | 0.0483 JT | W005 | 0.0125 | 0.00809 JT | 0.0286 J |
| Total PAHs | XAD Filter - particulate | µg/L | 0.000144 JT | 0.0111 JT | W005 | 0.00383 | 0.00372 JT | 0.00723 J |
| Total PAHs | Peristaltic - total | µg/L | 0.0026 JT | 0.0362 JT | W005 | 0.0103 | 0.0065 U | 0.0208 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 0.00568 J | 0.0594 J | W005 | 0.0163 | 0.0115 J | 0.0356 J |

Table D3.2-1. Summary Statistics for COIs in Surface Water, High-Flow Events (Transect Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 UJ | 0.03 U | W005; W023 | 0.0146 | 0.0145 U | 0.015 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.12 U | 2.2 J | W011 | 0.647 | 0.355 UJ | 2.11 J |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.013 U | 0.2 J | W011 | 0.0281 | 0.021 J | 0.0433 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 0.0000161 J | 0.0000547 | W023W | 0.0000335 | 0.0000341 | 0.0000546 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 0.00000226 U | 0.0000107 J | W023 | 0.00000523 | 0.000005 J | 0.00000891 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.015 UJ | 0.015 UJ | W005; W011; W023; W023E; W023M; W023W; W024; W025E; W025M; W025W; W027 | 0.0075 | 0.0075 U | 0.0075 U |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 0.0000233 J | 0.000062 J | W023W | 0.0000384 | 0.0000386 J | 0.0000553 J |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

[d] Particulate values were calculated as the difference between total and dissolved concentrations. If the measured dissolved concentration was greater than or equal to the measured total concentration, the calculated particulate concentration was assigned a value of zero.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
XAD - hydrophobic crosslinked polystyrene copolymer resin

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D3.2-2a. Summary Statistics for COIs in Surface Water, High-Flow Events (Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 26 | 26 | 100 | 0.185 J | 0.341 J | W034 | 0.238 | 0.224 J | 0.293 J |
| Arsenic | Peristaltic - particulate | µg/L | 26 | 26 | 100 | 0.04 J | 0.286 J | W034 | 0.111 | 0.0945 J | 0.207 J |
| Arsenic | Peristaltic - total | µg/L | 26 | 26 | 100 | 0.3 | 0.627 J | W034 | 0.349 | 0.329 J | 0.454 J |
| Cadmium | Peristaltic - dissolved | µg/L | 26 | 2 | 8 | 0.02 | 0.05 | W032 | 0.035 | 0.035 | 0.0485 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 26 | 4 | 15 | 0 | 0.03 | W033 | 0.0125 | 0.01 | 0.0285 |
| Cadmium | Peristaltic - total | µg/L | 26 | 2 | 8 | 0.02 | 0.03 | W033 | 0.025 | 0.025 | 0.0295 |
| Chromium | Peristaltic - dissolved | µg/L | 26 | 4 | 15 | 0.43 | 0.64 | W034 | 0.5 | 0.465 | 0.619 |
| Chromium | Peristaltic - particulate | µg/L | 26 | 26 | 100 | 0.24 | 1.92 | W031 | 0.947 | 0.88 | 1.68 |
| Chromium | Peristaltic - total | µg/L | 26 | 26 | 100 | 0.7 | 1.92 | W031 | 1.02 | 0.94 | 1.68 |
| Copper | Peristaltic - dissolved | µg/L | 26 | 26 | 100 | 0.55 | 1.22 | W035 | 0.749 | 0.65 | 1.17 |
| Copper | Peristaltic - particulate | µg/L | 26 | 26 | 100 | 0.6 | 2.59 | W031 | 1.21 | 1.15 | 2.06 |
| Copper | Peristaltic - total | µg/L | 26 | 26 | 100 | 1.47 | 3.49 | W031 | 1.96 | 1.81 | 2.72 |
| Lead | Peristaltic - dissolved | µg/L | 26 | 18 | 69 | 0.008 J | 0.142 | W034 | 0.0637 | 0.0705 | 0.121 |
| Lead | Peristaltic - particulate | µg/L | 26 | 26 | 100 | 0.182 | 1.05 | W031 | 0.382 | 0.351 | 0.556 J |
| Lead | Peristaltic - total | µg/L | 26 | 26 | 100 | 0.305 | 1.13 | W031 | 0.426 | 0.388 | 0.56 |
| Mercury | Peristaltic - dissolved | µg/L | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 26 | 26 | 100 | 0.46 | 1.58 | W033 | 0.889 | 0.78 | 1.51 |
| Nickel | Peristaltic - particulate | µg/L | 26 | 26 | 100 | 0.19 | 1.42 | W031 | 0.512 | 0.47 | 0.915 |
| Nickel | Peristaltic - total | µg/L | 26 | 26 | 100 | 0.9 | 2.19 | W031 | 1.4 | 1.35 | 2.06 |
| Zinc | Peristaltic - dissolved | µg/L | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - particulate | µg/L | 26 | 26 | 100 | 3 | 8.4 | W031 | 4.35 | 4.08 | 6.28 |
| Zinc | Peristaltic - total | µg/L | 26 | 26 | 100 | 3 | 8.4 | W031 | 4.35 | 4.08 | 6.28 |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 26 | 2 | 8 | 0.0021 J | 0.0035 J | W035 | 0.0028 | 0.0028 J | 0.00343 J |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 24 | 24 | 100 | 0.0000602 JT | 0.000285 JT | W028 | 0.000124 | 0.00011 J | 0.000249 J |
| Total PCBs | XAD Filter - particulate | µg/L | 24 | 24 | 100 | 0.0000337 JT | 0.000496 JT | W035 | 0.000159 | 0.000109 J | 0.00046 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 24 | 24 | 100 | 0.000111 J | 0.000749 J | W035 | 0.000283 | 0.000213 J | 0.000667 J |
| **PCDD/F Homologs** | | | | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.00000179 T | 0.00000533 T | W033 | 0.00000398 | 0.00000439 | 0.0000053 |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 6 | 6 | 100 | 0.0000196 T | 0.0000707 JT | W035 | 0.0000401 | 0.0000277 | 0.0000705 J |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.0000247 | 0.0000749 | W035 | 0.000044 | 0.0000318 | 0.0000748 J |
| **PCDD/Fs** | | | | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.00000000274 T | 0.0000000143 JT | W033 | 0.00000000703 | 0.00000000659 | 0.0000000128 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 6 | 6 | 100 | 0.0000000437 JT | 0.000000162 JT | W035 | 0.000000089 | 0.000000071 J | 0.000000157 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.0000000491 J | 0.000000168 J | W035 | 0.000000096 | 0.0000000795 J | 0.000000163 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 24 | 24 | 100 | 0.0000000000568 JT | 0.00000000189 JT | W035 | 0.000000000203 | 0.0000000000726 J | 0.00000000096 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 24 | 24 | 100 | 0.0000000000491 JT | 0.00000000631 T | W031 | 0.00000000079 | 0.00000000022 | 0.00000000376 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 24 | 24 | 100 | 0.000000000108 J | 0.00000000638 J | W031 | 0.000000000993 | 0.000000000296 J | 0.00000000391 J |

Table D3.2-2a. Summary Statistics for COIs in Surface Water, High-Flow Events (Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 10 | 6 | 60 | 0.00000174 J | 0.00000259 J | W033 | 0.00000213 | 0.00000207 J | 0.00000257 J |
| Aldrin | XAD Filter - particulate | µg/L | 10 | 7 | 70 | 0.000000514 J | 0.00000148 J | W033 | 0.000000938 | 0.00000101 J | 0.0000014 J |
| Aldrin | Peristaltic - total | µg/L | 14 | 1 | 7 | 0.0052 | 0.0052 | W030 | 0.0052 | 0.0052 | 0.0052 |
| Aldrin | XAD Column+Filter - total | µg/L | 10 | 8 | 80 | 0.000000514 J | 0.00000407 J | W033 | 0.00000242 | 0.00000244 J | 0.00000388 J |
| Dieldrin | XAD Column - dissolved | µg/L | 10 | 10 | 100 | 0.0000985 | 0.000158 | W033 | 0.000117 | 0.000113 | 0.000155 |
| Dieldrin | XAD Filter - particulate | µg/L | 10 | 10 | 100 | 0.00000867 J | 0.0000324 | W033 | 0.0000155 | 0.0000114 J | 0.000031 |
| Dieldrin | Peristaltic - total | µg/L | 14 | 3 | 21 | 0.001 NJ | 0.0012 J | W028; W036 | 0.00113 | 0.0012 J | 0.0012 J |
| Dieldrin | XAD Column+Filter - total | µg/L | 10 | 10 | 100 | 0.000108 J | 0.00019 | W033 | 0.000133 | 0.000124 J | 0.000186 |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 10 | 10 | 100 | 0.0000118 J | 0.0000217 J | W031 | 0.0000017 | 0.0000169 J | 0.0000215 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 10 | 4 | 40 | 0.000000314 J | 0.000000746 J | W033 | 0.000000475 | 0.00000042 J | 0.000000705 J |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 14 | 1 | 7 | 0.0019 | 0.0019 | W026 | 0.0019 | 0.0019 | 0.0019 |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 10 | 10 | 100 | 0.0000123 J | 0.0000217 J | W031 | 0.0000172 | 0.0000169 J | 0.0000216 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 10 | 10 | 100 | 0.0000332 JT | 0.0000495 JT | W033 | 0.000039 | 0.0000365 J | 0.0000477 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 10 | 10 | 100 | 0.0000115 JT | 0.0000393 JT | W031 | 0.000022 | 0.0000176 J | 0.000038 J |
| Total chlordanes | Peristaltic - total | µg/L | 14 | 3 | 21 | 0.00029 JT | 0.0006 NJT | W030 | 0.000467 | 0.00051 T | 0.000591 J |
| Total chlordanes | XAD Column+Filter - total | µg/L | 10 | 10 | 100 | 0.0000466 J | 0.0000859 J | W033 | 0.000061 | 0.0000524 J | 0.0000848 J |
| DDx | XAD Column - dissolved | µg/L | 10 | 10 | 100 | 0.000105 JT | 0.000287 JT | W031 | 0.000167 | 0.000132 J | 0.000277 J |
| DDx | XAD Filter - particulate | µg/L | 10 | 10 | 100 | 0.000153 JT | 0.00057 JT | W031 | 0.000262 | 0.000193 J | 0.000501 J |
| DDx | Peristaltic - total | µg/L | 14 | 12 | 86 | 0.00017 JT | 0.00205 NJT | W037 | 0.000573 | 0.000435 J | 0.00145 J |
| DDx | XAD Column+Filter - total | µg/L | 10 | 10 | 100 | 0.000266 J | 0.000857 J | W031 | 0.000429 | 0.000316 J | 0.000752 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.0000321 J | 0.000349 | W035 | 0.000123 | 0.0000462 J | 0.000319 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 6 | 6 | 100 | 0.000257 J | 0.00567 | W035 | 0.0018 | 0.00054 J | 0.00512 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 26 | 1 | 4 | 0.19 | 0.19 | W031 | 0.19 | 0.19 | 0.19 |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.0003 J | 0.00602 | W035 | 0.00192 | 0.000574 J | 0.00543 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.00178 JT | 0.0135 JT | W035 | 0.00499 | 0.0019 J | 0.0124 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 6 | 6 | 100 | 0.00269 JT | 0.0685 T | W035 | 0.0208 | 0.00496 J | 0.0615 |
| Total HPAHs | Peristaltic - total | µg/L | 26 | 6 | 23 | 0.011 JT | 3.5 T | W031 | 0.619 | 0.0495 J | 2.65 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.00447 J | 0.082 J | W035 | 0.0258 | 0.00681 J | 0.0739 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.00416 T | 0.00705 T | W032 | 0.00528 | 0.00471 | 0.00699 |
| Total LPAHs | XAD Filter - particulate | µg/L | 6 | 6 | 100 | 0.000473 JT | 0.0178 JT | W035 | 0.00531 | 0.00109 J | 0.016 J |
| Total LPAHs | Peristaltic - total | µg/L | 26 | 8 | 31 | 0.0047 JT | 3.9 T | W031 | 0.537 | 0.035 J | 2.62 J |
| Total LPAHs | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.00524 J | 0.0246 J | W035 | 0.0106 | 0.00643 J | 0.0223 J |
| Naphthalene | XAD Column - dissolved | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Filter - particulate | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 26 | 4 | 15 | 0.034 J | 0.16 | W036 | 0.079 | 0.061 | 0.148 |
| Naphthalene | XAD Column+Filter - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.00146 | 0.00194 | W035 | 0.00163 | 0.00153 | 0.00192 |
| Phenanthrene | XAD Filter - particulate | µg/L | 6 | 6 | 100 | 0.000444 | 0.0124 | W035 | 0.0037 | 0.000756 | 0.0111 |
| Phenanthrene | Peristaltic - total | µg/L | 26 | 5 | 19 | 0.0068 J | 2.2 | W031 | 0.45 | 0.016 J | 1.76 |
| Phenanthrene | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.00191 | 0.0143 | W035 | 0.00533 | 0.00228 | 0.013 |
| Total cPAHs | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.00016 JT | 0.0031 JT | W035 | 0.00105 | 0.00034 J | 0.00285 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 6 | 6 | 100 | 0.0018 JT | 0.035 T | W035 | 0.011 | 0.0031 J | 0.0315 |
| Total cPAHs | Peristaltic - total | µg/L | 26 | 4 | 15 | 0.0069 JT | 1.2 T | W031 | 0.314 | 0.024 J | 1.02 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.00215 J | 0.0381 J | W035 | 0.0121 | 0.00332 J | 0.0344 J |
| Total PAHs | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.00606 JT | 0.0204 JT | W035 | 0.0103 | 0.00747 J | 0.0189 J |
| Total PAHs | XAD Filter - particulate | µg/L | 6 | 6 | 100 | 0.00316 JT | 0.0863 JT | W035 | 0.0261 | 0.00601 J | 0.0775 J |
| Total PAHs | Peristaltic - total | µg/L | 26 | 9 | 35 | 0.0047 JT | 7.4 T | W031 | 0.89 | 0.058 JT | 4.55 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.0104 J | 0.107 J | W035 | 0.0364 | 0.0123 J | 0.0963 J |

Table D3.2-2a. Summary Statistics for COIs in Surface Water, High-Flow Events (Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 26 | 5 | 19 | 0.98 J | 3.5 J | W032 | 2.04 | 1.9 J | 3.36 J |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 26 | 20 | 77 | 0.016 J | 0.066 J | W029 | 0.0265 | 0.0225 J | 0.0375 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 10 | 10 | 100 | 0.0000347 J | 0.0000422 | W032 | 0.0000375 | 0.0000365 J | 0.0000413 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 10 | 10 | 100 | 0.00000314 J | 0.0000199 J | W031 | 0.00000718 | 0.000006 J | 0.000015 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 26 | 5 | 19 | 0.00037 J | 0.00067 J | W036 | 0.000504 | 0.00049 J | 0.000658 J |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 10 | 10 | 100 | 0.0000393 J | 0.0000559 J | W031 | 0.0000447 | 0.000043 J | 0.0000528 J |

Table D3.2-2a. Summary Statistics for COIs in Surface Water, High-Flow Events (Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.185 J | 0.341 J | W034 | 0.238 | 0.224 J | 0.293 J |
| Arsenic | Peristaltic - particulate | µg/L | 0.04 J | 0.286 J | W034 | 0.111 | 0.0945 J | 0.207 J |
| Arsenic | Peristaltic - total | µg/L | 0.3 | 0.627 J | W034 | 0.349 | 0.329 J | 0.454 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.05 | W032 | 0.0119 | 0.01 U | 0.0175 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 0 | 0.03 | W033 | 0.0104 | 0.01 U | 0.0175 |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.03 | W033 | 0.0112 | 0.01 U | 0.0175 |
| Chromium | Peristaltic - dissolved | µg/L | 0.12 U | 0.64 | W034 | 0.201 | 0.143 U | 0.483 |
| Chromium | Peristaltic - particulate | µg/L | 0.24 | 1.92 | W031 | 0.947 | 0.88 | 1.68 |
| Chromium | Peristaltic - total | µg/L | 0.7 | 1.92 | W031 | 1.02 | 0.94 | 1.68 |
| Copper | Peristaltic - dissolved | µg/L | 0.55 | 1.22 | W035 | 0.749 | 0.65 | 1.17 |
| Copper | Peristaltic - particulate | µg/L | 0.6 | 2.59 | W031 | 1.21 | 1.15 | 2.06 |
| Copper | Peristaltic - total | µg/L | 1.47 | 3.49 | W031 | 1.96 | 1.81 | 2.72 |
| Lead | Peristaltic - dissolved | µg/L | 0.008 U | 0.142 | W034 | 0.0462 | 0.0193 J | 0.116 |
| Lead | Peristaltic - particulate | µg/L | 0.182 | 1.05 | W031 | 0.382 | 0.351 | 0.556 J |
| Lead | Peristaltic - total | µg/L | 0.305 | 1.13 | W031 | 0.426 | 0.388 | 0.56 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W026; W028; W029; W030; W031; W032; W033; W034; W035; W036; W037; W038 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W026; W028; W029; W030; W031; W032; W033; W034; W035; W036; W037; W038 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W026; W028; W029; W030; W031; W032; W033; W034; W035; W036; W037; W038 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.46 | 1.58 | W033 | 0.889 | 0.78 | 1.51 |
| Nickel | Peristaltic - particulate | µg/L | 0.19 | 1.42 | W031 | 0.512 | 0.47 | 0.915 |
| Nickel | Peristaltic - total | µg/L | 0.9 | 2.19 | W031 | 1.4 | 1.35 | 2.06 |
| Zinc | Peristaltic - dissolved | µg/L | 0.5 U | 4 U | W038 | 0.944 | 0.95 U | 1.75 U |
| Zinc | Peristaltic - particulate | µg/L | 3 | 8.4 | W031 | 4.35 | 4.08 | 6.28 |
| Zinc | Peristaltic - total | µg/L | 3 | 8.4 | W031 | 4.35 | 4.08 | 6.28 |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0035 J | W035 | 0.000492 | 0.0003 U | 0.00165 J |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.0000602 JT | 0.000285 JT | W028 | 0.000124 | 0.00011 J | 0.000249 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.0000337 JT | 0.000496 JT | W035 | 0.000159 | 0.000109 J | 0.00046 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000111 J | 0.000749 J | W035 | 0.000283 | 0.000213 J | 0.000667 J |
| **PCDD/F Homologs** | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 0.00000179 T | 0.00000533 T | W033 | 0.00000398 | 0.00000439 | 0.0000053 |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 0.0000196 T | 0.0000707 JT | W035 | 0.0000401 | 0.0000277 | 0.0000705 J |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 0.0000247 | 0.0000749 | W035 | 0.000044 | 0.0000318 | 0.0000748 J |
| **PCDD/Fs** | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.00000000274 T | 0.0000000143 JT | W033 | 0.00000000703 | 0.00000000659 | 0.0000000128 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.0000000437 JT | 0.000000162 JT | W035 | 0.000000089 | 0.000000071 J | 0.000000157 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.0000000491 J | 0.000000168 J | W035 | 0.000000096 | 0.0000000795 J | 0.000000163 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.0000000000568 JT | 0.00000000189 JT | W035 | 0.000000000203 | 0.0000000000726 J | 0.00000000096 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.0000000000491 JT | 0.00000000631 T | W031 | 0.00000000079 | 0.00000000022 | 0.00000000376 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000000108 J | 0.00000000638 J | W031 | 0.000000000993 | 0.000000000296 J | 0.00000000391 J |

Table D3.2-2a. Summary Statistics for COIs in Surface Water, High-Flow Events (Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Pesticides** | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 0.00000174 J | 0.00000283 U | W031 | 0.00000174 | 0.00000178 J | 0.00000255 J |
| Aldrin | XAD Filter - particulate | µg/L | 0.000000514 J | 0.00000148 J | W033 | 0.000000812 | 0.00000069 J | 0.00000135 J |
| Aldrin | Peristaltic - total | µg/L | 0.00048 U | 0.0058 U | W030 | 0.000953 | 0.000385 U | 0.00371 |
| Aldrin | XAD Column+Filter - total | µg/L | 0.000000514 J | 0.00000407 J | W033 | 0.00000217 | 0.0000023 J | 0.00000382 J |
| Dieldrin | XAD Column - dissolved | µg/L | 0.0000985 | 0.000158 | W033 | 0.000117 | 0.000113 | 0.000155 |
| Dieldrin | XAD Filter - particulate | µg/L | 0.00000867 J | 0.0000324 | W033 | 0.0000155 | 0.0000114 J | 0.000031 |
| Dieldrin | Peristaltic - total | µg/L | 0.0004 UJ | 0.0012 J | W028; W036 | 0.0004 | 0.0002 U | 0.0012 J |
| Dieldrin | XAD Column+Filter - total | µg/L | 0.000108 J | 0.00019 | W033 | 0.000133 | 0.000124 J | 0.000186 |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 0.0000118 J | 0.0000217 J | W031 | 0.000017 | 0.0000169 J | 0.0000215 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 0.000000314 J | 0.00000355 U | W034 | 0.000000655 | 0.00000042 J | 0.00000177 U |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.000092 U | 0.0019 | W026 | 0.000299 | 0.000153 U | 0.000961 |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 0.0000123 J | 0.0000217 J | W031 | 0.0000172 | 0.0000169 J | 0.0000216 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 0.0000332 JT | 0.0000495 JT | W033 | 0.000039 | 0.0000365 J | 0.0000477 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 0.0000115 JT | 0.0000393 JT | W031 | 0.000022 | 0.0000176 J | 0.000038 J |
| Total chlordanes | Peristaltic - total | µg/L | 0.00029 JT | 0.00073 UT | W026; W028; W029; W036; W037; W038 | 0.000387 | 0.000365 U | 0.000542 J |
| Total chlordanes | XAD Column+Filter - total | µg/L | 0.0000466 J | 0.0000859 J | W033 | 0.000061 | 0.0000524 J | 0.0000848 J |
| DDx | XAD Column - dissolved | µg/L | 0.000105 JT | 0.000287 JT | W031 | 0.000167 | 0.000132 J | 0.000277 J |
| DDx | XAD Filter - particulate | µg/L | 0.000153 JT | 0.00057 JT | W031 | 0.000262 | 0.000193 J | 0.000501 J |
| DDx | Peristaltic - total | µg/L | 0.00017 JT | 0.00205 NJT | W037 | 0.000558 | 0.00047 U | 0.00134 J |
| DDx | XAD Column+Filter - total | µg/L | 0.000266 J | 0.000857 J | W031 | 0.000429 | 0.000316 J | 0.000752 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 0.0000321 J | 0.000349 | W035 | 0.000123 | 0.0000462 J | 0.000319 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 0.000257 J | 0.00567 | W035 | 0.0018 | 0.00054 J | 0.00512 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0043 U | 0.19 | W031 | 0.0114 | 0.0043 U | 0.0043 U |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 0.0003 J | 0.00602 | W035 | 0.00192 | 0.000574 J | 0.00543 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 0.00178 JT | 0.0135 JT | W035 | 0.00499 | 0.0019 J | 0.0124 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 0.00269 JT | 0.0685 T | W035 | 0.0208 | 0.00496 J | 0.0615 |
| Total HPAHs | Peristaltic - total | µg/L | 0.0053 UT | 3.5 T | W031 | 0.147 | 0.0055 U | 0.0855 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 0.00447 J | 0.082 J | W035 | 0.0258 | 0.00681 J | 0.0739 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 0.00416 T | 0.00705 T | W032 | 0.00528 | 0.00471 | 0.00699 |
| Total LPAHs | XAD Filter - particulate | µg/L | 0.000473 JT | 0.0178 JT | W035 | 0.00531 | 0.00109 J | 0.016 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.0047 JT | 3.9 T | W031 | 0.17 | 0.0065 U | 0.195 J |
| Total LPAHs | XAD Column+Filter - total | µg/L | 0.00524 J | 0.0246 J | W035 | 0.0106 | 0.00643 J | 0.0223 J |
| Naphthalene | XAD Column - dissolved | µg/L | 0.0133 U | 0.0246 U | W032 | 0.0087 | 0.00833 U | 0.0115 U |
| Naphthalene | XAD Filter - particulate | µg/L | 0.000114 U | 0.00075 U | W035 | 0.000275 | 0.000328 U | 0.000366 U |
| Naphthalene | Peristaltic - total | µg/L | 0.0065 U | 0.16 | W036 | 0.0175 | 0.0065 U | 0.072 |
| Naphthalene | XAD Column+Filter - total | µg/L | 0.0133 U | 0.0246 U | W032 | 0.0087 | 0.00833 U | 0.0115 U |
| Phenanthrene | XAD Column - dissolved | µg/L | 0.00146 | 0.00194 | W035 | 0.00163 | 0.00153 | 0.00192 |
| Phenanthrene | XAD Filter - particulate | µg/L | 0.000444 | 0.0124 | W035 | 0.0037 | 0.000756 | 0.0111 |
| Phenanthrene | Peristaltic - total | µg/L | 0.0032 U | 2.2 | W031 | 0.0891 | 0.0032 U | 0.019 J |
| Phenanthrene | XAD Column+Filter - total | µg/L | 0.00191 | 0.0143 | W035 | 0.00533 | 0.00228 | 0.013 |
| Total cPAHs | XAD Column - dissolved | µg/L | 0.00016 JT | 0.0031 JT | W035 | 0.00105 | 0.00034 J | 0.00285 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 0.0018 JT | 0.035 T | W035 | 0.011 | 0.0031 J | 0.0315 |
| Total cPAHs | Peristaltic - total | µg/L | 0.0053 UT | 1.2 T | W031 | 0.0528 | 0.0055 U | 0.0255 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 0.00215 J | 0.0381 J | W035 | 0.0121 | 0.00332 J | 0.0344 J |
| Total PAHs | XAD Column - dissolved | µg/L | 0.00606 JT | 0.0204 JT | W035 | 0.0103 | 0.00747 J | 0.0189 J |
| Total PAHs | XAD Filter - particulate | µg/L | 0.00316 JT | 0.0863 JT | W035 | 0.0261 | 0.00601 J | 0.0775 J |
| Total PAHs | Peristaltic - total | µg/L | 0.0047 JT | 7.4 T | W031 | 0.312 | 0.0065 U | 0.23 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 0.0104 J | 0.107 J | W035 | 0.0364 | 0.0123 J | 0.0963 J |

Table D3.2-2a. Summary Statistics for COIs in Surface Water, High-Flow Events (Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W026; W028; W029; W030; W031; W032; W033; W034; W035; W036; W037; W038 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.098 U | 3.5 J | W032 | 0.601 | 0.308 U | 2.58 J |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.013 U | 0.066 J | W029 | 0.0223 | 0.02 J | 0.036 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 0.0000347 J | 0.0000422 | W032 | 0.0000375 | 0.0000365 J | 0.0000413 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 0.00000314 J | 0.0000199 J | W031 | 0.00000718 | 0.000006 J | 0.000015 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.000014 U | 0.015 U | W026; W028; W029; W030; W031; W032; W033; W034; W035; W036; W038 | 0.00587 | 0.0075 U | 0.0075 U |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 0.0000393 J | 0.0000559 J | W031 | 0.0000447 | 0.000043 J | 0.0000528 J |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

[d] Particulate values were calculated as the difference between total and dissolved concentrations. If the measured dissolved concentration was greater than or equal to the measured total concentration, the calculated particulate concentration was assigned a value of zero.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCDD/F - dioxin/furan
PCB - polychlorinated biphenyl
RM - river mile
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
XAD - hydrophobic crosslinked polystyrene copolymer resin

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D3.2-2b. Summary Statistics for COIs in Surface Water, High-Flow Events (East Channel Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **RM 01.9<03** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.23 J | 0.26 J | W026 | 0.245 | 0.245 J | 0.259 J |
| Arsenic | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.06 J | 0.09 J | W026 | 0.075 | 0.075 J | 0.0885 J |
| Arsenic | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.32 J | 0.32 J | W026 | 0.32 | 0.32 J | 0.32 J |
| Cadmium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.79 | 0.86 | W026 | 0.825 | 0.825 | 0.857 |
| Chromium | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.79 | 0.86 | W026 | 0.825 | 0.825 | 0.857 |
| Copper | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.57 | 0.65 | W026 | 0.61 | 0.61 | 0.646 |
| Copper | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.9 | 0.99 | W026 | 0.945 | 0.945 | 0.986 |
| Copper | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.47 | 1.64 | W026 | 1.56 | 1.56 | 1.63 |
| Lead | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Lead | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.305 | 0.311 | W026 | 0.308 | 0.308 | 0.311 |
| Lead | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.305 | 0.311 | W026 | 0.308 | 0.308 | 0.311 |
| Mercury | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 1.3 | 1.32 | W026 | 1.31 | 1.31 | 1.32 |
| Nickel | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.43 | 0.46 | W026 | 0.445 | 0.445 | 0.459 |
| Nickel | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.75 | 1.76 | W026 | 1.76 | 1.76 | 1.76 |
| Zinc | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 3.4 | 3.6 | W026 | 3.5 | 3.5 | 3.59 |
| Zinc | Peristaltic - total | µg/L | 2 | 2 | 100 | 3.4 | 3.6 | W026 | 3.5 | 3.5 | 3.59 |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000127 JT | 0.000154 JT | W026 | 0.000141 | 0.000141 J | 0.000153 J |
| Total PCBs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000096 JT | 0.000114 JT | W026 | 0.000105 | 0.000105 J | 0.000113 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000223 J | 0.000268 J | W026 | 0.000246 | 0.000246 J | 0.000266 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000000000962 JT | 0.000000000115 JT | W026 | 0.000000000106 | 0.000000000106 J | 0.000000000114 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000000000204 JT | 0.000000000241 JT | W026 | 0.000000000223 | 0.000000000223 J | 0.000000000239 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000000003 J | 0.000000000356 J | W026 | 0.000000000328 | 0.000000000328 J | 0.000000000353 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.0019 | 0.0019 | W026 | 0.0019 | 0.0019 | 0.0019 |
| Total chlordanes | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.00032 JT | 0.00057 JT | W026 | 0.000445 | 0.000445 J | 0.000558 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total LPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.016 J | 0.02 J | W026 | 0.018 | 0.018 J | 0.0198 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.00037 J | 0.00037 J | W026 | 0.00037 | 0.00037 J | 0.00037 J |

Table D3.2-2b. Summary Statistics for COIs in Surface Water, High-Flow Events (East Channel Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **RM 03<04** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.202 J | 0.213 J | W028 | 0.208 | 0.208 J | 0.212 J |
| Arsenic | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.104 J | 0.12 J | W028 | 0.112 | 0.112 J | 0.119 J |
| Arsenic | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.306 J | 0.333 J | W028 | 0.32 | 0.32 J | 0.332 J |
| Cadmium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 1.02 | 1.07 | W028 | 1.05 | 1.05 | 1.07 |
| Chromium | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.02 | 1.07 | W028 | 1.05 | 1.05 | 1.07 |
| Copper | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.61 | 0.62 | W028 | 0.615 | 0.615 | 0.62 |
| Copper | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 1.34 | 1.36 | W028 | 1.35 | 1.35 | 1.36 |
| Copper | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.95 | 1.98 | W028 | 1.97 | 1.97 | 1.98 |
| Lead | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.009 J | 0.023 | W028 | 0.016 | 0.016 J | 0.0223 J |
| Lead | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.374 | 0.551 J | W028 | 0.463 | 0.463 J | 0.542 J |
| Lead | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.397 | 0.56 | W028 | 0.479 | 0.479 | 0.552 |
| Mercury | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.48 | 0.52 | W028 | 0.5 | 0.5 | 0.518 |
| Nickel | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.55 | 0.56 | W028 | 0.555 | 0.555 | 0.56 |
| Nickel | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.03 | 1.08 | W028 | 1.06 | 1.06 | 1.08 |
| Zinc | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 3.6 | 4.3 | W028 | 3.95 | 3.95 | 4.27 |
| Zinc | Peristaltic - total | µg/L | 2 | 2 | 100 | 3.6 | 4.3 | W028 | 3.95 | 3.95 | 4.27 |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000102 JT | 0.000285 JT | W028 | 0.000194 | 0.000194 J | 0.000276 J |
| Total PCBs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000541 JT | 0.000175 JT | W028 | 0.000115 | 0.000115 J | 0.000169 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000156 J | 0.00046 J | W028 | 0.000308 | 0.000308 J | 0.000445 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000000000787 JT | 0.000000000223 T | W028 | 0.000000000151 | 0.000000000151 J | 0.000000000216 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000000000828 JT | 0.000000000352 JT | W028 | 0.000000000217 | 0.000000000217 J | 0.000000000339 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000000000162 J | 0.000000000575 J | W028 | 0.000000000368 | 0.000000000368 J | 0.000000000554 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.0012 J | 0.0012 J | W028 | 0.0012 | 0.0012 J | 0.0012 J |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.00017 JT | 0.00018 NJT | W028 | 0.000175 | 0.000175 J | 0.00018 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total LPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.027 J | 0.027 J | W028 | 0.027 | 0.027 J | 0.027 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |

Table D3.2-2b. Summary Statistics for COIs in Surface Water, High-Flow Events (East Channel Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **RM 05<06** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.185 J | 0.222 J | W030 | 0.204 | 0.204 J | 0.22 J |
| Arsenic | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.095 J | 0.143 J | W030 | 0.119 | 0.119 J | 0.141 J |
| Arsenic | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.317 J | 0.328 J | W030 | 0.323 | 0.323 J | 0.327 J |
| Cadmium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.95 | 0.99 | W030 | 0.97 | 0.97 | 0.988 |
| Chromium | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.95 | 0.99 | W030 | 0.97 | 0.97 | 0.988 |
| Copper | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.64 | 0.65 | W030 | 0.645 | 0.645 | 0.65 |
| Copper | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 1.19 | 1.29 | W030 | 1.24 | 1.24 | 1.29 |
| Copper | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.83 | 1.94 | W030 | 1.89 | 1.89 | 1.93 |
| Lead | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.01 J | 0.011 J | W030 | 0.0105 | 0.0105 J | 0.011 J |
| Lead | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.369 J | 0.379 J | W030 | 0.374 | 0.374 J | 0.379 J |
| Lead | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.379 | 0.39 | W030 | 0.385 | 0.385 | 0.389 |
| Mercury | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.49 | 0.53 | W030 | 0.51 | 0.51 | 0.528 |
| Nickel | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.5 | 0.55 | W030 | 0.525 | 0.525 | 0.548 |
| Nickel | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.03 | 1.04 | W030 | 1.04 | 1.04 | 1.04 |
| Zinc | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 3.3 | 3.9 | W030 | 3.6 | 3.6 | 3.87 |
| Zinc | Peristaltic - total | µg/L | 2 | 2 | 100 | 3.3 | 3.9 | W030 | 3.6 | 3.6 | 3.87 |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000076 JT | 0.0000768 JT | W030 | 0.0000764 | 0.0000764 J | 0.0000768 J |
| Total PCBs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000337 JT | 0.0000729 JT | W030 | 0.0000533 | 0.0000533 J | 0.0000709 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000111 J | 0.000149 J | W030 | 0.00013 | 0.00013 J | 0.000147 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000000000586 JT | 0.0000000000589 JT | W030 | 0.0000000000588 | 0.0000000000588 J | 0.0000000000589 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000000000491 JT | 0.000000000092 JT | W030 | 0.0000000000706 | 0.0000000000706 J | 0.0000000000899 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000000000108 J | 0.000000000151 J | W030 | 0.000000000129 | 0.000000000129 J | 0.000000000148 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.0052 | 0.0052 | W030 | 0.0052 | 0.0052 | 0.0052 |
| Dieldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.00051 T | 0.0006 NJT | W030 | 0.000555 | 0.000555 J | 0.000596 J |
| DDx | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.00022 JT | 0.00022 JT | W030 | 0.00022 | 0.00022 JT | 0.00022 JT |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.013 JT | 0.013 JT | W030 | 0.013 | 0.013 JT | 0.013 JT |
| Total LPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PAHs | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.013 JT | 0.013 JT | W030 | 0.013 | 0.013 JT | 0.013 JT |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.018 J | 0.029 J | W030 | 0.0235 | 0.0235 J | 0.0285 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |

Table D3.2-2b. Summary Statistics for COIs in Surface Water, High-Flow Events (East Channel Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **RM 06<07** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.22 | 0.22 | W032 | 0.22 | 0.22 | 0.22 |
| Arsenic | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.085 | 0.1 | W032 | 0.0925 | 0.0925 | 0.0993 |
| Arsenic | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.305 T | 0.32 | W032 | 0.313 | 0.313 | 0.319 |
| Cadmium | Peristaltic - dissolved | µg/L | 2 | 1 | 50 | 0.05 | 0.05 | W032 | 0.05 | 0.05 | 0.05 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 2 | 1 | 50 | 0 | 0 | W032 | 0 | 0 | 0 |
| Cadmium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.7 | 0.725 | W032 | 0.713 | 0.713 | 0.724 |
| Chromium | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.7 | 0.725 T | W032 | 0.713 | 0.713 | 0.724 |
| Copper | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.64 | 0.64 | W032 | 0.64 | 0.64 | 0.64 |
| Copper | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.99 | 1.05 | W032 | 1.02 | 1.02 | 1.05 |
| Copper | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.63 | 1.69 T | W032 | 1.66 | 1.66 | 1.69 |
| Lead | Peristaltic - dissolved | µg/L | 2 | 1 | 50 | 0.057 | 0.057 | W032 | 0.057 | 0.057 | 0.057 |
| Lead | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.248 | 0.316 | W032 | 0.282 | 0.282 | 0.313 |
| Lead | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.305 | 0.316 T | W032 | 0.311 | 0.311 | 0.315 |
| Mercury | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 1.02 | 1.09 | W032 | 1.06 | 1.06 | 1.09 |
| Nickel | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.32 | 0.48 | W032 | 0.4 | 0.4 | 0.472 |
| Nickel | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.41 | 1.5 T | W032 | 1.46 | 1.46 | 1.5 |
| Zinc | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 3.4 | 4.3 | W032 | 3.85 | 3.85 | 4.26 |
| Zinc | Peristaltic - total | µg/L | 2 | 2 | 100 | 3.4 T | 4.3 | W032 | 3.85 | 3.85 | 4.26 |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000125 JT | 0.00014 JT | W032 | 0.000133 | 0.000133 J | 0.000139 J |
| Total PCBs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000121 JT | 0.000195 JT | W032 | 0.000158 | 0.000158 J | 0.000191 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000261 J | 0.00032 J | W032 | 0.000291 | 0.000291 J | 0.000317 J |
| **PCDD/F Homologs** | | | | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00000278 T | 0.00000506 T | W032 | 0.00000392 | 0.00000392 | 0.00000495 |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000196 T | 0.0000261 T | W032 | 0.0000229 | 0.0000229 | 0.0000258 |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000247 | 0.0000289 | W032 | 0.0000268 | 0.0000268 | 0.0000287 |
| **PCDD/Fs** | | | | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00000000378 T | 0.00000000719 T | W032 | 0.00000000549 | 0.00000000549 | 0.00000000702 |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000000437 JT | 0.0000000453 JT | W032 | 0.0000000445 | 0.0000000445 J | 0.0000000452 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000000491 J | 0.0000000509 J | W032 | 0.00000005 | 0.00000005 J | 0.0000000508 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000000000655 T | 0.00000000109 JT | W032 | 0.000000000578 | 0.000000000578 J | 0.00000000104 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000000000163 T | 0.000000000231 T | W032 | 0.000000000197 | 0.000000000197 | 0.000000000228 |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000000000229 | 0.00000000132 J | W032 | 0.000000000775 | 0.000000000775 J | 0.00000000127 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00000174 J | 0.00000182 J | W032 | 0.00000178 | 0.00000178 J | 0.00000182 J |
| Aldrin | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00000061 J | 0.000000714 J | W032 | 0.000000662 | 0.000000662 J | 0.000000709 J |
| Aldrin | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00000243 J | 0.00000245 J | W032 | 0.00000244 | 0.00000244 J | 0.00000245 J |
| Dieldrin | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000993 | 0.000109 | W032 | 0.000104 | 0.000104 | 0.000109 |
| Dieldrin | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000012 J | 0.0000135 J | W032 | 0.0000128 | 0.0000128 J | 0.0000134 J |
| Dieldrin | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000111 J | 0.000123 J | W032 | 0.000117 | 0.000117 J | 0.000122 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000118 J | 0.0000133 J | W032 | 0.0000126 | 0.0000126 J | 0.0000132 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 2 | 1 | 50 | 0.000000475 J | 0.000000475 J | W032 | 0.000000475 | 0.000000475 J | 0.000000475 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000123 J | 0.0000133 J | W032 | 0.0000128 | 0.0000128 J | 0.0000132 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000332 JT | 0.0000352 JT | W032 | 0.0000342 | 0.0000342 J | 0.0000351 J |

Table D3.2-2b. Summary Statistics for COIs in Surface Water, High-Flow Events (East Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| Total chlordanes | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000145 JT | 0.0000171 JT | W032 | 0.0000158 | 0.0000158 J | 0.000017 J |
| Total chlordanes | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000477 J | 0.0000523 J | W032 | 0.00005 | 0.00005 J | 0.0000521 J |
| DDx | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000113 JT | 0.000126 JT | W032 | 0.00012 | 0.00012 J | 0.000125 J |
| DDx | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000153 JT | 0.000212 JT | W032 | 0.000183 | 0.000183 J | 0.000209 J |
| DDx | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000266 J | 0.000338 J | W032 | 0.000302 | 0.000302 J | 0.000334 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000425 J | 0.0000498 J | W032 | 0.0000462 | 0.0000462 J | 0.0000494 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000257 J | 0.000315 J | W032 | 0.000286 | 0.000286 J | 0.000312 J |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0003 J | 0.000365 J | W032 | 0.000332 | 0.000332 J | 0.000362 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00178 JT | 0.00188 JT | W032 | 0.00183 | 0.00183 J | 0.00188 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00269 JT | 0.00322 JT | W032 | 0.00296 | 0.00296 J | 0.00319 J |
| Total HPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00447 J | 0.0051 J | W032 | 0.00479 | 0.00479 J | 0.00507 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00423 T | 0.00705 T | W032 | 0.00564 | 0.00564 | 0.00691 |
| Total LPAHs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000473 JT | 0.0011 JT | W032 | 0.000787 | 0.000787 J | 0.00107 J |
| Total LPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total LPAHs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00533 J | 0.00752 J | W032 | 0.00643 | 0.00643 J | 0.00741 J |
| Naphthalene | XAD Column - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Filter - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Column+Filter - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00146 | 0.00147 | W032 | 0.00147 | 0.00147 | 0.00147 |
| Phenanthrene | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000444 | 0.000654 | W032 | 0.000549 | 0.000549 | 0.000644 |
| Phenanthrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00191 | 0.00211 | W032 | 0.00201 | 0.00201 | 0.0021 |
| Total cPAHs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00033 JT | 0.00035 JT | W032 | 0.00034 | 0.00034 J | 0.000349 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0018 JT | 0.0021 JT | W032 | 0.00195 | 0.00195 J | 0.00209 J |
| Total cPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00215 J | 0.00243 J | W032 | 0.00229 | 0.00229 J | 0.00242 J |
| Total PAHs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0061 JT | 0.00883 JT | W032 | 0.00747 | 0.00747 J | 0.00869 J |
| Total PAHs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00316 JT | 0.00432 JT | W032 | 0.00374 | 0.00374 J | 0.00426 J |
| Total PAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PAHs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0104 J | 0.012 J | W032 | 0.0112 | 0.0112 J | 0.0119 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 2 | 1 | 50 | 3.5 J | 3.5 J | W032 | 3.5 | 3.5 J | 3.5 J |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.035 J | 0.036 J | W032 | 0.0355 | 0.0355 J | 0.036 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000402 | 0.0000422 | W032 | 0.0000412 | 0.0000412 | 0.0000421 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000044 J | 0.00000659 J | W032 | 0.0000055 | 0.0000055 J | 0.00000648 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000446 J | 0.0000488 J | W032 | 0.0000467 | 0.0000467 J | 0.0000486 J |

Table D3.2-2b. Summary Statistics for COIs in Surface Water, High-Flow Events (East Channel Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **RM 08<09** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.281 J | 0.296 J | W035 | 0.289 | 0.289 J | 0.295 J |
| Arsenic | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.074 J | 0.087 J | W035 | 0.0805 | 0.0805 J | 0.0864 J |
| Arsenic | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.355 J | 0.383 J | W035 | 0.369 | 0.369 J | 0.382 J |
| Cadmium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.86 | 0.88 | W035 | 0.87 | 0.87 | 0.879 |
| Chromium | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.86 | 0.88 | W035 | 0.87 | 0.87 | 0.879 |
| Copper | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 1.22 | 1.22 | W035 | 1.22 | 1.22 | 1.22 |
| Copper | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.85 | 0.99 | W035 | 0.92 | 0.92 | 0.983 |
| Copper | Peristaltic - total | µg/L | 2 | 2 | 100 | 2.07 | 2.21 | W035 | 2.14 | 2.14 | 2.2 |
| Lead | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.1 | 0.111 | W035 | 0.106 | 0.106 | 0.11 |
| Lead | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.303 | 0.352 | W035 | 0.328 | 0.328 | 0.35 |
| Lead | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.403 | 0.463 | W035 | 0.433 | 0.433 | 0.46 |
| Mercury | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.72 | 0.73 | W035 | 0.725 | 0.725 | 0.73 |
| Nickel | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.31 | 0.36 | W035 | 0.335 | 0.335 | 0.358 |
| Nickel | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.04 | 1.08 | W035 | 1.06 | 1.06 | 1.08 |
| Zinc | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 5.6 | 6.5 | W035 | 6.05 | 6.05 | 6.46 |
| Zinc | Peristaltic - total | µg/L | 2 | 2 | 100 | 5.6 | 6.5 | W035 | 6.05 | 6.05 | 6.46 |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.0021 J | 0.0035 J | W035 | 0.0028 | 0.0028 J | 0.00343 J |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000223 JT | 0.000253 JT | W035 | 0.000238 | 0.000238 J | 0.000252 J |
| Total PCBs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00048 JT | 0.000496 JT | W035 | 0.000488 | 0.000488 J | 0.000495 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000703 J | 0.000749 J | W035 | 0.000726 | 0.000726 J | 0.000747 J |
| **PCDD/F Homologs** | | | | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00000371 T | 0.0000052 T | W035 | 0.00000446 | 0.00000446 | 0.00000513 |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000697 T | 0.0000707 JT | W035 | 0.0000702 | 0.0000702 J | 0.0000707 J |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000744 J | 0.0000749 | W035 | 0.0000747 | 0.0000747 J | 0.0000749 J |
| **PCDD/Fs** | | | | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00000000598 T | 0.00000000817 T | W035 | 0.00000000708 | 0.00000000708 | 0.00000000806 |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000000141 JT | 0.000000162 JT | W035 | 0.000000152 | 0.000000152 J | 0.000000161 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000000149 J | 0.000000168 J | W035 | 0.000000159 | 0.000000159 J | 0.000000167 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00000000018 T | 0.00000000189 JT | W035 | 0.00000000104 | 0.00000000104 J | 0.0000000018 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000000000621 T | 0.000000000628 T | W035 | 0.000000000625 | 0.000000000625 | 0.000000000628 |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000000000801 | 0.00000000252 J | W035 | 0.00000000166 | 0.00000000166 J | 0.00000000243 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00000197 J | 0.00000251 J | W035 | 0.00000224 | 0.00000224 J | 0.00000248 J |
| Aldrin | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00000101 J | 0.00000104 J | W035 | 0.00000103 | 0.00000103 J | 0.00000104 J |
| Aldrin | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00000301 J | 0.00000352 J | W035 | 0.00000327 | 0.00000327 J | 0.00000349 J |
| Dieldrin | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000985 | 0.0000995 | W035 | 0.000099 | 0.000099 | 0.0000995 |
| Dieldrin | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00000997 J | 0.0000101 J | W035 | 0.00001 | 0.00001 J | 0.0000101 J |
| Dieldrin | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000108 J | 0.00011 J | W035 | 0.000109 | 0.000109 J | 0.00011 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000185 J | 0.0000212 J | W035 | 0.0000199 | 0.0000199 J | 0.0000211 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 2 | 1 | 50 | 0.000000314 J | 0.000000314 J | W035 | 0.000000314 | 0.000000314 J | 0.000000314 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000185 J | 0.0000215 J | W035 | 0.00002 | 0.00002 J | 0.0000214 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000332 JT | 0.0000344 JT | W035 | 0.0000338 | 0.0000338 J | 0.0000343 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000178 JT | 0.0000192 JT | W035 | 0.0000185 | 0.0000185 J | 0.0000191 J |

Table D3.2-2b. Summary Statistics for COIs in Surface Water, High-Flow Events (East Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| Total chlordanes | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000522 J | 0.0000524 J | W035 | 0.0000523 | 0.0000523 J | 0.0000524 J |
| DDx | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000105 JT | 0.000121 JT | W035 | 0.000113 | 0.000113 J | 0.00012 J |
| DDx | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000169 JT | 0.000173 JT | W035 | 0.000171 | 0.000171 J | 0.000173 J |
| DDx | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000278 J | 0.00029 J | W035 | 0.000284 | 0.000284 J | 0.000289 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000229 J | 0.000349 | W035 | 0.000289 | 0.000289 J | 0.000343 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00345 | 0.00567 | W035 | 0.00456 | 0.00456 | 0.00556 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00368 J | 0.00602 | W035 | 0.00485 | 0.00485 J | 0.0059 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00908 JT | 0.0135 JT | W035 | 0.0113 | 0.0113 J | 0.0133 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0406 T | 0.0685 T | W035 | 0.0546 | 0.0546 | 0.0671 |
| Total HPAHs | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.072 JT | 0.09 JT | W035 | 0.081 | 0.081 J | 0.0891 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0497 J | 0.082 J | W035 | 0.0658 | 0.0658 J | 0.0804 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00513 T | 0.00681 T | W035 | 0.00597 | 0.00597 | 0.00673 |
| Total LPAHs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0104 JT | 0.0178 JT | W035 | 0.0141 | 0.0141 J | 0.0174 J |
| Total LPAHs | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.016 JT | 0.02 T | W035 | 0.018 | 0.018 J | 0.0198 J |
| Total LPAHs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0155 J | 0.0246 J | W035 | 0.0201 | 0.0201 J | 0.0242 J |
| Naphthalene | XAD Column - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Filter - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Column+Filter - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00186 | 0.00194 | W035 | 0.0019 | 0.0019 | 0.00194 |
| Phenanthrene | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00719 | 0.0124 | W035 | 0.0098 | 0.0098 | 0.0121 |
| Phenanthrene | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.016 J | 0.02 | W035 | 0.018 | 0.018 J | 0.0198 J |
| Phenanthrene | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00913 | 0.0143 | W035 | 0.0117 | 0.0117 | 0.014 |
| Total cPAHs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0021 JT | 0.0031 JT | W035 | 0.0026 | 0.0026 J | 0.00305 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.021 T | 0.035 T | W035 | 0.028 | 0.028 | 0.0343 |
| Total cPAHs | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.021 JT | 0.027 JT | W035 | 0.024 | 0.024 J | 0.0267 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0231 J | 0.0381 J | W035 | 0.0306 | 0.0306 J | 0.0374 J |
| Total PAHs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0142 JT | 0.0204 JT | W035 | 0.0173 | 0.0173 J | 0.0201 J |
| Total PAHs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.051 JT | 0.0863 JT | W035 | 0.0687 | 0.0687 J | 0.0845 J |
| Total PAHs | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.088 JT | 0.11 JT | W035 | 0.099 | 0.099 J | 0.109 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0652 J | 0.107 J | W035 | 0.086 | 0.086 J | 0.105 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.02 J | 0.023 J | W035 | 0.0215 | 0.0215 J | 0.0229 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000356 | 0.0000367 | W035 | 0.0000362 | 0.0000362 | 0.0000366 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00000515 J | 0.00000542 J | W035 | 0.00000529 | 0.00000529 J | 0.00000541 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000041 J | 0.0000419 J | W035 | 0.0000414 | 0.0000414 J | 0.0000418 J |

Table D3.2-2b. Summary Statistics for COIs in Surface Water, High-Flow Events (East Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **RM 09<10** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.21 | 0.21 | W038 | 0.21 | 0.21 | 0.21 |
| Arsenic | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.09 | 0.1 | W038 | 0.095 | 0.095 | 0.0995 |
| Arsenic | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.3 | 0.31 | W038 | 0.305 | 0.305 | 0.31 |
| Cadmium | Peristaltic - dissolved | µg/L | 2 | 1 | 50 | 0.02 | 0.02 | W038 | 0.02 | 0.02 | 0.02 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 2 | 1 | 50 | 0 | 0 | W038 | 0 | 0 | 0 |
| Cadmium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.82 | 0.85 | W038 | 0.835 | 0.835 | 0.849 |
| Chromium | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.82 | 0.85 | W038 | 0.835 | 0.835 | 0.849 |
| Copper | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.57 | 0.6 | W038 | 0.585 | 0.585 | 0.599 |
| Copper | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 1.12 | 1.18 | W038 | 1.15 | 1.15 | 1.18 |
| Copper | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.72 | 1.75 | W038 | 1.74 | 1.74 | 1.75 |
| Lead | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Lead | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.337 | 0.355 | W038 | 0.346 | 0.346 | 0.354 |
| Lead | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.337 | 0.355 | W038 | 0.346 | 0.346 | 0.354 |
| Mercury | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 1.05 | 1.07 | W038 | 1.06 | 1.06 | 1.07 |
| Nickel | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.44 | 0.56 | W038 | 0.5 | 0.5 | 0.554 |
| Nickel | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.49 | 1.63 | W038 | 1.56 | 1.56 | 1.62 |
| Zinc | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 3.3 | 4.7 | W038 | 4 | 4 | 4.63 |
| Zinc | Peristaltic - total | µg/L | 2 | 2 | 100 | 3.3 | 4.7 | W038 | 4 | 4 | 4.63 |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000602 JT | 0.000065 JT | W038 | 0.0000626 | 0.0000626 J | 0.0000648 J |
| Total PCBs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000548 JT | 0.000103 JT | W038 | 0.0000789 | 0.0000789 J | 0.000101 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000115 J | 0.000168 J | W038 | 0.000142 | 0.000142 J | 0.000165 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000000000568 JT | 0.0000000000628 JT | W038 | 0.0000000000598 | 0.0000000000598 J | 0.0000000000625 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00000000191 JT | 0.00000000194 JT | W038 | 0.00000000193 | 0.00000000193 J | 0.00000000194 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00000000197 J | 0.000000002 J | W038 | 0.00000000198 | 0.00000000198 J | 0.000000002 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.0004 JT | 0.0004 JT | W038 | 0.0004 | 0.0004 JT | 0.0004 JT |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total LPAHs | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.05 JT | 0.05 JT | W038 | 0.05 | 0.05 JT | 0.05 JT |
| Naphthalene | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.034 J | 0.034 J | W038 | 0.034 | 0.034 J | 0.034 J |
| Phenanthrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PAHs | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.05 JT | 0.05 JT | W038 | 0.05 | 0.05 JT | 0.05 JT |

Table D3.2-2b. Summary Statistics for COIs in Surface Water, High-Flow Events (East Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 2 | 1 | 50 | 1 J | 1 J | W038 | 1 | 1 J | 1 J |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.00038 J | 0.00038 J | W038 | 0.00038 | 0.00038 J | 0.00038 J |

Table D3.2-2b. Summary Statistics for COIs in Surface Water, High-Flow Events (East Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **RM 01.9<03** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.23 J | 0.26 J | W026 | 0.245 | 0.245 J | 0.259 J |
| Arsenic | Peristaltic - particulate | µg/L | 0.06 J | 0.09 J | W026 | 0.075 | 0.075 J | 0.0885 J |
| Arsenic | Peristaltic - total | µg/L | 0.32 J | 0.32 J | W026 | 0.32 | 0.32 J | 0.32 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W026 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W026 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W026 | 0.01 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.23 U | 0.24 U | W026 | 0.118 | 0.118 U | 0.12 U |
| Chromium | Peristaltic - particulate | µg/L | 0.79 | 0.86 | W026 | 0.825 | 0.825 | 0.857 |
| Chromium | Peristaltic - total | µg/L | 0.79 | 0.86 | W026 | 0.825 | 0.825 | 0.857 |
| Copper | Peristaltic - dissolved | µg/L | 0.57 | 0.65 | W026 | 0.61 | 0.61 | 0.646 |
| Copper | Peristaltic - particulate | µg/L | 0.9 | 0.99 | W026 | 0.945 | 0.945 | 0.986 |
| Copper | Peristaltic - total | µg/L | 1.47 | 1.64 | W026 | 1.56 | 1.56 | 1.63 |
| Lead | Peristaltic - dissolved | µg/L | 0.008 U | 0.008 U | W026 | 0.004 | 0.004 U | 0.004 U |
| Lead | Peristaltic - particulate | µg/L | 0.305 | 0.311 | W026 | 0.308 | 0.308 | 0.311 |
| Lead | Peristaltic - total | µg/L | 0.305 | 0.311 | W026 | 0.308 | 0.308 | 0.311 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W026 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W026 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W026 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 1.3 | 1.32 | W026 | 1.31 | 1.31 | 1.32 |
| Nickel | Peristaltic - particulate | µg/L | 0.43 | 0.46 | W026 | 0.445 | 0.445 | 0.459 |
| Nickel | Peristaltic - total | µg/L | 1.75 | 1.76 | W026 | 1.76 | 1.76 | 1.76 |
| Zinc | Peristaltic - dissolved | µg/L | 1.1 U | 1.3 U | W026 | 0.6 | 0.6 U | 0.645 U |
| Zinc | Peristaltic - particulate | µg/L | 3.4 | 3.6 | W026 | 3.5 | 3.5 | 3.59 |
| Zinc | Peristaltic - total | µg/L | 3.4 | 3.6 | W026 | 3.5 | 3.5 | 3.59 |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0006 U | W026 | 0.0003 | 0.0003 U | 0.0003 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000127 JT | 0.000154 JT | W026 | 0.000141 | 0.000141 J | 0.000153 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.000096 JT | 0.000114 JT | W026 | 0.000105 | 0.000105 J | 0.000113 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000223 J | 0.000268 J | W026 | 0.000246 | 0.000246 J | 0.000266 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.0000000000962 JT | 0.000000000115 JT | W026 | 0.000000000106 | 0.000000000106 J | 0.000000000114 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000000204 JT | 0.000000000241 JT | W026 | 0.000000000223 | 0.000000000223 J | 0.000000000239 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.0000000003 J | 0.000000000356 J | W026 | 0.000000000328 | 0.000000000328 J | 0.000000000353 J |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.00064 U | 0.0007 U | W026 | 0.000335 | 0.000335 U | 0.000349 U |
| Dieldrin | Peristaltic - total | µg/L | 0.0004 U | 0.0004 U | W026 | 0.0002 | 0.0002 U | 0.0002 U |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.00041 U | 0.0019 | W026 | 0.00105 | 0.00105 | 0.00182 |
| Total chlordanes | Peristaltic - total | µg/L | 0.00073 UT | 0.00073 UT | W026 | 0.000365 | 0.000365 U | 0.000365 U |
| DDx | Peristaltic - total | µg/L | 0.00032 JT | 0.00057 JT | W026 | 0.000445 | 0.000445 J | 0.000558 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0086 U | W026 | 0.0043 | 0.0043 U | 0.0043 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W026 | 0.0055 | 0.0055 U | 0.0055 U |
| Total LPAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W026 | 0.0065 | 0.0065 U | 0.0065 U |
| Naphthalene | Peristaltic - total | µg/L | 0.013 U | 0.013 U | W026 | 0.0065 | 0.0065 U | 0.0065 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.0064 U | W026 | 0.0032 | 0.0032 U | 0.0032 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W026 | 0.0055 | 0.0055 U | 0.0055 U |
| Total PAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W026 | 0.0065 | 0.0065 U | 0.0065 U |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W026 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.23 U | 0.63 U | W026 | 0.215 | 0.215 U | 0.305 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.016 J | 0.02 J | W026 | 0.018 | 0.018 J | 0.0198 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.00037 J | 0.015 U | W026 | 0.00394 | 0.00394 J | 0.00714 J |

Table D3.2-2b. Summary Statistics for COIs in Surface Water, High-Flow Events (East Channel Single-Point Locations).

| Analyte | Method | Units | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th Percentile (half DL)[b] |
| **RM 03<04** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.202 J | 0.213 J | W028 | 0.208 | 0.208 J | 0.212 J |
| Arsenic | Peristaltic - particulate | µg/L | 0.104 J | 0.12 J | W028 | 0.112 | 0.112 J | 0.119 J |
| Arsenic | Peristaltic - total | µg/L | 0.306 J | 0.333 J | W028 | 0.32 | 0.32 J | 0.332 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W028 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W028 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W028 | 0.01 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.14 U | 0.15 U | W028 | 0.0725 | 0.0725 U | 0.0748 U |
| Chromium | Peristaltic - particulate | µg/L | 1.02 | 1.07 | W028 | 1.05 | 1.05 | 1.07 |
| Chromium | Peristaltic - total | µg/L | 1.02 | 1.07 | W028 | 1.05 | 1.05 | 1.07 |
| Copper | Peristaltic - dissolved | µg/L | 0.61 | 0.62 | W028 | 0.615 | 0.615 | 0.62 |
| Copper | Peristaltic - particulate | µg/L | 1.34 | 1.36 | W028 | 1.35 | 1.35 | 1.36 |
| Copper | Peristaltic - total | µg/L | 1.95 | 1.98 | W028 | 1.97 | 1.97 | 1.98 |
| Lead | Peristaltic - dissolved | µg/L | 0.009 J | 0.023 | W028 | 0.016 | 0.016 J | 0.0223 J |
| Lead | Peristaltic - particulate | µg/L | 0.374 | 0.551 J | W028 | 0.463 | 0.463 J | 0.542 J |
| Lead | Peristaltic - total | µg/L | 0.397 | 0.56 | W028 | 0.479 | 0.479 | 0.552 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W028 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W028 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W028 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.48 | 0.52 | W028 | 0.5 | 0.5 | 0.518 |
| Nickel | Peristaltic - particulate | µg/L | 0.55 | 0.56 | W028 | 0.555 | 0.555 | 0.56 |
| Nickel | Peristaltic - total | µg/L | 1.03 | 1.08 | W028 | 1.06 | 1.06 | 1.08 |
| Zinc | Peristaltic - dissolved | µg/L | 1.1 U | 1.3 U | W028 | 0.6 | 0.6 U | 0.645 U |
| Zinc | Peristaltic - particulate | µg/L | 3.6 | 4.3 | W028 | 3.95 | 3.95 | 4.27 |
| Zinc | Peristaltic - total | µg/L | 3.6 | 4.3 | W028 | 3.95 | 3.95 | 4.27 |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0006 U | W028 | 0.0003 | 0.0003 U | 0.0003 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000102 JT | 0.000285 JT | W028 | 0.000194 | 0.000194 J | 0.000276 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.0000541 JT | 0.000175 JT | W028 | 0.000115 | 0.000115 J | 0.000169 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000156 J | 0.00046 J | W028 | 0.000308 | 0.000308 J | 0.000445 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.0000000000787 JT | 0.000000000223 T | W028 | 0.000000000151 | 0.000000000151 J | 0.000000000216 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.0000000000828 JT | 0.000000000352 JT | W028 | 0.000000000217 | 0.000000000217 J | 0.000000000339 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000000162 J | 0.000000000575 J | W028 | 0.000000000368 | 0.000000000368 J | 0.000000000554 J |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.00048 U | 0.00069 U | W028 | 0.000293 | 0.000293 U | 0.00034 U |
| Dieldrin | Peristaltic - total | µg/L | 0.0004 U | 0.0012 J | W028 | 0.0007 | 0.0007 J | 0.00115 J |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.00021 U | 0.0005 U | W028 | 0.000178 | 0.000178 U | 0.000243 U |
| Total chlordanes | Peristaltic - total | µg/L | 0.00073 UT | 0.00073 UT | W028 | 0.000365 | 0.000365 U | 0.000365 U |
| DDx | Peristaltic - total | µg/L | 0.00017 JT | 0.00018 NJT | W028 | 0.000175 | 0.000175 J | 0.00018 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0086 U | W028 | 0.0043 | 0.0043 U | 0.0043 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W028 | 0.0055 | 0.0055 U | 0.0055 U |
| Total LPAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W028 | 0.0065 | 0.0065 U | 0.0065 U |
| Naphthalene | Peristaltic - total | µg/L | 0.013 U | 0.013 U | W028 | 0.0065 | 0.0065 U | 0.0065 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.0064 U | W028 | 0.0032 | 0.0032 U | 0.0032 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W028 | 0.0055 | 0.0055 U | 0.0055 U |
| Total PAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W028 | 0.0065 | 0.0065 U | 0.0065 U |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W028 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.098 U | 0.25 U | W028 | 0.087 | 0.087 U | 0.121 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.027 J | 0.028 U | W028 | 0.0205 | 0.0205 J | 0.0264 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.000014 U | 0.015 U | W028 | 0.00375 | 0.00375 U | 0.00713 U |

Table D3.2-2b. Summary Statistics for COIs in Surface Water, High-Flow Events (East Channel Single-Point Locations).

| Analyte | Method | Units | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th Percentile (half DL)[b] |
| **RM 05<06** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.185 J | 0.222 J | W030 | 0.204 | 0.204 J | 0.22 J |
| Arsenic | Peristaltic - particulate | µg/L | 0.095 J | 0.143 J | W030 | 0.119 | 0.119 J | 0.141 J |
| Arsenic | Peristaltic - total | µg/L | 0.317 J | 0.328 J | W030 | 0.323 | 0.323 J | 0.327 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W030 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W030 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W030 | 0.01 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.2 U | 0.23 U | W030 | 0.108 | 0.108 U | 0.114 U |
| Chromium | Peristaltic - particulate | µg/L | 0.95 | 0.99 | W030 | 0.97 | 0.97 | 0.988 |
| Chromium | Peristaltic - total | µg/L | 0.95 | 0.99 | W030 | 0.97 | 0.97 | 0.988 |
| Copper | Peristaltic - dissolved | µg/L | 0.64 | 0.65 | W030 | 0.645 | 0.645 | 0.65 |
| Copper | Peristaltic - particulate | µg/L | 1.19 | 1.29 | W030 | 1.24 | 1.24 | 1.29 |
| Copper | Peristaltic - total | µg/L | 1.83 | 1.94 | W030 | 1.89 | 1.89 | 1.93 |
| Lead | Peristaltic - dissolved | µg/L | 0.01 J | 0.011 J | W030 | 0.0105 | 0.0105 J | 0.011 J |
| Lead | Peristaltic - particulate | µg/L | 0.369 J | 0.379 J | W030 | 0.374 | 0.374 J | 0.379 J |
| Lead | Peristaltic - total | µg/L | 0.379 | 0.39 | W030 | 0.385 | 0.385 | 0.389 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W030 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W030 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W030 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.49 | 0.53 | W030 | 0.51 | 0.51 | 0.528 |
| Nickel | Peristaltic - particulate | µg/L | 0.5 | 0.55 | W030 | 0.525 | 0.525 | 0.548 |
| Nickel | Peristaltic - total | µg/L | 1.03 | 1.04 | W030 | 1.04 | 1.04 | 1.04 |
| Zinc | Peristaltic - dissolved | µg/L | 1.9 U | 2 U | W030 | 0.975 | 0.975 U | 0.998 U |
| Zinc | Peristaltic - particulate | µg/L | 3.3 | 3.9 | W030 | 3.6 | 3.6 | 3.87 |
| Zinc | Peristaltic - total | µg/L | 3.3 | 3.9 | W030 | 3.6 | 3.6 | 3.87 |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0006 U | W030 | 0.0003 | 0.0003 U | 0.0003 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000076 JT | 0.0000768 JT | W030 | 0.0000764 | 0.0000764 J | 0.0000768 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.0000337 JT | 0.0000729 JT | W030 | 0.0000533 | 0.0000533 J | 0.0000709 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000111 J | 0.000149 J | W030 | 0.00013 | 0.00013 J | 0.000147 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.0000000000586 JT | 0.0000000000589 JT | W030 | 0.0000000000588 | 0.0000000000588 J | 0.0000000000589 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.0000000000491 JT | 0.000000000092 JT | W030 | 0.0000000000706 | 0.0000000000706 J | 0.0000000000899 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000000108 J | 0.000000000151 J | W030 | 0.000000000129 | 0.000000000129 J | 0.000000000148 J |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.0052 | 0.0058 U | W030 | 0.00405 | 0.00405 | 0.00509 |
| Dieldrin | Peristaltic - total | µg/L | 0.0004 U | 0.0004 U | W030 | 0.0002 | 0.0002 U | 0.0002 U |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.000092 U | 0.00019 U | W030 | 0.0000705 | 0.0000705 U | 0.0000926 U |
| Total chlordanes | Peristaltic - total | µg/L | 0.00051 T | 0.0006 NJT | W030 | 0.000555 | 0.000555 J | 0.000596 J |
| DDx | Peristaltic - total | µg/L | 0.00022 JT | 0.00094 UT | W030 | 0.000345 | 0.000345 J | 0.000458 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0086 U | W030 | 0.0043 | 0.0043 U | 0.0043 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.013 JT | W030 | 0.00925 | 0.00925 J | 0.0126 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W030 | 0.0065 | 0.0065 U | 0.0065 U |
| Naphthalene | Peristaltic - total | µg/L | 0.013 U | 0.013 U | W030 | 0.0065 | 0.0065 U | 0.0065 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.0064 U | W030 | 0.0032 | 0.0032 U | 0.0032 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W030 | 0.0055 | 0.0055 U | 0.0055 U |
| Total PAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W030 | 0.00975 | 0.00975 J | 0.0127 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W030 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.26 U | 0.58 U | W030 | 0.21 | 0.21 U | 0.282 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.018 J | 0.029 J | W030 | 0.0235 | 0.0235 J | 0.0285 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.015 U | 0.015 U | W030 | 0.0075 | 0.0075 U | 0.0075 U |

Table D3.2-2b. Summary Statistics for COIs in Surface Water, High-Flow Events (East Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **RM 06<07** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.22 | 0.22 | W032 | 0.22 | 0.22 | 0.22 |
| Arsenic | Peristaltic - particulate | µg/L | 0.085 | 0.1 | W032 | 0.0925 | 0.0925 | 0.0993 |
| Arsenic | Peristaltic - total | µg/L | 0.305 T | 0.32 | W032 | 0.313 | 0.313 | 0.319 |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.05 | W032 | 0.03 | 0.03 | 0.048 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 0 | 0.02 U | W032 | 0.005 | 0.005 | 0.0095 |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W032 | 0.01 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.23 U | 0.24 U | W032 | 0.118 | 0.118 U | 0.12 U |
| Chromium | Peristaltic - particulate | µg/L | 0.7 | 0.725 | W032 | 0.713 | 0.713 | 0.724 |
| Chromium | Peristaltic - total | µg/L | 0.7 | 0.725 T | W032 | 0.713 | 0.713 | 0.724 |
| Copper | Peristaltic - dissolved | µg/L | 0.64 | 0.64 | W032 | 0.64 | 0.64 | 0.64 |
| Copper | Peristaltic - particulate | µg/L | 0.99 | 1.05 | W032 | 1.02 | 1.02 | 1.05 |
| Copper | Peristaltic - total | µg/L | 1.63 | 1.69 T | W032 | 1.66 | 1.66 | 1.69 |
| Lead | Peristaltic - dissolved | µg/L | 0.01 U | 0.057 | W032 | 0.031 | 0.031 | 0.0544 |
| Lead | Peristaltic - particulate | µg/L | 0.248 | 0.316 | W032 | 0.282 | 0.282 | 0.313 |
| Lead | Peristaltic - total | µg/L | 0.305 | 0.316 T | W032 | 0.311 | 0.311 | 0.315 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W032 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W032 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W032 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 1.02 | 1.09 | W032 | 1.06 | 1.06 | 1.09 |
| Nickel | Peristaltic - particulate | µg/L | 0.32 | 0.48 | W032 | 0.4 | 0.4 | 0.472 |
| Nickel | Peristaltic - total | µg/L | 1.41 | 1.5 T | W032 | 1.46 | 1.46 | 1.5 |
| Zinc | Peristaltic - dissolved | µg/L | 1 U | 1.6 U | W032 | 0.65 | 0.65 U | 0.785 U |
| Zinc | Peristaltic - particulate | µg/L | 3.4 | 4.3 | W032 | 3.85 | 3.85 | 4.26 |
| Zinc | Peristaltic - total | µg/L | 3.4 T | 4.3 | W032 | 3.85 | 3.85 | 4.26 |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0006 U | W032 | 0.0003 | 0.0003 U | 0.0003 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000125 JT | 0.00014 JT | W032 | 0.000133 | 0.000133 J | 0.000139 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.000121 JT | 0.000195 JT | W032 | 0.000158 | 0.000158 J | 0.000191 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000261 J | 0.00032 J | W032 | 0.000291 | 0.000291 J | 0.000317 J |
| **PCDD/F Homologs** | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 0.00000278 T | 0.00000506 T | W032 | 0.00000392 | 0.00000392 | 0.00000495 |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 0.0000196 T | 0.0000261 T | W032 | 0.0000229 | 0.0000229 | 0.0000258 |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 0.0000247 | 0.0000289 | W032 | 0.0000268 | 0.0000268 | 0.0000287 |
| **PCDD/Fs** | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.00000000378 T | 0.00000000719 T | W032 | 0.00000000549 | 0.00000000549 | 0.00000000702 |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.0000000437 JT | 0.0000000453 JT | W032 | 0.0000000445 | 0.0000000445 J | 0.0000000452 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.0000000491 J | 0.0000000509 J | W032 | 0.00000005 | 0.00000005 J | 0.0000000508 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.0000000000655 T | 0.00000000109 JT | W032 | 0.000000000578 | 0.000000000578 J | 0.00000000104 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000000163 T | 0.000000000231 T | W032 | 0.000000000197 | 0.000000000197 | 0.000000000228 |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000000229 | 0.00000000132 J | W032 | 0.000000000775 | 0.000000000775 J | 0.00000000127 J |
| **Pesticides** | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 0.00000174 J | 0.00000182 J | W032 | 0.00000178 | 0.00000178 J | 0.00000182 J |
| Aldrin | XAD Filter - particulate | µg/L | 0.00000061 J | 0.000000714 J | W032 | 0.000000662 | 0.000000662 J | 0.000000709 J |
| Aldrin | XAD Column+Filter - total | µg/L | 0.00000243 J | 0.00000245 J | W032 | 0.00000244 | 0.00000244 J | 0.00000245 J |
| Dieldrin | XAD Column - dissolved | µg/L | 0.0000993 | 0.000109 | W032 | 0.000104 | 0.000104 | 0.000109 |
| Dieldrin | XAD Filter - particulate | µg/L | 0.000012 J | 0.0000135 J | W032 | 0.0000128 | 0.0000128 J | 0.0000134 J |
| Dieldrin | XAD Column+Filter - total | µg/L | 0.000111 J | 0.000123 J | W032 | 0.000117 | 0.000117 J | 0.000122 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 0.0000118 J | 0.0000133 J | W032 | 0.0000126 | 0.0000126 J | 0.0000132 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 0.000000349 U | 0.000000475 J | W032 | 0.000000325 | 0.000000325 J | 0.00000046 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 0.0000123 J | 0.0000133 J | W032 | 0.0000128 | 0.0000128 J | 0.0000132 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 0.0000332 JT | 0.0000352 JT | W032 | 0.0000342 | 0.0000342 J | 0.0000351 J |

Table D3.2-2b. Summary Statistics for COIs in Surface Water, High-Flow Events (East Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| Total chlordanes | XAD Filter - particulate | µg/L | 0.0000145 JT | 0.0000171 JT | W032 | 0.0000158 | 0.0000158 J | 0.000017 J |
| Total chlordanes | XAD Column+Filter - total | µg/L | 0.0000477 J | 0.0000523 J | W032 | 0.00005 | 0.00005 J | 0.0000521 J |
| DDx | XAD Column - dissolved | µg/L | 0.000113 JT | 0.000126 JT | W032 | 0.00012 | 0.00012 J | 0.000125 J |
| DDx | XAD Filter - particulate | µg/L | 0.000153 JT | 0.000212 JT | W032 | 0.000183 | 0.000183 J | 0.000209 J |
| DDx | XAD Column+Filter - total | µg/L | 0.000266 J | 0.000338 J | W032 | 0.000302 | 0.000302 J | 0.000334 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 0.0000425 J | 0.0000498 J | W032 | 0.0000462 | 0.0000462 J | 0.0000494 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 0.000257 J | 0.000315 J | W032 | 0.000286 | 0.000286 J | 0.000312 J |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0043 U | 0.0086 U | W032 | 0.00323 | 0.00323 U | 0.00419 U |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 0.0003 J | 0.000365 J | W032 | 0.000332 | 0.000332 J | 0.000362 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 0.00178 JT | 0.00188 JT | W032 | 0.00183 | 0.00183 J | 0.00188 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 0.00269 JT | 0.00322 JT | W032 | 0.00296 | 0.00296 J | 0.00319 J |
| Total HPAHs | Peristaltic - total | µg/L | 0.0053 UT | 0.011 UT | W032 | 0.00408 | 0.00408 U | 0.00536 U |
| Total HPAHs | XAD Column+Filter - total | µg/L | 0.00447 J | 0.0051 J | W032 | 0.00479 | 0.00479 J | 0.00507 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 0.00423 T | 0.00705 T | W032 | 0.00564 | 0.00564 | 0.00691 |
| Total LPAHs | XAD Filter - particulate | µg/L | 0.000473 JT | 0.0011 JT | W032 | 0.000787 | 0.000787 J | 0.00107 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.0065 UT | 0.013 UT | W032 | 0.00488 | 0.00488 U | 0.00634 U |
| Total LPAHs | XAD Column+Filter - total | µg/L | 0.00533 J | 0.00752 J | W032 | 0.00643 | 0.00643 J | 0.00741 J |
| Naphthalene | XAD Column - dissolved | µg/L | 0.0165 U | 0.0246 U | W032 | 0.0103 | 0.0103 U | 0.0121 U |
| Naphthalene | XAD Filter - particulate | µg/L | 0.000114 U | 0.000679 U | W032 | 0.000198 | 0.000198 U | 0.000325 U |
| Naphthalene | Peristaltic - total | µg/L | 0.0065 U | 0.013 U | W032 | 0.00488 | 0.00488 U | 0.00634 U |
| Naphthalene | XAD Column+Filter - total | µg/L | 0.0165 U | 0.0246 U | W032 | 0.0103 | 0.0103 U | 0.0121 U |
| Phenanthrene | XAD Column - dissolved | µg/L | 0.00146 | 0.00147 | W032 | 0.00147 | 0.00147 | 0.00147 |
| Phenanthrene | XAD Filter - particulate | µg/L | 0.000444 | 0.000654 | W032 | 0.000549 | 0.000549 | 0.000644 |
| Phenanthrene | Peristaltic - total | µg/L | 0.0032 U | 0.0064 U | W032 | 0.0024 | 0.0024 U | 0.00312 U |
| Phenanthrene | XAD Column+Filter - total | µg/L | 0.00191 | 0.00211 | W032 | 0.00201 | 0.00201 | 0.0021 |
| Total cPAHs | XAD Column - dissolved | µg/L | 0.00033 JT | 0.00035 JT | W032 | 0.00034 | 0.00034 J | 0.000349 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 0.0018 JT | 0.0021 JT | W032 | 0.00195 | 0.00195 J | 0.00209 J |
| Total cPAHs | Peristaltic - total | µg/L | 0.0053 UT | 0.011 UT | W032 | 0.00408 | 0.00408 U | 0.00536 U |
| Total cPAHs | XAD Column+Filter - total | µg/L | 0.00215 J | 0.00243 J | W032 | 0.00229 | 0.00229 J | 0.00242 J |
| Total PAHs | XAD Column - dissolved | µg/L | 0.0061 JT | 0.00883 JT | W032 | 0.00747 | 0.00747 J | 0.00869 J |
| Total PAHs | XAD Filter - particulate | µg/L | 0.00316 JT | 0.00432 JT | W032 | 0.00374 | 0.00374 J | 0.00426 J |
| Total PAHs | Peristaltic - total | µg/L | 0.0065 UT | 0.013 UT | W032 | 0.00488 | 0.00488 U | 0.00634 U |
| Total PAHs | XAD Column+Filter - total | µg/L | 0.0104 J | 0.012 J | W032 | 0.0112 | 0.0112 J | 0.0119 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W032 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.71 U | 3.5 J | W032 | 1.93 | 1.93 J | 3.34 J |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.035 J | 0.036 J | W032 | 0.0355 | 0.0355 J | 0.036 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 0.0000402 | 0.0000422 | W032 | 0.0000412 | 0.0000412 | 0.0000421 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 0.0000044 J | 0.00000659 J | W032 | 0.0000055 | 0.0000055 J | 0.00000648 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.015 U | 0.015 U | W032 | 0.0075 | 0.0075 U | 0.0075 U |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 0.0000446 J | 0.0000488 J | W032 | 0.0000467 | 0.0000467 J | 0.0000486 J |

Table D3.2-2b. Summary Statistics for COIs in Surface Water, High-Flow Events (East Channel Single-Point Locations).

| Analyte | Method | Units | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th Percentile (half DL)[b] |
| **RM 08<09** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.281 J | 0.296 J | W035 | 0.289 | 0.289 J | 0.295 J |
| Arsenic | Peristaltic - particulate | µg/L | 0.074 J | 0.087 J | W035 | 0.0805 | 0.0805 J | 0.0864 J |
| Arsenic | Peristaltic - total | µg/L | 0.355 J | 0.383 J | W035 | 0.369 | 0.369 J | 0.382 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W035 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W035 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W035 | 0.01 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.45 U | 0.48 U | W035 | 0.233 | 0.233 U | 0.239 U |
| Chromium | Peristaltic - particulate | µg/L | 0.86 | 0.88 | W035 | 0.87 | 0.87 | 0.879 |
| Chromium | Peristaltic - total | µg/L | 0.86 | 0.88 | W035 | 0.87 | 0.87 | 0.879 |
| Copper | Peristaltic - dissolved | µg/L | 1.22 | 1.22 | W035 | 1.22 | 1.22 | 1.22 |
| Copper | Peristaltic - particulate | µg/L | 0.85 | 0.99 | W035 | 0.92 | 0.92 | 0.983 |
| Copper | Peristaltic - total | µg/L | 2.07 | 2.21 | W035 | 2.14 | 2.14 | 2.2 |
| Lead | Peristaltic - dissolved | µg/L | 0.1 | 0.111 | W035 | 0.106 | 0.106 | 0.11 |
| Lead | Peristaltic - particulate | µg/L | 0.303 | 0.352 | W035 | 0.328 | 0.328 | 0.35 |
| Lead | Peristaltic - total | µg/L | 0.403 | 0.463 | W035 | 0.433 | 0.433 | 0.46 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W035 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W035 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W035 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.72 | 0.73 | W035 | 0.725 | 0.725 | 0.73 |
| Nickel | Peristaltic - particulate | µg/L | 0.31 | 0.36 | W035 | 0.335 | 0.335 | 0.358 |
| Nickel | Peristaltic - total | µg/L | 1.04 | 1.08 | W035 | 1.06 | 1.06 | 1.08 |
| Zinc | Peristaltic - dissolved | µg/L | 3.2 U | 3.6 U | W035 | 1.7 | 1.7 U | 1.79 U |
| Zinc | Peristaltic - particulate | µg/L | 5.6 | 6.5 | W035 | 6.05 | 6.05 | 6.46 |
| Zinc | Peristaltic - total | µg/L | 5.6 | 6.5 | W035 | 6.05 | 6.05 | 6.46 |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0021 J | 0.0035 J | W035 | 0.0028 | 0.0028 J | 0.00343 J |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000223 JT | 0.000253 JT | W035 | 0.000238 | 0.000238 J | 0.000252 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.00048 JT | 0.000496 JT | W035 | 0.000488 | 0.000488 J | 0.000495 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000703 J | 0.000749 J | W035 | 0.000726 | 0.000726 J | 0.000747 J |
| **PCDD/F Homologs** | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 0.00000371 T | 0.0000052 T | W035 | 0.00000446 | 0.00000446 | 0.00000513 |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 0.0000697 T | 0.0000707 JT | W035 | 0.0000702 | 0.0000702 J | 0.0000707 J |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 0.0000744 J | 0.0000749 | W035 | 0.0000747 | 0.0000747 J | 0.0000749 J |
| **PCDD/Fs** | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.00000000598 T | 0.00000000817 T | W035 | 0.00000000708 | 0.00000000708 | 0.00000000806 |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000141 JT | 0.000000162 JT | W035 | 0.000000152 | 0.000000152 J | 0.000000161 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000149 J | 0.000000168 J | W035 | 0.000000159 | 0.000000159 J | 0.000000167 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.00000000018 T | 0.00000000189 JT | W035 | 0.00000000104 | 0.00000000104 J | 0.0000000018 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000000621 T | 0.000000000628 T | W035 | 0.000000000625 | 0.000000000625 | 0.000000000628 |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000000801 | 0.00000000252 J | W035 | 0.00000000166 | 0.00000000166 J | 0.00000000243 J |
| **Pesticides** | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 0.00000197 J | 0.00000251 J | W035 | 0.00000224 | 0.00000224 J | 0.00000248 J |
| Aldrin | XAD Filter - particulate | µg/L | 0.00000101 J | 0.00000104 J | W035 | 0.00000103 | 0.00000103 J | 0.00000104 J |
| Aldrin | XAD Column+Filter - total | µg/L | 0.00000301 J | 0.00000352 J | W035 | 0.00000327 | 0.00000327 J | 0.00000349 J |
| Dieldrin | XAD Column - dissolved | µg/L | 0.0000985 | 0.0000995 | W035 | 0.000099 | 0.000099 | 0.0000995 |
| Dieldrin | XAD Filter - particulate | µg/L | 0.00000997 J | 0.0000101 J | W035 | 0.00001 | 0.00001 J | 0.0000101 J |
| Dieldrin | XAD Column+Filter - total | µg/L | 0.000108 J | 0.00011 J | W035 | 0.000109 | 0.000109 J | 0.00011 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 0.0000185 J | 0.0000212 J | W035 | 0.0000199 | 0.0000199 J | 0.0000211 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 0.000000314 J | 0.000000319 U | W035 | 0.000000237 | 0.000000237 J | 0.000000306 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 0.0000185 J | 0.0000215 J | W035 | 0.00002 | 0.00002 J | 0.0000214 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 0.0000332 JT | 0.0000344 JT | W035 | 0.0000338 | 0.0000338 J | 0.0000343 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 0.0000178 JT | 0.0000192 JT | W035 | 0.0000185 | 0.0000185 J | 0.0000191 J |

Table D3.2-2b. Summary Statistics for COIs in Surface Water, High-Flow Events (East Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| Total chlordanes | XAD Column+Filter - total | µg/L | 0.0000522 J | 0.0000524 J | W035 | 0.0000523 | 0.0000523 J | 0.0000524 J |
| DDx | XAD Column - dissolved | µg/L | 0.000105 JT | 0.000121 JT | W035 | 0.000113 | 0.000113 J | 0.00012 J |
| DDx | XAD Filter - particulate | µg/L | 0.000169 JT | 0.000173 JT | W035 | 0.000171 | 0.000171 J | 0.000173 J |
| DDx | XAD Column+Filter - total | µg/L | 0.000278 J | 0.00029 J | W035 | 0.000284 | 0.000284 J | 0.000289 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 0.000229 J | 0.000349 | W035 | 0.000289 | 0.000289 J | 0.000343 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 0.00345 | 0.00567 | W035 | 0.00456 | 0.00456 | 0.00556 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0086 U | W035 | 0.0043 | 0.0043 U | 0.0043 U |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 0.00368 J | 0.00602 | W035 | 0.00485 | 0.00485 J | 0.0059 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 0.00908 JT | 0.0135 JT | W035 | 0.0113 | 0.0113 J | 0.0133 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 0.0406 T | 0.0685 T | W035 | 0.0546 | 0.0546 | 0.0671 |
| Total HPAHs | Peristaltic - total | µg/L | 0.072 JT | 0.09 JT | W035 | 0.081 | 0.081 J | 0.0891 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 0.0497 J | 0.082 J | W035 | 0.0658 | 0.0658 J | 0.0804 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 0.00513 T | 0.00681 T | W035 | 0.00597 | 0.00597 | 0.00673 |
| Total LPAHs | XAD Filter - particulate | µg/L | 0.0104 JT | 0.0178 JT | W035 | 0.0141 | 0.0141 J | 0.0174 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.016 JT | 0.02 T | W035 | 0.018 | 0.018 J | 0.0198 J |
| Total LPAHs | XAD Column+Filter - total | µg/L | 0.0155 J | 0.0246 J | W035 | 0.0201 | 0.0201 J | 0.0242 J |
| Naphthalene | XAD Column - dissolved | µg/L | 0.0133 U | 0.0183 U | W035 | 0.0079 | 0.0079 U | 0.00903 U |
| Naphthalene | XAD Filter - particulate | µg/L | 0.000451 U | 0.00075 U | W035 | 0.0003 | 0.0003 U | 0.000368 U |
| Naphthalene | Peristaltic - total | µg/L | 0.013 U | 0.013 U | W035 | 0.0065 | 0.0065 U | 0.0065 U |
| Naphthalene | XAD Column+Filter - total | µg/L | 0.0133 U | 0.0183 U | W035 | 0.0079 | 0.0079 U | 0.00903 U |
| Phenanthrene | XAD Column - dissolved | µg/L | 0.00186 | 0.00194 | W035 | 0.0019 | 0.0019 | 0.00194 |
| Phenanthrene | XAD Filter - particulate | µg/L | 0.00719 | 0.0124 | W035 | 0.0098 | 0.0098 | 0.0121 |
| Phenanthrene | Peristaltic - total | µg/L | 0.016 J | 0.02 | W035 | 0.018 | 0.018 J | 0.0198 J |
| Phenanthrene | XAD Column+Filter - total | µg/L | 0.00913 | 0.0143 | W035 | 0.0117 | 0.0117 | 0.014 |
| Total cPAHs | XAD Column - dissolved | µg/L | 0.0021 JT | 0.0031 JT | W035 | 0.0026 | 0.0026 J | 0.00305 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 0.021 T | 0.035 T | W035 | 0.028 | 0.028 | 0.0343 |
| Total cPAHs | Peristaltic - total | µg/L | 0.021 JT | 0.027 JT | W035 | 0.024 | 0.024 J | 0.0267 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 0.0231 J | 0.0381 J | W035 | 0.0306 | 0.0306 J | 0.0374 J |
| Total PAHs | XAD Column - dissolved | µg/L | 0.0142 JT | 0.0204 JT | W035 | 0.0173 | 0.0173 J | 0.0201 J |
| Total PAHs | XAD Filter - particulate | µg/L | 0.051 JT | 0.0863 JT | W035 | 0.0687 | 0.0687 J | 0.0845 J |
| Total PAHs | Peristaltic - total | µg/L | 0.088 JT | 0.11 JT | W035 | 0.099 | 0.099 J | 0.109 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 0.0652 J | 0.107 J | W035 | 0.086 | 0.086 J | 0.105 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W035 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.31 U | 0.36 U | W035 | 0.168 | 0.168 U | 0.179 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.02 J | 0.023 J | W035 | 0.0215 | 0.0215 J | 0.0229 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 0.0000356 | 0.0000367 | W035 | 0.0000362 | 0.0000362 | 0.0000366 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 0.00000515 J | 0.00000542 J | W035 | 0.00000529 | 0.00000529 J | 0.00000541 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.015 U | 0.015 U | W035 | 0.0075 | 0.0075 U | 0.0075 U |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 0.000041 J | 0.0000419 J | W035 | 0.0000414 | 0.0000414 J | 0.0000418 J |

Table D3.2-2b. Summary Statistics for COIs in Surface Water, High-Flow Events (East Channel Single-Point Locations).

| Analyte | Method | Units | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th Percentile (half DL)[b] |
| **RM 09<10** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.21 | 0.21 | W038 | 0.21 | 0.21 | 0.21 |
| Arsenic | Peristaltic - particulate | µg/L | 0.09 | 0.1 | W038 | 0.095 | 0.095 | 0.0995 |
| Arsenic | Peristaltic - total | µg/L | 0.3 | 0.31 | W038 | 0.305 | 0.305 | 0.31 |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W038 | 0.015 | 0.015 | 0.0195 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 0 | 0.02 U | W038 | 0.005 | 0.005 | 0.0095 |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W038 | 0.01 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.17 U | 0.24 U | W038 | 0.103 | 0.103 U | 0.118 U |
| Chromium | Peristaltic - particulate | µg/L | 0.82 | 0.85 | W038 | 0.835 | 0.835 | 0.849 |
| Chromium | Peristaltic - total | µg/L | 0.82 | 0.85 | W038 | 0.835 | 0.835 | 0.849 |
| Copper | Peristaltic - dissolved | µg/L | 0.57 | 0.6 | W038 | 0.585 | 0.585 | 0.599 |
| Copper | Peristaltic - particulate | µg/L | 1.12 | 1.18 | W038 | 1.15 | 1.15 | 1.18 |
| Copper | Peristaltic - total | µg/L | 1.72 | 1.75 | W038 | 1.74 | 1.74 | 1.75 |
| Lead | Peristaltic - dissolved | µg/L | 0.017 U | 0.041 U | W038 | 0.0145 | 0.0145 U | 0.0199 U |
| Lead | Peristaltic - particulate | µg/L | 0.337 | 0.355 | W038 | 0.346 | 0.346 | 0.354 |
| Lead | Peristaltic - total | µg/L | 0.337 | 0.355 | W038 | 0.346 | 0.346 | 0.354 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W038 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W038 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W038 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 1.05 | 1.07 | W038 | 1.06 | 1.06 | 1.07 |
| Nickel | Peristaltic - particulate | µg/L | 0.44 | 0.56 | W038 | 0.5 | 0.5 | 0.554 |
| Nickel | Peristaltic - total | µg/L | 1.49 | 1.63 | W038 | 1.56 | 1.56 | 1.62 |
| Zinc | Peristaltic - dissolved | µg/L | 2.1 U | 4 U | W038 | 1.53 | 1.53 U | 1.95 U |
| Zinc | Peristaltic - particulate | µg/L | 3.3 | 4.7 | W038 | 4 | 4 | 4.63 |
| Zinc | Peristaltic - total | µg/L | 3.3 | 4.7 | W038 | 4 | 4 | 4.63 |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0006 U | W038 | 0.0003 | 0.0003 U | 0.0003 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.0000602 JT | 0.000065 JT | W038 | 0.0000626 | 0.0000626 J | 0.0000648 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.0000548 JT | 0.000103 JT | W038 | 0.0000789 | 0.0000789 J | 0.000101 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000115 J | 0.000168 J | W038 | 0.000142 | 0.000142 J | 0.000165 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.0000000000568 JT | 0.0000000000628 JT | W038 | 0.0000000000598 | 0.0000000000598 J | 0.0000000000625 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.00000000191 JT | 0.00000000194 JT | W038 | 0.00000000193 | 0.00000000193 J | 0.00000000194 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.00000000197 J | 0.000000002 J | W038 | 0.00000000198 | 0.00000000198 J | 0.000000002 J |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.00048 U | 0.00048 U | W038 | 0.00024 | 0.00024 U | 0.00024 U |
| Dieldrin | Peristaltic - total | µg/L | 0.0004 UJ | 0.0004 UJ | W038 | 0.0002 | 0.0002 UJ | 0.0002 UJ |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.00021 UJ | 0.00091 U | W038 | 0.00028 | 0.00028 UJ | 0.000438 UJ |
| Total chlordanes | Peristaltic - total | µg/L | 0.00073 UT | 0.00073 UT | W038 | 0.000365 | 0.000365 U | 0.000365 U |
| DDx | Peristaltic - total | µg/L | 0.0004 JT | 0.00094 UT | W038 | 0.000435 | 0.000435 J | 0.000467 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0086 U | W038 | 0.0043 | 0.0043 U | 0.0043 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W038 | 0.0055 | 0.0055 U | 0.0055 U |
| Total LPAHs | Peristaltic - total | µg/L | 0.013 UT | 0.05 JT | W038 | 0.0283 | 0.0283 J | 0.0478 J |
| Naphthalene | Peristaltic - total | µg/L | 0.013 U | 0.034 J | W038 | 0.0203 | 0.0203 J | 0.0326 J |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.0064 U | W038 | 0.0032 | 0.0032 U | 0.0032 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W038 | 0.0055 | 0.0055 U | 0.0055 U |
| Total PAHs | Peristaltic - total | µg/L | 0.013 UT | 0.05 JT | W038 | 0.0283 | 0.0283 J | 0.0478 J |

Table D3.2-2b. Summary Statistics for COIs in Surface Water, High-Flow Events (East Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W038 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.82 U | 1 J | W038 | 0.705 | 0.705 J | 0.971 J |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.013 U | 0.014 U | W038 | 0.00675 | 0.00675 U | 0.00698 U |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.00038 J | 0.015 U | W038 | 0.00394 | 0.00394 J | 0.00714 J |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

[d] Particulate values were calculated as the difference between total and dissolved concentrations. If the measured dissolved concentration was greater than or equal to the measured total concentration, the calculated particulate concentration was assigned a value of zero.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
XAD - hydrophobic crosslinked polystyrene copolymer resin

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D3.2-2c. Summary Statistics for COIs in Surface Water, High-Flow Events
(Mid-Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| No data for this table. | | | | | | | | | | | |

Table D3.2-2c. Summary Statistics for COIs in Surface Water, High-Flow Events
(Mid-Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| No data for this table. | | | | | | | | |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
XAD - hydrophobic crosslinked polystyrene copolymer resin

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D3.2-2d. Summary Statistics for COIs in Surface Water, High-Flow Events (West Channel Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **RM 04<05** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.206 J | 0.223 J | W029 | 0.215 | 0.215 J | 0.222 J |
| Arsenic | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.094 J | 0.123 J | W029 | 0.109 | 0.109 J | 0.122 J |
| Arsenic | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.317 JT | 0.329 J | W029 | 0.323 | 0.323 J | 0.328 J |
| Cadmium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.865 | 0.88 | W029 | 0.873 | 0.873 | 0.879 |
| Chromium | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.865 T | 0.88 | W029 | 0.873 | 0.873 | 0.879 |
| Copper | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.59 | 0.6 | W029 | 0.595 | 0.595 | 0.6 |
| Copper | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 1.13 | 1.17 | W029 | 1.15 | 1.15 | 1.17 |
| Copper | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.73 | 1.76 T | W029 | 1.75 | 1.75 | 1.76 |
| Lead | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.016 J | 0.018 J | W029 | 0.017 | 0.017 J | 0.0179 J |
| Lead | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.299 J | 0.496 J | W029 | 0.398 | 0.398 J | 0.486 J |
| Lead | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.317 T | 0.512 | W029 | 0.415 | 0.415 | 0.502 |
| Mercury | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.46 | 0.49 | W029 | 0.475 | 0.475 | 0.489 |
| Nickel | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.41 | 0.5 | W029 | 0.455 | 0.455 | 0.496 |
| Nickel | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.9 | 0.96 T | W029 | 0.93 | 0.93 | 0.957 |
| Zinc | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 3 | 3.2 | W029 | 3.1 | 3.1 | 3.19 |
| Zinc | Peristaltic - total | µg/L | 2 | 2 | 100 | 3 | 3.2 T | W029 | 3.1 | 3.1 | 3.19 |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000839 JT | 0.0000844 JT | W029 | 0.0000842 | 0.0000842 J | 0.0000844 J |
| Total PCBs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000883 JT | 0.0000934 JT | W029 | 0.0000909 | 0.0000909 J | 0.0000931 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000173 J | 0.000177 J | W029 | 0.000175 | 0.000175 J | 0.000177 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000000000618 JT | 0.000000000067 T | W029 | 0.0000000000644 | 0.0000000000644 J | 0.0000000000667 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000000000157 T | 0.000000000188 T | W029 | 0.000000000173 | 0.000000000173 | 0.000000000186 |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000000000219 J | 0.000000000255 | W029 | 0.000000000237 | 0.000000000237 J | 0.000000000253 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.001 NJ | 0.001 NJ | W029 | 0.001 | 0.001 NJ | 0.001 NJ |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.00029 JT | 0.00029 JT | W029 | 0.00029 | 0.00029 JT | 0.00029 JT |
| DDx | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.00047 NJT | 0.00096 NJT | W029 | 0.000715 | 0.000715 J | 0.000936 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total LPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 2 | 1 | 50 | 1.9 J | 1.9 J | W029 | 1.9 | 1.9 J | 1.9 J |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.034 J | 0.066 J | W029 | 0.05 | 0.05 J | 0.0644 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |

Table D3.2-2d. Summary Statistics for COIs in Surface Water, High-Flow Events (West Channel Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **RM 06<07** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.26 J | 0.261 J | W031 | 0.261 | 0.261 J | 0.261 J |
| Arsenic | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.064 J | 0.217 J | W031 | 0.141 | 0.141 J | 0.209 J |
| Arsenic | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.324 J | 0.478 J | W031 | 0.401 | 0.401 J | 0.47 J |
| Cadmium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 2 | 1 | 50 | 0.02 | 0.02 | W031 | 0.02 | 0.02 | 0.02 |
| Cadmium | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.02 | 0.02 | W031 | 0.02 | 0.02 | 0.02 |
| Chromium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 1.01 | 1.92 | W031 | 1.47 | 1.47 | 1.87 |
| Chromium | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.01 | 1.92 | W031 | 1.47 | 1.47 | 1.87 |
| Copper | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.9 | 0.93 | W031 | 0.915 | 0.915 | 0.929 |
| Copper | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.75 | 2.59 | W031 | 1.67 | 1.67 | 2.5 |
| Copper | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.68 | 3.49 | W031 | 2.59 | 2.59 | 3.4 |
| Lead | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.084 | 0.108 | W031 | 0.096 | 0.096 | 0.107 |
| Lead | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.235 | 1.05 | W031 | 0.641 | 0.641 | 1.01 |
| Lead | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.343 | 1.13 | W031 | 0.737 | 0.737 | 1.09 |
| Mercury | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.77 | 0.79 | W031 | 0.78 | 0.78 | 0.789 |
| Nickel | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.36 | 1.42 | W031 | 0.89 | 0.89 | 1.37 |
| Nickel | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.15 | 2.19 | W031 | 1.67 | 1.67 | 2.14 |
| Zinc | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 3.5 | 8.4 | W031 | 5.95 | 5.95 | 8.16 |
| Zinc | Peristaltic - total | µg/L | 2 | 2 | 100 | 3.5 | 8.4 | W031 | 5.95 | 5.95 | 8.16 |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000982 JT | 0.000111 JT | W031 | 0.000105 | 0.000105 J | 0.00011 J |
| Total PCBs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000898 JT | 0.000348 JT | W031 | 0.000219 | 0.000219 J | 0.000335 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000188 J | 0.000459 J | W031 | 0.000324 | 0.000324 J | 0.000445 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000000000702 JT | 0.0000000000726 JT | W031 | 0.0000000000714 | 0.0000000000714 J | 0.0000000000725 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000000000151 T | 0.00000000631 T | W031 | 0.00000000323 | 0.00000000323 | 0.000000006 |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000000000221 J | 0.00000000638 J | W031 | 0.0000000033 | 0.0000000033 J | 0.00000000607 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Aldrin | XAD Filter - particulate | µg/L | 2 | 1 | 50 | 0.0000012 J | 0.0000012 J | W031 | 0.0000012 | 0.0000012 J | 0.0000012 J |
| Aldrin | XAD Column+Filter - total | µg/L | 2 | 1 | 50 | 0.0000012 J | 0.0000012 J | W031 | 0.0000012 | 0.0000012 J | 0.0000012 J |
| Dieldrin | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000117 | 0.000119 | W031 | 0.000118 | 0.000118 | 0.000119 |
| Dieldrin | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000108 J | 0.0000192 J | W031 | 0.000015 | 0.000015 J | 0.0000188 J |
| Dieldrin | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00013 J | 0.000136 J | W031 | 0.000133 | 0.000133 J | 0.000136 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000203 J | 0.0000217 J | W031 | 0.000021 | 0.000021 J | 0.0000216 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 2 | 1 | 50 | 0.000000364 J | 0.000000364 J | W031 | 0.000000364 | 0.000000364 J | 0.000000364 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000207 J | 0.0000217 J | W031 | 0.0000212 | 0.0000212 J | 0.0000216 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000422 JT | 0.0000441 JT | W031 | 0.0000432 | 0.0000432 J | 0.000044 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000174 JT | 0.0000393 JT | W031 | 0.0000284 | 0.0000284 J | 0.0000382 J |
| Total chlordanes | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000596 J | 0.0000834 J | W031 | 0.0000715 | 0.0000715 J | 0.0000822 J |
| DDx | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000264 JT | 0.000287 JT | W031 | 0.000276 | 0.000276 J | 0.000286 J |
| DDx | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00026 JT | 0.00057 JT | W031 | 0.000415 | 0.000415 J | 0.000555 J |
| DDx | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000524 J | 0.000857 J | W031 | 0.000691 | 0.000691 J | 0.00084 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.19 | 0.19 | W031 | 0.19 | 0.19 | 0.19 |
| Total HPAHs | Peristaltic - total | µg/L | 2 | 1 | 50 | 3.5 T | 3.5 T | W031 | 3.5 | 3.5 T | 3.5 T |
| Total LPAHs | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.058 JT | 3.9 T | W031 | 1.98 | 1.98 J | 3.71 J |

Table D3.2-2d. Summary Statistics for COIs in Surface Water, High-Flow Events (West Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| Naphthalene | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.039 | 0.083 | W031 | 0.061 | 0.061 | 0.0808 |
| Phenanthrene | Peristaltic - total | µg/L | 2 | 1 | 50 | 2.2 | 2.2 | W031 | 2.2 | 2.2 | 2.2 |
| Total cPAHs | Peristaltic - total | µg/L | 2 | 1 | 50 | 1.2 T | 1.2 T | W031 | 1.2 | 1.2 T | 1.2 T |
| Total PAHs | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.058 JT | 7.4 T | W031 | 3.73 | 3.73 J | 7.03 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.028 J | 0.028 J | W031 | 0.028 | 0.028 J | 0.028 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000036 J | 0.0000361 J | W031 | 0.0000361 | 0.0000361 J | 0.0000361 J |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00000431 J | 0.0000199 J | W031 | 0.0000121 | 0.0000121 J | 0.0000191 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000404 J | 0.0000559 J | W031 | 0.0000482 | 0.0000482 J | 0.0000551 J |
| **RM 07<08** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 6 | 6 | 100 | 0.23 J | 0.341 J | W034 | 0.276 | 0.27 J | 0.327 J |
| Arsenic | Peristaltic - particulate | µg/L | 6 | 6 | 100 | 0.04 J | 0.286 J | W034 | 0.111 | 0.076 J | 0.245 J |
| Arsenic | Peristaltic - total | µg/L | 6 | 6 | 100 | 0.32 J | 0.627 J | W034 | 0.387 | 0.345 J | 0.56 J |
| Cadmium | Peristaltic - dissolved | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 6 | 1 | 17 | 0.03 | 0.03 | W033 | 0.03 | 0.03 | 0.03 |
| Cadmium | Peristaltic - total | µg/L | 6 | 1 | 17 | 0.03 | 0.03 | W033 | 0.03 | 0.03 | 0.03 |
| Chromium | Peristaltic - dissolved | µg/L | 6 | 4 | 67 | 0.43 | 0.64 | W034 | 0.5 | 0.465 | 0.619 |
| Chromium | Peristaltic - particulate | µg/L | 6 | 6 | 100 | 0.24 | 1.06 | W033 | 0.644 | 0.573 | 1.04 |
| Chromium | Peristaltic - total | µg/L | 6 | 6 | 100 | 0.88 | 1.08 | W033 | 0.978 | 0.96 | 1.08 |
| Copper | Peristaltic - dissolved | µg/L | 6 | 6 | 100 | 0.62 | 1.02 | W034 | 0.87 | 0.88 | 1.01 |
| Copper | Peristaltic - particulate | µg/L | 6 | 6 | 100 | 0.6 | 1.43 | W033 | 0.963 | 0.84 | 1.39 |
| Copper | Peristaltic - total | µg/L | 6 | 6 | 100 | 1.62 | 2.14 | W033 | 1.83 | 1.75 | 2.12 |
| Lead | Peristaltic - dissolved | µg/L | 6 | 5 | 83 | 0.088 | 0.142 | W034 | 0.108 | 0.102 | 0.137 |
| Lead | Peristaltic - particulate | µg/L | 6 | 6 | 100 | 0.182 | 0.419 | W033 | 0.295 | 0.278 | 0.402 |
| Lead | Peristaltic - total | µg/L | 6 | 6 | 100 | 0.324 | 0.437 | W033 | 0.385 | 0.382 | 0.433 |
| Mercury | Peristaltic - dissolved | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 6 | 6 | 100 | 0.69 | 1.58 | W033 | 1.24 | 1.42 | 1.57 |
| Nickel | Peristaltic - particulate | µg/L | 6 | 6 | 100 | 0.19 | 0.56 | W033 | 0.388 | 0.37 | 0.56 |
| Nickel | Peristaltic - total | µg/L | 6 | 6 | 100 | 1.11 | 2.09 | W033 | 1.63 | 1.77 | 2.06 |
| Zinc | Peristaltic - dissolved | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - particulate | µg/L | 6 | 6 | 100 | 3.5 | 4.5 | W033 | 4.04 | 4.08 | 4.45 |
| Zinc | Peristaltic - total | µg/L | 6 | 6 | 100 | 3.5 | 4.5 | W033 | 4.04 | 4.08 | 4.45 |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 4 | 4 | 100 | 0.0000785 JT | 0.000109 JT | W034 | 0.0000895 | 0.0000853 J | 0.000106 J |
| Total PCBs | XAD Filter - particulate | µg/L | 4 | 4 | 100 | 0.0000906 JT | 0.000122 JT | W033 | 0.000102 | 0.0000978 J | 0.000119 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 4 | 4 | 100 | 0.000172 J | 0.000204 J | W033 | 0.000192 | 0.000195 J | 0.000203 J |
| **PCDD/F Homologs** | | | | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00000179 T | 0.00000533 T | W033 | 0.00000356 | 0.00000356 | 0.00000515 |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000249 JT | 0.0000293 T | W033 | 0.0000271 | 0.0000271 J | 0.0000291 J |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000267 J | 0.0000346 | W033 | 0.0000307 | 0.0000307 J | 0.0000342 J |
| **PCDD/Fs** | | | | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00000000274 T | 0.0000000143 JT | W033 | 0.00000000852 | 0.00000000852 J | 0.0000000137 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000000607 JT | 0.0000000813 JT | W033 | 0.000000071 | 0.000000071 J | 0.0000000803 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000000075 J | 0.000000084 J | W033 | 0.0000000795 | 0.0000000795 J | 0.0000000836 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 4 | 4 | 100 | 0.0000000000699 JT | 0.0000000000833 JT | W034 | 0.0000000000761 | 0.0000000000756 J | 0.0000000000826 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 4 | 4 | 100 | 0.000000000177 T | 0.00000000408 T | W033 | 0.000000000117 | 0.000000000205 | 0.0000000035 |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 4 | 4 | 100 | 0.00000000026 J | 0.00000000415 | W033 | 0.000000000124 | 0.000000000279 J | 0.00000000357 J |

Table D3.2-2d. Summary Statistics for COIs in Surface Water, High-Flow Events (West Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 4 | 2 | 50 | 0.00000216 J | 0.00000259 J | W033 | 0.00000238 | 0.00000238 J | 0.00000257 J |
| Aldrin | XAD Filter - particulate | µg/L | 4 | 2 | 50 | 0.000000514 J | 0.00000148 J | W033 | 0.000000997 | 0.000000997 J | 0.00000143 J |
| Aldrin | XAD Column+Filter - total | µg/L | 4 | 3 | 75 | 0.000000514 J | 0.00000407 J | W033 | 0.00000225 | 0.00000216 J | 0.00000388 J |
| Dieldrin | XAD Column - dissolved | µg/L | 4 | 4 | 100 | 0.000105 | 0.000158 | W033 | 0.000133 | 0.000134 | 0.000157 |
| Dieldrin | XAD Filter - particulate | µg/L | 4 | 4 | 100 | 0.00000867 J | 0.0000324 | W033 | 0.00002 | 0.0000194 J | 0.0000319 |
| Dieldrin | XAD Column+Filter - total | µg/L | 4 | 4 | 100 | 0.000115 J | 0.00019 | W033 | 0.000152 | 0.000152 J | 0.000189 |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 4 | 4 | 100 | 0.0000141 J | 0.0000189 J | W034 | 0.0000159 | 0.0000153 J | 0.0000184 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 4 | 1 | 25 | 0.000000746 J | 0.000000746 J | W033 | 0.000000746 | 0.000000746 J | 0.000000746 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 4 | 4 | 100 | 0.0000148 J | 0.0000189 J | W034 | 0.0000161 | 0.0000153 J | 0.0000184 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 4 | 4 | 100 | 0.0000351 JT | 0.0000495 JT | W033 | 0.000042 | 0.0000417 J | 0.0000489 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 4 | 4 | 100 | 0.0000115 JT | 0.0000364 JT | W033 | 0.0000236 | 0.0000233 J | 0.0000359 J |
| Total chlordanes | XAD Column+Filter - total | µg/L | 4 | 4 | 100 | 0.0000466 J | 0.0000859 J | W033 | 0.0000656 | 0.000065 J | 0.0000848 J |
| DDx | XAD Column - dissolved | µg/L | 4 | 4 | 100 | 0.000119 JT | 0.000208 JT | W033 | 0.000162 | 0.000161 J | 0.000204 J |
| DDx | XAD Filter - particulate | µg/L | 4 | 4 | 100 | 0.000155 JT | 0.000416 JT | W033 | 0.000272 | 0.000258 J | 0.000406 J |
| DDx | XAD Column+Filter - total | µg/L | 4 | 4 | 100 | 0.000289 J | 0.000624 J | W033 | 0.000434 | 0.000412 J | 0.00061 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000321 J | 0.0000358 J | W033 | 0.000034 | 0.000034 J | 0.0000356 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000493 J | 0.000587 J | W033 | 0.00054 | 0.00054 J | 0.000582 J |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000529 J | 0.000619 J | W033 | 0.000574 | 0.000574 J | 0.000615 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00178 JT | 0.00192 JT | W033 | 0.00185 | 0.00185 J | 0.00191 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0044 JT | 0.00552 JT | W033 | 0.00496 | 0.00496 J | 0.00546 J |
| Total HPAHs | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00618 J | 0.00744 J | W033 | 0.00681 | 0.00681 J | 0.00738 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00416 T | 0.00428 T | W033 | 0.00422 | 0.00422 | 0.00427 |
| Total LPAHs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00102 JT | 0.00108 JT | W033 | 0.00105 | 0.00105 J | 0.00108 J |
| Total LPAHs | Peristaltic - total | µg/L | 6 | 1 | 17 | 0.0047 JT | 0.0047 JT | W033 | 0.0047 | 0.0047 JT | 0.0047 JT |
| Total LPAHs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00524 J | 0.0053 J | W033 | 0.00527 | 0.00527 J | 0.0053 J |
| Naphthalene | XAD Column - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Filter - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Column+Filter - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00147 | 0.00158 | W033 | 0.00153 | 0.00153 | 0.00157 |
| Phenanthrene | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000681 | 0.00083 | W033 | 0.000756 | 0.000756 | 0.000823 |
| Phenanthrene | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00215 | 0.00241 | W033 | 0.00228 | 0.00228 | 0.0024 |
| Total cPAHs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00016 JT | 0.00027 JT | W033 | 0.000215 | 0.000215 J | 0.000265 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0028 JT | 0.0034 JT | W033 | 0.0031 | 0.0031 J | 0.00337 J |
| Total cPAHs | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00296 J | 0.00367 J | W033 | 0.00332 | 0.00332 J | 0.00363 J |
| Total PAHs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00606 JT | 0.00608 JT | W033 | 0.00607 | 0.00607 J | 0.00608 J |
| Total PAHs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00542 JT | 0.0066 JT | W033 | 0.00601 | 0.00601 J | 0.00654 J |
| Total PAHs | Peristaltic - total | µg/L | 6 | 1 | 17 | 0.0047 JT | 0.0047 JT | W033 | 0.0047 | 0.0047 JT | 0.0047 JT |
| Total PAHs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0115 J | 0.0127 J | W033 | 0.0121 | 0.0121 J | 0.0126 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 6 | 1 | 17 | 0.98 J | 0.98 J | W033 | 0.98 | 0.98 J | 0.98 J |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 6 | 6 | 100 | 0.018 J | 0.036 J | W034 | 0.0217 | 0.0185 J | 0.0323 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 4 | 4 | 100 | 0.0000347 J | 0.00004 | W033 | 0.0000371 | 0.0000368 J | 0.0000396 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 4 | 4 | 100 | 0.00000314 J | 0.00000897 J | W033 | 0.00000652 | 0.00000698 J | 0.00000873 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 4 | 4 | 100 | 0.0000393 J | 0.000049 J | W033 | 0.0000436 | 0.000043 J | 0.0000482 J |

Table D3.2-2d. Summary Statistics for COIs in Surface Water, High-Flow Events (West Channel Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **RM 08<09** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.201 J | 0.208 J | W036 | 0.205 | 0.205 J | 0.208 J |
| Arsenic | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.158 J | 0.176 J | W036 | 0.167 | 0.167 J | 0.175 J |
| Arsenic | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.366 JT | 0.377 J | W036 | 0.372 | 0.372 J | 0.376 J |
| Cadmium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 1.62 | 1.7 | W036 | 1.66 | 1.66 | 1.7 |
| Chromium | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.62 | 1.7 T | W036 | 1.66 | 1.66 | 1.7 |
| Copper | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.65 | 0.68 | W036 | 0.665 | 0.665 | 0.679 |
| Copper | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 2.04 | 2.06 | W036 | 2.05 | 2.05 | 2.06 |
| Copper | Peristaltic - total | µg/L | 2 | 2 | 100 | 2.71 | 2.72 T | W036 | 2.72 | 2.72 | 2.72 |
| Lead | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Lead | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.539 | 0.558 | W036 | 0.549 | 0.549 | 0.557 |
| Lead | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.539 T | 0.558 | W036 | 0.549 | 0.549 | 0.557 |
| Mercury | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.61 | 0.62 | W036 | 0.615 | 0.615 | 0.62 |
| Nickel | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.9 | 0.92 | W036 | 0.91 | 0.91 | 0.919 |
| Nickel | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.51 | 1.54 T | W036 | 1.53 | 1.53 | 1.54 |
| Zinc | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 5.5 | 5.55 | W036 | 5.53 | 5.53 | 5.55 |
| Zinc | Peristaltic - total | µg/L | 2 | 2 | 100 | 5.5 | 5.55 T | W036 | 5.53 | 5.53 | 5.55 |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000116 JT | 0.000137 JT | W036 | 0.000127 | 0.000127 J | 0.000136 J |
| Total PCBs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000165 JT | 0.000223 JT | W036 | 0.000194 | 0.000194 J | 0.00022 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000302 J | 0.000339 J | W036 | 0.000321 | 0.000321 J | 0.000337 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000000000686 JT | 0.0000000000807 JT | W036 | 0.0000000000747 | 0.0000000000747 J | 0.0000000000801 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000000000224 T | 0.000000000324 JT | W036 | 0.000000000274 | 0.000000000274 J | 0.000000000319 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000000000293 J | 0.000000000405 J | W036 | 0.000000000349 | 0.000000000349 J | 0.000000000399 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.0012 NJ | 0.0012 NJ | W036 | 0.0012 | 0.0012 NJ | 0.0012 NJ |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.0003 JT | 0.00049 JT | W036 | 0.000395 | 0.000395 J | 0.000481 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.011 JT | 0.027 JT | W036 | 0.019 | 0.019 J | 0.0262 J |
| Total LPAHs | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.0068 JT | 0.24 JT | W036 | 0.123 | 0.123 J | 0.228 J |
| Naphthalene | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.16 | 0.16 | W036 | 0.16 | 0.16 | 0.16 |
| Phenanthrene | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.0068 J | 0.0085 J | W036 | 0.00765 | 0.00765 J | 0.00842 J |
| Total cPAHs | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.0069 JT | 0.0069 JT | W036 | 0.0069 | 0.0069 JT | 0.0069 JT |
| Total PAHs | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.018 JT | 0.27 JT | W036 | 0.144 | 0.144 J | 0.257 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 2 | 1 | 50 | 2.8 J | 2.8 J | W036 | 2.8 | 2.8 J | 2.8 J |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.022 J | 0.025 J | W036 | 0.0235 | 0.0235 J | 0.0249 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.00067 J | 0.00067 J | W036 | 0.00067 | 0.00067 J | 0.00067 J |

Table D3.2-2d. Summary Statistics for COIs in Surface Water, High-Flow Events (West Channel Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **RM 09<10** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.211 J | 0.224 J | W037 | 0.218 | 0.218 J | 0.223 J |
| Arsenic | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.094 J | 0.145 J | W037 | 0.12 | 0.12 J | 0.142 J |
| Arsenic | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.318 J | 0.356 J | W037 | 0.337 | 0.337 J | 0.354 J |
| Cadmium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 1.08 | 1.17 | W037 | 1.13 | 1.13 | 1.17 |
| Chromium | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.08 | 1.17 | W037 | 1.13 | 1.13 | 1.17 |
| Copper | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.55 | 0.73 | W037 | 0.64 | 0.64 | 0.721 |
| Copper | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 1.35 | 1.41 | W037 | 1.38 | 1.38 | 1.41 |
| Copper | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.96 | 2.08 | W037 | 2.02 | 2.02 | 2.07 |
| Lead | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.008 J | 0.05 | W037 | 0.029 | 0.029 J | 0.0479 J |
| Lead | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.376 | 0.406 J | W037 | 0.391 | 0.391 J | 0.405 J |
| Lead | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.414 | 0.426 | W037 | 0.42 | 0.42 | 0.425 |
| Mercury | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.66 | 0.94 | W037 | 0.8 | 0.8 | 0.926 |
| Nickel | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.33 | 0.62 | W037 | 0.475 | 0.475 | 0.606 |
| Nickel | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.27 | 1.28 | W037 | 1.28 | 1.28 | 1.28 |
| Zinc | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 4.4 | 5.3 | W037 | 4.85 | 4.85 | 5.26 |
| Zinc | Peristaltic - total | µg/L | 2 | 2 | 100 | 4.4 | 5.3 | W037 | 4.85 | 4.85 | 5.26 |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000146 JT | 0.000154 JT | W037 | 0.00015 | 0.00015 J | 0.000154 J |
| Total PCBs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000186 JT | 0.000225 JT | W037 | 0.000206 | 0.000206 J | 0.000223 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00034 J | 0.000371 J | W037 | 0.000356 | 0.000356 J | 0.000369 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000000000715 JT | 0.0000000000966 JT | W037 | 0.0000000000841 | 0.0000000000841 J | 0.0000000000953 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000000000192 JT | 0.000000000245 T | W037 | 0.000000000219 | 0.000000000219 J | 0.000000000242 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000000000289 J | 0.000000000317 J | W037 | 0.000000000303 | 0.000000000303 J | 0.000000000315 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.00074 NJT | 0.00205 NJT | W037 | 0.0014 | 0.0014 J | 0.00198 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total LPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |

Table D3.2-2d. Summary Statistics for COIs in Surface Water, High-Flow Events (West Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.00049 J | 0.00061 J | W037 | 0.00055 | 0.00055 J | 0.000604 J |

Table D3.2-2d. Summary Statistics for COIs in Surface Water, High-Flow Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **RM 04<05** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.206 J | 0.223 J | W029 | 0.215 | 0.215 J | 0.222 J |
| Arsenic | Peristaltic - particulate | µg/L | 0.094 J | 0.123 J | W029 | 0.109 | 0.109 J | 0.122 J |
| Arsenic | Peristaltic - total | µg/L | 0.317 JT | 0.329 J | W029 | 0.323 | 0.323 J | 0.328 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W029 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W029 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W029 | 0.01 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.12 U | 0.13 U | W029 | 0.0625 | 0.0625 U | 0.0648 U |
| Chromium | Peristaltic - particulate | µg/L | 0.865 | 0.88 | W029 | 0.873 | 0.873 | 0.879 |
| Chromium | Peristaltic - total | µg/L | 0.865 T | 0.88 | W029 | 0.873 | 0.873 | 0.879 |
| Copper | Peristaltic - dissolved | µg/L | 0.59 | 0.6 | W029 | 0.595 | 0.595 | 0.6 |
| Copper | Peristaltic - particulate | µg/L | 1.13 | 1.17 | W029 | 1.15 | 1.15 | 1.17 |
| Copper | Peristaltic - total | µg/L | 1.73 | 1.76 T | W029 | 1.75 | 1.75 | 1.76 |
| Lead | Peristaltic - dissolved | µg/L | 0.016 J | 0.018 J | W029 | 0.017 | 0.017 J | 0.0179 J |
| Lead | Peristaltic - particulate | µg/L | 0.299 J | 0.496 J | W029 | 0.398 | 0.398 J | 0.486 J |
| Lead | Peristaltic - total | µg/L | 0.317 T | 0.512 | W029 | 0.415 | 0.415 | 0.502 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W029 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W029 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W029 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.46 | 0.49 | W029 | 0.475 | 0.475 | 0.489 |
| Nickel | Peristaltic - particulate | µg/L | 0.41 | 0.5 | W029 | 0.455 | 0.455 | 0.496 |
| Nickel | Peristaltic - total | µg/L | 0.9 | 0.96 T | W029 | 0.93 | 0.93 | 0.957 |
| Zinc | Peristaltic - dissolved | µg/L | 0.5 U | 0.7 U | W029 | 0.3 | 0.3 U | 0.345 U |
| Zinc | Peristaltic - particulate | µg/L | 3 | 3.2 | W029 | 3.1 | 3.1 | 3.19 |
| Zinc | Peristaltic - total | µg/L | 3 | 3.2 T | W029 | 3.1 | 3.1 | 3.19 |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0006 U | W029 | 0.0003 | 0.0003 U | 0.0003 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.0000839 JT | 0.0000844 JT | W029 | 0.0000842 | 0.0000842 J | 0.0000844 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.0000883 JT | 0.0000934 JT | W029 | 0.0000909 | 0.0000909 J | 0.0000931 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000173 J | 0.000177 J | W029 | 0.000175 | 0.000175 J | 0.000177 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.0000000000618 JT | 0.000000000067 T | W029 | 0.0000000000644 | 0.0000000000644 J | 0.0000000000667 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000000157 T | 0.000000000188 T | W029 | 0.000000000173 | 0.000000000173 | 0.000000000186 |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000000219 J | 0.000000000255 | W029 | 0.000000000237 | 0.000000000237 J | 0.000000000253 J |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.0018 U | 0.0018 U | W029 | 0.0009 | 0.0009 U | 0.0009 U |
| Dieldrin | Peristaltic - total | µg/L | 0.0004 U | 0.001 NJ | W029 | 0.0006 | 0.0006 J | 0.00096 J |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.00025 U | 0.00032 U | W029 | 0.000143 | 0.000143 U | 0.000158 U |
| Total chlordanes | Peristaltic - total | µg/L | 0.00029 JT | 0.00073 UT | W029 | 0.000328 | 0.000328 J | 0.000361 J |
| DDx | Peristaltic - total | µg/L | 0.00047 NJT | 0.00096 NJT | W029 | 0.000715 | 0.000715 J | 0.000936 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0086 U | W029 | 0.0043 | 0.0043 U | 0.0043 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W029 | 0.0055 | 0.0055 U | 0.0055 U |
| Total LPAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W029 | 0.0065 | 0.0065 U | 0.0065 U |
| Naphthalene | Peristaltic - total | µg/L | 0.013 U | 0.013 U | W029 | 0.0065 | 0.0065 U | 0.0065 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.0064 U | W029 | 0.0032 | 0.0032 U | 0.0032 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W029 | 0.0055 | 0.0055 U | 0.0055 U |
| Total PAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W029 | 0.0065 | 0.0065 U | 0.0065 U |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W029 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.75 U | 1.9 J | W029 | 1.14 | 1.14 J | 1.82 J |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.034 J | 0.066 J | W029 | 0.05 | 0.05 J | 0.0644 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.015 U | 0.015 U | W029 | 0.0075 | 0.0075 U | 0.0075 U |

Table D3.2-2d. Summary Statistics for COIs in Surface Water, High-Flow Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **RM 06<07** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.26 J | 0.261 J | W031 | 0.261 | 0.261 J | 0.261 J |
| Arsenic | Peristaltic - particulate | µg/L | 0.064 J | 0.217 J | W031 | 0.141 | 0.141 J | 0.209 J |
| Arsenic | Peristaltic - total | µg/L | 0.324 J | 0.478 J | W031 | 0.401 | 0.401 J | 0.47 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W031 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W031 | 0.015 | 0.015 | 0.0195 |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W031 | 0.015 | 0.015 | 0.0195 |
| Chromium | Peristaltic - dissolved | µg/L | 0.55 U | 0.59 U | W031 | 0.285 | 0.285 U | 0.294 U |
| Chromium | Peristaltic - particulate | µg/L | 1.01 | 1.92 | W031 | 1.47 | 1.47 | 1.87 |
| Chromium | Peristaltic - total | µg/L | 1.01 | 1.92 | W031 | 1.47 | 1.47 | 1.87 |
| Copper | Peristaltic - dissolved | µg/L | 0.9 | 0.93 | W031 | 0.915 | 0.915 | 0.929 |
| Copper | Peristaltic - particulate | µg/L | 0.75 | 2.59 | W031 | 1.67 | 1.67 | 2.5 |
| Copper | Peristaltic - total | µg/L | 1.68 | 3.49 | W031 | 2.59 | 2.59 | 3.4 |
| Lead | Peristaltic - dissolved | µg/L | 0.084 | 0.108 | W031 | 0.096 | 0.096 | 0.107 |
| Lead | Peristaltic - particulate | µg/L | 0.235 | 1.05 | W031 | 0.641 | 0.641 | 1.01 |
| Lead | Peristaltic - total | µg/L | 0.343 | 1.13 | W031 | 0.737 | 0.737 | 1.09 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W031 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W031 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W031 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.77 | 0.79 | W031 | 0.78 | 0.78 | 0.789 |
| Nickel | Peristaltic - particulate | µg/L | 0.36 | 1.42 | W031 | 0.89 | 0.89 | 1.37 |
| Nickel | Peristaltic - total | µg/L | 1.15 | 2.19 | W031 | 1.67 | 1.67 | 2.14 |
| Zinc | Peristaltic - dissolved | µg/L | 1.9 U | 2.2 U | W031 | 1.03 | 1.03 U | 1.09 U |
| Zinc | Peristaltic - particulate | µg/L | 3.5 | 8.4 | W031 | 5.95 | 5.95 | 8.16 |
| Zinc | Peristaltic - total | µg/L | 3.5 | 8.4 | W031 | 5.95 | 5.95 | 8.16 |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0006 U | W031 | 0.0003 | 0.0003 U | 0.0003 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.0000982 JT | 0.000111 JT | W031 | 0.000105 | 0.000105 J | 0.00011 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.0000898 JT | 0.000348 JT | W031 | 0.000219 | 0.000219 J | 0.000335 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000188 J | 0.000459 J | W031 | 0.000324 | 0.000324 J | 0.000445 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.0000000000702 JT | 0.0000000000726 JT | W031 | 0.0000000000714 | 0.0000000000714 J | 0.0000000000725 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000000151 T | 0.00000000631 T | W031 | 0.00000000323 | 0.00000000323 | 0.000000006 |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000000221 J | 0.00000000638 J | W031 | 0.0000000033 | 0.0000000033 J | 0.00000000607 J |
| **Pesticides** | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 0.00000215 U | 0.00000283 U | W031 | 0.00000125 | 0.00000125 U | 0.0000014 U |
| Aldrin | XAD Filter - particulate | µg/L | 0.000000882 U | 0.0000012 J | W031 | 0.000000821 | 0.000000821 J | 0.00000116 J |
| Aldrin | XAD Column+Filter - total | µg/L | 0.0000012 J | 0.00000215 U | W031 | 0.00000114 | 0.00000114 J | 0.00000119 J |
| Dieldrin | XAD Column - dissolved | µg/L | 0.000117 | 0.000119 | W031 | 0.000118 | 0.000118 | 0.000119 |
| Dieldrin | XAD Filter - particulate | µg/L | 0.0000108 J | 0.0000192 J | W031 | 0.000015 | 0.000015 J | 0.0000188 J |
| Dieldrin | XAD Column+Filter - total | µg/L | 0.00013 J | 0.000136 J | W031 | 0.000133 | 0.000133 J | 0.000136 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 0.0000203 J | 0.0000217 J | W031 | 0.000021 | 0.000021 J | 0.0000216 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 0.000000364 J | 0.000000516 U | W031 | 0.000000311 | 0.000000311 J | 0.000000359 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 0.0000207 J | 0.0000217 J | W031 | 0.0000212 | 0.0000212 J | 0.0000216 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 0.0000422 JT | 0.0000441 JT | W031 | 0.0000432 | 0.0000432 J | 0.000044 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 0.0000174 JT | 0.0000393 JT | W031 | 0.0000284 | 0.0000284 J | 0.0000382 J |
| Total chlordanes | XAD Column+Filter - total | µg/L | 0.0000596 J | 0.0000834 J | W031 | 0.0000715 | 0.0000715 J | 0.0000822 J |
| DDx | XAD Column - dissolved | µg/L | 0.000264 JT | 0.000287 JT | W031 | 0.000276 | 0.000276 J | 0.000286 J |
| DDx | XAD Filter - particulate | µg/L | 0.00026 JT | 0.00057 JT | W031 | 0.000415 | 0.000415 J | 0.000555 J |
| DDx | XAD Column+Filter - total | µg/L | 0.000524 J | 0.000857 J | W031 | 0.000691 | 0.000691 J | 0.00084 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.19 | W031 | 0.0972 | 0.0972 | 0.181 |
| Total HPAHs | Peristaltic - total | µg/L | 0.011 UT | 3.5 T | W031 | 1.75 | 1.75 | 3.33 |
| Total LPAHs | Peristaltic - total | µg/L | 0.058 JT | 3.9 T | W031 | 1.98 | 1.98 J | 3.71 J |

Table D3.2-2d. Summary Statistics for COIs in Surface Water, High-Flow Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| Naphthalene | Peristaltic - total | µg/L | 0.039 | 0.083 | W031 | 0.061 | 0.061 | 0.0808 |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 2.2 | W031 | 1.1 | 1.1 | 2.09 |
| Total cPAHs | Peristaltic - total | µg/L | 0.011 UT | 1.2 T | W031 | 0.603 | 0.603 | 1.14 |
| Total PAHs | Peristaltic - total | µg/L | 0.058 JT | 7.4 T | W031 | 3.73 | 3.73 J | 7.03 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W031 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.35 U | 0.73 U | W031 | 0.27 | 0.27 U | 0.356 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.015 U | 0.028 J | W031 | 0.0178 | 0.0178 J | 0.027 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 0.000036 J | 0.0000361 J | W031 | 0.0000361 | 0.0000361 J | 0.0000361 J |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 0.00000431 J | 0.0000199 J | W031 | 0.0000121 | 0.0000121 J | 0.0000191 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.015 U | 0.015 U | W031 | 0.0075 | 0.0075 U | 0.0075 U |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 0.0000404 J | 0.0000559 J | W031 | 0.0000482 | 0.0000482 J | 0.0000551 J |
| **RM 07<08** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.23 J | 0.341 J | W034 | 0.276 | 0.27 J | 0.327 J |
| Arsenic | Peristaltic - particulate | µg/L | 0.04 J | 0.286 J | W034 | 0.111 | 0.076 J | 0.245 J |
| Arsenic | Peristaltic - total | µg/L | 0.32 J | 0.627 J | W034 | 0.387 | 0.345 J | 0.56 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W033; W034 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.03 | W033 | 0.0133 | 0.01 U | 0.025 |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.03 | W033 | 0.0133 | 0.01 U | 0.025 |
| Chromium | Peristaltic - dissolved | µg/L | 0.26 U | 0.64 | W034 | 0.392 | 0.43 | 0.605 |
| Chromium | Peristaltic - particulate | µg/L | 0.24 | 1.06 | W033 | 0.644 | 0.573 | 1.04 |
| Chromium | Peristaltic - total | µg/L | 0.88 | 1.08 | W033 | 0.978 | 0.96 | 1.08 |
| Copper | Peristaltic - dissolved | µg/L | 0.62 | 1.02 | W034 | 0.87 | 0.88 | 1.01 |
| Copper | Peristaltic - particulate | µg/L | 0.6 | 1.43 | W033 | 0.963 | 0.84 | 1.39 |
| Copper | Peristaltic - total | µg/L | 1.62 | 2.14 | W033 | 1.83 | 1.75 | 2.12 |
| Lead | Peristaltic - dissolved | µg/L | 0.008 U | 0.142 | W034 | 0.091 | 0.0975 | 0.136 |
| Lead | Peristaltic - particulate | µg/L | 0.182 | 0.419 | W033 | 0.295 | 0.278 | 0.402 |
| Lead | Peristaltic - total | µg/L | 0.324 | 0.437 | W033 | 0.385 | 0.382 | 0.433 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W033; W034 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W033; W034 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W033; W034 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.69 | 1.58 | W033 | 1.24 | 1.42 | 1.57 |
| Nickel | Peristaltic - particulate | µg/L | 0.19 | 0.56 | W033 | 0.388 | 0.37 | 0.56 |
| Nickel | Peristaltic - total | µg/L | 1.11 | 2.09 | W033 | 1.63 | 1.77 | 2.06 |
| Zinc | Peristaltic - dissolved | µg/L | 1.5 U | 2.5 U | W034 | 0.992 | 0.975 U | 1.21 U |
| Zinc | Peristaltic - particulate | µg/L | 3.5 | 4.5 | W033 | 4.04 | 4.08 | 4.45 |
| Zinc | Peristaltic - total | µg/L | 3.5 | 4.5 | W033 | 4.04 | 4.08 | 4.45 |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0006 U | W033; W034 | 0.0003 | 0.0003 U | 0.0003 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.0000785 JT | 0.000109 JT | W034 | 0.0000895 | 0.0000853 J | 0.000106 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.0000906 JT | 0.000122 JT | W033 | 0.000102 | 0.0000978 J | 0.000119 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000172 J | 0.000204 J | W033 | 0.000192 | 0.000195 J | 0.000203 J |
| **PCDD/F Homologs** | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 0.00000179 T | 0.00000533 T | W033 | 0.00000356 | 0.00000356 | 0.00000515 |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 0.0000249 JT | 0.0000293 T | W033 | 0.0000271 | 0.0000271 J | 0.0000291 J |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 0.0000267 J | 0.0000346 | W033 | 0.0000307 | 0.0000307 J | 0.0000342 J |
| **PCDD/Fs** | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.00000000274 T | 0.0000000143 JT | W033 | 0.00000000852 | 0.00000000852 J | 0.0000000137 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.0000000607 JT | 0.0000000813 JT | W033 | 0.000000071 | 0.000000071 J | 0.0000000803 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000075 J | 0.000000084 J | W033 | 0.0000000795 | 0.0000000795 J | 0.0000000836 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.0000000000699 JT | 0.0000000000833 JT | W034 | 0.0000000000761 | 0.0000000000756 J | 0.0000000000826 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000000177 T | 0.00000000408 T | W033 | 0.00000000117 | 0.000000000205 | 0.0000000035 |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.00000000026 J | 0.00000000415 | W033 | 0.00000000124 | 0.000000000279 J | 0.00000000357 J |

Table D3.2-2d. Summary Statistics for COIs in Surface Water, High-Flow Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Pesticides** | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 0.00000182 U | 0.00000259 J | W033 | 0.00000172 | 0.0000017 J | 0.00000253 J |
| Aldrin | XAD Filter - particulate | µg/L | 0.000000514 J | 0.00000148 J | W033 | 0.000000776 | 0.00000059 J | 0.00000136 J |
| Aldrin | XAD Column+Filter - total | µg/L | 0.000000514 J | 0.00000407 J | W033 | 0.00000199 | 0.0000017 J | 0.00000378 J |
| Dieldrin | XAD Column - dissolved | µg/L | 0.000105 | 0.000158 | W033 | 0.000133 | 0.000134 | 0.000157 |
| Dieldrin | XAD Filter - particulate | µg/L | 0.00000867 J | 0.0000324 | W033 | 0.00002 | 0.0000194 J | 0.0000319 |
| Dieldrin | XAD Column+Filter - total | µg/L | 0.000115 J | 0.00019 | W033 | 0.000152 | 0.000152 J | 0.000189 |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 0.0000141 J | 0.0000189 J | W034 | 0.0000159 | 0.0000153 J | 0.0000184 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 0.000000746 J | 0.00000355 U | W034 | 0.0000012 | 0.00000125 J | 0.00000177 U |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 0.0000148 J | 0.0000189 J | W034 | 0.0000161 | 0.0000153 J | 0.0000184 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 0.0000351 JT | 0.0000495 JT | W033 | 0.000042 | 0.0000417 J | 0.0000489 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 0.0000115 JT | 0.0000364 JT | W033 | 0.0000236 | 0.0000233 J | 0.0000359 J |
| Total chlordanes | XAD Column+Filter - total | µg/L | 0.0000466 J | 0.0000859 J | W033 | 0.0000656 | 0.000065 J | 0.0000848 J |
| DDx | XAD Column - dissolved | µg/L | 0.000119 JT | 0.000208 JT | W033 | 0.000162 | 0.000161 J | 0.000204 J |
| DDx | XAD Filter - particulate | µg/L | 0.000155 JT | 0.000416 JT | W033 | 0.000272 | 0.000258 J | 0.000406 J |
| DDx | XAD Column+Filter - total | µg/L | 0.000289 J | 0.000624 J | W033 | 0.000434 | 0.000412 J | 0.00061 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 0.0000321 J | 0.0000358 J | W033 | 0.000034 | 0.000034 J | 0.0000356 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 0.000493 J | 0.000587 J | W033 | 0.00054 | 0.00054 J | 0.000582 J |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0086 U | W033; W034 | 0.0043 | 0.0043 U | 0.0043 U |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 0.000529 J | 0.000619 J | W033 | 0.000574 | 0.000574 J | 0.000615 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 0.00178 JT | 0.00192 JT | W033 | 0.00185 | 0.00185 J | 0.00191 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 0.0044 JT | 0.00552 JT | W033 | 0.00496 | 0.00496 J | 0.00546 J |
| Total HPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W033; W034 | 0.0055 | 0.0055 U | 0.0055 U |
| Total HPAHs | XAD Column+Filter - total | µg/L | 0.00618 J | 0.00744 J | W033 | 0.00681 | 0.00681 J | 0.00738 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 0.00416 T | 0.00428 T | W033 | 0.00422 | 0.00422 | 0.00427 |
| Total LPAHs | XAD Filter - particulate | µg/L | 0.00102 JT | 0.00108 JT | W033 | 0.00105 | 0.00105 J | 0.00108 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.0047 JT | 0.013 UT | W033; W034 | 0.0062 | 0.0065 U | 0.0065 U |
| Total LPAHs | XAD Column+Filter - total | µg/L | 0.00524 J | 0.0053 J | W033 | 0.00527 | 0.00527 J | 0.0053 J |
| Naphthalene | XAD Column - dissolved | µg/L | 0.0149 U | 0.0168 U | W033 | 0.00793 | 0.00793 U | 0.00835 U |
| Naphthalene | XAD Filter - particulate | µg/L | 0.000639 U | 0.000671 U | W033 | 0.000328 | 0.000328 U | 0.000335 U |
| Naphthalene | Peristaltic - total | µg/L | 0.013 U | 0.013 U | W033; W034 | 0.0065 | 0.0065 U | 0.0065 U |
| Naphthalene | XAD Column+Filter - total | µg/L | 0.0149 U | 0.0168 U | W033 | 0.00793 | 0.00793 U | 0.00835 U |
| Phenanthrene | XAD Column - dissolved | µg/L | 0.00147 | 0.00158 | W033 | 0.00153 | 0.00153 | 0.00157 |
| Phenanthrene | XAD Filter - particulate | µg/L | 0.000681 | 0.00083 | W033 | 0.000756 | 0.000756 | 0.000823 |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.0064 U | W033; W034 | 0.0032 | 0.0032 U | 0.0032 U |
| Phenanthrene | XAD Column+Filter - total | µg/L | 0.00215 | 0.00241 | W033 | 0.00228 | 0.00228 | 0.0024 |
| Total cPAHs | XAD Column - dissolved | µg/L | 0.00016 JT | 0.00027 JT | W033 | 0.000215 | 0.000215 J | 0.000265 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 0.0028 JT | 0.0034 JT | W033 | 0.0031 | 0.0031 J | 0.00337 J |
| Total cPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W033; W034 | 0.0055 | 0.0055 U | 0.0055 U |
| Total cPAHs | XAD Column+Filter - total | µg/L | 0.00296 J | 0.00367 J | W033 | 0.00332 | 0.00332 J | 0.00363 J |
| Total PAHs | XAD Column - dissolved | µg/L | 0.00606 JT | 0.00608 JT | W033 | 0.00607 | 0.00607 J | 0.00608 J |
| Total PAHs | XAD Filter - particulate | µg/L | 0.00542 JT | 0.0066 JT | W033 | 0.00601 | 0.00601 J | 0.00654 J |
| Total PAHs | Peristaltic - total | µg/L | 0.0047 JT | 0.013 UT | W033; W034 | 0.0062 | 0.0065 U | 0.0065 U |
| Total PAHs | XAD Column+Filter - total | µg/L | 0.0115 J | 0.0127 J | W033 | 0.0121 | 0.0121 J | 0.0126 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W033; W034 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.4 U | 0.98 J | W033 | 0.419 | 0.323 U | 0.848 J |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.018 J | 0.036 J | W034 | 0.0217 | 0.0185 J | 0.0323 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 0.0000347 J | 0.00004 | W033 | 0.0000371 | 0.0000368 J | 0.0000396 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 0.00000314 J | 0.00000897 J | W033 | 0.00000652 | 0.00000698 J | 0.00000873 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.015 U | 0.015 U | W033; W034 | 0.0075 | 0.0075 U | 0.0075 U |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 0.0000393 J | 0.000049 J | W033 | 0.0000436 | 0.000043 J | 0.0000482 J |

Table D3.2-2d. Summary Statistics for COIs in Surface Water, High-Flow Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **RM 08<09** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.201 J | 0.208 J | W036 | 0.205 | 0.205 J | 0.208 J |
| Arsenic | Peristaltic - particulate | µg/L | 0.158 J | 0.176 J | W036 | 0.167 | 0.167 J | 0.175 J |
| Arsenic | Peristaltic - total | µg/L | 0.366 JT | 0.377 J | W036 | 0.372 | 0.372 J | 0.376 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W036 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W036 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W036 | 0.01 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.31 U | 0.39 U | W036 | 0.175 | 0.175 U | 0.193 U |
| Chromium | Peristaltic - particulate | µg/L | 1.62 | 1.7 | W036 | 1.66 | 1.66 | 1.7 |
| Chromium | Peristaltic - total | µg/L | 1.62 | 1.7 T | W036 | 1.66 | 1.66 | 1.7 |
| Copper | Peristaltic - dissolved | µg/L | 0.65 | 0.68 | W036 | 0.665 | 0.665 | 0.679 |
| Copper | Peristaltic - particulate | µg/L | 2.04 | 2.06 | W036 | 2.05 | 2.05 | 2.06 |
| Copper | Peristaltic - total | µg/L | 2.71 | 2.72 T | W036 | 2.72 | 2.72 | 2.72 |
| Lead | Peristaltic - dissolved | µg/L | 0.008 U | 0.008 U | W036 | 0.004 | 0.004 U | 0.004 U |
| Lead | Peristaltic - particulate | µg/L | 0.539 | 0.558 | W036 | 0.549 | 0.549 | 0.557 |
| Lead | Peristaltic - total | µg/L | 0.539 T | 0.558 | W036 | 0.549 | 0.549 | 0.557 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W036 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W036 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W036 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.61 | 0.62 | W036 | 0.615 | 0.615 | 0.62 |
| Nickel | Peristaltic - particulate | µg/L | 0.9 | 0.92 | W036 | 0.91 | 0.91 | 0.919 |
| Nickel | Peristaltic - total | µg/L | 1.51 | 1.54 T | W036 | 1.53 | 1.53 | 1.54 |
| Zinc | Peristaltic - dissolved | µg/L | 1.5 U | 1.9 U | W036 | 0.85 | 0.85 U | 0.94 U |
| Zinc | Peristaltic - particulate | µg/L | 5.5 | 5.55 | W036 | 5.53 | 5.53 | 5.55 |
| Zinc | Peristaltic - total | µg/L | 5.5 | 5.55 T | W036 | 5.53 | 5.53 | 5.55 |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0006 U | W036 | 0.0003 | 0.0003 U | 0.0003 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000116 JT | 0.000137 JT | W036 | 0.000127 | 0.000127 J | 0.000136 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.000165 JT | 0.000223 JT | W036 | 0.000194 | 0.000194 J | 0.00022 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000302 J | 0.000339 J | W036 | 0.000321 | 0.000321 J | 0.000337 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.0000000000686 JT | 0.0000000000807 JT | W036 | 0.0000000000747 | 0.0000000000747 J | 0.0000000000801 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000000224 T | 0.000000000324 JT | W036 | 0.000000000274 | 0.000000000274 J | 0.000000000319 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000000293 J | 0.000000000405 J | W036 | 0.000000000349 | 0.000000000349 J | 0.000000000399 J |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.00084 U | 0.00099 U | W036 | 0.000458 | 0.000458 U | 0.000491 U |
| Dieldrin | Peristaltic - total | µg/L | 0.0004 U | 0.0012 NJ | W036 | 0.0007 | 0.0007 J | 0.00115 J |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.00029 U | 0.00048 U | W036 | 0.000193 | 0.000193 U | 0.000235 U |
| Total chlordanes | Peristaltic - total | µg/L | 0.00073 UT | 0.00073 UT | W036 | 0.000365 | 0.000365 U | 0.000365 U |
| DDx | Peristaltic - total | µg/L | 0.0003 JT | 0.00049 JT | W036 | 0.000395 | 0.000395 J | 0.000481 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0086 U | W036 | 0.0043 | 0.0043 U | 0.0043 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.011 JT | 0.027 JT | W036 | 0.019 | 0.019 J | 0.0262 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.0068 JT | 0.24 JT | W036 | 0.123 | 0.123 J | 0.228 J |
| Naphthalene | Peristaltic - total | µg/L | 0.013 U | 0.16 | W036 | 0.0833 | 0.0833 | 0.152 |
| Phenanthrene | Peristaltic - total | µg/L | 0.0068 J | 0.0085 J | W036 | 0.00765 | 0.00765 J | 0.00842 J |
| Total cPAHs | Peristaltic - total | µg/L | 0.0069 JT | 0.011 UT | W036 | 0.0062 | 0.0062 J | 0.00683 J |
| Total PAHs | Peristaltic - total | µg/L | 0.018 JT | 0.27 JT | W036 | 0.144 | 0.144 J | 0.257 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W036 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.56 U | 2.8 J | W036 | 1.54 | 1.54 J | 2.67 J |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.022 J | 0.025 J | W036 | 0.0235 | 0.0235 J | 0.0249 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.00067 J | 0.015 U | W036 | 0.00409 | 0.00409 J | 0.00716 J |

Table D3.2-2d. Summary Statistics for COIs in Surface Water, High-Flow Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **RM 09<10** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.211 J | 0.224 J | W037 | 0.218 | 0.218 J | 0.223 J |
| Arsenic | Peristaltic - particulate | µg/L | 0.094 J | 0.145 J | W037 | 0.12 | 0.12 J | 0.142 J |
| Arsenic | Peristaltic - total | µg/L | 0.318 J | 0.356 J | W037 | 0.337 | 0.337 J | 0.354 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W037 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W037 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W037 | 0.01 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.32 U | 0.36 U | W037 | 0.17 | 0.17 U | 0.179 U |
| Chromium | Peristaltic - particulate | µg/L | 1.08 | 1.17 | W037 | 1.13 | 1.13 | 1.17 |
| Chromium | Peristaltic - total | µg/L | 1.08 | 1.17 | W037 | 1.13 | 1.13 | 1.17 |
| Copper | Peristaltic - dissolved | µg/L | 0.55 | 0.73 | W037 | 0.64 | 0.64 | 0.721 |
| Copper | Peristaltic - particulate | µg/L | 1.35 | 1.41 | W037 | 1.38 | 1.38 | 1.41 |
| Copper | Peristaltic - total | µg/L | 1.96 | 2.08 | W037 | 2.02 | 2.02 | 2.07 |
| Lead | Peristaltic - dissolved | µg/L | 0.008 J | 0.05 | W037 | 0.029 | 0.029 J | 0.0479 J |
| Lead | Peristaltic - particulate | µg/L | 0.376 | 0.406 J | W037 | 0.391 | 0.391 J | 0.405 J |
| Lead | Peristaltic - total | µg/L | 0.414 | 0.426 | W037 | 0.42 | 0.42 | 0.425 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W037 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W037 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W037 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.66 | 0.94 | W037 | 0.8 | 0.8 | 0.926 |
| Nickel | Peristaltic - particulate | µg/L | 0.33 | 0.62 | W037 | 0.475 | 0.475 | 0.606 |
| Nickel | Peristaltic - total | µg/L | 1.27 | 1.28 | W037 | 1.28 | 1.28 | 1.28 |
| Zinc | Peristaltic - dissolved | µg/L | 1.3 U | 3 U | W037 | 1.08 | 1.08 U | 1.46 U |
| Zinc | Peristaltic - particulate | µg/L | 4.4 | 5.3 | W037 | 4.85 | 4.85 | 5.26 |
| Zinc | Peristaltic - total | µg/L | 4.4 | 5.3 | W037 | 4.85 | 4.85 | 5.26 |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0006 U | W037 | 0.0003 | 0.0003 U | 0.0003 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000146 JT | 0.000154 JT | W037 | 0.00015 | 0.00015 J | 0.000154 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.000186 JT | 0.000225 JT | W037 | 0.000206 | 0.000206 J | 0.000223 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.00034 J | 0.000371 J | W037 | 0.000356 | 0.000356 J | 0.000369 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.0000000000715 JT | 0.0000000000966 JT | W037 | 0.0000000000841 | 0.0000000000841 J | 0.0000000000953 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000000192 JT | 0.000000000245 T | W037 | 0.000000000219 | 0.000000000219 J | 0.000000000242 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000000289 J | 0.000000000317 J | W037 | 0.000000000303 | 0.000000000303 J | 0.000000000315 J |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.00069 U | 0.00088 U | W037 | 0.000393 | 0.000393 U | 0.000435 U |
| Dieldrin | Peristaltic - total | µg/L | 0.0004 U | 0.0004 U | W037 | 0.0002 | 0.0002 U | 0.0002 U |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.00016 U | 0.00054 U | W037 | 0.000175 | 0.000175 U | 0.000261 U |
| Total chlordanes | Peristaltic - total | µg/L | 0.00073 UT | 0.00073 UT | W037 | 0.000365 | 0.000365 U | 0.000365 U |
| DDx | Peristaltic - total | µg/L | 0.00074 NJT | 0.00205 NJT | W037 | 0.0014 | 0.0014 J | 0.00198 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0086 U | W037 | 0.0043 | 0.0043 U | 0.0043 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W037 | 0.0055 | 0.0055 U | 0.0055 U |
| Total LPAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W037 | 0.0065 | 0.0065 U | 0.0065 U |
| Naphthalene | Peristaltic - total | µg/L | 0.013 U | 0.013 U | W037 | 0.0065 | 0.0065 U | 0.0065 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.0064 U | W037 | 0.0032 | 0.0032 U | 0.0032 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W037 | 0.0055 | 0.0055 U | 0.0055 U |
| Total PAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W037 | 0.0065 | 0.0065 U | 0.0065 U |

Table D3.2-2d. Summary Statistics for COIs in Surface Water, High-Flow Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W037 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.41 U | 0.78 U | W037 | 0.298 | 0.298 U | 0.381 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.015 U | 0.015 U | W037 | 0.0075 | 0.0075 U | 0.0075 U |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.00049 J | 0.00061 J | W037 | 0.00055 | 0.00055 J | 0.000604 J |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
XAD - hydrophobic crosslinked polystyrene copolymer resin

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D3.2-3. Summary Statistics for COIs in Surface Water, Low-Flow Events (Transect Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 23 | 20 | 87 | 0.19 | 0.6 | W025M | 0.419 | 0.43 | 0.581 |
| Arsenic | Peristaltic - particulate | µg/L | 23 | 23 | 100 | 0.01 | 0.51 | W005 | 0.11 | 0.055 | 0.457 |
| Arsenic | Peristaltic - total | µg/L | 23 | 23 | 100 | 0.349 T | 0.64 T | W025E | 0.474 | 0.46 | 0.605 |
| Cadmium | Peristaltic - dissolved | µg/L | 23 | 4 | 17 | 0.02 | 0.03 | W011; W023 | 0.025 | 0.025 | 0.03 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 23 | 5 | 22 | 0 | 0.03 | W024 | 0.01 | 0.01 | 0.026 |
| Cadmium | Peristaltic - total | µg/L | 23 | 4 | 17 | 0.02 | 0.03 | W005; W011; W024 | 0.0275 | 0.03 | 0.03 |
| Chromium | Peristaltic - dissolved | µg/L | 23 | 8 | 35 | 0.12 J | 0.29 | W011 | 0.215 | 0.22 J | 0.28 |
| Chromium | Peristaltic - particulate[d] | µg/L | 23 | 22 | 96 | 0 | 1.09 | W005 | 0.352 | 0.363 | 0.548 |
| Chromium | Peristaltic - total | µg/L | 23 | 21 | 91 | 0.29 | 1.09 | W005 | 0.436 | 0.38 | 0.61 |
| Copper | Peristaltic - dissolved | µg/L | 23 | 23 | 100 | 0.45 | 0.83 J | W011 | 0.678 | 0.68 | 0.82 |
| Copper | Peristaltic - particulate | µg/L | 23 | 23 | 100 | 0.14 | 0.78 | W005 | 0.373 | 0.35 | 0.617 J |
| Copper | Peristaltic - total | µg/L | 23 | 23 | 100 | 0.68 | 1.55 | W005 | 1.05 | 1.06 | 1.41 J |
| Lead | Peristaltic - dissolved | µg/L | 23 | 11 | 48 | 0.011 J | 0.031 J | W005 | 0.0212 | 0.02 | 0.0305 J |
| Lead | Peristaltic - particulate | µg/L | 23 | 23 | 100 | 0.086 | 0.339 | W005 | 0.158 | 0.137 J | 0.249 |
| Lead | Peristaltic - total | µg/L | 23 | 23 | 100 | 0.086 | 0.339 | W005 | 0.168 | 0.141 | 0.267 |
| Mercury | Peristaltic - dissolved | µg/L | 23 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 23 | 3 | 13 | 0.02 J | 0.02 J | W023W; W027 | 0.02 | 0.02 J | 0.02 J |
| Mercury | Peristaltic - total | µg/L | 23 | 3 | 13 | 0.02 J | 0.02 J | W023W; W027 | 0.02 | 0.02 J | 0.02 J |
| Nickel | Peristaltic - dissolved | µg/L | 23 | 19 | 83 | 0.35 | 1.11 | W011 | 0.533 | 0.5 | 0.813 |
| Nickel | Peristaltic - particulate | µg/L | 23 | 22 | 96 | 0.07 | 0.76 | W005 | 0.232 | 0.165 | 0.646 |
| Nickel | Peristaltic - total | µg/L | 23 | 22 | 96 | 0.45 | 1.35 | W011 | 0.692 | 0.66 | 0.899 |
| Zinc | Peristaltic - dissolved | µg/L | 23 | 9 | 39 | 1.4 | 2.2 | W023 | 1.75 | 1.75 | 2.19 |
| Zinc | Peristaltic - particulate | µg/L | 23 | 23 | 100 | 0.14 | 6.1 | W023W | 2.38 | 2.6 | 4.47 |
| Zinc | Peristaltic - total | µg/L | 23 | 23 | 100 | 2.1 | 6.1 | W023W | 3.07 | 2.83 | 4.47 |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 23 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 23 | 23 | 100 | 0.0000424 JT | 0.000472 JT | W005 | 0.000283 | 0.00028 JT | 0.000465 J |
| Total PCBs | XAD Filter - particulate | µg/L | 23 | 23 | 100 | 0.0000135 JT | 0.000663 JT | W023E | 0.000205 | 0.000171 JT | 0.000561 J |
| Total PCBs | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PCBs | XAD Column+Filter - total | µg/L | 23 | 23 | 100 | 0.000159 J | 0.00095 J | W005 | 0.000488 | 0.000432 J | 0.00095 J |
| **PCDD/F Homologs** | | | | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 23 | 23 | 100 | 0.00000049 T | 0.00000583 JT | W023W | 0.00000224 | 0.00000186 JT | 0.00000403 J |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 23 | 23 | 100 | 0.00000217 JT | 0.0000507 T | W005 | 0.0000214 | 0.0000228 T | 0.0000491 |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 23 | 23 | 100 | 0.0000059 J | 0.0000516 J | W005 | 0.0000236 | 0.0000239 | 0.0000513 |
| **PCDD/Fs** | | | | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 23 | 23 | 100 | 0.000000000558 T | 0.0000000214 JT | W025M | 0.00000000754 | 0.0000000051 JT | 0.000000017 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 23 | 23 | 100 | 0.00000000419 JT | 0.000000317 JT | W005 | 0.0000000725 | 0.0000000589 JT | 0.00000019 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 23 | 23 | 100 | 0.0000000181 J | 0.000000327 J | W005 | 0.00000008 | 0.0000000643 J | 0.000000193 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 23 | 23 | 100 | 0.0000000000416 JT | 0.00000000203 JT | W025E | 0.000000000542 | 0.00000000024 JT | 0.00000000182 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 23 | 23 | 100 | 0.0000000000233 JT | 0.00000000622 T | W011 | 0.00000000186 | 0.00000000119 JT | 0.00000000492 |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 23 | 23 | 100 | 0.000000000167 J | 0.00000000647 | W011 | 0.0000000024 | 0.00000000236 J | 0.00000000531 J |

Table D3.2-3. Summary Statistics for COIs in Surface Water, Low-Flow Events (Transect Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 23 | 20 | 87 | 0.000000646 J | 0.00000446 J | W005 | 0.00000227 | 0.00000219 J | 0.00000411 J |
| Aldrin | XAD Filter - particulate | µg/L | 23 | 16 | 70 | 0.000000107 J | 0.00000224 J | W011 | 0.000000803 | 0.00000055 J | 0.00000218 J |
| Aldrin | XAD Column+Filter - total | µg/L | 23 | 21 | 91 | 0.000000296 J | 0.00000662 J | W005 | 0.00000278 | 0.00000274 J | 0.00000505 J |
| Dieldrin | XAD Column - dissolved | µg/L | 23 | 23 | 100 | 0.0000143 | 0.0000444 | W011 | 0.0000375 | 0.0000392 | 0.0000442 |
| Dieldrin | XAD Filter - particulate | µg/L | 23 | 13 | 57 | 0.000000989 J | 0.00000526 J | W005 | 0.00000265 | 0.00000243 J | 0.00000514 J |
| Dieldrin | XAD Column+Filter - total | µg/L | 23 | 23 | 100 | 0.0000167 J | 0.0000487 J | W005 | 0.0000039 | 0.0000405 J | 0.0000469 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 23 | 23 | 100 | 0.0000118 J | 0.0000358 J | W023E | 0.0000292 | 0.0000294 | 0.0000351 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 23 | 9 | 39 | 0.000000109 J | 0.000000501 J | W011 | 0.000000276 | 0.00000026 J | 0.000000476 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 23 | 23 | 100 | 0.0000118 J | 0.0000358 J | W023E | 0.0000293 | 0.0000295 J | 0.0000355 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 23 | 23 | 100 | 0.00000787 JT | 0.0000401 JT | W005 | 0.0000253 | 0.0000259 JT | 0.0000335 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 23 | 20 | 87 | 0.000000101 JT | 0.0000187 JT | W005 | 0.0000075 | 0.00000633 J | 0.0000179 J |
| Total chlordanes | XAD Column+Filter - total | µg/L | 23 | 23 | 100 | 0.0000134 J | 0.0000588 J | W005 | 0.0000318 | 0.0000307 J | 0.0000475 J |
| DDx | XAD Column - dissolved | µg/L | 23 | 23 | 100 | 0.0000124 JT | 0.000311 JT | W027 | 0.000142 | 0.0000949 T | 0.000308 J |
| DDx | XAD Filter - particulate | µg/L | 23 | 23 | 100 | 0.0000104 JT | 0.000274 JT | W005 | 0.0000758 | 0.0000388 JT | 0.000256 J |
| DDx | XAD Column+Filter - total | µg/L | 23 | 23 | 100 | 0.0000428 J | 0.000546 J | W005 | 0.000218 | 0.000176 J | 0.000496 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 23 | 10 | 43 | 0.0000263 J | 0.000125 J | W011 | 0.0000656 | 0.0000667 J | 0.000112 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 23 | 18 | 78 | 0.000098 J | 0.00322 | W005 | 0.000917 | 0.000701 | 0.00268 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 23 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 23 | 21 | 91 | 0.0000263 J | 0.00331 J | W005 | 0.000818 | 0.00059 J | 0.00259 |
| Total HPAHs | XAD Column - dissolved | µg/L | 23 | 23 | 100 | 0.00104 JT | 0.022 JT | W027 | 0.00953 | 0.00488 JT | 0.0216 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 23 | 23 | 100 | 0.000472 JT | 0.0338 T | W005 | 0.00758 | 0.0045 JT | 0.028 J |
| Total HPAHs | Peristaltic - total | µg/L | 23 | 14 | 61 | 0.01 JT | 0.0344 JT | W011 | 0.0199 | 0.0167 J | 0.0322 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 23 | 23 | 100 | 0.00194 J | 0.0539 J | W005 | 0.0171 | 0.0106 J | 0.0401 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 23 | 23 | 100 | 0.00103 JT | 0.0639 T | W023 | 0.014 | 0.00918 T | 0.0365 |
| Total LPAHs | XAD Filter - particulate | µg/L | 23 | 16 | 70 | 0.000035 JT | 0.00412 JT | W027 | 0.000887 | 0.000218 J | 0.00327 J |
| Total LPAHs | Peristaltic - total | µg/L | 23 | 7 | 30 | 0.0057 JT | 0.015 JT | W027 | 0.00811 | 0.0066 JT | 0.0132 J |
| Total LPAHs | XAD Column+Filter - total | µg/L | 23 | 23 | 100 | 0.00107 J | 0.0639 | W023 | 0.0146 | 0.0109 J | 0.0367 J |
| Naphthalene | XAD Column - dissolved | µg/L | 23 | 3 | 13 | 0.0153 | 0.0345 | W023 | 0.0221 | 0.0165 | 0.0327 |
| Naphthalene | XAD Filter - particulate | µg/L | 23 | 3 | 13 | 0.000835 | 0.00109 | W027 | 0.000978 | 0.00101 | 0.00108 |
| Naphthalene | Peristaltic - total | µg/L | 23 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Column+Filter - total | µg/L | 23 | 5 | 22 | 0.00101 | 0.0345 | W023 | 0.0138 | 0.0153 | 0.0311 |
| Phenanthrene | XAD Column - dissolved | µg/L | 23 | 23 | 100 | 0.00035 | 0.00574 | W005 | 0.00255 | 0.00244 | 0.00538 |
| Phenanthrene | XAD Filter - particulate | µg/L | 23 | 2 | 9 | 0.00129 | 0.00168 | W027 | 0.00149 | 0.00149 | 0.00166 |
| Phenanthrene | Peristaltic - total | µg/L | 23 | 2 | 9 | 0.0066 J | 0.0076 J | W027 | 0.0071 | 0.0071 J | 0.00755 J |
| Phenanthrene | XAD Column+Filter - total | µg/L | 23 | 23 | 100 | 0.00035 | 0.00676 | W011 | 0.00268 | 0.00256 | 0.00562 |
| Total cPAHs | XAD Column - dissolved | µg/L | 23 | 23 | 100 | 0.000047 JT | 0.0023 JT | W011 | 0.000898 | 0.00056 JT | 0.00199 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 23 | 23 | 100 | 0.000085 JT | 0.017 T | W005 | 0.00372 | 0.0032 JT | 0.0135 J |
| Total cPAHs | Peristaltic - total | µg/L | 23 | 3 | 13 | 0.0031 JT | 0.024 JT | W011 | 0.0124 | 0.01 JT | 0.0226 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 23 | 23 | 100 | 0.000327 J | 0.0183 J | W005 | 0.00462 | 0.00349 J | 0.0142 J |
| Total PAHs | XAD Column - dissolved | µg/L | 23 | 23 | 100 | 0.00346 JT | 0.0655 JT | W023 | 0.0235 | 0.0274 JT | 0.0482 J |
| Total PAHs | XAD Filter - particulate | µg/L | 23 | 23 | 100 | 0.000482 T | 0.0359 JT | W005 | 0.00819 | 0.0045 JT | 0.0303 J |
| Total PAHs | Peristaltic - total | µg/L | 23 | 14 | 61 | 0.01 JT | 0.046 JT | W027 | 0.024 | 0.021 J | 0.0435 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 23 | 23 | 100 | 0.00397 J | 0.0661 J | W005 | 0.0317 | 0.035 J | 0.0654 J |

Table D3.2-3. Summary Statistics for COIs in Surface Water, Low-Flow Events (Transect Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 23 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | XAD Column - dissolved | µg/L | 9 | 3 | 33 | 0.00361 J | 0.0171 | W023 | 0.00901 | 0.00631 J | 0.016 J |
| Bis(2-ethylhexyl) phthalate | XAD Filter - particulate | µg/L | 9 | 3 | 33 | 0.00476 J | 0.00589 J | W023 | 0.00538 | 0.00548 J | 0.00585 J |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 23 | 4 | 17 | 0.7 | 1.5 | W025E | 1.18 | 1.25 | 1.47 |
| Bis(2-ethylhexyl) phthalate | XAD Column+Filter - total | µg/L | 9 | 3 | 33 | 0.00909 J | 0.023 J | W023 | 0.0144 | 0.0111 J | 0.0218 J |
| Butylbenzyl phthalate | XAD Column - dissolved | µg/L | 9 | 2 | 22 | 0.00124 J | 0.00199 | W011 | 0.00162 | 0.00162 J | 0.00195 J |
| Butylbenzyl phthalate | XAD Filter - particulate | µg/L | 9 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 23 | 3 | 13 | 0.096 J | 0.32 | W025W | 0.195 | 0.17 J | 0.305 J |
| Butylbenzyl phthalate | XAD Column+Filter - total | µg/L | 9 | 2 | 22 | 0.00124 J | 0.00199 | W011 | 0.00162 | 0.00162 J | 0.00195 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 23 | 23 | 100 | 0.0000157 | 0.0000554 | W011 | 0.0000274 | 0.0000237 J | 0.0000478 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 23 | 18 | 78 | 0.00000308 J | 0.0000453 | W024 | 0.0000085 | 0.00000492 J | 0.000028 |
| Hexachlorobenzene | Peristaltic - total | µg/L | 23 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 23 | 23 | 100 | 0.000017 J | 0.0000732 | W023 | 0.0000341 | 0.0000282 J | 0.0000618 J |

Table D3.2-3. Summary Statistics for COIs in Surface Water, Low-Flow Events (Transect Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.19 | 0.6 | W025M | 0.39 | 0.402 | 0.574 |
| Arsenic | Peristaltic - particulate | µg/L | 0.01 | 0.51 | W005 | 0.11 | 0.055 | 0.457 |
| Arsenic | Peristaltic - total | µg/L | 0.349 T | 0.64 T | W025E | 0.474 | 0.46 | 0.605 |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 UJ | 0.03 | W011; W023 | 0.0127 | 0.01 U | 0.029 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 0 | 0.051 U | W005 | 0.0107 | 0.01 U | 0.0241 U |
| Cadmium | Peristaltic - total | µg/L | 0.017 U | 0.051 U | W005 | 0.0137 | 0.01 U | 0.03 |
| Chromium | Peristaltic - dissolved | µg/L | 0.12 J | 0.29 | W011 | 0.15 | 0.125 U | 0.26 |
| Chromium | Peristaltic - particulate[d] | µg/L | 0 | 1.09 | W005 | 0.343 | 0.355 | 0.546 |
| Chromium | Peristaltic - total | µg/L | 0.29 | 1.09 | W005 | 0.415 | 0.38 | 0.604 |
| Copper | Peristaltic - dissolved | µg/L | 0.45 | 0.83 J | W011 | 0.678 | 0.68 | 0.82 |
| Copper | Peristaltic - particulate | µg/L | 0.14 | 0.78 | W005 | 0.373 | 0.35 | 0.617 J |
| Copper | Peristaltic - total | µg/L | 0.68 | 1.55 | W005 | 1.05 | 1.06 | 1.41 J |
| Lead | Peristaltic - dissolved | µg/L | 0.011 J | 0.031 J | W005 | 0.0154 | 0.0115 U | 0.03 |
| Lead | Peristaltic - particulate | µg/L | 0.086 | 0.339 | W005 | 0.158 | 0.137 J | 0.249 |
| Lead | Peristaltic - total | µg/L | 0.086 | 0.339 | W005 | 0.168 | 0.141 | 0.267 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 U | 0.08 UJ | W005; W011; W023 | 0.0165 | 0.01 U | 0.04 UJ |
| Mercury | Peristaltic - particulate | µg/L | 0.02 U | 0.08 UJ | W005; W011; W023 | 0.0178 | 0.02 UJ | 0.04 UJ |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.08 UJ | W005; W011; W023 | 0.0178 | 0.02 UJ | 0.04 UJ |
| Nickel | Peristaltic - dissolved | µg/L | 0.35 | 1.11 | W011 | 0.491 | 0.47 | 0.765 |
| Nickel | Peristaltic - particulate | µg/L | 0.07 | 0.96 U | W005 | 0.243 | 0.17 | 0.641 |
| Nickel | Peristaltic - total | µg/L | 0.45 | 1.35 | W011 | 0.683 | 0.66 | 0.897 |
| Zinc | Peristaltic - dissolved | µg/L | 1.4 | 7.4 U | W025W | 1.48 | 1.35 U | 2.2 |
| Zinc | Peristaltic - particulate | µg/L | 0.14 | 6.1 | W023W | 2.38 | 2.6 | 4.47 |
| Zinc | Peristaltic - total | µg/L | 2.1 | 6.1 | W023W | 3.07 | 2.83 | 4.47 |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 UJ | 0.0071 U | W005; W011; W023 | 0.000744 | 0.0003 U | 0.00355 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.0000424 JT | 0.000472 JT | W005 | 0.000283 | 0.00028 JT | 0.000465 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.0000135 JT | 0.000663 JT | W023E | 0.000205 | 0.000171 JT | 0.000561 J |
| Total PCBs | Peristaltic - total | µg/L | 0.0025 UT | 0.0026 UT | W005 | 0.00127 | 0.00125 UT | 0.0013 U |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000159 J | 0.00095 J | W005 | 0.000488 | 0.000432 J | 0.00095 J |
| **PCDD/F Homologs** | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 0.00000049 T | 0.00000583 JT | W023W | 0.00000224 | 0.00000186 JT | 0.00000403 J |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 0.00000217 JT | 0.0000507 T | W005 | 0.0000214 | 0.0000228 T | 0.0000491 |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 0.0000059 J | 0.0000516 J | W005 | 0.0000236 | 0.0000239 | 0.0000513 |
| **PCDD/Fs** | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.000000000558 T | 0.0000000214 JT | W025M | 0.00000000754 | 0.0000000051 JT | 0.000000017 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.00000000419 JT | 0.000000317 JT | W005 | 0.0000000725 | 0.0000000589 JT | 0.00000019 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.0000000181 J | 0.000000327 J | W005 | 0.00000008 | 0.0000000643 J | 0.000000193 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.0000000000416 JT | 0.00000000203 JT | W025E | 0.000000000542 | 0.00000000024 JT | 0.00000000182 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.0000000000233 JT | 0.00000000622 T | W011 | 0.00000000186 | 0.00000000119 JT | 0.00000000492 |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000000167 J | 0.00000000647 | W011 | 0.0000000024 | 0.00000000236 J | 0.00000000531 J |

Table D3.2-3. Summary Statistics for COIs in Surface Water, Low-Flow Events (Transect Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Pesticides** | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 0.000000341 UJ | 0.00000446 J | W005 | 0.00000203 | 0.00000198 J | 0.00000401 J |
| Aldrin | XAD Filter - particulate | µg/L | 0.000000107 J | 0.00000526 U | W025E | 0.000000737 | 0.000000451 J | 0.00000223 J |
| Aldrin | XAD Column+Filter - total | µg/L | 0.000000296 J | 0.00000662 J | W005 | 0.00000257 | 0.00000231 J | 0.00000501 J |
| Dieldrin | XAD Column - dissolved | µg/L | 0.0000143 | 0.0000444 | W011 | 0.0000375 | 0.0000392 | 0.0000442 |
| Dieldrin | XAD Filter - particulate | µg/L | 0.000000192 UJ | 0.00000526 J | W005 | 0.00000193 | 0.00000187 U | 0.0000049 J |
| Dieldrin | XAD Column+Filter - total | µg/L | 0.0000167 J | 0.0000487 J | W005 | 0.000039 | 0.0000405 J | 0.0000469 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 0.0000118 J | 0.0000358 J | W023E | 0.0000292 | 0.0000294 | 0.0000351 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 0.00000001 U | 0.00000214 U | W005 | 0.00000021 | 0.000000159 U | 0.000000495 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 0.0000118 J | 0.0000358 J | W023E | 0.0000293 | 0.0000295 J | 0.0000355 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 0.00000787 JT | 0.0000401 JT | W005 | 0.0000253 | 0.0000259 JT | 0.0000335 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 0.000000101 JT | 0.0000187 JT | W005 | 0.00000715 | 0.00000568 JT | 0.0000174 J |
| Total chlordanes | XAD Column+Filter - total | µg/L | 0.0000134 J | 0.0000588 J | W005 | 0.0000318 | 0.0000307 J | 0.0000475 J |
| DDx | XAD Column - dissolved | µg/L | 0.0000124 JT | 0.000311 JT | W027 | 0.000142 | 0.0000949 T | 0.000308 J |
| DDx | XAD Filter - particulate | µg/L | 0.0000104 JT | 0.000274 JT | W005 | 0.0000758 | 0.0000388 JT | 0.000256 J |
| DDx | XAD Column+Filter - total | µg/L | 0.0000428 J | 0.000546 J | W005 | 0.000218 | 0.000176 J | 0.000496 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 0.0000263 J | 0.000135 U | W005 | 0.0000484 | 0.0000359 U | 0.0000943 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 0.000068 U | 0.00322 | W005 | 0.000738 | 0.000511 | 0.00251 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0032 U | 0.0086 U | W005; W011; W023E; W023M; W023W; W024; W025E; W025M; W025W; W027 | 0.00338 | 0.0043 U | 0.0043 U |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 0.0000263 J | 0.00331 J | W005 | 0.00075 | 0.000511 | 0.00251 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 0.00104 JT | 0.022 JT | W027 | 0.00953 | 0.00488 JT | 0.0216 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 0.000472 JT | 0.0338 T | W005 | 0.00758 | 0.0045 JT | 0.028 J |
| Total HPAHs | Peristaltic - total | µg/L | 0.0074 UT | 0.0344 JT | W011 | 0.0139 | 0.013 JT | 0.0309 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 0.00194 J | 0.0539 J | W005 | 0.0171 | 0.0106 J | 0.0401 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 0.00103 JT | 0.0639 T | W023 | 0.014 | 0.00918 T | 0.0365 |
| Total LPAHs | XAD Filter - particulate | µg/L | 0.000035 JT | 0.00412 JT | W027 | 0.000731 | 0.000256 UT | 0.00289 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.0057 JT | 0.047 UT | W011 | 0.00822 | 0.0065 UT | 0.021 U |
| Total LPAHs | XAD Column+Filter - total | µg/L | 0.00107 J | 0.0639 | W023 | 0.0146 | 0.0109 J | 0.0367 J |
| Naphthalene | XAD Column - dissolved | µg/L | 0.00356 U | 0.0345 | W023 | 0.00901 | 0.00745 U | 0.0165 |
| Naphthalene | XAD Filter - particulate | µg/L | 0.000227 U | 0.00172 U | W011 | 0.00044 | 0.000305 U | 0.000995 |
| Naphthalene | Peristaltic - total | µg/L | 0.0064 U | 0.047 U | W011 | 0.00773 | 0.0065 U | 0.021 U |
| Naphthalene | XAD Column+Filter - total | µg/L | 0.00101 | 0.0345 | W023 | 0.00828 | 0.007 U | 0.0172 |
| Phenanthrene | XAD Column - dissolved | µg/L | 0.00035 | 0.00574 | W005 | 0.00255 | 0.00244 | 0.00538 |
| Phenanthrene | XAD Filter - particulate | µg/L | 0.000277 U | 0.00279 U | W005 | 0.00052 | 0.000362 U | 0.00139 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.013 U | W011; W023 | 0.00383 | 0.0032 U | 0.00659 J |
| Phenanthrene | XAD Column+Filter - total | µg/L | 0.00035 | 0.00676 | W011 | 0.00268 | 0.00256 | 0.00562 |
| Total cPAHs | XAD Column - dissolved | µg/L | 0.000047 JT | 0.0023 JT | W011 | 0.000898 | 0.00056 JT | 0.00199 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 0.000085 JT | 0.017 T | W005 | 0.00372 | 0.0032 JT | 0.0135 J |
| Total cPAHs | Peristaltic - total | µg/L | 0.0031 JT | 0.024 JT | W011 | 0.00551 | 0.0055 UT | 0.00955 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 0.000327 J | 0.0183 J | W005 | 0.00462 | 0.00349 J | 0.0142 J |
| Total PAHs | XAD Column - dissolved | µg/L | 0.00346 JT | 0.0655 JT | W023 | 0.0235 | 0.0274 JT | 0.0482 J |
| Total PAHs | XAD Filter - particulate | µg/L | 0.000482 T | 0.0359 JT | W005 | 0.00819 | 0.0045 JT | 0.0303 J |
| Total PAHs | Peristaltic - total | µg/L | 0.0074 UT | 0.046 JT | W027 | 0.0173 | 0.015 JT | 0.0416 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 0.00397 J | 0.0661 J | W005 | 0.0317 | 0.035 J | 0.0654 J |

Table D3.2-3. Summary Statistics for COIs in Surface Water, Low-Flow Events (Transect Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.061 U | W023 | 0.0155 | 0.0145 U | 0.0165 U |
| Bis(2-ethylhexyl) phthalate | XAD Column - dissolved | µg/L | 0.00312 U | 0.0171 | W023 | 0.00439 | 0.00247 U | 0.0128 J |
| Bis(2-ethylhexyl) phthalate | XAD Filter - particulate | µg/L | 0.00351 U | 0.00647 U | W023 | 0.00366 | 0.0032 U | 0.00573 J |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.12 U | 1.5 | W025E | 0.358 | 0.17 U | 1.29 |
| Bis(2-ethylhexyl) phthalate | XAD Column+Filter - total | µg/L | 0.00432 U | 0.023 J | W023 | 0.00671 | 0.0032 U | 0.0182 J |
| Butylbenzyl phthalate | XAD Column - dissolved | µg/L | 0.000515 U | 0.00199 | W011 | 0.000732 | 0.000555 U | 0.00169 J |
| Butylbenzyl phthalate | XAD Filter - particulate | µg/L | 0.000182 U | 0.000894 U | W005 | 0.000165 | 0.000113 U | 0.000359 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.013 U | 0.32 | W025W | 0.0418 | 0.0185 U | 0.163 J |
| Butylbenzyl phthalate | XAD Column+Filter - total | µg/L | 0.000639 U | 0.00199 | W011 | 0.000753 | 0.000555 U | 0.00169 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 0.0000157 | 0.0000554 | W011 | 0.0000274 | 0.0000237 J | 0.0000478 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 0.000000722 U | 0.0000453 | W024 | 0.00000682 | 0.00000386 J | 0.0000235 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.015 U | 0.017 U | W025M | 0.00761 | 0.0075 U | 0.008 U |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 0.000017 J | 0.0000732 | W023 | 0.0000341 | 0.0000282 J | 0.0000618 J |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

[d] Particulate values were calculated as the difference between total and dissolved concentrations. If the measured dissolved concentration was greater than or equal to the measured total concentration, the calculated particulate concentration was assigned a value of zero.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
XAD - hydrophobic crosslinked polystyrene copolymer resin

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D3.2-4a. Summary Statistics for COIs in Surface Water, Low-Flow Events (Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 65 | 65 | 100 | 0.249 | 0.64 | W001 | 0.384 | 0.372 | 0.505 |
| Arsenic | Peristaltic - particulate | µg/L | 65 | 65 | 100 | 0.02 | 0.175 | W022 | 0.0679 | 0.065 | 0.104 |
| Arsenic | Peristaltic - total | µg/L | 65 | 65 | 100 | 0.328 T | 0.745 T | W001 | 0.451 | 0.435 | 0.624 |
| Cadmium | Peristaltic - dissolved | µg/L | 65 | 16 | 25 | 0.01 J | 0.03 | W012; W014; W015; W018; W019; W020; W021; W022 | 0.0244 | 0.025 | 0.03 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 65 | 29 | 45 | 0 | 0.03 | W004 | 0.0137 | 0.02 J | 0.03 |
| Cadmium | Peristaltic - total | µg/L | 65 | 27 | 42 | 0.008 T | 0.05 | W004; W015; W022 | 0.0273 | 0.03 | 0.05 |
| Chromium | Peristaltic - dissolved | µg/L | 65 | 36 | 55 | 0.1 J | 0.33 | W004 | 0.171 | 0.16 J | 0.283 |
| Chromium | Peristaltic - particulate[d] | µg/L | 65 | 48 | 74 | 0 J | 0.625 | W001 | 0.243 | 0.195 J | 0.57 |
| Chromium | Peristaltic - total | µg/L | 65 | 45 | 69 | 0.2 | 0.91 | W004 | 0.38 | 0.33 | 0.62 |
| Copper | Peristaltic - dissolved | µg/L | 65 | 63 | 97 | 0.37 | 1.64 J | W022 | 0.711 | 0.66 | 1.1 |
| Copper | Peristaltic - particulate[d] | µg/L | 65 | 65 | 100 | 0 J | 1.14 | W004 | 0.451 | 0.4 | 0.972 |
| Copper | Peristaltic - total | µg/L | 65 | 65 | 100 | 0.685 T | 2.09 | W004 | 1.13 | 1.02 | 1.73 J |
| Lead | Peristaltic - dissolved | µg/L | 65 | 51 | 78 | 0.009 J | 0.152 | W008 | 0.0264 | 0.02 J | 0.07 |
| Lead | Peristaltic - particulate | µg/L | 65 | 65 | 100 | 0.068 | 1.65 | W008 | 0.234 | 0.151 J | 0.542 J |
| Lead | Peristaltic - total | µg/L | 65 | 65 | 100 | 0.077 | 1.8 | W008 | 0.255 | 0.166 | 0.572 |
| Mercury | Peristaltic - dissolved | µg/L | 65 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 65 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 65 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 65 | 51 | 78 | 0.43 | 1.12 | W012 | 0.758 | 0.72 | 1.09 |
| Nickel | Peristaltic - particulate[d] | µg/L | 65 | 58 | 89 | 0 | 0.75 | W019 | 0.241 | 0.163 | 0.646 J |
| Nickel | Peristaltic - total | µg/L | 65 | 58 | 89 | 0.6 | 1.54 | W013-2 | 0.903 | 0.84 | 1.28 |
| Zinc | Peristaltic - dissolved | µg/L | 65 | 58 | 89 | 0.9 J | 41.9 | W022 | 2.82 | 1.8 | 4.7 J |
| Zinc | Peristaltic - particulate[d] | µg/L | 65 | 65 | 100 | 0 | 16 | W022 | 1.39 | 0.9 | 3.36 J |
| Zinc | Peristaltic - total | µg/L | 65 | 64 | 98 | 1.65 T | 57.9 | W022 | 3.84 | 2.65 | 5.93 J |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 65 | 6 | 9 | 0.00095 J | 0.0023 J | W004 | 0.00127 | 0.0011 J | 0.00203 J |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 15 | 15 | 100 | 0.000137 JT | 0.00242 JT | W013-1 | 0.000809 | 0.000581 JT | 0.00224 J |
| Total PCBs | XAD Filter - particulate | µg/L | 14 | 14 | 100 | 0.000201 JT | 0.00956 JT | W013-1 | 0.00187 | 0.000908 J | 0.00719 J |
| Total PCBs | Peristaltic - total | µg/L | 50 | 6 | 12 | 0.00467 JT | 0.0154 T | W014 | 0.00946 | 0.0086 J | 0.015 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 15 | 15 | 100 | 0.000375 J | 0.012 J | W013-1 | 0.00256 | 0.00169 J | 0.00918 J |

Table D3.2-4a. Summary Statistics for COIs in Surface Water, Low-Flow Events (Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **PCDD/F Homologs** | | | | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 9 | 9 | 100 | 0.000000897 JT | 0.0000125 JT | W013-2 | 0.00000401 | 0.00000296 T | 0.0000101 J |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 9 | 9 | 100 | 0.0000263 T | 0.000156 T | W013-1 | 0.0000593 | 0.0000474 T | 0.000125 |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 9 | 9 | 100 | 0.0000307 | 0.000162 | W013-1 | 0.0000633 | 0.0000504 | 0.00013 |
| **PCDD/Fs** | | | | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 9 | 9 | 100 | 0.00000000106 T | 0.0000000382 JT | W013-2 | 0.0000000163 | 0.0000000122 JT | 0.0000000363 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 9 | 9 | 100 | 0.000000109 JT | 0.00000091 JT | W013-2 | 0.000000327 | 0.000000333 JT | 0.0000000734 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 9 | 9 | 100 | 0.00000011 J | 0.000000917 J | W013-2 | 0.000000343 | 0.000000357 J | 0.000000751 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 15 | 15 | 100 | 0.000000000125 T | 0.00000000288 JT | W016-1 | 0.000000001 | 0.000000000436 T | 0.00000000264 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 14 | 14 | 100 | 0.000000000624 T | 0.0000000242 T | W013-1 | 0.00000000765 | 0.00000000543 | 0.0000000182 |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 15 | 15 | 100 | 0.000000000526 | 0.0000000245 | W013-1 | 0.00000000814 | 0.00000000545 J | 0.0000000195 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 15 | 12 | 80 | 0.000000537 J | 0.00000327 J | W015 | 0.00000123 | 0.00000117 J | 0.00000226 J |
| Aldrin | XAD Filter - particulate | µg/L | 15 | 14 | 93 | 0.000000122 J | 0.000013 | W015 | 0.00000147 | 0.000000518 J | 0.00000537 J |
| Aldrin | Peristaltic - total | µg/L | 52 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Aldrin | XAD Column+Filter - total | µg/L | 15 | 15 | 100 | 0.00000031 J | 0.0000163 J | W015 | 0.00000236 | 0.0000014 J | 0.00000657 J |
| Dieldrin | XAD Column - dissolved | µg/L | 15 | 15 | 100 | 0.0000227 | 0.0000468 | W015 | 0.0000342 | 0.0000349 | 0.0000449 |
| Dieldrin | XAD Filter - particulate | µg/L | 15 | 12 | 80 | 0.00000024 J | 0.0000157 | W015 | 0.00000406 | 0.00000286 J | 0.0000108 J |
| Dieldrin | Peristaltic - total | µg/L | 52 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | XAD Column+Filter - total | µg/L | 15 | 15 | 100 | 0.0000227 | 0.0000625 | W015 | 0.0000374 | 0.0000374 J | 0.0000544 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 15 | 15 | 100 | 0.00000723 | 0.0000711 | W015 | 0.000033 | 0.0000291 | 0.0000637 |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 15 | 8 | 53 | 0.000000147 J | 0.00000128 J | W016-1 | 0.000000422 | 0.000000234 J | 0.00000113 J |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 52 | 1 | 2 | 0.000768 | 0.000768 | W022 | 0.000768 | 0.000768 | 0.000768 |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 15 | 15 | 100 | 0.00000723 | 0.0000712 J | W015 | 0.0000332 | 0.0000291 | 0.0000646 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 15 | 15 | 100 | 0.0000126 JT | 0.0000555 JT | W015 | 0.0000219 | 0.0000206 JT | 0.0000353 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 15 | 15 | 100 | 0.000000936 JT | 0.000185 JT | W015 | 0.00002 | 0.00000707 JT | 0.0000675 J |
| Total chlordanes | Peristaltic - total | µg/L | 52 | 1 | 2 | 0.00212 JT | 0.00212 JT | W002 | 0.00212 | 0.00212 JT | 0.00212 JT |
| Total chlordanes | XAD Column+Filter - total | µg/L | 15 | 15 | 100 | 0.0000173 J | 0.000241 J | W015 | 0.0000419 | 0.0000272 J | 0.000102 J |
| DDx | XAD Column - dissolved | µg/L | 15 | 15 | 100 | 0.0000254 JT | 0.00346 T | W015 | 0.000819 | 0.0000778 JT | 0.00312 |
| DDx | XAD Filter - particulate | µg/L | 15 | 15 | 100 | 0.00000763 JT | 0.00679 T | W016-1 | 0.00127 | 0.0000514 JT | 0.00498 |
| DDx | Peristaltic - total | µg/L | 52 | 4 | 8 | 0.000693 JT | 0.0187 NJT | W001 | 0.00535 | 0.000995 | 0.0161 J |
| DDx | XAD Column+Filter - total | µg/L | 15 | 15 | 100 | 0.0000492 J | 0.00976 | W016-1 | 0.00209 | 0.000103 J | 0.0083 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 15 | 10 | 67 | 0.0000183 J | 0.000336 | W015 | 0.0000868 | 0.0000417 J | 0.000249 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 15 | 11 | 73 | 0.000336 | 0.0063 | W015 | 0.00168 | 0.000852 | 0.0046 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 65 | 7 | 11 | 0.0024 J | 0.15 | W012 | 0.0271 | 0.004 J | 0.111 |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 15 | 14 | 93 | 0.0000183 J | 0.00664 | W015 | 0.00138 | 0.000816 J | 0.00429 J |
| Total HPAH | XAD Column - dissolved | µg/L | 15 | 15 | 100 | 0.00179 JT | 0.0719 JT | W015 | 0.0126 | 0.00508 JT | 0.0494 J |
| Total HPAH | XAD Filter - particulate | µg/L | 15 | 15 | 100 | 0.000916 T | 0.059 T | W015 | 0.014 | 0.00686 T | 0.0415 |
| Total HPAH | Peristaltic - total | µg/L | 65 | 44 | 68 | 0.0026 JT | 1.77 JT | W012 | 0.069 | 0.0175 J | 0.126 J |
| Total HPAH | XAD Column+Filter - total | µg/L | 15 | 15 | 100 | 0.00353 J | 0.131 J | W015 | 0.0266 | 0.0116 J | 0.0884 J |
| Total LPAH | XAD Column - dissolved | µg/L | 15 | 15 | 100 | 0.00567 T | 0.0973 T | W015 | 0.0269 | 0.0194 T | 0.0638 |
| Total LPAH | XAD Filter - particulate | µg/L | 15 | 12 | 80 | 0.0000316 JT | 0.0134 T | W018 | 0.00217 | 0.000745 | 0.00828 |
| Total LPAH | Peristaltic - total | µg/L | 65 | 27 | 42 | 0.0013 JT | 1.08 T | W012 | 0.08 | 0.0078 JT | 0.528 J |
| Total LPAH | XAD Column+Filter - total | µg/L | 15 | 15 | 100 | 0.00585 | 0.1 | W015 | 0.0286 | 0.0212 J | 0.0647 J |
| Naphthalene | XAD Column - dissolved | µg/L | 15 | 7 | 47 | 0.00685 | 0.0276 | W015 | 0.0144 | 0.0109 | 0.0247 |
| Naphthalene | XAD Filter - particulate | µg/L | 15 | 4 | 27 | 0.000742 | 0.00093 | W015 | 0.000843 | 0.000851 | 0.00092 |
| Naphthalene | Peristaltic - total | µg/L | 65 | 4 | 6 | 0.0065 J | 0.77 | W012 | 0.228 | 0.0684 J | 0.674 |
| Naphthalene | XAD Column+Filter - total | µg/L | 15 | 10 | 67 | 0.000742 | 0.0285 | W015 | 0.0104 | 0.0102 | 0.0238 |
| Phenanthrene | XAD Column - dissolved | µg/L | 15 | 15 | 100 | 0.0011 | 0.0309 | W015 | 0.0057 | 0.00208 | 0.0188 |
| Phenanthrene | XAD Filter - particulate | µg/L | 15 | 2 | 13 | 0.00242 | 0.00364 | W018 | 0.00303 | 0.00303 | 0.00358 |
| Phenanthrene | Peristaltic - total | µg/L | 65 | 5 | 8 | 0.0071 J | 0.17 | W012 | 0.0639 | 0.039 | 0.155 |
| Phenanthrene | XAD Column+Filter - total | µg/L | 15 | 15 | 100 | 0.0011 | 0.0309 | W015 | 0.00611 | 0.00226 | 0.0188 |
| Total cPAHs | XAD Column - dissolved | µg/L | 15 | 15 | 100 | 0.00022 JT | 0.009 T | W015 | 0.00166 | 0.00063 JT | 0.00683 |
| Total cPAHs | XAD Filter - particulate | µg/L | 15 | 15 | 100 | 0.00067 T | 0.037 T | W015 | 0.00831 | 0.0045 T | 0.0251 |

Table D3.2-4a. Summary Statistics for COIs in Surface Water, Low-Flow Events (Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| Total cPAHs | Peristaltic - total | µg/L | 65 | 29 | 45 | 0.002 JT | 0.78 JT | W012 | 0.039 | 0.0048 JT | 0.0832 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 15 | 15 | 100 | 0.00132 J | 0.046 | W015 | 0.00998 | 0.00513 J | 0.0319 |
| Total PAHs | XAD Column - dissolved | µg/L | 15 | 15 | 100 | 0.00748 JT | 0.169 JT | W015 | 0.0395 | 0.0219 JT | 0.0978 J |
| Total PAHs | XAD Filter - particulate | µg/L | 15 | 15 | 100 | 0.000916 T | 0.0619 T | W015 | 0.0157 | 0.00686 T | 0.0452 |
| Total PAHs | Peristaltic - total | µg/L | 65 | 49 | 75 | 0.0026 JT | 2.46 JT | W012 | 0.106 | 0.0177 JT | 0.205 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 15 | 15 | 100 | 0.0125 J | 0.231 J | W015 | 0.0552 | 0.0275 J | 0.139 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | XAD Column - dissolved | µg/L | 15 | 5 | 33 | 0.00351 J | 0.0198 | W013-1 | 0.00874 | 0.00435 J | 0.0183 |
| Bis(2-ethylhexyl) phthalate | XAD Filter - particulate | µg/L | 15 | 5 | 33 | 0.00424 J | 0.033 | W015 | 0.0106 | 0.0052 J | 0.0276 J |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 64 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | XAD Column+Filter - total | µg/L | 15 | 6 | 40 | 0.00775 J | 0.033 | W015 | 0.0161 | 0.011 J | 0.031 J |
| Butylbenzyl phthalate | XAD Column - dissolved | µg/L | 15 | 6 | 40 | 0.000889 J | 0.00733 | W015 | 0.00243 | 0.00167 J | 0.00601 |
| Butylbenzyl phthalate | XAD Filter - particulate | µg/L | 15 | 1 | 7 | 0.00217 | 0.00217 | W015 | 0.00217 | 0.00217 | 0.00217 |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 64 | 1 | 2 | 0.027 J | 0.027 J | W007 | 0.027 | 0.027 J | 0.027 J |
| Butylbenzyl phthalate | XAD Column+Filter - total | µg/L | 15 | 6 | 40 | 0.000889 J | 0.0095 | W015 | 0.00279 | 0.00167 J | 0.00764 |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 15 | 15 | 100 | 0.0000281 | 0.000054 | W015 | 0.0000397 | 0.0000389 | 0.0000536 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 15 | 14 | 93 | 0.00000306 J | 0.000032 | W016-1 | 0.0000088 | 0.00000588 | 0.0000225 |
| Hexachlorobenzene | Peristaltic - total | µg/L | 65 | 6 | 9 | 0.000906 J | 0.00701 | W022 | 0.003 | 0.0017 J | 0.00667 |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 15 | 15 | 100 | 0.0000308 | 0.0000854 | W016-1 | 0.0000479 | 0.0000426 J | 0.0000739 |

Table D3.2-4a. Summary Statistics for COIs in Surface Water, Low-Flow Events (Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.249 | 0.64 | W001 | 0.384 | 0.372 | 0.505 |
| Arsenic | Peristaltic - particulate | µg/L | 0.02 | 0.175 | W022 | 0.0679 | 0.065 | 0.104 |
| Arsenic | Peristaltic - total | µg/L | 0.328 T | 0.745 T | W001 | 0.451 | 0.435 | 0.624 |
| Cadmium | Peristaltic - dissolved | µg/L | 0.008 U | 0.05 U | W006; W007; W014 | 0.0145 | 0.01 U | 0.03 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 0 | 0.07 U | W009 | 0.0139 | 0.01 U | 0.03 |
| Cadmium | Peristaltic - total | µg/L | 0.008 U | 0.07 U | W009 | 0.0193 | 0.02 U | 0.039 |
| Chromium | Peristaltic - dissolved | µg/L | 0.1 J | 0.33 | W004 | 0.135 | 0.12 J | 0.248 |
| Chromium | Peristaltic - particulate[d] | µg/L | 0 J | 0.625 | W001 | 0.231 | 0.19 J | 0.548 |
| Chromium | Peristaltic - total | µg/L | 0.2 | 0.91 | W004 | 0.323 | 0.3 | 0.598 |
| Copper | Peristaltic - dissolved | µg/L | 0.37 | 1.64 J | W022 | 0.697 | 0.65 | 1.09 |
| Copper | Peristaltic - particulate[d] | µg/L | 0 J | 1.14 | W004 | 0.451 | 0.4 | 0.972 |
| Copper | Peristaltic - total | µg/L | 0.685 T | 2.09 | W004 | 1.13 | 1.02 | 1.73 J |
| Lead | Peristaltic - dissolved | µg/L | 0.009 U | 0.152 | W008 | 0.0223 | 0.015 J | 0.0574 |
| Lead | Peristaltic - particulate | µg/L | 0.068 | 1.65 | W008 | 0.234 | 0.151 J | 0.542 J |
| Lead | Peristaltic - total | µg/L | 0.077 | 1.8 | W008 | 0.255 | 0.166 | 0.572 |
| Mercury | Peristaltic - dissolved | µg/L | 0.04 UJ | 0.08 UJ | W001; W002; W003; W004; W006; W007; W008; W009; W010; W012; W013-1; W014; W015; W016-1; W017; W018; W019; W020; W021; W022 | 0.0265 | 0.02 U | 0.04 U |
| Mercury | Peristaltic - particulate | µg/L | 0.04 UJ | 0.08 UJ | W001; W002; W003; W004; W006; W007; W008; W009; W010; W012; W013-1; W014; W015; W016-1; W017; W018; W019; W020; W021; W022 | 0.0265 | 0.02 U | 0.04 U |
| Mercury | Peristaltic - total | µg/L | 0.04 UJ | 0.08 UJ | W019; W020; W021; W022 | 0.0265 | 0.02 U | 0.04 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.43 | 1.12 | W012 | 0.662 | 0.65 | 1.07 |
| Nickel | Peristaltic - particulate[d] | µg/L | 0 | 0.99 U | W008 | 0.26 | 0.2 | 0.64 J |
| Nickel | Peristaltic - total | µg/L | 0.57 U | 1.54 | W013-2 | 0.851 | 0.78 | 1.27 |
| Zinc | Peristaltic - dissolved | µg/L | 0.9 J | 41.9 | W022 | 2.6 | 1.8 J | 4.62 J |
| Zinc | Peristaltic - particulate[d] | µg/L | 0 | 16 | W022 | 1.39 | 0.9 | 3.36 J |
| Zinc | Peristaltic - total | µg/L | 1.65 T | 57.9 | W022 | 3.8 | 2.6 | 5.88 J |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0071 U | W001; W002; W003; W004; W006; W007; W008; W009; W010; W012; W013-1; W013-2; W014; W015; W016-1; W016-2; W017; W018; W019; W020; W021; W022 | 0.00151 | 0.0003 U | 0.00355 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000137 JT | 0.00242 JT | W013-1 | 0.000809 | 0.000581 JT | 0.00224 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.000201 JT | 0.00956 JT | W013-1 | 0.00187 | 0.000908 J | 0.00719 J |
| Total PCBs | Peristaltic - total | µg/L | 0.0025 UJT | 0.0154 T | W014 | 0.00225 | 0.00125 U | 0.00883 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000375 J | 0.012 J | W013-1 | 0.00256 | 0.00169 J | 0.00918 J |

Table D3.2-4a. Summary Statistics for COIs in Surface Water, Low-Flow Events (Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **PCDD/F Homologs** | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 0.000000897 JT | 0.0000125 JT | W013-2 | 0.00000401 | 0.00000296 T | 0.0000101 J |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 0.0000263 T | 0.000156 T | W013-1 | 0.0000593 | 0.0000474 T | 0.000125 |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 0.0000307 | 0.000162 | W013-1 | 0.0000633 | 0.0000504 | 0.00013 |
| **PCDD/Fs** | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.00000000106 T | 0.0000000382 JT | W013-2 | 0.0000000163 | 0.0000000122 JT | 0.0000000363 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000109 JT | 0.00000091 JT | W013-2 | 0.000000327 | 0.000000333 JT | 0.000000734 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.00000011 J | 0.000000917 J | W013-2 | 0.000000343 | 0.000000357 J | 0.000000751 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.000000000125 T | 0.00000000288 JT | W016-1 | 0.000000001 | 0.000000000436 T | 0.00000000264 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000000624 T | 0.0000000242 T | W013-1 | 0.00000000765 | 0.00000000543 | 0.0000000182 |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000000526 | 0.0000000245 | W013-1 | 0.00000000814 | 0.00000000545 J | 0.0000000195 J |
| **Pesticides** | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 0.000000418 UJ | 0.00000327 J | W015 | 0.0000011 | 0.000000972 J | 0.00000199 J |
| Aldrin | XAD Filter - particulate | µg/L | 0.000000122 J | 0.000013 | W015 | 0.00000138 | 0.000000406 J | 0.00000478 J |
| Aldrin | Peristaltic - total | µg/L | 0.000472 UJ | 0.000538 UJ | W002 | 0.000248 | 0.000245 U | 0.000263 UJ |
| Aldrin | XAD Column+Filter - total | µg/L | 0.00000031 J | 0.0000163 J | W015 | 0.00000236 | 0.0000014 J | 0.00000657 J |
| Dieldrin | XAD Column - dissolved | µg/L | 0.0000227 | 0.0000468 | W015 | 0.0000342 | 0.0000349 | 0.0000449 |
| Dieldrin | XAD Filter - particulate | µg/L | 0.00000024 J | 0.0000157 | W015 | 0.00000344 | 0.00000214 J | 0.0000095 J |
| Dieldrin | Peristaltic - total | µg/L | 0.000472 UJ | 0.000538 UJ | W002 | 0.000248 | 0.000245 U | 0.000263 UJ |
| Dieldrin | XAD Column+Filter - total | µg/L | 0.0000227 | 0.0000625 | W015 | 0.0000374 | 0.0000374 J | 0.0000544 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 0.00000723 | 0.0000711 | W015 | 0.000033 | 0.0000291 | 0.0000637 |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 0.000000029 U | 0.00000128 J | W016-1 | 0.000000242 | 0.000000147 J | 0.000000987 J |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.000472 UJ | 0.000768 | W022 | 0.000258 | 0.000246 U | 0.000264 U |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 0.00000723 | 0.0000712 J | W015 | 0.0000332 | 0.0000291 | 0.0000646 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 0.0000126 JT | 0.0000555 JT | W015 | 0.0000219 | 0.0000206 JT | 0.0000353 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 0.000000936 JT | 0.000185 JT | W015 | 0.00002 | 0.00000707 JT | 0.0000675 J |
| Total chlordanes | Peristaltic - total | µg/L | 0.000472 UJT | 0.00212 JT | W002 | 0.000284 | 0.000245 U | 0.000263 UJ |
| Total chlordanes | XAD Column+Filter - total | µg/L | 0.0000173 J | 0.000241 J | W015 | 0.0000419 | 0.0000272 J | 0.000102 J |
| DDx | XAD Column - dissolved | µg/L | 0.0000254 JT | 0.00346 T | W015 | 0.000819 | 0.0000778 JT | 0.00312 |
| DDx | XAD Filter - particulate | µg/L | 0.00000763 JT | 0.00679 T | W016-1 | 0.00127 | 0.0000514 JT | 0.00498 |
| DDx | Peristaltic - total | µg/L | 0.000472 UJT | 0.0187 NJT | W001 | 0.00064 | 0.000249 UJ | 0.000759 J |
| DDx | XAD Column+Filter - total | µg/L | 0.0000492 J | 0.00976 | W016-1 | 0.00209 | 0.000103 J | 0.0083 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 0.0000169 U | 0.000336 | W015 | 0.0000694 | 0.0000379 J | 0.000201 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 0.000185 U | 0.0063 | W015 | 0.00127 | 0.000722 | 0.00391 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0016 U | 0.15 | W012 | 0.00444 | 0.0016 U | 0.00408 J |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 0.0000183 J | 0.00664 | W015 | 0.0013 | 0.00079 J | 0.00411 J |
| Total HPAH | XAD Column - dissolved | µg/L | 0.00179 JT | 0.0719 JT | W015 | 0.0126 | 0.00508 JT | 0.0494 J |
| Total HPAH | XAD Filter - particulate | µg/L | 0.000916 T | 0.059 T | W015 | 0.014 | 0.00686 T | 0.0415 |
| Total HPAH | Peristaltic - total | µg/L | 0.0026 JT | 1.77 JT | W012 | 0.0482 | 0.0099 JT | 0.0745 J |
| Total HPAH | XAD Column+Filter - total | µg/L | 0.00353 J | 0.131 J | W015 | 0.0266 | 0.0116 J | 0.0884 J |
| Total LPAH | XAD Column - dissolved | µg/L | 0.00567 T | 0.0973 T | W015 | 0.0269 | 0.0194 T | 0.0638 |
| Total LPAH | XAD Filter - particulate | µg/L | 0.0000316 JT | 0.0134 T | W018 | 0.00183 | 0.000545 UT | 0.00688 |
| Total LPAH | Peristaltic - total | µg/L | 0.0013 JT | 1.08 T | W012 | 0.0355 | 0.0038 JT | 0.0563 J |
| Total LPAH | XAD Column+Filter - total | µg/L | 0.00585 | 0.1 | W015 | 0.0286 | 0.0212 J | 0.0647 J |
| Naphthalene | XAD Column - dissolved | µg/L | 0.00424 U | 0.0276 | W015 | 0.00892 | 0.00685 | 0.0209 |
| Naphthalene | XAD Filter - particulate | µg/L | 0.000155 U | 0.00667 U | W018 | 0.000706 | 0.000545 U | 0.00165 |
| Naphthalene | Peristaltic - total | µg/L | 0.0032 UJ | 0.77 | W012 | 0.019 | 0.0032 U | 0.0256 U |
| Naphthalene | XAD Column+Filter - total | µg/L | 0.000742 | 0.0285 | W015 | 0.00841 | 0.00685 | 0.0212 |
| Phenanthrene | XAD Column - dissolved | µg/L | 0.0011 | 0.0309 | W015 | 0.0057 | 0.00208 | 0.0188 |
| Phenanthrene | XAD Filter - particulate | µg/L | 0.000198 U | 0.00364 | W018 | 0.000756 | 0.000428 U | 0.00279 |
| Phenanthrene | Peristaltic - total | µg/L | 0.0032 U | 0.17 | W012 | 0.00801 | 0.0032 U | 0.00726 J |
| Phenanthrene | XAD Column+Filter - total | µg/L | 0.0011 | 0.0309 | W015 | 0.00611 | 0.00226 | 0.0188 |
| Total cPAHs | XAD Column - dissolved | µg/L | 0.00022 JT | 0.009 T | W015 | 0.00166 | 0.00063 JT | 0.00683 |
| Total cPAHs | XAD Filter - particulate | µg/L | 0.00067 T | 0.037 T | W015 | 0.00831 | 0.0045 T | 0.0251 |

Table D3.2-4a. Summary Statistics for COIs in Surface Water, Low-Flow Events (Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| Total cPAHs | Peristaltic - total | µg/L | 0.002 JT | 0.78 JT | W012 | 0.0186 | 0.0021 UT | 0.0354 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 0.00132 J | 0.046 | W015 | 0.00998 | 0.00513 J | 0.0319 |
| Total PAHs | XAD Column - dissolved | µg/L | 0.00748 JT | 0.169 JT | W015 | 0.0395 | 0.0219 JT | 0.0978 J |
| Total PAHs | XAD Filter - particulate | µg/L | 0.000916 T | 0.0619 T | W015 | 0.0157 | 0.00686 T | 0.0452 |
| Total PAHs | Peristaltic - total | µg/L | 0.0026 JT | 2.46 JT | W012 | 0.0812 | 0.0123 JT | 0.0793 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 0.0125 J | 0.231 J | W015 | 0.0552 | 0.0275 J | 0.139 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.032 U | W004; W008; W013-1 | 0.0149 | 0.015 U | 0.0155 U |
| Bis(2-ethylhexyl) phthalate | XAD Column - dissolved | µg/L | 0.00338 U | 0.0198 | W013-1 | 0.00433 | 0.00272 U | 0.0144 |
| Bis(2-ethylhexyl) phthalate | XAD Filter - particulate | µg/L | 0.00257 U | 0.033 | W015 | 0.0057 | 0.00416 U | 0.0141 J |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.27 U | 4.1 U | W017 | 0.273 | 0.148 UJ | 0.706 U |
| Bis(2-ethylhexyl) phthalate | XAD Column+Filter - total | µg/L | 0.00543 U | 0.033 | W015 | 0.00855 | 0.00428 U | 0.0274 J |
| Butylbenzyl phthalate | XAD Column - dissolved | µg/L | 0.000512 U | 0.00733 | W015 | 0.00125 | 0.000535 U | 0.00364 |
| Butylbenzyl phthalate | XAD Filter - particulate | µg/L | 0.0000254 U | 0.00217 | W015 | 0.000273 | 0.000144 U | 0.000879 |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.026 U | 0.035 U | W018 | 0.0137 | 0.0135 U | 0.014 U |
| Butylbenzyl phthalate | XAD Column+Filter - total | µg/L | 0.000512 U | 0.0095 | W015 | 0.00139 | 0.000535 U | 0.00429 |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 0.0000281 | 0.000054 | W015 | 0.0000397 | 0.0000389 | 0.0000536 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 0.000000918 U | 0.000032 | W016-1 | 0.00000824 | 0.00000427 | 0.0000218 |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.000472 U | 0.016 U | W002; W013-1 | 0.00198 | 0.00025 U | 0.0075 U |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 0.0000308 | 0.0000854 | W016-1 | 0.0000479 | 0.0000426 J | 0.0000739 |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

[d] Particulate values were calculated as the difference between total and dissolved concentrations. If the measured dissolved concentration was greater than or equal to the measured total concentration, the calculated particulate concentration was assigned a value of zero.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
XAD - hydrophobic crosslinked polystyrene copolymer resin

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D3.2-4b. Summary Statistics for COIs in Surface Water, Low-Flow Events (East Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **RM 01.9<03** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.286 | 0.64 | W001 | 0.428 | 0.359 | 0.612 |
| Arsenic | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.042 | 0.105 | W001 | 0.0708 | 0.0655 | 0.101 |
| Arsenic | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.328 T | 0.745 T | W001 | 0.499 | 0.425 T | 0.713 |
| Cadmium | Peristaltic - dissolved | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 3 | 2 | 67 | 0.02 | 0.025 | W001 | 0.0225 | 0.0225 | 0.0248 |
| Cadmium | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.02 T | 0.025 T | W001 | 0.0225 | 0.0225 | 0.0248 |
| Chromium | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 0.13 J | 0.22 T | W001 | 0.175 | 0.175 J | 0.216 J |
| Chromium | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.175 J | 0.625 | W001 | 0.353 | 0.26 | 0.589 |
| Chromium | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.305 T | 0.625 T | W001 | 0.47 | 0.48 T | 0.611 |
| Copper | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.45 | 0.84 | W001 | 0.652 | 0.665 T | 0.823 |
| Copper | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.35 | 0.85 | W001 | 0.537 | 0.41 | 0.806 |
| Copper | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.8 T | 1.69 T | W001 | 1.19 | 1.08 T | 1.63 |
| Lead | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 0.012 J | 0.0215 JT | W001 | 0.0168 | 0.0168 J | 0.021 J |
| Lead | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.115 J | 0.47 J | W001 | 0.236 | 0.124 J | 0.435 J |
| Lead | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.136 T | 0.47 T | W001 | 0.247 | 0.136 T | 0.437 |
| Mercury | Peristaltic - dissolved | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.48 | 0.9 T | W001 | 0.75 | 0.87 | 0.897 |
| Nickel | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.15 | 0.4 | W001 | 0.265 | 0.245 | 0.385 |
| Nickel | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.63 T | 1.27 T | W001 | 1.02 | 1.15 T | 1.26 |
| Zinc | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 1.4 | 1.4 | W001 | 1.4 | 1.4 | 1.4 |
| Zinc | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.25 | 3.47 J | W001 | 1.54 | 0.9 | 3.21 J |
| Zinc | Peristaltic - total | µg/L | 3 | 3 | 100 | 1.65 T | 3.47 JT | W001 | 2.47 | 2.3 T | 3.35 J |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.0063 JT | 0.0063 JT | W001 | 0.0063 | 0.0063 JT | 0.0063 JT |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.0187 NJT | 0.0187 NJT | W001 | 0.0187 | 0.0187 NJT | 0.0187 NJT |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.0101 JT | 0.0101 JT | W001 | 0.0101 | 0.0101 JT | 0.0101 JT |
| Total LPAHs | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.0109 JT | 0.012 JT | W001 | 0.0115 | 0.0115 J | 0.0119 J |
| Naphthalene | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.0065 J | 0.0065 J | W001 | 0.0065 | 0.0065 J | 0.0065 J |
| Phenanthrene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.0021 JT | 0.0021 JT | W001 | 0.0021 | 0.0021 JT | 0.0021 JT |
| Total PAHs | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.0101 JT | 0.012 JT | W001 | 0.011 | 0.0109 JT | 0.0119 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.000906 J | 0.00563 | W001 | 0.00327 | 0.00327 J | 0.00539 J |

Table D3.2-4b. Summary Statistics for COIs in Surface Water, Low-Flow Events (East Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **RM 03<04** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.315 | 0.41 | W004 | 0.377 | 0.406 | 0.41 |
| Arsenic | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.07 | 0.083 | W004 | 0.076 | 0.075 | 0.0822 |
| Arsenic | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.39 | 0.489 | W004 | 0.453 | 0.48 | 0.488 |
| Cadmium | Peristaltic - dissolved | µg/L | 3 | 1 | 33 | 0.02 | 0.02 | W004 | 0.02 | 0.02 | 0.02 |
| Cadmium | Peristaltic - particulate | µg/L | 3 | 1 | 33 | 0.03 | 0.03 | W004 | 0.03 | 0.03 | 0.03 |
| Cadmium | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.05 | 0.05 | W004 | 0.05 | 0.05 | 0.05 |
| Chromium | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 0.13 J | 0.33 | W004 | 0.23 | 0.23 J | 0.32 J |
| Chromium | Peristaltic - particulate | µg/L | 3 | 2 | 67 | 0.38 J | 0.58 | W004 | 0.48 | 0.48 J | 0.57 J |
| Chromium | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.51 | 0.91 | W004 | 0.71 | 0.71 | 0.89 |
| Copper | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.61 | 0.95 | W004 | 0.81 | 0.87 | 0.942 |
| Copper | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.51 | 1.14 | W004 | 0.723 | 0.52 | 1.08 |
| Copper | Peristaltic - total | µg/L | 3 | 3 | 100 | 1.13 | 2.09 | W004 | 1.53 | 1.38 | 2.02 |
| Lead | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 0.034 | 0.038 J | W004 | 0.036 | 0.036 J | 0.0378 J |
| Lead | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.25 | 1.09 | W004 | 0.632 | 0.56 J | 1.03 J |
| Lead | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.25 | 1.12 | W004 | 0.656 | 0.598 | 1.07 |
| Mercury | Peristaltic - dissolved | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.51 | 1.05 | W004 | 0.74 | 0.66 | 1.01 |
| Nickel | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.2 | 0.44 | W004 | 0.347 | 0.4 | 0.436 |
| Nickel | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.71 | 1.45 | W004 | 1.09 | 1.1 | 1.42 |
| Zinc | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 1.88 J | 4.3 | W004 | 2.89 | 2.5 | 4.12 |
| Zinc | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 1.4 J | 4.5 | W004 | 2.6 | 1.9 | 4.24 |
| Zinc | Peristaltic - total | µg/L | 3 | 3 | 100 | 3.28 J | 8.8 | W004 | 5.49 | 4.4 | 8.36 |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.0023 J | 0.0023 J | W004 | 0.0023 | 0.0023 J | 0.0023 J |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 4 | 3 | 75 | 0.00589 JT | 0.0136 JT | W004 | 0.0101 | 0.0109 T | 0.0133 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | Peristaltic - total | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | Peristaltic - total | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.0055 JT | 0.0719 JT | W004 | 0.0308 | 0.0149 JT | 0.0662 J |
| Total LPAHs | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.0078 JT | 0.0078 JT | W004 | 0.0078 | 0.0078 JT | 0.0078 JT |
| Naphthalene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.0055 JT | 0.038 JT | W004 | 0.0218 | 0.0218 J | 0.0364 J |
| Total PAHs | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.0055 JT | 0.0797 JT | W004 | 0.0334 | 0.0149 JT | 0.0732 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | Peristaltic - total | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |

Table D3.2-4b. Summary Statistics for COIs in Surface Water, Low-Flow Events (East Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **RM 04<05** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 6 | 6 | 100 | 0.315 | 0.43 | W008 | 0.374 | 0.374 | 0.428 |
| Arsenic | Peristaltic - particulate | µg/L | 6 | 6 | 100 | 0.042 | 0.0755 | W007 | 0.0582 | 0.058 | 0.073 |
| Arsenic | Peristaltic - total | µg/L | 6 | 6 | 100 | 0.381 T | 0.48 | W007; W008 | 0.433 | 0.433 | 0.48 |
| Cadmium | Peristaltic - dissolved | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 6 | 3 | 50 | 0.013 J | 0.029 | W008 | 0.0207 | 0.02 | 0.0281 |
| Cadmium | Peristaltic - total | µg/L | 6 | 3 | 50 | 0.013 JT | 0.029 T | W008 | 0.0207 | 0.02 T | 0.0281 |
| Chromium | Peristaltic - dissolved | µg/L | 6 | 2 | 33 | 0.13 J | 0.14 J | W008 | 0.135 | 0.135 J | 0.14 J |
| Chromium | Peristaltic - particulate | µg/L | 6 | 2 | 33 | 0.07 J | 0.165 J | W008 | 0.118 | 0.118 J | 0.16 J |
| Chromium | Peristaltic - total | µg/L | 6 | 2 | 33 | 0.2 JT | 0.305 T | W008 | 0.253 | 0.253 J | 0.3 J |
| Copper | Peristaltic - dissolved | µg/L | 6 | 6 | 100 | 0.46 | 0.87 | W007 | 0.663 | 0.65 | 0.863 |
| Copper | Peristaltic - particulate | µg/L | 6 | 6 | 100 | 0.23 | 0.49 J | W007 | 0.303 | 0.255 J | 0.453 J |
| Copper | Peristaltic - total | µg/L | 6 | 6 | 100 | 0.77 T | 1.36 J | W007 | 0.967 | 0.89 | 1.29 J |
| Lead | Peristaltic - dissolved | µg/L | 6 | 6 | 100 | 0.015 J | 0.152 | W008 | 0.0502 | 0.0325 J | 0.126 |
| Lead | Peristaltic - particulate | µg/L | 6 | 6 | 100 | 0.111 J | 1.65 | W008 | 0.564 | 0.332 J | 1.44 |
| Lead | Peristaltic - total | µg/L | 6 | 6 | 100 | 0.133 T | 1.8 | W008 | 0.614 | 0.364 | 1.56 |
| Mercury | Peristaltic - dissolved | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 6 | 4 | 67 | 0.51 | 0.78 | W007 | 0.655 | 0.665 | 0.779 |
| Nickel | Peristaltic - particulate[d] | µg/L | 6 | 4 | 67 | 0 | 0.13 | W008 | 0.085 | 0.105 | 0.128 |
| Nickel | Peristaltic - total | µg/L | 6 | 4 | 67 | 0.625 T | 0.9 | W008 | 0.738 | 0.713 | 0.881 |
| Zinc | Peristaltic - dissolved | µg/L | 6 | 6 | 100 | 1.5 | 4.7 J | W008 | 2.73 | 2.15 J | 4.58 J |
| Zinc | Peristaltic - particulate | µg/L | 6 | 6 | 100 | 0.45 | 1.4 J | W008 | 0.783 | 0.65 J | 1.3 J |
| Zinc | Peristaltic - total | µg/L | 6 | 6 | 100 | 1.95 T | 6.1 J | W008 | 3.52 | 3 J | 5.78 J |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 6 | 3 | 50 | 0.00095 J | 0.0012 J | W008 | 0.00105 | 0.00099 J | 0.00118 J |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 6 | 3 | 50 | 0.0033 J | 0.0075 J | W008 | 0.00493 | 0.004 J | 0.00715 J |
| Total HPAHs | Peristaltic - total | µg/L | 6 | 5 | 83 | 0.0102 JT | 0.0751 JT | W008 | 0.0369 | 0.0286 JT | 0.0716 J |
| Total LPAHs | Peristaltic - total | µg/L | 6 | 2 | 33 | 0.0038 JT | 0.0125 JT | W008 | 0.00815 | 0.00815 J | 0.0121 J |
| Naphthalene | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 6 | 4 | 67 | 0.0044 JT | 0.043 JT | W008 | 0.0219 | 0.02 J | 0.0403 J |
| Total PAHs | Peristaltic - total | µg/L | 6 | 5 | 83 | 0.0102 JT | 0.0751 JT | W008 | 0.0402 | 0.0411 JT | 0.0716 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 6 | 1 | 17 | 0.027 J | 0.027 J | W007 | 0.027 | 0.027 J | 0.027 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |

Table D3.2-4b. Summary Statistics for COIs in Surface Water, Low-Flow Events (East Channel Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **RM 05<06** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.322 | 0.46 | W010 | 0.381 | 0.36 | 0.45 |
| Arsenic | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.058 | 0.08 | W010 | 0.0657 | 0.059 | 0.0779 |
| Arsenic | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.38 | 0.54 | W010 | 0.446 | 0.419 | 0.528 |
| Cadmium | Peristaltic - dissolved | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 3 | 1 | 33 | 0.14 J | 0.14 J | W010 | 0.14 | 0.14 J | 0.14 J |
| Chromium | Peristaltic - particulate | µg/L | 3 | 2 | 67 | 0.18 J | 0.36 | W010 | 0.27 | 0.27 J | 0.351 J |
| Chromium | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.32 | 0.36 | W010 | 0.34 | 0.34 | 0.358 |
| Copper | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.5 | 0.9 J | W010 | 0.663 | 0.59 | 0.869 J |
| Copper | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.27 | 0.4 | W010 | 0.323 | 0.3 J | 0.39 J |
| Copper | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.86 | 1.2 J | W010 | 0.987 | 0.9 | 1.17 J |
| Lead | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.017 J | 0.046 | W010 | 0.0283 | 0.022 | 0.0436 |
| Lead | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.103 J | 0.169 | W010 | 0.133 | 0.128 | 0.165 |
| Lead | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.12 | 0.191 | W010 | 0.162 | 0.174 | 0.189 |
| Mercury | Peristaltic - dissolved | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 0.56 | 0.69 | W010 | 0.625 | 0.625 | 0.684 |
| Nickel | Peristaltic - particulate | µg/L | 3 | 2 | 67 | 0.08 | 0.09 | W010 | 0.085 | 0.085 | 0.0895 |
| Nickel | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.64 | 0.78 | W010 | 0.71 | 0.71 | 0.773 |
| Zinc | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 1.7 | 4.7 | W010 | 2.8 | 2 J | 4.43 J |
| Zinc | Peristaltic - particulate[d] | µg/L | 3 | 3 | 100 | 0 | 0.8 J | W010 | 0.4 | 0.4 | 0.76 J |
| Zinc | Peristaltic - total | µg/L | 3 | 3 | 100 | 2.1 | 2.8 J | W010 | 2.37 | 2.2 | 2.74 J |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total clordanes | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.0177 JT | 0.0177 JT | W010 | 0.0177 | 0.0177 JT | 0.0177 JT |
| Total LPAHs | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PAHs | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.0177 JT | 0.0177 JT | W010 | 0.0177 | 0.0177 JT | 0.0177 JT |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |

Table D3.2-4b. Summary Statistics for COIs in Surface Water, Low-Flow Events (East Channel Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **RM 06<07** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 8 | 8 | 100 | 0.252 | 0.46 | W014 | 0.336 | 0.316 | 0.431 |
| Arsenic | Peristaltic - particulate | µg/L | 8 | 8 | 100 | 0.043 | 0.107 | W013-2 | 0.0701 | 0.0605 | 0.103 |
| Arsenic | Peristaltic - total | µg/L | 8 | 8 | 100 | 0.359 | 0.52 | W014 | 0.406 | 0.387 | 0.49 |
| Cadmium | Peristaltic - dissolved | µg/L | 8 | 1 | 12 | 0.03 | 0.03 | W014 | 0.03 | 0.03 | 0.03 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 8 | 3 | 38 | 0 | 0.02 J | W013-2 | 0.00933 | 0.008 | 0.0188 J |
| Cadmium | Peristaltic - total | µg/L | 8 | 3 | 38 | 0.008 T | 0.03 | W014 | 0.0193 | 0.02 J | 0.029 J |
| Chromium | Peristaltic - dissolved | µg/L | 8 | 5 | 62 | 0.13 J | 0.22 | W013-2 | 0.168 | 0.17 J | 0.214 J |
| Chromium | Peristaltic - particulate[d] | µg/L | 8 | 6 | 75 | 0 J | 0.46 | W013-2 | 0.201 | 0.163 J | 0.423 |
| Chromium | Peristaltic - total | µg/L | 8 | 5 | 62 | 0.24 | 0.68 | W013-2 | 0.371 | 0.31 | 0.609 |
| Copper | Peristaltic - dissolved | µg/L | 8 | 6 | 75 | 0.45 | 0.87 | W014 | 0.655 | 0.61 | 0.868 |
| Copper | Peristaltic - particulate | µg/L | 8 | 8 | 100 | 0.3 | 0.98 | W013-2 | 0.609 | 0.508 J | 0.966 |
| Copper | Peristaltic - total | µg/L | 8 | 8 | 100 | 0.87 | 1.48 | W013-2 | 1.1 | 0.973 | 1.47 J |
| Lead | Peristaltic - dissolved | µg/L | 8 | 6 | 75 | 0.011 J | 0.026 | W014 | 0.0152 | 0.0135 J | 0.0233 J |
| Lead | Peristaltic - particulate | µg/L | 8 | 8 | 100 | 0.101 J | 0.378 J | W013-2 | 0.207 | 0.188 | 0.349 J |
| Lead | Peristaltic - total | µg/L | 8 | 8 | 100 | 0.116 | 0.392 | W013-2 | 0.218 | 0.194 | 0.367 |
| Mercury | Peristaltic - dissolved | µg/L | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 8 | 8 | 100 | 0.43 | 0.96 | W013-2 | 0.706 | 0.685 | 0.95 |
| Nickel | Peristaltic - particulate | µg/L | 8 | 8 | 100 | 0.12 | 0.58 | W013-2 | 0.222 | 0.185 | 0.458 |
| Nickel | Peristaltic - total | µg/L | 8 | 8 | 100 | 0.605 T | 1.54 | W013-2 | 0.928 | 0.83 | 1.4 |
| Zinc | Peristaltic - dissolved | µg/L | 8 | 6 | 75 | 0.9 J | 2.3 J | W014 | 1.68 | 1.7 | 2.25 J |
| Zinc | Peristaltic - particulate[d] | µg/L | 8 | 8 | 100 | 0 | 2.91 J | W013-1 | 1.32 | 0.95 J | 2.91 J |
| Zinc | Peristaltic - total | µg/L | 8 | 7 | 88 | 1.65 T | 4.7 | W013-2 | 2.75 | 2.6 | 4.25 J |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.000624 JT | 0.00242 JT | W013-1 | 0.00144 | 0.00139 J | 0.00236 J |
| Total PCBs | XAD Filter - particulate | µg/L | 5 | 5 | 100 | 0.00138 JT | 0.00956 JT | W013-1 | 0.00427 | 0.00262 T | 0.00883 J |
| Total PCBs | Peristaltic - total | µg/L | 5 | 1 | 20 | 0.0154 T | 0.0154 T | W014 | 0.0154 | 0.0154 T | 0.0154 T |
| Total PCBs | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.00206 J | 0.012 J | W013-1 | 0.00501 | 0.00293 J | 0.011 J |
| **PCDD/F Homologs** | | | | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.000000897 JT | 0.0000125 JT | W013-2 | 0.00000452 | 0.00000311 J | 0.000011 J |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 6 | 6 | 100 | 0.0000263 T | 0.000156 T | W013-1 | 0.0000607 | 0.0000466 | 0.00013 |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.0000307 | 0.000162 | W013-1 | 0.0000653 | 0.0000504 J | 0.000135 J |
| **PCDD/Fs** | | | | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.00000000106 T | 0.0000000382 JT | W013-2 | 0.0000000109 | 0.00000000591 J | 0.0000000317 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 6 | 6 | 100 | 0.000000109 JT | 0.00000091 JT | W013-2 | 0.000000287 | 0.000000121 J | 0.000000771 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.00000011 J | 0.000000917 J | W013-2 | 0.000000298 | 0.000000141 J | 0.000000779 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.000000000125 T | 0.000000000526 T | W013-2 | 0.000000000285 | 0.000000000231 | 0.000000000503 |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 5 | 5 | 100 | 0.000000000624 T | 0.0000000242 T | W013-1 | 0.0000000071 | 0.00000000325 T | 0.0000000204 |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.000000000526 | 0.0000000245 | W013-1 | 0.0000000062 | 0.00000000309 | 0.0000000197 |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 6 | 5 | 83 | 0.000000537 J | 0.00000144 J | W013-2 | 0.00000105 | 0.00000119 J | 0.00000141 J |
| Aldrin | XAD Filter - particulate | µg/L | 6 | 6 | 100 | 0.000000122 J | 0.000000953 J | W013-1 | 0.000000419 | 0.00000036 J | 0.000000816 J |
| Aldrin | Peristaltic - total | µg/L | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Aldrin | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.00000031 J | 0.00000214 J | W013-1 | 0.00000129 | 0.00000129 J | 0.00000205 J |
| Dieldrin | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.0000227 | 0.00004 | W013-1 | 0.0000307 | 0.0000296 | 0.0000393 |
| Dieldrin | XAD Filter - particulate | µg/L | 6 | 5 | 83 | 0.00000024 J | 0.00000427 J | W013-1 | 0.0000022 | 0.00000214 J | 0.00000389 J |
| Dieldrin | Peristaltic - total | µg/L | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.0000227 | 0.0000443 J | W013-1 | 0.0000325 | 0.0000318 J | 0.0000426 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.00000723 | 0.0000407 | W013-1 | 0.0000256 | 0.0000268 | 0.0000394 |

Table D3.2-4b. Summary Statistics for COIs in Surface Water, Low-Flow Events (East Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 6 | 1 | 17 | 0.00000021 J | 0.00000021 J | W013-1 | 0.00000021 | 0.00000021 J | 0.00000021 J |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.00000723 | 0.0000409 J | W013-1 | 0.0000256 | 0.0000268 | 0.0000395 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.0000126 JT | 0.0000263 JT | W013-2 | 0.0000176 | 0.0000162 J | 0.0000252 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 6 | 6 | 100 | 0.000000936 JT | 0.0000134 JT | W013-1 | 0.00000585 | 0.00000505 J | 0.0000116 J |
| Total chlordanes | Peristaltic - total | µg/L | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.0000173 J | 0.0000353 J | W013-1 | 0.0000235 | 0.0000216 J | 0.0000333 J |
| DDx | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.0000254 JT | 0.00013 JT | W013-1 | 0.0000567 | 0.00004 J | 0.000117 J |
| DDx | XAD Filter - particulate | µg/L | 6 | 6 | 100 | 0.00000763 JT | 0.000111 JT | W013-1 | 0.0000416 | 0.0000305 J | 0.0000948 J |
| DDx | Peristaltic - total | µg/L | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.0000492 J | 0.000241 J | W013-1 | 0.0000982 | 0.0000754 J | 0.000204 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 6 | 4 | 67 | 0.0000183 J | 0.000121 J | W013-1 | 0.0000522 | 0.0000348 J | 0.000109 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 6 | 3 | 50 | 0.000336 | 0.000722 | W013-1 | 0.000481 | 0.000384 | 0.000688 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 8 | 1 | 12 | 0.0024 J | 0.0024 J | W013-2 | 0.0024 | 0.0024 J | 0.0024 J |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 6 | 5 | 83 | 0.0000183 J | 0.000843 J | W013-1 | 0.00033 | 0.000336 | 0.000759 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.00179 JT | 0.00874 JT | W013-1 | 0.00413 | 0.00276 J | 0.00812 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 6 | 6 | 100 | 0.000916 T | 0.00904 T | W013-1 | 0.0042 | 0.00383 | 0.00812 |
| Total HPAHs | Peristaltic - total | µg/L | 8 | 5 | 62 | 0.0026 JT | 0.0252 JT | W013-2 | 0.0122 | 0.0099 JT | 0.0231 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.00353 J | 0.0178 J | W013-1 | 0.00833 | 0.0071 J | 0.0155 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.0067 T | 0.0318 T | W013-2 | 0.0177 | 0.0191 | 0.0291 |
| Total LPAHs | XAD Filter - particulate | µg/L | 6 | 4 | 67 | 0.0000835 JT | 0.00151 T | W013-1 | 0.000729 | 0.000661 J | 0.00144 |
| Total LPAHs | Peristaltic - total | µg/L | 8 | 3 | 38 | 0.0022 JT | 0.0068 JT | W014 | 0.00437 | 0.0041 JT | 0.00653 J |
| Total LPAHs | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.00774 | 0.0318 | W013-2 | 0.0182 | 0.0192 J | 0.0291 J |
| Naphthalene | XAD Column - dissolved | µg/L | 6 | 3 | 50 | 0.0101 | 0.0169 | W013-2 | 0.0126 | 0.0109 | 0.0163 |
| Naphthalene | XAD Filter - particulate | µg/L | 6 | 2 | 33 | 0.000836 | 0.000865 | W013-1 | 0.000851 | 0.000851 | 0.000864 |
| Naphthalene | Peristaltic - total | µg/L | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Column+Filter - total | µg/L | 6 | 5 | 83 | 0.000836 | 0.0169 | W013-2 | 0.00792 | 0.0101 | 0.0157 |
| Phenanthrene | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.00127 | 0.00257 | W013-1 | 0.00194 | 0.00192 | 0.00249 |
| Phenanthrene | XAD Filter - particulate | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.00127 | 0.00257 | W013-1 | 0.00194 | 0.00192 | 0.00249 |
| Total cPAHs | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.00022 JT | 0.0014 JT | W013-1 | 0.00061 | 0.00043 J | 0.00125 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 6 | 6 | 100 | 0.00092 T | 0.0048 T | W013-1 | 0.0024 | 0.00235 | 0.00425 |
| Total cPAHs | Peristaltic - total | µg/L | 8 | 2 | 25 | 0.004 JT | 0.0097 JT | W013-2 | 0.00685 | 0.00685 J | 0.00942 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.00137 J | 0.0062 J | W013-1 | 0.00301 | 0.00267 J | 0.0054 J |
| Total PAHs | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.0129 JT | 0.0344 JT | W013-2 | 0.0218 | 0.0218 J | 0.0315 J |
| Total PAHs | XAD Filter - particulate | µg/L | 6 | 6 | 100 | 0.000916 T | 0.0105 T | W013-1 | 0.00468 | 0.00396 J | 0.00928 J |
| Total PAHs | Peristaltic - total | µg/L | 8 | 5 | 62 | 0.0026 JT | 0.0293 JT | W013-2 | 0.0149 | 0.0148 JT | 0.0265 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.0162 J | 0.0353 J | W013-2 | 0.0265 | 0.0275 J | 0.0334 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | XAD Column - dissolved | µg/L | 6 | 2 | 33 | 0.0121 | 0.0198 | W013-1 | 0.016 | 0.016 | 0.0194 |
| Bis(2-ethylhexyl) phthalate | XAD Filter - particulate | µg/L | 6 | 1 | 17 | 0.0052 J | 0.0052 J | W013-1 | 0.0052 | 0.0052 J | 0.0052 J |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | XAD Column+Filter - total | µg/L | 6 | 2 | 33 | 0.0121 | 0.025 J | W013-1 | 0.0186 | 0.0186 J | 0.0244 J |
| Butylbenzyl phthalate | XAD Column - dissolved | µg/L | 6 | 2 | 33 | 0.00144 J | 0.0019 | W013-1 | 0.00167 | 0.00167 J | 0.00188 J |
| Butylbenzyl phthalate | XAD Filter - particulate | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | XAD Column+Filter - total | µg/L | 6 | 2 | 33 | 0.00144 J | 0.0019 | W013-1 | 0.00167 | 0.00167 J | 0.00188 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.0000281 | 0.0000442 | W013-1 | 0.0000339 | 0.0000314 | 0.0000426 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 6 | 5 | 83 | 0.00000306 J | 0.00000749 | W013-1 | 0.00000433 | 0.00000368 | 0.00000685 |
| Hexachlorobenzene | Peristaltic - total | µg/L | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.0000308 | 0.0000485 | W013-1 | 0.0000375 | 0.0000366 J | 0.0000467 |

Table D3.2-4b. Summary Statistics for COIs in Surface Water, Low-Flow Events (East Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **RM 08<09** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 6 | 6 | 100 | 0.249 | 0.43 | W021 | 0.342 | 0.333 | 0.425 |
| Arsenic | Peristaltic - particulate | µg/L | 6 | 6 | 100 | 0.041 | 0.088 | W018 | 0.0668 | 0.0675 | 0.0878 |
| Arsenic | Peristaltic - total | µg/L | 6 | 6 | 100 | 0.337 | 0.48 | W018; W021 | 0.409 | 0.397 | 0.48 |
| Cadmium | Peristaltic - dissolved | µg/L | 6 | 3 | 50 | 0.01 J | 0.03 | W018; W021 | 0.0233 | 0.03 | 0.03 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 6 | 4 | 67 | 0 | 0.03 | W021 | 0.00775 | 0.0005 J | 0.0257 J |
| Cadmium | Peristaltic - total | µg/L | 6 | 4 | 67 | 0.011 J | 0.03 | W018; W021 | 0.0253 | 0.03 | 0.03 |
| Chromium | Peristaltic - dissolved | µg/L | 6 | 5 | 83 | 0.11 J | 0.25 | W021 | 0.174 | 0.16 J | 0.246 |
| Chromium | Peristaltic - particulate[d] | µg/L | 6 | 5 | 83 | 0 | 0.19 J | W018 | 0.106 | 0.1 J | 0.186 J |
| Chromium | Peristaltic - total | µg/L | 6 | 4 | 67 | 0.21 | 0.4 | W018 | 0.288 | 0.27 | 0.387 |
| Copper | Peristaltic - dissolved | µg/L | 6 | 6 | 100 | 0.61 | 1.23 J | W021 | 0.815 | 0.755 J | 1.15 J |
| Copper | Peristaltic - particulate | µg/L | 6 | 6 | 100 | 0.21 | 0.51 J | W021 | 0.383 | 0.395 J | 0.488 J |
| Copper | Peristaltic - total | µg/L | 6 | 6 | 100 | 0.86 | 1.74 J | W021 | 1.2 | 1.17 | 1.63 J |
| Lead | Peristaltic - dissolved | µg/L | 6 | 5 | 83 | 0.012 J | 0.04 | W018 | 0.0206 | 0.019 J | 0.036 |
| Lead | Peristaltic - particulate | µg/L | 6 | 6 | 100 | 0.071 J | 0.144 J | W018 | 0.107 | 0.106 J | 0.143 J |
| Lead | Peristaltic - total | µg/L | 6 | 6 | 100 | 0.077 | 0.163 | W018 | 0.125 | 0.132 | 0.162 |
| Mercury | Peristaltic - dissolved | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 6 | 4 | 67 | 0.48 | 0.98 | W021 | 0.75 | 0.77 | 0.97 |
| Nickel | Peristaltic - particulate | µg/L | 6 | 6 | 100 | 0.1 | 0.68 | W021 | 0.332 | 0.23 | 0.66 |
| Nickel | Peristaltic - total | µg/L | 6 | 6 | 100 | 0.6 | 1.18 | W018 | 0.832 | 0.705 | 1.18 |
| Zinc | Peristaltic - dissolved | µg/L | 6 | 6 | 100 | 1.61 | 4.9 | W018 | 2.78 | 2.49 | 4.48 |
| Zinc | Peristaltic - particulate[d] | µg/L | 6 | 6 | 100 | 0 | 1.71 | W021 | 0.563 | 0.5 | 1.45 |
| Zinc | Peristaltic - total | µg/L | 6 | 6 | 100 | 2 | 3.34 | W018 | 2.83 | 2.85 | 3.34 |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.000162 JT | 0.000567 JT | W018 | 0.000405 | 0.000487 JT | 0.000559 J |
| Total PCBs | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.000277 JT | 0.00112 JT | W018 | 0.000579 | 0.000341 JT | 0.00104 J |
| Total PCBs | Peristaltic - total | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PCBs | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.000439 J | 0.00169 J | W018 | 0.000985 | 0.000828 J | 0.0016 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.000000000436 T | 0.00000000253 JT | W018 | 0.00000000148 | 0.00000000148 JT | 0.00000000243 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.00000000397 T | 0.0000000123 T | W018 | 0.00000000735 | 0.00000000579 T | 0.0000000116 |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.00000000545 J | 0.0000000148 J | W018 | 0.00000000884 | 0.00000000623 | 0.000000014 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 3 | 2 | 67 | 0.000000659 J | 0.000000972 J | W018 | 0.000000816 | 0.000000816 J | 0.000000956 J |
| Aldrin | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.00000039 J | 0.000000629 J | W018 | 0.000000473 | 0.0000004 J | 0.000000606 J |
| Aldrin | Peristaltic - total | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Aldrin | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0000004 J | 0.0000016 J | W018 | 0.00000102 | 0.00000105 J | 0.00000155 J |
| Dieldrin | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.000029 | 0.0000421 | W018 | 0.0000339 | 0.0000306 | 0.000041 |
| Dieldrin | XAD Filter - particulate | µg/L | 3 | 2 | 67 | 0.00000154 J | 0.0000018 J | W018 | 0.00000167 | 0.00000167 J | 0.00000179 J |
| Dieldrin | Peristaltic - total | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0000306 J | 0.0000436 J | W018 | 0.000035 | 0.0000308 J | 0.0000424 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.000021 | 0.0000303 | W018 | 0.0000263 | 0.0000277 | 0.00003 |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 3 | 1 | 33 | 0.000000168 J | 0.000000168 J | W018 | 0.000000168 | 0.000000168 J | 0.000000168 J |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.000021 | 0.0000303 | W018 | 0.0000264 | 0.0000279 J | 0.0000301 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.0000165 JT | 0.0000266 JT | W018 | 0.0000207 | 0.000019 JT | 0.0000258 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.00000484 JT | 0.00000707 JT | W018 | 0.00000572 | 0.00000524 JT | 0.00000689 J |
| Total chlordanes | Peristaltic - total | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0000213 J | 0.0000318 J | W018 | 0.0000264 | 0.0000261 J | 0.0000313 J |
| DDx | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.0000359 JT | 0.0000727 JT | W018 | 0.0000535 | 0.0000518 JT | 0.0000706 J |

Table D3.2-4b. Summary Statistics for COIs in Surface Water, Low-Flow Events (East Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| DDx | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.000025 JT | 0.0000514 JT | W018 | 0.0000345 | 0.0000271 JT | 0.000049 J |
| DDx | Peristaltic - total | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0000609 J | 0.000103 J | W018 | 0.000088 | 0.0000998 J | 0.000103 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 3 | 1 | 33 | 0.0000455 J | 0.0000455 J | W018 | 0.0000455 | 0.0000455 J | 0.0000455 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 3 | 2 | 67 | 0.000384 | 0.00161 | W018 | 0.000997 | 0.000997 | 0.00155 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0000455 J | 0.00161 | W018 | 0.00068 | 0.000384 | 0.00149 |
| Total HPAHs | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.00181 JT | 0.0072 JT | W018 | 0.0047 | 0.00508 JT | 0.00699 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.000969 T | 0.0214 T | W018 | 0.00906 | 0.00482 T | 0.0197 |
| Total HPAHs | Peristaltic - total | µg/L | 6 | 4 | 67 | 0.0031 JT | 0.135 JT | W021 | 0.0404 | 0.0119 J | 0.117 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.00663 J | 0.0265 J | W018 | 0.0138 | 0.00817 J | 0.0246 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.00567 T | 0.0495 T | W018 | 0.0238 | 0.0161 T | 0.0462 |
| Total LPAHs | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.0000316 JT | 0.0134 T | W018 | 0.00454 | 0.000176 T | 0.0121 |
| Total LPAHs | Peristaltic - total | µg/L | 6 | 3 | 50 | 0.0056 JT | 0.154 JT | W021 | 0.0554 | 0.007 JT | 0.139 J |
| Total LPAHs | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.00585 | 0.0495 J | W018 | 0.0283 | 0.0295 | 0.0475 J |
| Naphthalene | XAD Column - dissolved | µg/L | 3 | 1 | 33 | 0.00685 | 0.00685 | W018 | 0.00685 | 0.00685 | 0.00685 |
| Naphthalene | XAD Filter - particulate | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Column+Filter - total | µg/L | 3 | 1 | 33 | 0.00685 | 0.00685 | W018 | 0.00685 | 0.00685 | 0.00685 |
| Phenanthrene | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.0011 | 0.0061 | W018 | 0.00294 | 0.00162 | 0.00565 |
| Phenanthrene | XAD Filter - particulate | µg/L | 3 | 1 | 33 | 0.00364 | 0.00364 | W018 | 0.00364 | 0.00364 | 0.00364 |
| Phenanthrene | Peristaltic - total | µg/L | 6 | 1 | 17 | 0.096 | 0.096 | W021 | 0.096 | 0.096 | 0.096 |
| Phenanthrene | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0011 | 0.0061 | W018 | 0.00415 | 0.00526 | 0.00602 |
| Total cPAHs | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.00024 JT | 0.00065 JT | W018 | 0.000503 | 0.00062 JT | 0.000647 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.00067 T | 0.011 T | W018 | 0.00469 | 0.0024 T | 0.0101 |
| Total cPAHs | Peristaltic - total | µg/L | 6 | 1 | 17 | 0.0057 JT | 0.0057 JT | W021 | 0.0057 | 0.0057 JT | 0.0057 JT |
| Total cPAHs | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.00132 J | 0.0116 J | W018 | 0.00519 | 0.00264 J | 0.0107 J |
| Total PAHs | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.00748 JT | 0.0567 JT | W018 | 0.0284 | 0.0211 JT | 0.0531 J |
| Total PAHs | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.001 JT | 0.0348 T | W018 | 0.0136 | 0.005 T | 0.0318 |
| Total PAHs | Peristaltic - total | µg/L | 6 | 4 | 67 | 0.0087 JT | 0.288 JT | W021 | 0.082 | 0.0154 J | 0.248 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0125 J | 0.0577 J | W018 | 0.042 | 0.0559 J | 0.0575 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | XAD Column - dissolved | µg/L | 3 | 1 | 33 | 0.00394 J | 0.00394 J | W018 | 0.00394 | 0.00394 J | 0.00394 J |
| Bis(2-ethylhexyl) phthalate | XAD Filter - particulate | µg/L | 3 | 1 | 33 | 0.00593 J | 0.00593 J | W018 | 0.00593 | 0.00593 J | 0.00593 J |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | XAD Column+Filter - total | µg/L | 3 | 1 | 33 | 0.00987 J | 0.00987 J | W018 | 0.00987 | 0.00987 J | 0.00987 J |
| Butylbenzyl phthalate | XAD Column - dissolved | µg/L | 3 | 1 | 33 | 0.00206 | 0.00206 | W018 | 0.00206 | 0.00206 | 0.00206 |
| Butylbenzyl phthalate | XAD Filter - particulate | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | XAD Column+Filter - total | µg/L | 3 | 1 | 33 | 0.00206 | 0.00206 | W018 | 0.00206 | 0.00206 | 0.00206 |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.0000373 | 0.00004 | W018 | 0.0000387 | 0.0000389 | 0.0000399 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.00000312 J | 0.00000401 | W018 | 0.00000362 | 0.00000373 J | 0.00000398 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0000404 J | 0.000044 | W018 | 0.0000424 | 0.0000426 J | 0.0000439 J |

Table D3.2-4b. Summary Statistics for COIs in Surface Water, Low-Flow Events (East Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **RM 09<10** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.325 | 0.44 | W020 | 0.375 | 0.359 | 0.432 |
| Arsenic | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.03 | 0.07 | W020 | 0.0493 | 0.048 | 0.0678 |
| Arsenic | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.395 | 0.47 | W020 | 0.424 | 0.407 | 0.464 |
| Cadmium | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 0.02 | 0.03 | W020 | 0.025 | 0.025 | 0.0295 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 3 | 3 | 100 | 0 | 0.03 | W020 | 0.01 | 0 | 0.027 |
| Cadmium | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.03 | 0.03 | W020 | 0.03 | 0.03 | 0.03 |
| Chromium | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 0.1 J | 0.16 J | W020 | 0.13 | 0.13 J | 0.157 J |
| Chromium | Peristaltic - particulate | µg/L | 3 | 2 | 67 | 0.04 J | 0.12 J | W020 | 0.08 | 0.08 J | 0.116 J |
| Chromium | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.2 | 0.22 | W020 | 0.21 | 0.21 | 0.219 |
| Copper | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.61 | 1.19 J | W020 | 0.897 | 0.89 | 1.16 J |
| Copper | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.19 | 0.52 J | W020 | 0.367 | 0.39 | 0.507 J |
| Copper | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.8 | 1.71 J | W020 | 1.26 | 1.28 | 1.67 J |
| Lead | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 0.015 J | 0.02 | W020 | 0.0175 | 0.0175 J | 0.0198 J |
| Lead | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.072 J | 0.17 | W020 | 0.114 | 0.101 | 0.163 |
| Lead | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.087 | 0.19 | W020 | 0.126 | 0.101 | 0.181 |
| Mercury | Peristaltic - dissolved | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 0.67 | 1 | W020 | 0.835 | 0.835 | 0.984 |
| Nickel | Peristaltic - particulate[d] | µg/L | 3 | 2 | 67 | 0 | 0.14 | W020 | 0.07 | 0.07 | 0.133 |
| Nickel | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.63 | 1.14 | W020 | 0.885 | 0.885 | 1.11 |
| Zinc | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 1.79 | 2.5 | W020 | 2.26 | 2.5 | 2.5 |
| Zinc | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.4 | 2.77 | W020 | 1.26 | 0.6 | 2.55 |
| Zinc | Peristaltic - total | µg/L | 3 | 3 | 100 | 2.9 | 4.56 | W020 | 3.52 | 3.1 | 4.41 |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.0049 JT | 0.0283 JT | W020 | 0.0166 | 0.0166 J | 0.0271 J |
| Total LPAHs | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.013 JT | 0.013 JT | W020 | 0.013 | 0.013 JT | 0.013 JT |
| Naphthalene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.0073 J | 0.0073 J | W020 | 0.0073 | 0.0073 J | 0.0073 J |
| Total cPAHs | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PAHs | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.0049 JT | 0.0413 JT | W020 | 0.0231 | 0.0231 J | 0.0395 J |

Table D3.2-4b. Summary Statistics for COIs in Surface Water, Low-Flow Events (East Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |

Table D3.2-4b. Summary Statistics for COIs in Surface Water, Low-Flow Events (East Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **RM 01.9<03** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.286 | 0.64 | W001 | 0.428 | 0.359 | 0.612 |
| Arsenic | Peristaltic - particulate | µg/L | 0.042 | 0.105 | W001 | 0.0708 | 0.0655 | 0.101 |
| Arsenic | Peristaltic - total | µg/L | 0.328 T | 0.745 T | W001 | 0.499 | 0.425 T | 0.713 |
| Cadmium | Peristaltic - dissolved | µg/L | 0.013 U | 0.02 U | W001 | 0.00883 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 UJ | 0.025 | W001 | 0.0183 | 0.02 | 0.0245 |
| Cadmium | Peristaltic - total | µg/L | 0.02 UJT | 0.025 T | W001 | 0.0183 | 0.02 T | 0.0245 |
| Chromium | Peristaltic - dissolved | µg/L | 0.13 J | 0.22 T | W001 | 0.14 | 0.13 J | 0.211 J |
| Chromium | Peristaltic - particulate | µg/L | 0.175 J | 0.625 | W001 | 0.353 | 0.26 | 0.589 |
| Chromium | Peristaltic - total | µg/L | 0.305 T | 0.625 T | W001 | 0.47 | 0.48 T | 0.611 |
| Copper | Peristaltic - dissolved | µg/L | 0.45 | 0.84 | W001 | 0.652 | 0.665 T | 0.823 |
| Copper | Peristaltic - particulate | µg/L | 0.35 | 0.85 | W001 | 0.537 | 0.41 | 0.806 |
| Copper | Peristaltic - total | µg/L | 0.8 T | 1.69 T | W001 | 1.19 | 1.08 T | 1.63 |
| Lead | Peristaltic - dissolved | µg/L | 0.01 UJ | 0.0215 JT | W001 | 0.0128 | 0.012 J | 0.0206 J |
| Lead | Peristaltic - particulate | µg/L | 0.115 J | 0.47 J | W001 | 0.236 | 0.124 J | 0.435 J |
| Lead | Peristaltic - total | µg/L | 0.136 T | 0.47 T | W001 | 0.247 | 0.136 T | 0.437 |
| Mercury | Peristaltic - dissolved | µg/L | 0.04 UJ | 0.08 U | W001 | 0.0267 | 0.02 U | 0.038 U |
| Mercury | Peristaltic - particulate | µg/L | 0.04 UJ | 0.08 U | W001 | 0.0267 | 0.02 U | 0.038 U |
| Mercury | Peristaltic - total | µg/L | 0.04 UJT | 0.08 UT | W001 | 0.0267 | 0.02 UT | 0.038 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.48 | 0.9 T | W001 | 0.75 | 0.87 | 0.897 |
| Nickel | Peristaltic - particulate | µg/L | 0.15 | 0.4 | W001 | 0.265 | 0.245 | 0.385 |
| Nickel | Peristaltic - total | µg/L | 0.63 T | 1.27 T | W001 | 1.02 | 1.15 T | 1.26 |
| Zinc | Peristaltic - dissolved | µg/L | 1.21 UJ | 1.4 | W001 | 1.14 | 1.4 | 1.4 |
| Zinc | Peristaltic - particulate | µg/L | 0.25 | 3.47 J | W001 | 1.54 | 0.9 | 3.21 J |
| Zinc | Peristaltic - total | µg/L | 1.65 T | 3.47 JT | W001 | 2.47 | 2.3 T | 3.35 J |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0071 U | W001 | 0.00172 | 0.0013 U | 0.00333 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 0.0025 UJT | 0.0063 JT | W001 | 0.00293 | 0.00125 UT | 0.0058 J |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.000472 UJ | 0.00049 U | W001 | 0.000241 | 0.000241 UJ | 0.000245 UJ |
| Dieldrin | Peristaltic - total | µg/L | 0.000472 UJ | 0.00049 U | W001 | 0.000241 | 0.000241 UJ | 0.000245 UJ |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.000472 UJ | 0.00049 U | W001 | 0.000241 | 0.000241 UJ | 0.000245 UJ |
| Total chlordanes | Peristaltic - total | µg/L | 0.000472 UJT | 0.00049 UT | W001 | 0.000241 | 0.000241 UJT | 0.000245 UJ |
| DDx | Peristaltic - total | µg/L | 0.000472 UJT | 0.0187 NJT | W001 | 0.00639 | 0.000241 UJT | 0.0169 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0016 U | 0.0064 U | W001 | 0.00187 | 0.0016 U | 0.00304 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.0074 UT | 0.015 UT | W001 | 0.0071 | 0.0075 UT | 0.00984 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.0051 UT | 0.012 JT | W001 | 0.00848 | 0.0109 JT | 0.0119 J |
| Naphthalene | Peristaltic - total | µg/L | 0.0032 U | 0.013 U | W001 | 0.00487 | 0.0065 U | 0.0065 J |
| Phenanthrene | Peristaltic - total | µg/L | 0.0032 U | 0.013 U | W001 | 0.00377 | 0.0032 U | 0.00617 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.0021 JT | 0.0084 UT | W001 | 0.0028 | 0.0021 JT | 0.00399 J |
| Total PAHs | Peristaltic - total | µg/L | 0.0101 JT | 0.012 JT | W001 | 0.011 | 0.0109 JT | 0.0119 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.031 U | W001 | 0.0148 | 0.0145 U | 0.0154 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.28 U | 0.47 U | W001 | 0.175 | 0.15 U | 0.227 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.026 U | 0.028 U | W001 | 0.0133 | 0.013 U | 0.0139 U |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.000481 UJ | 0.00563 | W001 | 0.00226 | 0.000906 J | 0.00516 J |

Table D3.2-4b. Summary Statistics for COIs in Surface Water, Low-Flow Events (East Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **RM 03<04** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.315 | 0.41 | W004 | 0.377 | 0.406 | 0.41 |
| Arsenic | Peristaltic - particulate | µg/L | 0.07 | 0.083 | W004 | 0.076 | 0.075 | 0.0822 |
| Arsenic | Peristaltic - total | µg/L | 0.39 | 0.489 | W004 | 0.453 | 0.48 | 0.488 |
| Cadmium | Peristaltic - dissolved | µg/L | 0.017 U | 0.02 U | W004 | 0.0128 | 0.01 U | 0.019 |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.03 | W004 | 0.0178 | 0.0135 U | 0.0284 |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.05 | W004 | 0.0245 | 0.0135 U | 0.0464 |
| Chromium | Peristaltic - dissolved | µg/L | 0.13 J | 0.33 | W004 | 0.18 | 0.13 J | 0.31 J |
| Chromium | Peristaltic - particulate | µg/L | 0.38 J | 0.58 | W004 | 0.4 | 0.38 J | 0.56 J |
| Chromium | Peristaltic - total | µg/L | 0.48 U | 0.91 | W004 | 0.553 | 0.51 | 0.87 |
| Copper | Peristaltic - dissolved | µg/L | 0.61 | 0.95 | W004 | 0.81 | 0.87 | 0.942 |
| Copper | Peristaltic - particulate | µg/L | 0.51 | 1.14 | W004 | 0.723 | 0.52 | 1.08 |
| Copper | Peristaltic - total | µg/L | 1.13 | 2.09 | W004 | 1.53 | 1.38 | 2.02 |
| Lead | Peristaltic - dissolved | µg/L | 0.02 U | 0.038 J | W004 | 0.0273 | 0.034 | 0.0376 J |
| Lead | Peristaltic - particulate | µg/L | 0.25 | 1.09 | W004 | 0.632 | 0.56 J | 1.03 J |
| Lead | Peristaltic - total | µg/L | 0.25 | 1.12 | W004 | 0.656 | 0.598 | 1.07 |
| Mercury | Peristaltic - dissolved | µg/L | 0.04 U | 0.08 U | W004 | 0.0267 | 0.02 U | 0.038 U |
| Mercury | Peristaltic - particulate | µg/L | 0.04 U | 0.08 U | W004 | 0.0267 | 0.02 U | 0.038 U |
| Mercury | Peristaltic - total | µg/L | 0.04 U | 0.08 U | W004 | 0.0267 | 0.02 UT | 0.038 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.51 | 1.05 | W004 | 0.74 | 0.66 | 1.01 |
| Nickel | Peristaltic - particulate | µg/L | 0.2 | 0.44 | W004 | 0.347 | 0.4 | 0.436 |
| Nickel | Peristaltic - total | µg/L | 0.71 | 1.45 | W004 | 1.09 | 1.1 | 1.42 |
| Zinc | Peristaltic - dissolved | µg/L | 1.88 J | 4.3 | W004 | 2.89 | 2.5 | 4.12 |
| Zinc | Peristaltic - particulate | µg/L | 1.4 J | 4.5 | W004 | 2.6 | 1.9 | 4.24 |
| Zinc | Peristaltic - total | µg/L | 3.28 J | 8.8 | W004 | 5.49 | 4.4 | 8.36 |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0071 U | W004 | 0.00205 | 0.0023 J | 0.00343 J |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 0.0025 UJT | 0.0136 JT | W004 | 0.00791 | 0.0084 J | 0.0132 J |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.000485 U | 0.000526 UJ | W004 | 0.00025 | 0.000246 U | 0.000261 UJ |
| Dieldrin | Peristaltic - total | µg/L | 0.000485 U | 0.000526 UJ | W004 | 0.00025 | 0.000246 U | 0.000261 UJ |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.000485 U | 0.000526 UJ | W004 | 0.00025 | 0.000246 U | 0.000261 UJ |
| Total chlordanes | Peristaltic - total | µg/L | 0.000485 UT | 0.000526 UJT | W004 | 0.00025 | 0.000246 U | 0.000261 UJ |
| DDx | Peristaltic - total | µg/L | 0.000485 UT | 0.000526 UJT | W004 | 0.00025 | 0.000246 UJ | 0.000261 UJ |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0016 U | 0.0064 U | W004 | 0.00215 | 0.00245 U | 0.00313 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.0055 JT | 0.0719 JT | W004 | 0.0308 | 0.0149 JT | 0.0662 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.0032 UT | 0.0078 JT | W004 | 0.0042 | 0.0032 UT | 0.00734 J |
| Naphthalene | Peristaltic - total | µg/L | 0.0032 U | 0.013 U | W004 | 0.00377 | 0.0032 U | 0.00617 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0032 U | 0.013 U | W004 | 0.00377 | 0.0032 U | 0.00617 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.0021 UT | 0.038 JT | W004 | 0.0149 | 0.0055 JT | 0.0348 J |
| Total PAHs | Peristaltic - total | µg/L | 0.0055 JT | 0.0797 JT | W004 | 0.0334 | 0.0149 JT | 0.0732 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.032 U | W004 | 0.015 | 0.0145 U | 0.0159 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.28 U | 0.69 U | W004 | 0.212 | 0.15 U | 0.326 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.026 U | 0.028 U | W004 | 0.0133 | 0.013 U | 0.0139 U |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.000485 U | 0.000526 UJ | W004 | 0.00025 | 0.000246 U | 0.000261 UJ |

Table D3.2-4b. Summary Statistics for COIs in Surface Water, Low-Flow Events (East Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **RM 04<05** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.315 | 0.43 | W008 | 0.374 | 0.374 | 0.428 |
| Arsenic | Peristaltic - particulate | µg/L | 0.042 | 0.0755 | W007 | 0.0582 | 0.058 | 0.073 |
| Arsenic | Peristaltic - total | µg/L | 0.381 T | 0.48 | W007; W008 | 0.433 | 0.433 | 0.48 |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.05 U | W007 | 0.0144 | 0.0108 U | 0.0238 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.013 J | 0.06 U | W007; W008 | 0.022 | 0.0245 | 0.03 U |
| Cadmium | Peristaltic - total | µg/L | 0.013 JT | 0.06 U | W007; W008 | 0.022 | 0.0245 | 0.03 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.13 J | 0.25 U | W008 | 0.113 | 0.113 U | 0.138 J |
| Chromium | Peristaltic - particulate | µg/L | 0.07 J | 0.37 U | W007 | 0.144 | 0.15 U | 0.18 J |
| Chromium | Peristaltic - total | µg/L | 0.2 JT | 0.37 U | W007 | 0.189 | 0.17 U | 0.279 J |
| Copper | Peristaltic - dissolved | µg/L | 0.46 | 0.87 | W007 | 0.663 | 0.65 | 0.863 |
| Copper | Peristaltic - particulate | µg/L | 0.23 | 0.49 J | W007 | 0.303 | 0.255 J | 0.453 J |
| Copper | Peristaltic - total | µg/L | 0.77 T | 1.36 J | W007 | 0.967 | 0.89 | 1.29 J |
| Lead | Peristaltic - dissolved | µg/L | 0.015 J | 0.152 | W008 | 0.0502 | 0.0325 J | 0.126 |
| Lead | Peristaltic - particulate | µg/L | 0.111 J | 1.65 | W008 | 0.564 | 0.332 J | 1.44 |
| Lead | Peristaltic - total | µg/L | 0.133 T | 1.8 | W008 | 0.614 | 0.364 | 1.56 |
| Mercury | Peristaltic - dissolved | µg/L | 0.04 U | 0.08 U | W007; W008 | 0.0267 | 0.02 U | 0.04 U |
| Mercury | Peristaltic - particulate | µg/L | 0.04 U | 0.08 U | W007; W008 | 0.0267 | 0.02 U | 0.04 U |
| Mercury | Peristaltic - total | µg/L | 0.04 U | 0.08 U | W007; W008 | 0.0267 | 0.02 U | 0.04 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.51 | 0.86 U | W008 | 0.571 | 0.535 | 0.778 |
| Nickel | Peristaltic - particulate[d] | µg/L | 0 | 0.99 U | W008 | 0.207 | 0.123 | 0.473 U |
| Nickel | Peristaltic - total | µg/L | 0.625 T | 0.99 U | W008 | 0.642 | 0.64 | 0.868 |
| Zinc | Peristaltic - dissolved | µg/L | 1.5 | 4.7 J | W008 | 2.73 | 2.15 J | 4.58 J |
| Zinc | Peristaltic - particulate | µg/L | 0.45 | 1.4 J | W008 | 0.783 | 0.65 J | 1.3 J |
| Zinc | Peristaltic - total | µg/L | 1.95 T | 6.1 J | W008 | 3.52 | 3 J | 5.78 J |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0071 U | W007; W008 | 0.00176 | 0.0011 J | 0.00355 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 0.0025 UT | 0.00261 UT | W007 | 0.00127 | 0.00125 U | 0.0013 U |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.000472 U | 0.000524 U | W007 | 0.00025 | 0.000249 U | 0.000261 U |
| Dieldrin | Peristaltic - total | µg/L | 0.000472 U | 0.000524 U | W007 | 0.00025 | 0.000249 U | 0.000261 U |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.000472 U | 0.000524 U | W007 | 0.00025 | 0.000249 U | 0.000261 U |
| Total chlordanes | Peristaltic - total | µg/L | 0.000472 UT | 0.000524 UT | W007 | 0.00025 | 0.000249 U | 0.000261 U |
| DDx | Peristaltic - total | µg/L | 0.000472 UJT | 0.000524 UJT | W007 | 0.00025 | 0.000249 UJ | 0.000261 UJ |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0032 UJ | 0.0075 J | W008 | 0.00327 | 0.00245 J | 0.00663 J |
| Total HPAHs | Peristaltic - total | µg/L | 0.0074 UJT | 0.0751 JT | W008 | 0.0314 | 0.0208 J | 0.0708 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.0038 JT | 0.0125 JT | W008 | 0.00511 | 0.00375 UJ | 0.0103 J |
| Naphthalene | Peristaltic - total | µg/L | 0.0064 U | 0.012 U | W008 | 0.00376 | 0.0032 U | 0.00544 UJ |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 UJ | 0.0075 U | W007 | 0.00342 | 0.00335 U | 0.00373 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.0042 UJT | 0.043 JT | W008 | 0.0153 | 0.0097 J | 0.0385 J |
| Total PAHs | Peristaltic - total | µg/L | 0.0075 UJT | 0.0751 JT | W008 | 0.0341 | 0.029 J | 0.0708 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.032 U | W008 | 0.0151 | 0.015 U | 0.0158 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.29 U | 0.44 U | W007; W008 | 0.171 | 0.148 U | 0.22 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.026 U | 0.028 U | W008 | 0.0158 | 0.0135 U | 0.0238 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.000472 U | 0.000524 U | W007 | 0.00025 | 0.000249 U | 0.000261 U |

Table D3.2-4b. Summary Statistics for COIs in Surface Water, Low-Flow Events (East Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **RM 05<06** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.322 | 0.46 | W010 | 0.381 | 0.36 | 0.45 |
| Arsenic | Peristaltic - particulate | µg/L | 0.058 | 0.08 | W010 | 0.0657 | 0.059 | 0.0779 |
| Arsenic | Peristaltic - total | µg/L | 0.38 | 0.54 | W010 | 0.446 | 0.419 | 0.528 |
| Cadmium | Peristaltic - dissolved | µg/L | 0.018 U | 0.04 U | W010 | 0.013 | 0.01 U | 0.019 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.04 U | W010 | 0.0147 | 0.014 U | 0.0194 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.04 U | W010 | 0.0147 | 0.014 U | 0.0194 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.14 J | 0.19 U | W010 | 0.108 | 0.095 U | 0.136 J |
| Chromium | Peristaltic - particulate | µg/L | 0.18 J | 0.43 U | W010 | 0.252 | 0.215 U | 0.346 |
| Chromium | Peristaltic - total | µg/L | 0.32 | 0.43 U | W010 | 0.298 | 0.32 | 0.356 |
| Copper | Peristaltic - dissolved | µg/L | 0.5 | 0.9 J | W010 | 0.663 | 0.59 | 0.869 J |
| Copper | Peristaltic - particulate | µg/L | 0.27 | 0.4 | W010 | 0.323 | 0.3 J | 0.39 J |
| Copper | Peristaltic - total | µg/L | 0.86 | 1.2 J | W010 | 0.987 | 0.9 | 1.17 J |
| Lead | Peristaltic - dissolved | µg/L | 0.017 J | 0.046 | W010 | 0.0283 | 0.022 | 0.0436 |
| Lead | Peristaltic - particulate | µg/L | 0.103 J | 0.169 | W010 | 0.133 | 0.128 | 0.165 |
| Lead | Peristaltic - total | µg/L | 0.12 | 0.191 | W010 | 0.162 | 0.174 | 0.189 |
| Mercury | Peristaltic - dissolved | µg/L | 0.04 U | 0.08 U | W010 | 0.0267 | 0.02 U | 0.038 U |
| Mercury | Peristaltic - particulate | µg/L | 0.04 U | 0.08 U | W010 | 0.0267 | 0.02 U | 0.038 U |
| Mercury | Peristaltic - total | µg/L | 0.04 U | 0.08 U | W010 | 0.0267 | 0.02 U | 0.038 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.56 | 0.71 U | W010 | 0.535 | 0.56 | 0.677 |
| Nickel | Peristaltic - particulate | µg/L | 0.08 | 0.85 U | W010 | 0.198 | 0.09 | 0.392 |
| Nickel | Peristaltic - total | µg/L | 0.64 | 0.85 U | W010 | 0.615 | 0.64 | 0.766 |
| Zinc | Peristaltic - dissolved | µg/L | 1.7 | 4.7 | W010 | 2.8 | 2 J | 4.43 J |
| Zinc | Peristaltic - particulate[d] | µg/L | 0 | 0.8 J | W010 | 0.4 | 0.4 | 0.76 J |
| Zinc | Peristaltic - total | µg/L | 2.1 | 2.8 J | W010 | 2.37 | 2.2 | 2.74 J |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0071 U | W010 | 0.00138 | 0.0003 U | 0.00323 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 0.0025 UT | 0.00267 UT | W010 | 0.00128 | 0.00125 UT | 0.00133 U |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.000476 U | 0.0005 U | W010 | 0.000246 | 0.00025 U | 0.00025 U |
| Dieldrin | Peristaltic - total | µg/L | 0.000476 U | 0.0005 U | W010 | 0.000246 | 0.00025 U | 0.00025 U |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.000476 U | 0.0005 U | W010 | 0.000246 | 0.00025 U | 0.00025 U |
| Total clordanes | Peristaltic - total | µg/L | 0.000476 UT | 0.0005 UT | W010 | 0.000246 | 0.00025 UT | 0.00025 U |
| DDx | Peristaltic - total | µg/L | 0.000476 UT | 0.0005 UJT | W010 | 0.000246 | 0.00025 UJT | 0.00025 UJ |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0032 U | 0.0032 U | W010 | 0.0016 | 0.0016 U | 0.0016 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.0074 UT | 0.0177 JT | W010 | 0.00837 | 0.0037 UT | 0.0163 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.0064 UT | 0.0074 UT | W010 | 0.00337 | 0.0032 UT | 0.00365 U |
| Naphthalene | Peristaltic - total | µg/L | 0.0064 U | 0.0074 U | W010 | 0.00337 | 0.0032 U | 0.00365 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.0064 U | W010 | 0.0032 | 0.0032 U | 0.0032 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.0042 UT | 0.0042 UT | W010 | 0.0021 | 0.0021 UT | 0.0021 U |
| Total PAHs | Peristaltic - total | µg/L | 0.0074 UT | 0.0177 JT | W010 | 0.00837 | 0.0037 UT | 0.0163 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W010 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.28 U | 4 U | W010 | 0.853 | 0.42 U | 1.84 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.026 U | 0.026 U | W010 | 0.013 | 0.013 U | 0.013 U |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.000476 U | 0.0005 U | W010 | 0.000246 | 0.00025 U | 0.00025 U |

Table D3.2-4b. Summary Statistics for COIs in Surface Water, Low-Flow Events (East Channel Single-Point Locations).

| Analyte | Method | Units | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th Percentile (half DL)[b] |
| **RM 06<07** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.252 | 0.46 | W014 | 0.336 | 0.316 | 0.431 |
| Arsenic | Peristaltic - particulate | µg/L | 0.043 | 0.107 | W013-2 | 0.0701 | 0.0605 | 0.103 |
| Arsenic | Peristaltic - total | µg/L | 0.359 | 0.52 | W014 | 0.406 | 0.387 | 0.49 |
| Cadmium | Peristaltic - dissolved | µg/L | 0.008 U | 0.05 U | W014 | 0.0118 | 0.00875 U | 0.0283 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 0 | 0.05 U | W014 | 0.0106 | 0.009 | 0.0233 J |
| Cadmium | Peristaltic - total | µg/L | 0.008 U | 0.05 U | W014 | 0.0139 | 0.01 U | 0.0283 |
| Chromium | Peristaltic - dissolved | µg/L | 0.13 J | 0.22 | W013-2 | 0.139 | 0.13 J | 0.21 J |
| Chromium | Peristaltic - particulate[d] | µg/L | 0 J | 0.46 | W013-2 | 0.197 | 0.185 U | 0.408 |
| Chromium | Peristaltic - total | µg/L | 0.24 | 0.68 | W013-2 | 0.304 | 0.27 | 0.556 |
| Copper | Peristaltic - dissolved | µg/L | 0.44 U | 0.87 | W014 | 0.553 | 0.56 | 0.867 |
| Copper | Peristaltic - particulate | µg/L | 0.3 | 0.98 | W013-2 | 0.609 | 0.508 J | 0.966 |
| Copper | Peristaltic - total | µg/L | 0.87 | 1.48 | W013-2 | 1.1 | 0.973 | 1.47 J |
| Lead | Peristaltic - dissolved | µg/L | 0.011 J | 0.026 | W014 | 0.0134 | 0.0125 J | 0.0222 J |
| Lead | Peristaltic - particulate | µg/L | 0.101 J | 0.378 J | W013-2 | 0.207 | 0.188 | 0.349 J |
| Lead | Peristaltic - total | µg/L | 0.116 | 0.392 | W013-2 | 0.218 | 0.194 | 0.367 |
| Mercury | Peristaltic - dissolved | µg/L | 0.04 UJ | 0.08 U | W013-1; W014 | 0.025 | 0.02 U | 0.04 U |
| Mercury | Peristaltic - particulate | µg/L | 0.04 UJ | 0.08 U | W013-1; W014 | 0.025 | 0.02 U | 0.04 U |
| Mercury | Peristaltic - total | µg/L | 0.04 UJ | 0.08 U | W013-1; W014 | 0.025 | 0.02 U | 0.04 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.43 | 0.96 | W013-2 | 0.706 | 0.685 | 0.95 |
| Nickel | Peristaltic - particulate | µg/L | 0.12 | 0.58 | W013-2 | 0.222 | 0.185 | 0.458 |
| Nickel | Peristaltic - total | µg/L | 0.605 T | 1.54 | W013-2 | 0.928 | 0.83 | 1.4 |
| Zinc | Peristaltic - dissolved | µg/L | 0.9 J | 2.3 J | W014 | 1.5 | 1.5 | 2.23 J |
| Zinc | Peristaltic - particulate[d] | µg/L | 0 | 2.91 J | W013-1 | 1.32 | 0.95 J | 2.91 J |
| Zinc | Peristaltic - total | µg/L | 1.65 T | 4.7 | W013-2 | 2.55 | 2.45 | 4.18 J |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0071 U | W013-1; W013-2; W014 | 0.00152 | 0.0003 U | 0.00355 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000624 JT | 0.00242 JT | W013-1 | 0.00144 | 0.00139 J | 0.00236 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.00138 JT | 0.00956 JT | W013-1 | 0.00427 | 0.00262 T | 0.00883 J |
| Total PCBs | Peristaltic - total | µg/L | 0.0025 UT | 0.0154 T | W014 | 0.00409 | 0.00125 UT | 0.0126 |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.00206 J | 0.012 J | W013-1 | 0.00501 | 0.00293 J | 0.011 J |
| **PCDD/F Homologs** | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 0.000000897 JT | 0.0000125 JT | W013-2 | 0.00000452 | 0.00000311 J | 0.000011 J |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 0.0000263 T | 0.000156 T | W013-1 | 0.0000607 | 0.0000466 | 0.00013 |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 0.0000307 | 0.000162 | W013-1 | 0.0000653 | 0.0000504 J | 0.000135 J |
| **PCDD/Fs** | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.00000000106 T | 0.0000000382 JT | W013-2 | 0.0000000109 | 0.00000000591 J | 0.0000000317 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000109 JT | 0.00000091 JT | W013-2 | 0.000000287 | 0.000000121 J | 0.000000771 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.00000011 J | 0.000000917 J | W013-2 | 0.000000298 | 0.000000141 J | 0.000000779 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.000000000125 T | 0.000000000526 T | W013-2 | 0.000000000285 | 0.000000000231 | 0.000000000503 |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000000624 T | 0.0000000242 T | W013-1 | 0.0000000071 | 0.00000000325 T | 0.0000000204 |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000000526 | 0.0000000245 | W013-1 | 0.0000000062 | 0.00000000309 | 0.0000000197 |
| **Pesticides** | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 0.000000418 UJ | 0.00000144 J | W013-2 | 0.000000908 | 0.000000991 J | 0.0000014 J |
| Aldrin | XAD Filter - particulate | µg/L | 0.000000122 J | 0.000000953 J | W013-1 | 0.000000419 | 0.00000036 J | 0.000000816 J |
| Aldrin | Peristaltic - total | µg/L | 0.000472 U | 0.000526 U | W013-2 | 0.000246 | 0.000245 U | 0.000259 U |
| Aldrin | XAD Column+Filter - total | µg/L | 0.00000031 J | 0.00000214 J | W013-1 | 0.00000129 | 0.00000129 J | 0.00000205 J |
| Dieldrin | XAD Column - dissolved | µg/L | 0.0000227 | 0.00004 | W013-1 | 0.0000307 | 0.0000296 | 0.0000393 |
| Dieldrin | XAD Filter - particulate | µg/L | 0.00000024 J | 0.00000427 J | W013-1 | 0.000002 | 0.00000207 J | 0.00000379 J |
| Dieldrin | Peristaltic - total | µg/L | 0.000472 U | 0.000526 U | W013-2 | 0.000246 | 0.000245 U | 0.000259 U |
| Dieldrin | XAD Column+Filter - total | µg/L | 0.0000227 | 0.0000443 J | W013-1 | 0.0000325 | 0.0000318 J | 0.0000426 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 0.00000723 | 0.0000407 | W013-1 | 0.0000256 | 0.0000268 | 0.0000394 |

Table D3.2-4b. Summary Statistics for COIs in Surface Water, Low-Flow Events (East Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 0.000000029 U | 0.00000021 J | W013-1 | 0.000000065 | 0.0000000394 U | 0.000000171 J |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.000472 U | 0.000526 U | W013-2 | 0.000246 | 0.000245 U | 0.000259 U |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 0.00000723 | 0.0000409 J | W013-1 | 0.0000256 | 0.0000268 | 0.0000395 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 0.0000126 JT | 0.0000263 JT | W013-2 | 0.0000176 | 0.0000162 J | 0.0000252 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 0.000000936 JT | 0.0000134 JT | W013-1 | 0.00000585 | 0.00000505 J | 0.0000116 J |
| Total chlordanes | Peristaltic - total | µg/L | 0.000472 UT | 0.000526 UT | W013-2 | 0.000246 | 0.000245 UT | 0.000259 U |
| Total chlordanes | XAD Column+Filter - total | µg/L | 0.0000173 J | 0.0000353 J | W013-1 | 0.0000235 | 0.0000216 J | 0.0000333 J |
| DDx | XAD Column - dissolved | µg/L | 0.0000254 JT | 0.00013 JT | W013-1 | 0.0000567 | 0.00004 J | 0.000117 J |
| DDx | XAD Filter - particulate | µg/L | 0.00000763 JT | 0.000111 JT | W013-1 | 0.0000416 | 0.0000305 J | 0.0000948 J |
| DDx | Peristaltic - total | µg/L | 0.000472 UT | 0.000526 UT | W013-2 | 0.000246 | 0.000245 UT | 0.000259 U |
| DDx | XAD Column+Filter - total | µg/L | 0.0000492 J | 0.000241 J | W013-1 | 0.0000982 | 0.0000754 J | 0.000204 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 0.0000169 U | 0.000121 J | W013-1 | 0.000043 | 0.0000348 J | 0.000101 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 0.000232 U | 0.000722 | W013-1 | 0.000323 | 0.000293 | 0.000638 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0016 U | 0.0064 U | W013-1; W013-2 | 0.0019 | 0.0016 U | 0.0032 U |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 0.0000183 J | 0.000843 J | W013-1 | 0.000294 | 0.000226 | 0.000738 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 0.00179 JT | 0.00874 JT | W013-1 | 0.00413 | 0.00276 J | 0.00812 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 0.000916 T | 0.00904 T | W013-1 | 0.0042 | 0.00383 | 0.00812 |
| Total HPAHs | Peristaltic - total | µg/L | 0.0026 JT | 0.0252 JT | W013-2 | 0.00999 | 0.0081 J | 0.0216 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 0.00353 J | 0.0178 J | W013-1 | 0.00833 | 0.0071 J | 0.0155 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 0.0067 T | 0.0318 T | W013-2 | 0.0177 | 0.0191 | 0.0291 |
| Total LPAHs | XAD Filter - particulate | µg/L | 0.0000835 JT | 0.00151 T | W013-1 | 0.00062 | 0.000413 J | 0.00139 |
| Total LPAHs | Peristaltic - total | µg/L | 0.0022 JT | 0.016 UT | W013-1; W014 | 0.00513 | 0.0053 J | 0.008 U |
| Total LPAHs | XAD Column+Filter - total | µg/L | 0.00774 | 0.0318 | W013-2 | 0.0182 | 0.0192 J | 0.0291 J |
| Naphthalene | XAD Column - dissolved | µg/L | 0.00682 U | 0.0184 U | W013-1 | 0.00902 | 0.00965 | 0.0154 |
| Naphthalene | XAD Filter - particulate | µg/L | 0.00052 U | 0.00109 U | W013-1 | 0.000524 | 0.000451 U | 0.000858 |
| Naphthalene | Peristaltic - total | µg/L | 0.0032 UJ | 0.016 U | W014 | 0.00505 | 0.0057 U | 0.00783 U |
| Naphthalene | XAD Column+Filter - total | µg/L | 0.000836 | 0.0184 U | W013-1 | 0.00813 | 0.00965 | 0.0154 |
| Phenanthrene | XAD Column - dissolved | µg/L | 0.00127 | 0.00257 | W013-1 | 0.00194 | 0.00192 | 0.00249 |
| Phenanthrene | XAD Filter - particulate | µg/L | 0.000387 U | 0.000952 U | W013-1 | 0.000313 | 0.00028 U | 0.000464 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0032 U | 0.013 U | W013-1; W013-2 | 0.00364 | 0.0032 U | 0.0065 U |
| Phenanthrene | XAD Column+Filter - total | µg/L | 0.00127 | 0.00257 | W013-1 | 0.00194 | 0.00192 | 0.00249 |
| Total cPAHs | XAD Column - dissolved | µg/L | 0.00022 JT | 0.0014 JT | W013-1 | 0.00061 | 0.00043 J | 0.00125 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 0.00092 T | 0.0048 T | W013-1 | 0.0024 | 0.00235 | 0.00425 |
| Total cPAHs | Peristaltic - total | µg/L | 0.0021 UT | 0.0097 JT | W013-2 | 0.00355 | 0.00305 J | 0.00778 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 0.00137 J | 0.0062 J | W013-1 | 0.00301 | 0.00267 J | 0.0054 J |
| Total PAHs | XAD Column - dissolved | µg/L | 0.0129 JT | 0.0344 JT | W013-2 | 0.0218 | 0.0218 J | 0.0315 J |
| Total PAHs | XAD Filter - particulate | µg/L | 0.000916 T | 0.0105 T | W013-1 | 0.00468 | 0.00396 J | 0.00928 J |
| Total PAHs | Peristaltic - total | µg/L | 0.0026 JT | 0.0293 JT | W013-2 | 0.0117 | 0.0101 J | 0.0245 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 0.0162 J | 0.0353 J | W013-2 | 0.0265 | 0.0275 J | 0.0334 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.032 U | W013-1 | 0.0148 | 0.0145 U | 0.0157 U |
| Bis(2-ethylhexyl) phthalate | XAD Column - dissolved | µg/L | 0.00338 U | 0.0198 | W013-1 | 0.00671 | 0.00244 U | 0.0179 |
| Bis(2-ethylhexyl) phthalate | XAD Filter - particulate | µg/L | 0.00257 U | 0.00859 U | W013-1 | 0.00325 | 0.00313 U | 0.00497 J |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.27 U | 0.91 U | W014 | 0.211 | 0.15 U | 0.389 U |
| Bis(2-ethylhexyl) phthalate | XAD Column+Filter - total | µg/L | 0.00543 U | 0.025 J | W013-1 | 0.0084 | 0.00388 U | 0.0218 J |
| Butylbenzyl phthalate | XAD Column - dissolved | µg/L | 0.000512 U | 0.0019 | W013-1 | 0.000813 | 0.000473 U | 0.00179 J |
| Butylbenzyl phthalate | XAD Filter - particulate | µg/L | 0.0000254 U | 0.000332 U | W013-2 | 0.0000949 | 0.000114 U | 0.000161 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.026 U | 0.029 U | W013-1 | 0.0133 | 0.013 U | 0.0142 U |
| Butylbenzyl phthalate | XAD Column+Filter - total | µg/L | 0.000512 U | 0.0019 | W013-1 | 0.000813 | 0.000473 U | 0.00179 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 0.0000281 | 0.0000442 | W013-1 | 0.0000339 | 0.0000314 | 0.0000426 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 0.000000918 U | 0.00000749 | W013-1 | 0.00000368 | 0.00000341 J | 0.00000669 |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.000481 U | 0.016 U | W013-1 | 0.00249 | 0.000355 U | 0.00785 U |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 0.0000308 | 0.0000485 | W013-1 | 0.0000375 | 0.0000366 J | 0.0000467 |

Table D3.2-4b. Summary Statistics for COIs in Surface Water, Low-Flow Events (East Channel Single-Point Locations).

| Analyte | Method | Units | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th Percentile (half DL)[b] |
| **RM 08<09** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.249 | 0.43 | W021 | 0.342 | 0.333 | 0.425 |
| Arsenic | Peristaltic - particulate | µg/L | 0.041 | 0.088 | W018 | 0.0668 | 0.0675 | 0.0878 |
| Arsenic | Peristaltic - total | µg/L | 0.337 | 0.48 | W018; W021 | 0.409 | 0.397 | 0.48 |
| Cadmium | Peristaltic - dissolved | µg/L | 0.008 U | 0.03 | W018; W021 | 0.0157 | 0.01 J | 0.03 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 0 | 0.03 | W021 | 0.0075 | 0.0025 J | 0.025 |
| Cadmium | Peristaltic - total | µg/L | 0.008 U | 0.03 | W018; W021 | 0.0192 | 0.0205 J | 0.03 |
| Chromium | Peristaltic - dissolved | µg/L | 0.11 J | 0.25 | W021 | 0.165 | 0.14 J | 0.245 |
| Chromium | Peristaltic - particulate[d] | µg/L | 0 | 0.36 U | W018 | 0.118 | 0.135 J | 0.188 J |
| Chromium | Peristaltic - total | µg/L | 0.21 | 0.4 | W018 | 0.248 | 0.22 | 0.378 |
| Copper | Peristaltic - dissolved | µg/L | 0.61 | 1.23 J | W021 | 0.815 | 0.755 J | 1.15 J |
| Copper | Peristaltic - particulate | µg/L | 0.21 | 0.51 J | W021 | 0.383 | 0.395 J | 0.488 J |
| Copper | Peristaltic - total | µg/L | 0.86 | 1.74 J | W021 | 1.2 | 1.17 | 1.63 J |
| Lead | Peristaltic - dissolved | µg/L | 0.009 U | 0.04 | W018 | 0.0179 | 0.0155 J | 0.035 |
| Lead | Peristaltic - particulate | µg/L | 0.071 J | 0.144 J | W018 | 0.107 | 0.106 J | 0.143 J |
| Lead | Peristaltic - total | µg/L | 0.077 | 0.163 | W018 | 0.125 | 0.132 | 0.162 |
| Mercury | Peristaltic - dissolved | µg/L | 0.04 UJ | 0.08 UJ | W018; W021 | 0.0267 | 0.02 U | 0.04 UJ |
| Mercury | Peristaltic - particulate | µg/L | 0.04 UJ | 0.08 UJ | W018; W021 | 0.0267 | 0.02 U | 0.04 UJ |
| Mercury | Peristaltic - total | µg/L | 0.04 UJ | 0.08 UJ | W018; W021 | 0.0267 | 0.02 U | 0.04 UJ |
| Nickel | Peristaltic - dissolved | µg/L | 0.48 | 0.98 | W021 | 0.588 | 0.555 | 0.963 |
| Nickel | Peristaltic - particulate | µg/L | 0.1 | 0.68 | W021 | 0.332 | 0.23 | 0.66 |
| Nickel | Peristaltic - total | µg/L | 0.6 | 1.18 | W018 | 0.832 | 0.705 | 1.18 |
| Zinc | Peristaltic - dissolved | µg/L | 1.61 | 4.9 | W018 | 2.78 | 2.49 | 4.48 |
| Zinc | Peristaltic - particulate[d] | µg/L | 0 | 1.71 | W021 | 0.563 | 0.5 | 1.45 |
| Zinc | Peristaltic - total | µg/L | 2 | 3.34 | W018 | 2.83 | 2.85 | 3.34 |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0071 U | W018; W021 | 0.00144 | 0.000475 U | 0.00355 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000162 JT | 0.000567 JT | W018 | 0.000405 | 0.000487 JT | 0.000559 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.000277 JT | 0.00112 JT | W018 | 0.000579 | 0.000341 JT | 0.00104 J |
| Total PCBs | Peristaltic - total | µg/L | 0.0025 UT | 0.0026 UT | W021 | 0.00126 | 0.00125 U | 0.00129 U |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000439 J | 0.00169 J | W018 | 0.000985 | 0.000828 J | 0.0016 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.000000000436 T | 0.00000000253 JT | W018 | 0.00000000148 | 0.00000000148 JT | 0.00000000243 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.00000000397 T | 0.0000000123 T | W018 | 0.00000000735 | 0.00000000579 T | 0.0000000116 |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.00000000545 J | 0.0000000148 J | W018 | 0.00000000884 | 0.00000000623 | 0.000000014 J |
| **Pesticides** | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 0.000000659 J | 0.00000143 U | W018 | 0.000000782 | 0.000000715 U | 0.000000946 J |
| Aldrin | XAD Filter - particulate | µg/L | 0.00000039 J | 0.000000629 J | W018 | 0.000000473 | 0.0000004 J | 0.000000606 J |
| Aldrin | Peristaltic - total | µg/L | 0.000481 U | 0.00049 U | W021 | 0.000242 | 0.000241 U | 0.000244 U |
| Aldrin | XAD Column+Filter - total | µg/L | 0.0000004 J | 0.0000016 J | W018 | 0.00000102 | 0.00000105 J | 0.00000155 J |
| Dieldrin | XAD Column - dissolved | µg/L | 0.000029 | 0.0000421 | W018 | 0.0000339 | 0.0000306 | 0.000041 |
| Dieldrin | XAD Filter - particulate | µg/L | 0.00000154 J | 0.00000184 UJ | W018 | 0.00000142 | 0.00000154 J | 0.00000177 J |
| Dieldrin | Peristaltic - total | µg/L | 0.000481 U | 0.00049 U | W021 | 0.000242 | 0.000241 U | 0.000244 U |
| Dieldrin | XAD Column+Filter - total | µg/L | 0.0000306 J | 0.0000436 J | W018 | 0.000035 | 0.0000308 J | 0.0000424 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 0.000021 | 0.0000303 | W018 | 0.0000263 | 0.0000277 | 0.00003 |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 0.0000000792 U | 0.000000168 J | W018 | 0.000000083 | 0.0000000415 U | 0.000000155 J |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.000481 U | 0.00049 U | W021 | 0.000242 | 0.000241 U | 0.000244 U |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 0.000021 | 0.0000303 | W018 | 0.0000264 | 0.0000279 J | 0.0000301 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 0.0000165 JT | 0.0000266 JT | W018 | 0.0000207 | 0.000019 JT | 0.0000258 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 0.00000484 JT | 0.00000707 JT | W018 | 0.00000572 | 0.00000524 JT | 0.00000689 J |
| Total chlordanes | Peristaltic - total | µg/L | 0.000481 UT | 0.00049 UT | W021 | 0.000242 | 0.000241 U | 0.000244 U |
| Total chlordanes | XAD Column+Filter - total | µg/L | 0.0000213 J | 0.0000318 J | W018 | 0.0000264 | 0.0000261 J | 0.0000313 J |
| DDx | XAD Column - dissolved | µg/L | 0.0000359 JT | 0.0000727 JT | W018 | 0.0000535 | 0.0000518 JT | 0.0000706 J |

Table D3.2-4b. Summary Statistics for COIs in Surface Water, Low-Flow Events (East Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| DDx | XAD Filter - particulate | µg/L | 0.000025 JT | 0.0000514 JT | W018 | 0.0000345 | 0.0000271 JT | 0.000049 J |
| DDx | Peristaltic - total | µg/L | 0.000481 UT | 0.00049 UJT | W021 | 0.000242 | 0.000241 U | 0.000244 UJ |
| DDx | XAD Column+Filter - total | µg/L | 0.0000609 J | 0.000103 J | W018 | 0.000088 | 0.0000998 J | 0.000103 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 0.0000232 U | 0.0000455 J | W018 | 0.0000248 | 0.0000174 U | 0.0000427 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 0.000185 U | 0.00161 | W018 | 0.000696 | 0.000384 | 0.00149 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0016 U | 0.0064 U | W018 | 0.00173 | 0.0016 U | 0.0028 U |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 0.0000455 J | 0.00161 | W018 | 0.00068 | 0.000384 | 0.00149 |
| Total HPAHs | XAD Column - dissolved | µg/L | 0.00181 JT | 0.0072 JT | W018 | 0.0047 | 0.00508 JT | 0.00699 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 0.000969 T | 0.0214 T | W018 | 0.00906 | 0.00482 T | 0.0197 |
| Total HPAHs | Peristaltic - total | µg/L | 0.0031 JT | 0.135 JT | W021 | 0.0288 | 0.0082 J | 0.105 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 0.00663 J | 0.0265 J | W018 | 0.0138 | 0.00817 J | 0.0246 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 0.00567 T | 0.0495 T | W018 | 0.0238 | 0.0161 T | 0.0462 |
| Total LPAHs | XAD Filter - particulate | µg/L | 0.0000316 JT | 0.0134 T | W018 | 0.00454 | 0.000176 T | 0.0121 |
| Total LPAHs | Peristaltic - total | µg/L | 0.0056 JT | 0.154 JT | W021 | 0.0299 | 0.00605 J | 0.117 J |
| Total LPAHs | XAD Column+Filter - total | µg/L | 0.00585 | 0.0495 J | W018 | 0.0283 | 0.0295 | 0.0475 J |
| Naphthalene | XAD Column - dissolved | µg/L | 0.00527 U | 0.0107 U | W018 | 0.00495 | 0.00535 U | 0.0067 |
| Naphthalene | XAD Filter - particulate | µg/L | 0.000155 U | 0.00667 U | W018 | 0.00123 | 0.00027 U | 0.00303 U |
| Naphthalene | Peristaltic - total | µg/L | 0.0053 U | 0.028 U | W018 | 0.00548 | 0.00328 U | 0.0121 U |
| Naphthalene | XAD Column+Filter - total | µg/L | 0.00527 U | 0.0107 U | W018 | 0.00495 | 0.00535 U | 0.0067 |
| Phenanthrene | XAD Column - dissolved | µg/L | 0.0011 | 0.0061 | W018 | 0.00294 | 0.00162 | 0.00565 |
| Phenanthrene | XAD Filter - particulate | µg/L | 0.000198 U | 0.00364 | W018 | 0.00135 | 0.000306 U | 0.00331 |
| Phenanthrene | Peristaltic - total | µg/L | 0.0032 U | 0.096 | W021 | 0.019 | 0.00323 U | 0.0736 |
| Phenanthrene | XAD Column+Filter - total | µg/L | 0.0011 | 0.0061 | W018 | 0.00415 | 0.00526 | 0.00602 |
| Total cPAHs | XAD Column - dissolved | µg/L | 0.00024 JT | 0.00065 JT | W018 | 0.000503 | 0.00062 JT | 0.000647 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 0.00067 T | 0.011 T | W018 | 0.00469 | 0.0024 T | 0.0101 |
| Total cPAHs | Peristaltic - total | µg/L | 0.0021 UT | 0.0084 UT | W018 | 0.00288 | 0.0021 U | 0.00533 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 0.00132 J | 0.0116 J | W018 | 0.00519 | 0.00264 J | 0.0107 J |
| Total PAHs | XAD Column - dissolved | µg/L | 0.00748 JT | 0.0567 JT | W018 | 0.0284 | 0.0211 JT | 0.0531 J |
| Total PAHs | XAD Filter - particulate | µg/L | 0.001 JT | 0.0348 T | W018 | 0.0136 | 0.005 T | 0.0318 |
| Total PAHs | Peristaltic - total | µg/L | 0.0075 UT | 0.288 JT | W021 | 0.0565 | 0.0088 J | 0.222 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 0.0125 J | 0.0577 J | W018 | 0.042 | 0.0559 J | 0.0575 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.031 U | W021 | 0.0149 | 0.015 U | 0.0154 U |
| Bis(2-ethylhexyl) phthalate | XAD Column - dissolved | µg/L | 0.00355 U | 0.00562 U | W018 | 0.00284 | 0.00281 U | 0.00383 J |
| Bis(2-ethylhexyl) phthalate | XAD Filter - particulate | µg/L | 0.0057 U | 0.00831 U | W018 | 0.00431 | 0.00416 U | 0.00575 J |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.29 U | 0.69 U | W021 | 0.193 | 0.148 U | 0.316 U |
| Bis(2-ethylhexyl) phthalate | XAD Column+Filter - total | µg/L | 0.0057 U | 0.00987 J | W018 | 0.00563 | 0.00416 U | 0.0093 J |
| Butylbenzyl phthalate | XAD Column - dissolved | µg/L | 0.000785 U | 0.00206 | W018 | 0.00104 | 0.000675 U | 0.00192 |
| Butylbenzyl phthalate | XAD Filter - particulate | µg/L | 0.0000276 U | 0.000651 U | W018 | 0.000212 | 0.000298 U | 0.000323 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.026 U | 0.035 U | W018 | 0.0141 | 0.0135 U | 0.0166 U |
| Butylbenzyl phthalate | XAD Column+Filter - total | µg/L | 0.000785 U | 0.00206 | W018 | 0.00104 | 0.000675 U | 0.00192 |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 0.0000373 | 0.00004 | W018 | 0.0000387 | 0.0000389 | 0.0000399 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 0.00000312 J | 0.00000401 | W018 | 0.00000362 | 0.00000373 J | 0.00000398 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.000481 U | 0.015 U | W018 | 0.00266 | 0.000243 U | 0.0075 U |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 0.0000404 J | 0.000044 | W018 | 0.0000424 | 0.0000426 J | 0.0000439 J |

Table D3.2-4b. Summary Statistics for COIs in Surface Water, Low-Flow Events (East Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **RM 09<10** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.325 | 0.44 | W020 | 0.375 | 0.359 | 0.432 |
| Arsenic | Peristaltic - particulate | µg/L | 0.03 | 0.07 | W020 | 0.0493 | 0.048 | 0.0678 |
| Arsenic | Peristaltic - total | µg/L | 0.395 | 0.47 | W020 | 0.424 | 0.407 | 0.464 |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.03 | W020 | 0.02 | 0.02 | 0.029 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 0 | 0.03 | W020 | 0.01 | 0 | 0.027 |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.03 | W020 | 0.0233 | 0.03 | 0.03 |
| Chromium | Peristaltic - dissolved | µg/L | 0.1 J | 0.22 U | W020 | 0.123 | 0.11 U | 0.155 J |
| Chromium | Peristaltic - particulate | µg/L | 0.04 J | 0.36 U | W020 | 0.113 | 0.12 J | 0.174 J |
| Chromium | Peristaltic - total | µg/L | 0.2 | 0.36 U | W020 | 0.2 | 0.2 | 0.218 |
| Copper | Peristaltic - dissolved | µg/L | 0.61 | 1.19 J | W020 | 0.897 | 0.89 | 1.16 J |
| Copper | Peristaltic - particulate | µg/L | 0.19 | 0.52 J | W020 | 0.367 | 0.39 | 0.507 J |
| Copper | Peristaltic - total | µg/L | 0.8 | 1.71 J | W020 | 1.26 | 1.28 | 1.67 J |
| Lead | Peristaltic - dissolved | µg/L | 0.009 U | 0.02 | W020 | 0.0132 | 0.015 J | 0.0195 J |
| Lead | Peristaltic - particulate | µg/L | 0.072 J | 0.17 | W020 | 0.114 | 0.101 | 0.163 |
| Lead | Peristaltic - total | µg/L | 0.087 | 0.19 | W020 | 0.126 | 0.101 | 0.181 |
| Mercury | Peristaltic - dissolved | µg/L | 0.04 U | 0.08 U | W020 | 0.0267 | 0.02 U | 0.038 U |
| Mercury | Peristaltic - particulate | µg/L | 0.04 U | 0.08 U | W020 | 0.0267 | 0.02 U | 0.038 U |
| Mercury | Peristaltic - total | µg/L | 0.04 U | 0.08 U | W020 | 0.0267 | 0.02 U | 0.038 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.45 U | 1 | W020 | 0.632 | 0.67 | 0.967 |
| Nickel | Peristaltic - particulate[d] | µg/L | 0 | 0.57 U | W020 | 0.142 | 0.14 | 0.271 |
| Nickel | Peristaltic - total | µg/L | 0.57 U | 1.14 | W020 | 0.685 | 0.63 | 1.09 |
| Zinc | Peristaltic - dissolved | µg/L | 1.79 | 2.5 | W020 | 2.26 | 2.5 | 2.5 |
| Zinc | Peristaltic - particulate | µg/L | 0.4 | 2.77 | W020 | 1.26 | 0.6 | 2.55 |
| Zinc | Peristaltic - total | µg/L | 2.9 | 4.56 | W020 | 3.52 | 3.1 | 4.41 |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0071 U | W020 | 0.00147 | 0.00055 U | 0.00325 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 0.0025 UT | 0.0025 UT | W020 | 0.00125 | 0.00125 UT | 0.00125 U |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.00049 U | 0.00051 U | W020 | 0.000248 | 0.000245 U | 0.000254 U |
| Dieldrin | Peristaltic - total | µg/L | 0.00049 U | 0.00051 U | W020 | 0.000248 | 0.000245 U | 0.000254 U |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.00049 U | 0.00051 U | W020 | 0.000248 | 0.000245 U | 0.000254 U |
| Total chlordanes | Peristaltic - total | µg/L | 0.00049 UT | 0.00051 UT | W020 | 0.000248 | 0.000245 UT | 0.000254 U |
| DDx | Peristaltic - total | µg/L | 0.00049 UT | 0.00051 UJT | W020 | 0.000248 | 0.000245 UT | 0.000254 UJ |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0032 U | 0.0032 U | W020 | 0.0016 | 0.0016 U | 0.0016 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.0049 JT | 0.0283 JT | W020 | 0.0123 | 0.0049 JT | 0.026 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.0064 UT | 0.013 JT | W020 | 0.00687 | 0.0044 UT | 0.0121 J |
| Naphthalene | Peristaltic - total | µg/L | 0.0064 U | 0.0064 U | W020 | 0.0032 | 0.0032 U | 0.0032 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.0073 J | W020 | 0.00457 | 0.0032 U | 0.00689 J |
| Total cPAHs | Peristaltic - total | µg/L | 0.0042 UT | 0.0042 UT | W020 | 0.0021 | 0.0021 UT | 0.0021 U |
| Total PAHs | Peristaltic - total | µg/L | 0.0049 JT | 0.0413 JT | W020 | 0.0166 | 0.0049 JT | 0.0377 J |

Table D3.2-4b. Summary Statistics for COIs in Surface Water, Low-Flow Events (East Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.03 U | W020 | 0.0148 | 0.015 U | 0.015 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.29 U | 0.58 U | W020 | 0.193 | 0.145 U | 0.276 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.027 U | 0.027 U | W020 | 0.0135 | 0.0135 U | 0.0135 U |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.00049 U | 0.00051 U | W020 | 0.000248 | 0.000245 U | 0.000254 U |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

[d] Particulate values were calculated as the difference between total and dissolved concentrations. If the measured dissolved concentration was greater than or equal to the measured total concentration, the calculated particulate concentration was assigned a value of zero.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
XAD - hydrophobic crosslinked polystyrene copolymer resin

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D3.2-4c. Summary Statistics for COIs in Surface Water, Low-Flow Events (Mid-Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| No data for this table. | | | | | | | | | | | |

Table D3.2-4c. Summary Statistics for COIs in Surface Water, Low-Flow Events (Mid-Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| No data for this table. | | | | | | | | |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
XAD - hydrophobic crosslinked polystyrene copolymer resin

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **Multnomah Channel** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.299 | 0.41 | W003 | 0.354 | 0.353 | 0.404 |
| Arsenic | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.056 | 0.084 | W003 | 0.0733 | 0.08 | 0.0836 |
| Arsenic | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.355 | 0.49 | W003 | 0.427 | 0.437 | 0.485 |
| Cadmium | Peristaltic - dissolved | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 0.13 J | 0.29 | W003 | 0.21 | 0.21 J | 0.282 J |
| Chromium | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.18 | 0.54 | W003 | 0.307 | 0.2 J | 0.506 J |
| Chromium | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.33 | 0.54 | W003 | 0.447 | 0.47 | 0.533 |
| Copper | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.46 | 0.74 | W003 | 0.633 | 0.7 | 0.736 |
| Copper | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.41 | 0.67 | W003 | 0.533 | 0.52 | 0.655 |
| Copper | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.87 | 1.41 | W003 | 1.17 | 1.22 | 1.39 |
| Lead | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 0.012 J | 0.036 J | W003 | 0.024 | 0.024 J | 0.0348 J |
| Lead | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.101 J | 0.26 | W003 | 0.172 | 0.154 J | 0.249 J |
| Lead | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.137 | 0.26 | W003 | 0.188 | 0.166 | 0.251 |
| Mercury | Peristaltic - dissolved | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.52 | 0.82 | W003 | 0.667 | 0.66 | 0.804 |
| Nickel | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.15 | 0.36 | W003 | 0.263 | 0.28 | 0.352 |
| Nickel | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.67 | 1.18 | W003 | 0.93 | 0.94 | 1.16 |
| Zinc | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.9 | 1.9 J | W003 | 1.53 | 1.8 | 1.89 J |
| Zinc | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.3 | 1.04 J | W003 | 0.747 | 0.9 | 1.03 J |
| Zinc | Peristaltic - total | µg/L | 3 | 3 | 100 | 1.8 | 2.94 J | W003 | 2.28 | 2.1 | 2.86 J |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.0027 J | 0.0027 J | W003 | 0.0027 | 0.0027 J | 0.0027 J |
| Total HPAHs | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.0055 JT | 0.042 JT | W003 | 0.0238 | 0.0238 J | 0.0402 J |
| Total LPAHs | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.0095 JT | 0.0095 JT | W003 | 0.0095 | 0.0095 JT | 0.0095 JT |
| Naphthalene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.0055 JT | 0.014 JT | W003 | 0.00975 | 0.00975 J | 0.0136 J |
| Total PAHs | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.015 JT | 0.042 JT | W003 | 0.0285 | 0.0285 J | 0.0407 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **RM 01.9<03** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 5 | 5 | 100 | 0.285 | 0.62 | W002 | 0.501 | 0.508 | 0.62 |
| Arsenic | Peristaltic - particulate | µg/L | 5 | 5 | 100 | 0.02 | 0.09 | W002 | 0.0572 | 0.062 | 0.085 |
| Arsenic | Peristaltic - total | µg/L | 5 | 5 | 100 | 0.35 | 0.71 | W002 | 0.558 | 0.557 | 0.696 |
| Cadmium | Peristaltic - dissolved | µg/L | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 5 | 2 | 40 | 0.02 | 0.03 | W002 | 0.025 | 0.025 | 0.0295 |
| Cadmium | Peristaltic - total | µg/L | 5 | 2 | 40 | 0.02 | 0.03 | W002 | 0.025 | 0.025 | 0.0295 |
| Chromium | Peristaltic - dissolved | µg/L | 5 | 3 | 60 | 0.13 J | 0.24 | W002 | 0.187 | 0.19 J | 0.235 J |
| Chromium | Peristaltic - particulate | µg/L | 5 | 4 | 80 | 0.23 J | 0.55 | W002 | 0.313 | 0.235 J | 0.504 J |
| Chromium | Peristaltic - total | µg/L | 5 | 4 | 80 | 0.36 | 0.55 | W002 | 0.453 | 0.45 | 0.538 |
| Copper | Peristaltic - dissolved | µg/L | 5 | 5 | 100 | 0.51 | 0.84 | W002 | 0.694 | 0.67 | 0.836 |
| Copper | Peristaltic - particulate | µg/L | 5 | 5 | 100 | 0.29 | 0.68 | W002 | 0.454 | 0.41 | 0.66 |
| Copper | Peristaltic - total | µg/L | 5 | 5 | 100 | 0.92 | 1.5 | W002 | 1.15 | 0.96 | 1.48 |
| Lead | Peristaltic - dissolved | µg/L | 5 | 3 | 60 | 0.015 J | 0.021 J | W002 | 0.0187 | 0.02 J | 0.0209 J |
| Lead | Peristaltic - particulate | µg/L | 5 | 5 | 100 | 0.112 J | 0.26 J | W002 | 0.177 | 0.14 J | 0.26 J |
| Lead | Peristaltic - total | µg/L | 5 | 5 | 100 | 0.132 | 0.26 | W002 | 0.188 | 0.155 | 0.26 |
| Mercury | Peristaltic - dissolved | µg/L | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 5 | 5 | 100 | 0.5 | 1.11 | W002 | 0.878 | 0.88 | 1.09 |
| Nickel | Peristaltic - particulate | µg/L | 5 | 5 | 100 | 0.11 | 0.38 | W002 | 0.238 | 0.2 | 0.37 |
| Nickel | Peristaltic - total | µg/L | 5 | 5 | 100 | 0.67 | 1.26 | W002 | 1.12 | 1.22 | 1.25 |
| Zinc | Peristaltic - dissolved | µg/L | 5 | 3 | 60 | 1.1 | 2.3 | W002 | 1.53 | 1.2 | 2.19 |
| Zinc | Peristaltic - particulate[d] | µg/L | 5 | 5 | 100 | 0 | 2.78 J | W002 | 1.39 | 0.9 | 2.72 J |
| Zinc | Peristaltic - total | µg/L | 5 | 5 | 100 | 1.8 | 2.78 J | W002 | 2.21 | 2 | 2.72 J |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.00212 JT | 0.00212 JT | W002 | 0.00212 | 0.00212 JT | 0.00212 JT |
| DDx | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 5 | 3 | 60 | 0.0031 JT | 0.0132 JT | W002 | 0.0091 | 0.011 JT | 0.013 J |
| Total LPAHs | Peristaltic - total | µg/L | 5 | 4 | 80 | 0.0013 JT | 0.005 JT | W002 | 0.0034 | 0.00365 J | 0.00499 J |
| Naphthalene | Peristaltic - total | µg/L | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 5 | 1 | 20 | 0.002 JT | 0.002 JT | W002 | 0.002 | 0.002 JT | 0.002 JT |
| Total PAHs | Peristaltic - total | µg/L | 5 | 5 | 100 | 0.0049 JT | 0.0132 JT | W002 | 0.00818 | 0.0055 JT | 0.013 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | Peristaltic - total | µg/L | 5 | 1 | 20 | 0.00211 J | 0.00211 J | W002 | 0.00211 | 0.00211 J | 0.00211 J |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **RM 04<05** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.319 | 0.42 | W006 | 0.356 | 0.33 | 0.411 |
| Arsenic | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.07 | 0.098 | W006 | 0.0827 | 0.08 | 0.0962 |
| Arsenic | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.399 | 0.49 T | W006 | 0.439 | 0.428 | 0.484 |
| Cadmium | Peristaltic - dissolved | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 0.13 J | 0.22 | W006 | 0.175 | 0.175 J | 0.216 J |
| Chromium | Peristaltic - particulate | µg/L | 3 | 2 | 67 | 0.24 J | 0.38 | W006 | 0.31 | 0.31 J | 0.373 J |
| Chromium | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.37 | 0.6 | W006 | 0.485 | 0.485 | 0.589 |
| Copper | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.62 | 0.93 | W006 | 0.793 | 0.83 | 0.92 |
| Copper | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.07 | 0.52 J | W006 | 0.37 | 0.52 | 0.52 J |
| Copper | Peristaltic - total | µg/L | 3 | 3 | 100 | 1 | 1.35 JT | W006 | 1.16 | 1.14 | 1.33 J |
| Lead | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 0.02 J | 0.091 | W006 | 0.0555 | 0.0555 J | 0.0875 J |
| Lead | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.155 | 0.217 J | W006 | 0.185 | 0.183 | 0.214 J |
| Lead | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.183 T | 0.246 | W006 | 0.222 | 0.237 | 0.245 |
| Mercury | Peristaltic - dissolved | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.63 | 0.94 | W006 | 0.803 | 0.84 | 0.93 |
| Nickel | Peristaltic - particulate[d] | µg/L | 3 | 3 | 100 | 0 | 0.155 | W006 | 0.0883 | 0.11 | 0.151 |
| Nickel | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.72 | 0.95 | W006 | 0.818 | 0.785 T | 0.934 |
| Zinc | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 1.8 | 2.8 | W006 | 2.2 | 2 J | 2.72 J |
| Zinc | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0 | 1.25 J | W006 | 0.65 | 0.7 | 1.2 J |
| Zinc | Peristaltic - total | µg/L | 3 | 3 | 100 | 2.5 | 3.25 JT | W006 | 2.75 | 2.5 | 3.18 J |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.0011 J | 0.0011 J | W006 | 0.0011 | 0.0011 J | 0.0011 J |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.021 JT | 0.0352 JT | W006 | 0.0289 | 0.0304 JT | 0.0347 J |
| Total LPAHs | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.0069 JT | 0.0069 JT | W006 | 0.0069 | 0.0069 JT | 0.0069 JT |
| Naphthalene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.0032 JT | 0.0089 JT | W006 | 0.00517 | 0.0034 JT | 0.00835 J |
| Total PAHs | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.021 JT | 0.0373 JT | W006 | 0.0312 | 0.0352 JT | 0.0371 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **RM 05<06** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.329 | 0.42 | W009 | 0.37 | 0.362 | 0.414 |
| Arsenic | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.045 | 0.08 | W009 | 0.059 | 0.052 | 0.0772 |
| Arsenic | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.374 | 0.5 | W009 | 0.429 | 0.414 | 0.491 |
| Cadmium | Peristaltic - dissolved | µg/L | 3 | 1 | 33 | 0.02 | 0.02 | W009 | 0.02 | 0.02 | 0.02 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 3 | 1 | 33 | 0 | 0 | W009 | 0 | 0 | 0 |
| Cadmium | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.02 | 0.02 | W009 | 0.02 | 0.02 | 0.02 |
| Chromium | Peristaltic - dissolved | µg/L | 3 | 1 | 33 | 0.16 J | 0.16 J | W009 | 0.16 | 0.16 J | 0.16 J |
| Chromium | Peristaltic - particulate | µg/L | 3 | 2 | 67 | 0.14 J | 0.38 | W009 | 0.26 | 0.26 J | 0.368 J |
| Chromium | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.3 | 0.38 | W009 | 0.34 | 0.34 | 0.376 |
| Copper | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.5 | 0.73 | W009 | 0.61 | 0.6 | 0.717 |
| Copper | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.3 | 0.7 J | W009 | 0.46 | 0.38 | 0.668 J |
| Copper | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.8 | 1.43 J | W009 | 1.07 | 0.98 | 1.39 J |
| Lead | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 0.015 J | 0.015 J | W009 | 0.015 | 0.015 J | 0.015 J |
| Lead | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.104 J | 0.243 | W009 | 0.157 | 0.124 J | 0.231 J |
| Lead | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.119 | 0.243 | W009 | 0.167 | 0.139 | 0.233 |
| Mercury | Peristaltic - dissolved | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 0.57 | 0.6 | W009 | 0.585 | 0.585 | 0.599 |
| Nickel | Peristaltic - particulate | µg/L | 3 | 2 | 67 | 0.09 | 0.26 | W009 | 0.175 | 0.175 | 0.252 |
| Nickel | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.66 | 0.86 | W009 | 0.76 | 0.76 | 0.85 |
| Zinc | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 1.6 | 1.8 J | W009 | 1.7 | 1.7 | 1.79 J |
| Zinc | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.6 | 1.7 J | W009 | 1 | 0.7 | 1.6 J |
| Zinc | Peristaltic - total | µg/L | 3 | 3 | 100 | 2.3 | 3.5 J | W009 | 2.7 | 2.3 | 3.38 J |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.0011 J | 0.0011 J | W009 | 0.0011 | 0.0011 J | 0.0011 J |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.0113 JT | 0.0343 JT | W009 | 0.0228 | 0.0228 J | 0.0332 J |
| Total LPAHs | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.0666 JT | 0.0666 JT | W009 | 0.0666 | 0.0666 JT | 0.0666 JT |
| Naphthalene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.0043 JT | 0.0043 JT | W009 | 0.0043 | 0.0043 J | 0.0043 J |
| Total PAHs | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.0343 JT | 0.0779 JT | W009 | 0.0561 | 0.0561 J | 0.0757 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.00129 J | 0.00129 J | W009 | 0.00129 | 0.00129 J | 0.00129 J |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **RM 06<07** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 6 | 6 | 100 | 0.31 | 0.47 | W012 | 0.389 | 0.376 | 0.465 |
| Arsenic | Peristaltic - particulate | µg/L | 6 | 6 | 100 | 0.0425 | 0.09 | W012 | 0.0616 | 0.0605 | 0.085 |
| Arsenic | Peristaltic - total | µg/L | 6 | 6 | 100 | 0.353 T | 0.56 | W012 | 0.451 | 0.436 | 0.55 |
| Cadmium | Peristaltic - dissolved | µg/L | 6 | 3 | 50 | 0.02 | 0.03 | W012; W015 | 0.0267 | 0.03 | 0.03 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 6 | 3 | 50 | 0 | 0.02 | W015 | 0.01 | 0.01 | 0.019 |
| Cadmium | Peristaltic - total | µg/L | 6 | 3 | 50 | 0.02 | 0.05 T | W015 | 0.0333 | 0.03 T | 0.048 |
| Chromium | Peristaltic - dissolved | µg/L | 6 | 2 | 33 | 0.14 J | 0.17 J | W012 | 0.155 | 0.155 J | 0.169 J |
| Chromium | Peristaltic - particulate | µg/L | 6 | 5 | 83 | 0.115 J | 0.59 | W012 | 0.306 | 0.325 | 0.548 |
| Chromium | Peristaltic - total | µg/L | 6 | 5 | 83 | 0.26 | 0.59 | W012 | 0.368 | 0.325 T | 0.548 |
| Copper | Peristaltic - dissolved | µg/L | 6 | 6 | 100 | 0.42 | 0.85 J | W012 | 0.652 | 0.69 | 0.848 J |
| Copper | Peristaltic - particulate | µg/L | 6 | 6 | 100 | 0.265 | 1.08 J | W012 | 0.458 | 0.355 | 0.913 J |
| Copper | Peristaltic - total | µg/L | 6 | 6 | 100 | 0.685 T | 1.93 J | W012 | 1.11 | 1.01 | 1.76 J |
| Lead | Peristaltic - dissolved | µg/L | 6 | 6 | 100 | 0.009 J | 0.037 | W012 | 0.0213 | 0.022 J | 0.0343 |
| Lead | Peristaltic - particulate | µg/L | 6 | 6 | 100 | 0.068 | 0.356 | W012 | 0.161 | 0.142 J | 0.307 |
| Lead | Peristaltic - total | µg/L | 6 | 6 | 100 | 0.105 T | 0.38 | W012 | 0.182 | 0.158 | 0.332 |
| Mercury | Peristaltic - dissolved | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 6 | 4 | 67 | 0.64 | 1.12 | W012 | 0.808 | 0.735 | 1.07 |
| Nickel | Peristaltic - particulate | µg/L | 6 | 5 | 83 | 0.05 | 0.645 J | W015 | 0.298 | 0.13 | 0.636 J |
| Nickel | Peristaltic - total | µg/L | 6 | 5 | 83 | 0.645 T | 1.36 | W012 | 0.944 | 0.84 | 1.32 |
| Zinc | Peristaltic - dissolved | µg/L | 6 | 6 | 100 | 1.5 | 2.2 | W015 | 1.77 | 1.75 J | 2.1 |
| Zinc | Peristaltic - particulate[d] | µg/L | 6 | 6 | 100 | 0 | 2.5 J | W012 | 1.05 | 0.95 | 2.2 J |
| Zinc | Peristaltic - total | µg/L | 6 | 6 | 100 | 2 T | 4.3 J | W012 | 2.78 | 2.7 J | 3.95 J |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.000254 JT | 0.000639 JT | W015 | 0.000432 | 0.000404 JT | 0.000616 J |
| Total PCBs | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.000285 JT | 0.00129 T | W015 | 0.000658 | 0.000398 JT | 0.0012 J |
| Total PCBs | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PCBs | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.000539 J | 0.00193 J | W015 | 0.00109 | 0.000802 J | 0.00182 J |
| **PCDD/F Homologs** | | | | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.00000201 JT | 0.00000402 T | W015 | 0.000003 | 0.00000296 T | 0.00000391 |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.0000436 T | 0.000078 T | W015 | 0.0000563 | 0.0000474 T | 0.0000749 |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0000456 J | 0.000082 | W015 | 0.0000593 | 0.0000504 | 0.0000789 |
| **PCDD/Fs** | | | | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.0000000238 JT | 0.0000000334 JT | W015 | 0.000000027 | 0.0000000239 JT | 0.0000000325 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.000000333 JT | 0.000000469 JT | W015 | 0.000000406 | 0.000000417 JT | 0.000000464 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.000000357 J | 0.000000502 J | W015 | 0.000000433 | 0.000000441 J | 0.000000496 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.000000000302 T | 0.00000000242 JT | W015 | 0.00000000158 | 0.00000000202 JT | 0.00000000238 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.00000000619 T | 0.000000015 T | W015 | 0.00000000959 | 0.00000000758 T | 0.0000000143 |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.00000000788 | 0.0000000174 J | W015 | 0.0000000112 | 0.00000000821 J | 0.0000000165 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.00000115 J | 0.00000327 J | W015 | 0.00000195 | 0.00000142 J | 0.00000309 J |
| Aldrin | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.000000693 J | 0.000013 | W015 | 0.00000498 | 0.00000126 J | 0.0000118 J |
| Aldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Aldrin | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.00000211 J | 0.0000163 J | W015 | 0.00000693 | 0.00000241 J | 0.0000149 J |
| Dieldrin | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.000036 | 0.0000468 | W015 | 0.0000423 | 0.0000441 | 0.0000465 |
| Dieldrin | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.00000387 J | 0.0000157 | W015 | 0.00000881 | 0.00000685 J | 0.0000148 J |
| Dieldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0000399 J | 0.0000625 | W015 | 0.0000511 | 0.000051 J | 0.0000613 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.0000298 | 0.0000711 | W015 | 0.0000508 | 0.0000514 | 0.0000691 |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.000000147 J | 0.000000862 J | W015 | 0.000000435 | 0.000000296 J | 0.000000805 J |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0000301 J | 0.0000712 J | W015 | 0.0000512 | 0.0000523 J | 0.0000693 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.0000216 JT | 0.0000555 JT | W015 | 0.0000341 | 0.0000252 JT | 0.0000525 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.0000127 JT | 0.000185 JT | W015 | 0.0000716 | 0.0000172 JT | 0.000168 J |
| Total chlordanes | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0000343 J | 0.000241 J | W015 | 0.000106 | 0.0000424 J | 0.000221 J |
| DDx | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.00198 T | 0.00346 T | W015 | 0.00251 | 0.0021 T | 0.00332 |
| DDx | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.00161 T | 0.00421 T | W015 | 0.00298 | 0.00312 T | 0.0041 |
| DDx | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.000839 T | 0.000839 T | W012 | 0.000839 | 0.000839 T | 0.000839 T |
| DDx | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.00359 | 0.00767 | W015 | 0.00549 | 0.00522 | 0.00743 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.0000632 J | 0.000336 | W015 | 0.000181 | 0.000143 J | 0.000317 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.00169 | 0.0063 | W015 | 0.00363 | 0.00289 | 0.00596 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 6 | 2 | 33 | 0.02 | 0.15 | W012 | 0.085 | 0.085 | 0.144 |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.00175 J | 0.00664 | W015 | 0.00381 | 0.00303 J | 0.00628 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.015 JT | 0.0719 JT | W015 | 0.0342 | 0.0157 JT | 0.0663 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.0173 T | 0.059 T | W015 | 0.0368 | 0.034 T | 0.0565 |
| Total HPAHs | Peristaltic - total | µg/L | 6 | 6 | 100 | 0.0172 JT | 1.77 JT | W012 | 0.351 | 0.0327 J | 1.39 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0323 J | 0.131 J | W015 | 0.071 | 0.0497 J | 0.123 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.0407 T | 0.0973 T | W015 | 0.0618 | 0.0475 T | 0.0923 |
| Total LPAHs | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.00045 T | 0.00409 T | W015 | 0.00248 | 0.0029 T | 0.00397 |
| Total LPAHs | Peristaltic - total | µg/L | 6 | 4 | 67 | 0.0034 JT | 1.08 T | W012 | 0.446 | 0.35 J | 1.02 |
| Total LPAHs | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0448 | 0.1 | W015 | 0.0643 | 0.048 | 0.095 |
| Naphthalene | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.0102 | 0.0276 | W015 | 0.0186 | 0.018 | 0.0266 |
| Naphthalene | XAD Filter - particulate | µg/L | 3 | 1 | 33 | 0.00093 | 0.00093 | W015 | 0.00093 | 0.00093 | 0.00093 |
| Naphthalene | Peristaltic - total | µg/L | 6 | 3 | 50 | 0.0068 J | 0.77 | W012 | 0.302 | 0.13 | 0.706 |
| Naphthalene | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0102 | 0.0285 | W015 | 0.0189 | 0.018 | 0.0275 |
| Phenanthrene | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.00597 | 0.0309 | W015 | 0.0159 | 0.0108 | 0.0289 |
| Phenanthrene | XAD Filter - particulate | µg/L | 3 | 1 | 33 | 0.00242 | 0.00242 | W015 | 0.00242 | 0.00242 | 0.00242 |
| Phenanthrene | Peristaltic - total | µg/L | 6 | 2 | 33 | 0.039 | 0.17 | W012 | 0.105 | 0.105 | 0.163 |
| Phenanthrene | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.00597 | 0.0309 | W015 | 0.0167 | 0.0132 | 0.0291 |
| Total cPAHs | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.0017 JT | 0.009 T | W015 | 0.00423 | 0.002 JT | 0.0083 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.0098 T | 0.037 T | W015 | 0.0219 | 0.019 T | 0.0352 |
| Total cPAHs | Peristaltic - total | µg/L | 6 | 6 | 100 | 0.0029 JT | 0.78 JT | W012 | 0.152 | 0.0071 J | 0.613 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0115 J | 0.046 | W015 | 0.0262 | 0.021 J | 0.0435 J |
| Total PAHs | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.0564 JT | 0.169 JT | W015 | 0.096 | 0.0625 JT | 0.158 J |
| Total PAHs | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.0178 T | 0.0619 T | W015 | 0.0393 | 0.0381 T | 0.0595 |
| Total PAHs | Peristaltic - total | µg/L | 6 | 6 | 100 | 0.0172 JT | 2.46 JT | W012 | 0.649 | 0.0353 J | 2.17 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0803 J | 0.231 J | W015 | 0.135 | 0.0945 J | 0.217 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | XAD Column - dissolved | µg/L | 3 | 1 | 33 | 0.00351 J | 0.00351 J | W015 | 0.00351 | 0.00351 J | 0.00351 J |
| Bis(2-ethylhexyl) phthalate | XAD Filter - particulate | µg/L | 3 | 2 | 67 | 0.00424 J | 0.033 | W015 | 0.0186 | 0.0186 J | 0.0316 J |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | XAD Column+Filter - total | µg/L | 3 | 2 | 67 | 0.00775 J | 0.033 | W015 | 0.0204 | 0.0204 J | 0.0317 J |
| Butylbenzyl phthalate | XAD Column - dissolved | µg/L | 3 | 2 | 67 | 0.000967 J | 0.00733 | W015 | 0.00415 | 0.00415 J | 0.00701 J |
| Butylbenzyl phthalate | XAD Filter - particulate | µg/L | 3 | 1 | 33 | 0.00217 | 0.00217 | W015 | 0.00217 | 0.00217 | 0.00217 |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | XAD Column+Filter - total | µg/L | 3 | 2 | 67 | 0.000967 J | 0.0095 | W015 | 0.00523 | 0.00523 J | 0.00907 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.0000395 | 0.000054 | W015 | 0.0000483 | 0.0000515 | 0.0000538 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.0000107 | 0.0000174 | W015 | 0.0000137 | 0.000013 | 0.000017 |
| Hexachlorobenzene | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0000502 | 0.0000689 | W015 | 0.000062 | 0.000067 | 0.0000687 |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **RM 07<08** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 7 | 7 | 100 | 0.33 | 0.47 | W017 | 0.384 | 0.376 | 0.464 |
| Arsenic | Peristaltic - particulate | µg/L | 7 | 7 | 100 | 0.043 | 0.128 | W017 | 0.0711 | 0.061 | 0.117 |
| Arsenic | Peristaltic - total | µg/L | 7 | 7 | 100 | 0.373 | 0.56 | W017 | 0.455 | 0.437 | 0.548 |
| Cadmium | Peristaltic - dissolved | µg/L | 7 | 2 | 29 | 0.02 | 0.02 | W017 | 0.02 | 0.02 | 0.02 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 7 | 3 | 43 | 0 | 0.02 | W016-2; W017 | 0.0133 | 0.02 | 0.02 |
| Cadmium | Peristaltic - total | µg/L | 7 | 2 | 29 | 0.02 | 0.04 | W017 | 0.03 | 0.03 | 0.039 |
| Chromium | Peristaltic - dissolved | µg/L | 7 | 2 | 29 | 0.12 J | 0.17 J | W017 | 0.145 | 0.145 J | 0.168 J |
| Chromium | Peristaltic - particulate | µg/L | 7 | 4 | 57 | 0.15 J | 0.3 | W016-1 | 0.228 | 0.23 J | 0.299 |
| Chromium | Peristaltic - total | µg/L | 7 | 4 | 57 | 0.27 | 0.34 | W017 | 0.3 | 0.295 | 0.334 |
| Copper | Peristaltic - dissolved | µg/L | 7 | 7 | 100 | 0.37 | 1.12 | W016-1 | 0.646 | 0.61 | 1.02 J |
| Copper | Peristaltic - particulate | µg/L | 7 | 7 | 100 | 0.17 | 1 | W017 | 0.453 | 0.36 | 0.877 J |
| Copper | Peristaltic - total | µg/L | 7 | 7 | 100 | 0.69 | 1.77 | W017 | 1.1 | 0.97 | 1.65 J |
| Lead | Peristaltic - dissolved | µg/L | 7 | 5 | 71 | 0.01 J | 0.02 | W017 | 0.0132 | 0.012 J | 0.0188 J |
| Lead | Peristaltic - particulate | µg/L | 7 | 7 | 100 | 0.107 J | 0.44 | W016-1 | 0.2 | 0.177 J | 0.386 |
| Lead | Peristaltic - total | µg/L | 7 | 7 | 100 | 0.121 | 0.44 | W016-1 | 0.209 | 0.187 | 0.392 |
| Mercury | Peristaltic - dissolved | µg/L | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 7 | 4 | 57 | 0.59 | 1.09 | W017 | 0.763 | 0.685 | 1.04 |
| Nickel | Peristaltic - particulate | µg/L | 7 | 6 | 86 | 0.05 | 0.62 J | W016-1 | 0.328 | 0.28 | 0.618 J |
| Nickel | Peristaltic - total | µg/L | 7 | 6 | 86 | 0.61 | 1.14 | W017 | 0.837 | 0.87 | 1.08 |
| Zinc | Peristaltic - dissolved | µg/L | 7 | 5 | 71 | 1.6 | 2.15 J | W016-1 | 1.79 | 1.7 | 2.08 J |
| Zinc | Peristaltic - particulate | µg/L | 7 | 7 | 100 | 0.45 J | 2.1 | W016-1 | 1.21 | 0.9 | 2.07 |
| Zinc | Peristaltic - total | µg/L | 7 | 7 | 100 | 2 | 3.5 J | W017 | 2.49 | 2.4 | 3.23 J |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.000137 JT | 0.000581 JT | W016-1 | 0.000322 | 0.000247 JT | 0.000548 J |
| Total PCBs | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.000201 JT | 0.000695 JT | W016-1 | 0.000378 | 0.000238 JT | 0.000649 J |
| Total PCBs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PCBs | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.000375 J | 0.00128 J | W016-1 | 0.0007 | 0.000448 J | 0.00119 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.000000000174 T | 0.00000000288 JT | W016-1 | 0.00000000139 | 0.00000000111 JT | 0.0000000027 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.00000000415 T | 0.0000000123 T | W016-1 | 0.00000000693 | 0.00000000433 JT | 0.0000000115 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.00000000432 | 0.0000000152 J | W016-1 | 0.00000000831 | 0.00000000544 J | 0.0000000142 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 3 | 2 | 67 | 0.000000702 J | 0.0000014 J | W016-1 | 0.00000105 | 0.00000105 J | 0.00000137 J |
| Aldrin | XAD Filter - particulate | µg/L | 3 | 2 | 67 | 0.000000652 J | 0.000000979 J | W016-1 | 0.000000816 | 0.000000816 J | 0.000000963 J |
| Aldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Aldrin | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.000000702 J | 0.00000205 J | W016-1 | 0.00000124 | 0.000000979 J | 0.00000194 J |
| Dieldrin | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.000023 | 0.0000424 | W016-1 | 0.0000334 | 0.0000349 | 0.0000417 |
| Dieldrin | XAD Filter - particulate | µg/L | 3 | 2 | 67 | 0.00000337 J | 0.00000456 J | W016-1 | 0.00000397 | 0.00000397 J | 0.0000045 J |
| Dieldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.000023 J | 0.000047 J | W016-1 | 0.0000361 | 0.0000383 J | 0.0000461 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.0000241 | 0.0000605 | W016-1 | 0.0000367 | 0.0000255 | 0.000057 |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.000000154 J | 0.00000128 J | W016-1 | 0.000000564 | 0.000000258 J | 0.00000118 J |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0000243 J | 0.0000618 J | W016-1 | 0.0000373 | 0.0000258 J | 0.0000582 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.000014 JT | 0.0000235 JT | W016-1 | 0.0000194 | 0.0000206 JT | 0.0000232 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.00000739 JT | 0.0000155 JT | W016-1 | 0.0000108 | 0.00000944 JT | 0.0000149 J |
| Total chlordanes | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0000214 J | 0.000039 J | W016-1 | 0.0000301 | 0.00003 J | 0.0000381 J |
| DDx | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.000494 JT | 0.00297 T | W016-1 | 0.00142 | 0.000781 T | 0.00275 |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| DDx | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.000743 JT | 0.00679 T | W016-1 | 0.00324 | 0.00219 T | 0.00633 |
| DDx | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.000693 JT | 0.000693 JT | W017 | 0.000693 | 0.000693 JT | 0.000693 JT |
| DDx | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.00124 J | 0.00976 | W016-1 | 0.00466 | 0.00297 | 0.00908 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 3 | 2 | 67 | 0.0000348 J | 0.0000367 J | W016-1 | 0.0000358 | 0.0000358 J | 0.0000366 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.000755 | 0.00257 | W016-1 | 0.00139 | 0.000852 | 0.0024 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.00079 J | 0.00257 | W016-1 | 0.00142 | 0.000889 J | 0.0024 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.00341 JT | 0.0398 JT | W016-1 | 0.016 | 0.00472 JT | 0.0363 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.00686 T | 0.0304 T | W016-1 | 0.0157 | 0.00985 JT | 0.0283 J |
| Total HPAHs | Peristaltic - total | µg/L | 7 | 2 | 29 | 0.0388 JT | 0.0396 JT | W017 | 0.0392 | 0.0392 J | 0.0396 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0116 J | 0.0702 J | W016-1 | 0.0317 | 0.0133 J | 0.0645 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.00659 T | 0.0275 T | W016-1 | 0.0136 | 0.00672 T | 0.0254 |
| Total LPAHs | XAD Filter - particulate | µg/L | 3 | 2 | 67 | 0.000329 JT | 0.00171 T | W016-1 | 0.00102 | 0.00102 J | 0.00164 J |
| Total LPAHs | Peristaltic - total | µg/L | 7 | 2 | 29 | 0.0093 JT | 0.0116 JT | W017 | 0.0105 | 0.0105 J | 0.0115 J |
| Total LPAHs | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.00659 | 0.0292 | W016-1 | 0.0143 | 0.00705 J | 0.027 J |
| Naphthalene | XAD Column - dissolved | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Filter - particulate | µg/L | 3 | 1 | 33 | 0.000742 | 0.000742 | W016-1 | 0.000742 | 0.000742 | 0.000742 |
| Naphthalene | Peristaltic - total | µg/L | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Column+Filter - total | µg/L | 3 | 1 | 33 | 0.000742 | 0.000742 | W016-1 | 0.000742 | 0.000742 | 0.000742 |
| Phenanthrene | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.00176 | 0.0136 | W016-1 | 0.0058 | 0.00203 | 0.0124 |
| Phenanthrene | XAD Filter - particulate | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 7 | 1 | 14 | 0.0071 J | 0.0071 J | W017 | 0.0071 | 0.0071 J | 0.0071 J |
| Phenanthrene | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.00176 | 0.0136 | W016-1 | 0.0058 | 0.00203 | 0.0124 |
| Total cPAHs | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.00056 JT | 0.0059 T | W016-1 | 0.00236 | 0.00063 JT | 0.00537 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.0045 T | 0.02 T | W016-1 | 0.0101 | 0.0059 JT | 0.0186 J |
| Total cPAHs | Peristaltic - total | µg/L | 7 | 2 | 29 | 0.0036 JT | 0.0038 JT | W016-1 | 0.0037 | 0.0037 J | 0.00379 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.00513 J | 0.0259 | W016-1 | 0.0125 | 0.00646 J | 0.024 J |
| Total PAHs | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.0101 JT | 0.0673 JT | W016-1 | 0.0296 | 0.0113 JT | 0.0617 J |
| Total PAHs | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.00686 T | 0.0321 T | W016-1 | 0.0164 | 0.0102 JT | 0.0299 J |
| Total PAHs | Peristaltic - total | µg/L | 7 | 3 | 43 | 0.0116 JT | 0.0489 JT | W017 | 0.0331 | 0.0388 JT | 0.0479 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0182 J | 0.0994 J | W016-1 | 0.046 | 0.0203 J | 0.0915 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | XAD Column - dissolved | µg/L | 3 | 1 | 33 | 0.00435 J | 0.00435 J | W016-1 | 0.00435 | 0.00435 J | 0.00435 J |
| Bis(2-ethylhexyl) phthalate | XAD Filter - particulate | µg/L | 3 | 1 | 33 | 0.00457 J | 0.00457 J | W016-1 | 0.00457 | 0.00457 J | 0.00457 J |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | XAD Column+Filter - total | µg/L | 3 | 1 | 33 | 0.00892 J | 0.00892 J | W016-1 | 0.00892 | 0.00892 J | 0.00892 J |
| Butylbenzyl phthalate | XAD Column - dissolved | µg/L | 3 | 1 | 33 | 0.000889 J | 0.000889 J | W016-1 | 0.000889 | 0.000889 J | 0.000889 J |
| Butylbenzyl phthalate | XAD Filter - particulate | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | XAD Column+Filter - total | µg/L | 3 | 1 | 33 | 0.000889 J | 0.000889 J | W016-1 | 0.000889 | 0.000889 J | 0.000889 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 3 | 3 | 100 | 0.0000317 | 0.0000534 | W016-1 | 0.0000436 | 0.0000456 | 0.0000526 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 3 | 3 | 100 | 0.00000784 | 0.000032 | W016-1 | 0.0000165 | 0.00000977 | 0.0000298 |
| Hexachlorobenzene | Peristaltic - total | µg/L | 7 | 1 | 14 | 0.00105 | 0.00105 | W017 | 0.00105 | 0.00105 | 0.00105 |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 3 | 3 | 100 | 0.0000395 | 0.0000854 | W016-1 | 0.0000601 | 0.0000554 | 0.0000824 |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **RM 08<09** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.307 | 0.46 | W019 | 0.385 | 0.389 | 0.453 |
| Arsenic | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.0565 | 0.08 | W019 | 0.0658 | 0.061 | 0.0781 |
| Arsenic | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.368 | 0.54 | W019 | 0.451 | 0.446 T | 0.531 |
| Cadmium | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 0.02 | 0.03 | W019 | 0.025 | 0.025 | 0.0295 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 3 | 2 | 67 | 0 | 0 | W019 | 0 | 0 | 0 |
| Cadmium | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.02 | 0.03 | W019 | 0.025 | 0.025 | 0.0295 |
| Chromium | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 0.13 J | 0.16 J | W019 | 0.145 | 0.145 J | 0.159 J |
| Chromium | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.14 J | 0.51 | W019 | 0.282 | 0.195 J | 0.479 J |
| Chromium | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.3 | 0.51 | W019 | 0.378 | 0.325 T | 0.492 |
| Copper | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.44 | 0.85 J | W019 | 0.637 | 0.62 | 0.827 J |
| Copper | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.36 | 0.76 J | W019 | 0.503 | 0.39 | 0.723 J |
| Copper | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.8 | 1.61 J | W019 | 1.14 | 1.01 T | 1.55 J |
| Lead | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 0.01 J | 0.06 | W019 | 0.035 | 0.035 J | 0.0575 J |
| Lead | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.147 | 0.39 | W019 | 0.239 | 0.18 J | 0.369 J |
| Lead | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.147 | 0.45 | W019 | 0.262 | 0.19 T | 0.424 |
| Mercury | Peristaltic - dissolved | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 0.67 | 0.97 | W019 | 0.82 | 0.82 | 0.955 |
| Nickel | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.01 | 0.75 | W019 | 0.265 | 0.035 | 0.679 |
| Nickel | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.68 | 1.01 T | W019 | 0.812 | 0.75 | 0.98 |
| Zinc | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 1.6 | 1.74 | W019 | 1.68 | 1.7 | 1.74 |
| Zinc | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.6 | 1.98 | W019 | 1.24 | 1.15 | 1.9 |
| Zinc | Peristaltic - total | µg/L | 3 | 3 | 100 | 2.2 | 3.72 | W019 | 2.92 | 2.85 T | 3.63 |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.00115 T | 0.00115 T | W019 | 0.00115 | 0.00115 T | 0.00115 T |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.0026 JT | 0.045 JT | W019 | 0.0238 | 0.0238 J | 0.0429 J |
| Total LPAHs | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.0042 JT | 0.0042 JT | W019 | 0.0042 | 0.0042 JT | 0.0042 JT |
| Naphthalene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.0026 JT | 0.004 JT | W019 | 0.0033 | 0.0033 J | 0.00393 J |
| Total PAHs | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.0026 JT | 0.0492 JT | W019 | 0.0259 | 0.0259 J | 0.0469 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **RM 09<10** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.397 | 0.493 | W022 | 0.447 | 0.45 | 0.489 |
| Arsenic | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.066 | 0.175 | W022 | 0.107 | 0.08 | 0.166 |
| Arsenic | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.463 | 0.668 | W022 | 0.554 | 0.53 | 0.654 |
| Cadmium | Peristaltic - dissolved | µg/L | 3 | 1 | 33 | 0.03 | 0.03 | W022 | 0.03 | 0.03 | 0.03 |
| Cadmium | Peristaltic - particulate | µg/L | 3 | 2 | 67 | 0.02 | 0.03 | W022 | 0.025 | 0.025 | 0.0295 |
| Cadmium | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.03 | 0.05 | W022 | 0.04 | 0.04 | 0.049 |
| Chromium | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.11 J | 0.28 | W022 | 0.193 | 0.19 J | 0.271 J |
| Chromium | Peristaltic - particulate[d] | µg/L | 3 | 3 | 100 | 0 | 0.22 J | W022 | 0.133 | 0.18 J | 0.216 J |
| Chromium | Peristaltic - total | µg/L | 3 | 2 | 67 | 0.33 | 0.37 | W022 | 0.35 | 0.35 | 0.368 |
| Copper | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.49 | 1.64 J | W022 | 1 | 0.88 | 1.56 J |
| Copper | Peristaltic - particulate[d] | µg/L | 3 | 3 | 100 | 0 J | 0.56 | W022 | 0.233 | 0.14 | 0.518 |
| Copper | Peristaltic - total | µg/L | 3 | 3 | 100 | 1.02 | 1.27 J | W022 | 1.11 | 1.05 | 1.25 J |
| Lead | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 0.015 J | 0.08 | W022 | 0.0393 | 0.023 | 0.0743 |
| Lead | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.134 | 0.303 J | W022 | 0.222 | 0.23 | 0.296 J |
| Lead | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.157 | 0.318 | W022 | 0.262 | 0.31 | 0.317 |
| Mercury | Peristaltic - dissolved | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 3 | 2 | 67 | 1.04 | 1.08 | W022 | 1.06 | 1.06 | 1.08 |
| Nickel | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 0.09 | 0.65 | W022 | 0.283 | 0.11 | 0.596 |
| Nickel | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.65 | 1.17 | W022 | 0.99 | 1.15 | 1.17 |
| Zinc | Peristaltic - dissolved | µg/L | 3 | 3 | 100 | 2.7 | 41.9 | W022 | 16.1 | 3.7 | 38.1 |
| Zinc | Peristaltic - particulate | µg/L | 3 | 3 | 100 | 1.3 | 16 | W022 | 7.12 | 4.07 | 14.8 |
| Zinc | Peristaltic - total | µg/L | 3 | 3 | 100 | 5 | 57.9 | W022 | 23.2 | 6.77 | 52.8 |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.00467 JT | 0.00467 JT | W022 | 0.00467 | 0.00467 JT | 0.00467 JT |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.000768 | 0.000768 | W022 | 0.000768 | 0.000768 | 0.000768 |
| Total chlordanes | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.0056 JT | 0.0213 JT | W022 | 0.0114 | 0.0072 JT | 0.0199 J |
| Total LPAHs | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.0151 JT | 0.0151 JT | W022 | 0.0151 | 0.0151 JT | 0.0151 JT |
| Naphthalene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.0072 JT | 0.0072 JT | W022 | 0.0072 | 0.0072 JT | 0.0072 JT |
| Total PAHs | Peristaltic - total | µg/L | 3 | 3 | 100 | 0.0072 JT | 0.0213 JT | W022 | 0.0164 | 0.0207 JT | 0.0212 J |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | Peristaltic - total | µg/L | 3 | 1 | 33 | 0.00701 | 0.00701 | W022 | 0.00701 | 0.00701 | 0.00701 |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Multnomah Channel** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.299 | 0.41 | W003 | 0.354 | 0.353 | 0.404 |
| Arsenic | Peristaltic - particulate | µg/L | 0.056 | 0.084 | W003 | 0.0733 | 0.08 | 0.0836 |
| Arsenic | Peristaltic - total | µg/L | 0.355 | 0.49 | W003 | 0.427 | 0.437 | 0.485 |
| Cadmium | Peristaltic - dissolved | µg/L | 0.017 U | 0.02 UJ | W003 | 0.0095 | 0.01 UJ | 0.01 UJ |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 UJ | 0.024 U | W003 | 0.0107 | 0.01 U | 0.0118 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 UJ | 0.024 U | W003 | 0.0107 | 0.01 U | 0.0118 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.13 J | 0.29 | W003 | 0.167 | 0.13 J | 0.274 J |
| Chromium | Peristaltic - particulate | µg/L | 0.18 | 0.54 | W003 | 0.307 | 0.2 J | 0.506 J |
| Chromium | Peristaltic - total | µg/L | 0.33 | 0.54 | W003 | 0.447 | 0.47 | 0.533 |
| Copper | Peristaltic - dissolved | µg/L | 0.46 | 0.74 | W003 | 0.633 | 0.7 | 0.736 |
| Copper | Peristaltic - particulate | µg/L | 0.41 | 0.67 | W003 | 0.533 | 0.52 | 0.655 |
| Copper | Peristaltic - total | µg/L | 0.87 | 1.41 | W003 | 1.17 | 1.22 | 1.39 |
| Lead | Peristaltic - dissolved | µg/L | 0.01 U | 0.036 J | W003 | 0.0177 | 0.012 J | 0.0336 J |
| Lead | Peristaltic - particulate | µg/L | 0.101 J | 0.26 | W003 | 0.172 | 0.154 J | 0.249 J |
| Lead | Peristaltic - total | µg/L | 0.137 | 0.26 | W003 | 0.188 | 0.166 | 0.251 |
| Mercury | Peristaltic - dissolved | µg/L | 0.04 UJ | 0.08 U | W003 | 0.0267 | 0.02 U | 0.038 U |
| Mercury | Peristaltic - particulate | µg/L | 0.04 UJ | 0.08 U | W003 | 0.0267 | 0.02 U | 0.038 U |
| Mercury | Peristaltic - total | µg/L | 0.04 UJ | 0.08 U | W003 | 0.0267 | 0.02 U | 0.038 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.52 | 0.82 | W003 | 0.667 | 0.66 | 0.804 |
| Nickel | Peristaltic - particulate | µg/L | 0.15 | 0.36 | W003 | 0.263 | 0.28 | 0.352 |
| Nickel | Peristaltic - total | µg/L | 0.67 | 1.18 | W003 | 0.93 | 0.94 | 1.16 |
| Zinc | Peristaltic - dissolved | µg/L | 0.9 | 1.9 J | W003 | 1.53 | 1.8 | 1.89 J |
| Zinc | Peristaltic - particulate | µg/L | 0.3 | 1.04 J | W003 | 0.747 | 0.9 | 1.03 J |
| Zinc | Peristaltic - total | µg/L | 1.8 | 2.94 J | W003 | 2.28 | 2.1 | 2.86 J |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0071 U | W003 | 0.00138 | 0.0003 U | 0.00323 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 0.0025 UJT | 0.0025 UJT | W003 | 0.00125 | 0.00125 UJT | 0.00125 UJ |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.00049 UJ | 0.000505 UJ | W003 | 0.000249 | 0.00025 U | 0.000252 UJ |
| Dieldrin | Peristaltic - total | µg/L | 0.00049 UJ | 0.000505 UJ | W003 | 0.000249 | 0.00025 U | 0.000252 UJ |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.00049 UJ | 0.000505 UJ | W003 | 0.000249 | 0.00025 U | 0.000252 UJ |
| Total chlordanes | Peristaltic - total | µg/L | 0.00049 UJT | 0.000505 UJT | W003 | 0.000249 | 0.00025 UT | 0.000252 UJ |
| DDx | Peristaltic - total | µg/L | 0.00049 UJT | 0.000505 UJT | W003 | 0.000249 | 0.00025 UT | 0.000252 UJ |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0027 J | 0.0064 U | W003 | 0.0025 | 0.0027 J | 0.00315 J |
| Total HPAHs | Peristaltic - total | µg/L | 0.0055 JT | 0.042 JT | W003 | 0.0171 | 0.0055 JT | 0.0384 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.0039 UT | 0.0095 JT | W003 | 0.00488 | 0.0032 UT | 0.00887 J |
| Naphthalene | Peristaltic - total | µg/L | 0.0039 U | 0.013 U | W003 | 0.00388 | 0.0032 U | 0.00617 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0032 U | 0.013 U | W003 | 0.00377 | 0.0032 U | 0.00617 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.0042 UT | 0.014 JT | W003 | 0.0072 | 0.0055 JT | 0.0132 J |
| Total PAHs | Peristaltic - total | µg/L | 0.0074 UT | 0.042 JT | W003 | 0.0202 | 0.015 JT | 0.0393 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.03 U | 0.03 U | W003 | 0.015 | 0.015 U | 0.015 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.28 U | 0.32 U | W003 | 0.148 | 0.145 U | 0.159 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.027 U | 0.027 U | W003 | 0.0135 | 0.0135 U | 0.0135 U |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.00049 UJ | 0.000505 UJ | W003 | 0.000249 | 0.00025 U | 0.000252 UJ |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **RM 01.9<03** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.285 | 0.62 | W002 | 0.501 | 0.508 | 0.62 |
| Arsenic | Peristaltic - particulate | µg/L | 0.02 | 0.09 | W002 | 0.0572 | 0.062 | 0.085 |
| Arsenic | Peristaltic - total | µg/L | 0.35 | 0.71 | W002 | 0.558 | 0.557 | 0.696 |
| Cadmium | Peristaltic - dissolved | µg/L | 0.015 U | 0.02 UJ | W002 | 0.0095 | 0.01 UJ | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.015 U | 0.03 | W002 | 0.0155 | 0.01 UJ | 0.028 |
| Cadmium | Peristaltic - total | µg/L | 0.011 U | 0.03 | W002 | 0.0151 | 0.01 UJ | 0.028 |
| Chromium | Peristaltic - dissolved | µg/L | 0.11 U | 0.24 | W002 | 0.136 | 0.13 J | 0.23 J |
| Chromium | Peristaltic - particulate | µg/L | 0.23 J | 0.55 | W002 | 0.298 | 0.24 U | 0.488 J |
| Chromium | Peristaltic - total | µg/L | 0.36 | 0.55 | W002 | 0.41 | 0.43 | 0.534 |
| Copper | Peristaltic - dissolved | µg/L | 0.51 | 0.84 | W002 | 0.694 | 0.67 | 0.836 |
| Copper | Peristaltic - particulate | µg/L | 0.29 | 0.68 | W002 | 0.454 | 0.41 | 0.66 |
| Copper | Peristaltic - total | µg/L | 0.92 | 1.5 | W002 | 1.15 | 0.96 | 1.48 |
| Lead | Peristaltic - dissolved | µg/L | 0.01 UJ | 0.021 J | W002 | 0.0132 | 0.015 J | 0.0208 J |
| Lead | Peristaltic - particulate | µg/L | 0.112 J | 0.26 J | W002 | 0.177 | 0.14 J | 0.26 J |
| Lead | Peristaltic - total | µg/L | 0.132 | 0.26 | W002 | 0.188 | 0.155 | 0.26 |
| Mercury | Peristaltic - dissolved | µg/L | 0.04 UJ | 0.08 U | W002 | 0.028 | 0.02 U | 0.04 U |
| Mercury | Peristaltic - particulate | µg/L | 0.04 UJ | 0.08 U | W002 | 0.028 | 0.02 U | 0.04 U |
| Mercury | Peristaltic - total | µg/L | 0.04 UJ | 0.08 U | W002 | 0.028 | 0.02 U | 0.04 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.5 | 1.11 | W002 | 0.878 | 0.88 | 1.09 |
| Nickel | Peristaltic - particulate | µg/L | 0.11 | 0.38 | W002 | 0.238 | 0.2 | 0.37 |
| Nickel | Peristaltic - total | µg/L | 0.67 | 1.26 | W002 | 1.12 | 1.22 | 1.25 |
| Zinc | Peristaltic - dissolved | µg/L | 1.1 | 2.3 | W002 | 1.18 | 1.1 | 2.08 |
| Zinc | Peristaltic - particulate[d] | µg/L | 0 | 2.78 J | W002 | 1.39 | 0.9 | 2.72 J |
| Zinc | Peristaltic - total | µg/L | 1.8 | 2.78 J | W002 | 2.21 | 2 | 2.72 J |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0071 U | W002 | 0.00095 | 0.0003 U | 0.0029 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 0.0025 UJT | 0.00255 UT | W002 | 0.00126 | 0.00126 UJ | 0.00127 UJ |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.000481 UJ | 0.000538 UJ | W002 | 0.000252 | 0.000248 U | 0.000267 UJ |
| Dieldrin | Peristaltic - total | µg/L | 0.000481 UJ | 0.000538 UJ | W002 | 0.000252 | 0.000248 U | 0.000267 UJ |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.000481 UJ | 0.000538 UJ | W002 | 0.000252 | 0.000248 U | 0.000267 UJ |
| Total chlordanes | Peristaltic - total | µg/L | 0.000481 UJT | 0.00212 JT | W002 | 0.000869 | 0.000248 UT | 0.00193 J |
| DDx | Peristaltic - total | µg/L | 0.000481 UJT | 0.000538 UJT | W002 | 0.000252 | 0.000248 UT | 0.000267 UJ |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0016 U | 0.0032 U | W002 | 0.00112 | 0.0008 U | 0.0016 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.0031 JT | 0.0132 JT | W002 | 0.00694 | 0.0037 UT | 0.0128 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.0013 JT | 0.005 JT | W002 | 0.00304 | 0.0024 JT | 0.00498 J |
| Naphthalene | Peristaltic - total | µg/L | 0.0032 U | 0.0064 U | W002 | 0.00256 | 0.0028 U | 0.0032 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0032 U | 0.0064 U | W002 | 0.00224 | 0.0016 U | 0.0032 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.002 JT | 0.0042 UT | W002 | 0.00166 | 0.002 JT | 0.0021 U |
| Total PAHs | Peristaltic - total | µg/L | 0.0049 JT | 0.0132 JT | W002 | 0.00818 | 0.0055 JT | 0.013 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.031 U | W002 | 0.0152 | 0.0155 U | 0.0155 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.29 U | 0.56 U | W002 | 0.174 | 0.15 UJ | 0.254 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.026 U | 0.028 UJ | W002 | 0.0137 | 0.014 UJ | 0.014 U |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.000495 U | 0.016 U | W002 | 0.00363 | 0.00211 J | 0.0079 U |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **RM 04<05** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.319 | 0.42 | W006 | 0.356 | 0.33 | 0.411 |
| Arsenic | Peristaltic - particulate | µg/L | 0.07 | 0.098 | W006 | 0.0827 | 0.08 | 0.0962 |
| Arsenic | Peristaltic - total | µg/L | 0.399 | 0.49 T | W006 | 0.439 | 0.428 | 0.484 |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 UJ | 0.05 U | W006 | 0.0158 | 0.0125 U | 0.0238 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 UJ | 0.06 U | W006 | 0.0175 | 0.0125 U | 0.0283 U |
| Cadmium | Peristaltic - total | µg/L | 0.017 U | 0.06 UT | W006 | 0.0162 | 0.01 UJ | 0.028 UJ |
| Chromium | Peristaltic - dissolved | µg/L | 0.13 J | 0.22 | W006 | 0.145 | 0.13 J | 0.211 J |
| Chromium | Peristaltic - particulate | µg/L | 0.24 J | 0.38 U | W006 | 0.27 | 0.24 J | 0.366 J |
| Chromium | Peristaltic - total | µg/L | 0.37 | 0.6 | W006 | 0.387 | 0.37 | 0.577 |
| Copper | Peristaltic - dissolved | µg/L | 0.62 | 0.93 | W006 | 0.793 | 0.83 | 0.92 |
| Copper | Peristaltic - particulate | µg/L | 0.07 | 0.52 J | W006 | 0.37 | 0.52 | 0.52 J |
| Copper | Peristaltic - total | µg/L | 1 | 1.35 JT | W006 | 1.16 | 1.14 | 1.33 J |
| Lead | Peristaltic - dissolved | µg/L | 0.019 U | 0.091 | W006 | 0.0402 | 0.02 J | 0.0839 J |
| Lead | Peristaltic - particulate | µg/L | 0.155 | 0.217 J | W006 | 0.185 | 0.183 | 0.214 J |
| Lead | Peristaltic - total | µg/L | 0.183 T | 0.246 | W006 | 0.222 | 0.237 | 0.245 |
| Mercury | Peristaltic - dissolved | µg/L | 0.04 U | 0.08 U | W006 | 0.0267 | 0.02 U | 0.038 U |
| Mercury | Peristaltic - particulate | µg/L | 0.04 U | 0.08 U | W006 | 0.0267 | 0.02 U | 0.038 U |
| Mercury | Peristaltic - total | µg/L | 0.04 U | 0.08 UT | W006 | 0.0267 | 0.02 U | 0.038 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.63 | 0.94 | W006 | 0.803 | 0.84 | 0.93 |
| Nickel | Peristaltic - particulate[d] | µg/L | 0 | 0.155 | W006 | 0.0883 | 0.11 | 0.151 |
| Nickel | Peristaltic - total | µg/L | 0.72 | 0.95 | W006 | 0.818 | 0.785 T | 0.934 |
| Zinc | Peristaltic - dissolved | µg/L | 1.8 | 2.8 | W006 | 2.2 | 2 J | 2.72 J |
| Zinc | Peristaltic - particulate | µg/L | 0 | 1.25 J | W006 | 0.65 | 0.7 | 1.2 J |
| Zinc | Peristaltic - total | µg/L | 2.5 | 3.25 JT | W006 | 2.75 | 2.5 | 3.18 J |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0071 U | W006 | 0.00165 | 0.0011 J | 0.00331 J |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 0.0025 UT | 0.00256 UT | W006 | 0.00126 | 0.00126 UT | 0.00128 U |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.0005 U | 0.000521 U | W006 | 0.000255 | 0.000255 U | 0.00026 U |
| Dieldrin | Peristaltic - total | µg/L | 0.0005 U | 0.000521 U | W006 | 0.000255 | 0.000255 U | 0.00026 U |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.0005 U | 0.000521 U | W006 | 0.000255 | 0.000255 U | 0.00026 U |
| Total chlordanes | Peristaltic - total | µg/L | 0.0005 UT | 0.000521 UT | W006 | 0.000255 | 0.000255 UT | 0.00026 U |
| DDx | Peristaltic - total | µg/L | 0.0005 UJT | 0.000521 UJT | W006 | 0.000255 | 0.000255 UT | 0.00026 UJ |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0032 UJ | 0.0032 UJ | W006 | 0.0016 | 0.0016 U | 0.0016 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.021 JT | 0.0352 JT | W006 | 0.0289 | 0.0304 JT | 0.0347 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.0064 UT | 0.0079 UJT | W006 | 0.00468 | 0.00395 UJT | 0.00661 J |
| Naphthalene | Peristaltic - total | µg/L | 0.0064 U | 0.0079 UJ | W006 | 0.00345 | 0.0032 U | 0.00388 UJ |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 UJ | 0.0064 UJ | W006 | 0.0032 | 0.0032 U | 0.0032 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.0032 JT | 0.0089 JT | W006 | 0.00517 | 0.0034 JT | 0.00835 J |
| Total PAHs | Peristaltic - total | µg/L | 0.021 JT | 0.0373 JT | W006 | 0.0312 | 0.0352 JT | 0.0371 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.031 U | W006 | 0.0152 | 0.0155 U | 0.0155 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.29 U | 0.45 U | W006 | 0.172 | 0.145 U | 0.217 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.026 U | 0.028 U | W006 | 0.0137 | 0.014 U | 0.014 U |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.0005 U | 0.000521 U | W006 | 0.000255 | 0.000255 U | 0.00026 U |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| Analyte | Method | Units | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th Percentile (half DL)[b] |
| **RM 05<06** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.329 | 0.42 | W009 | 0.37 | 0.362 | 0.414 |
| Arsenic | Peristaltic - particulate | µg/L | 0.045 | 0.08 | W009 | 0.059 | 0.052 | 0.0772 |
| Arsenic | Peristaltic - total | µg/L | 0.374 | 0.5 | W009 | 0.429 | 0.414 | 0.491 |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.04 U | W009 | 0.0167 | 0.02 U | 0.02 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 0 | 0.07 U | W009 | 0.015 | 0.01 U | 0.0325 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.07 U | W009 | 0.0217 | 0.02 | 0.0335 |
| Chromium | Peristaltic - dissolved | µg/L | 0.16 J | 0.2 U | W009 | 0.12 | 0.1 U | 0.154 J |
| Chromium | Peristaltic - particulate | µg/L | 0.14 J | 0.48 U | W009 | 0.253 | 0.24 U | 0.366 |
| Chromium | Peristaltic - total | µg/L | 0.3 | 0.48 U | W009 | 0.307 | 0.3 | 0.372 |
| Copper | Peristaltic - dissolved | µg/L | 0.5 | 0.73 | W009 | 0.61 | 0.6 | 0.717 |
| Copper | Peristaltic - particulate | µg/L | 0.3 | 0.7 J | W009 | 0.46 | 0.38 | 0.668 J |
| Copper | Peristaltic - total | µg/L | 0.8 | 1.43 J | W009 | 1.07 | 0.98 | 1.39 J |
| Lead | Peristaltic - dissolved | µg/L | 0.015 J | 0.019 U | W009 | 0.0132 | 0.015 J | 0.015 J |
| Lead | Peristaltic - particulate | µg/L | 0.104 J | 0.243 | W009 | 0.157 | 0.124 J | 0.231 J |
| Lead | Peristaltic - total | µg/L | 0.119 | 0.243 | W009 | 0.167 | 0.139 | 0.233 |
| Mercury | Peristaltic - dissolved | µg/L | 0.04 U | 0.08 U | W009 | 0.0267 | 0.02 U | 0.038 U |
| Mercury | Peristaltic - particulate | µg/L | 0.04 U | 0.08 U | W009 | 0.0267 | 0.02 U | 0.038 U |
| Mercury | Peristaltic - total | µg/L | 0.04 U | 0.08 U | W009 | 0.0267 | 0.02 U | 0.038 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.57 | 0.72 U | W009 | 0.51 | 0.57 | 0.597 |
| Nickel | Peristaltic - particulate | µg/L | 0.09 | 0.89 U | W009 | 0.265 | 0.26 | 0.427 |
| Nickel | Peristaltic - total | µg/L | 0.66 | 0.89 U | W009 | 0.655 | 0.66 | 0.84 |
| Zinc | Peristaltic - dissolved | µg/L | 1.6 | 1.8 J | W009 | 1.7 | 1.7 | 1.79 J |
| Zinc | Peristaltic - particulate | µg/L | 0.6 | 1.7 J | W009 | 1 | 0.7 | 1.6 J |
| Zinc | Peristaltic - total | µg/L | 2.3 | 3.5 J | W009 | 2.7 | 2.3 | 3.38 J |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0071 U | W009 | 0.00165 | 0.0011 J | 0.00331 J |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 0.0025 UT | 0.0025 UT | W009 | 0.00125 | 0.00125 UT | 0.00125 U |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.000485 U | 0.000532 U | W009 | 0.000253 | 0.00025 U | 0.000264 U |
| Dieldrin | Peristaltic - total | µg/L | 0.000485 U | 0.000532 U | W009 | 0.000253 | 0.00025 U | 0.000264 U |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.000485 U | 0.000532 U | W009 | 0.000253 | 0.00025 U | 0.000264 U |
| Total chlordanes | Peristaltic - total | µg/L | 0.000485 UT | 0.000532 UT | W009 | 0.000253 | 0.00025 UT | 0.000264 U |
| DDx | Peristaltic - total | µg/L | 0.000485 UT | 0.000532 UJT | W009 | 0.000253 | 0.00025 UT | 0.000264 UJ |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0032 U | 0.0032 U | W009 | 0.0016 | 0.0016 U | 0.0016 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.0074 UT | 0.0343 JT | W009 | 0.0164 | 0.0113 JT | 0.032 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.0064 UT | 0.0666 JT | W009 | 0.0243 | 0.0032 UT | 0.0603 J |
| Naphthalene | Peristaltic - total | µg/L | 0.0064 U | 0.099 U | W009 | 0.0186 | 0.0032 U | 0.0449 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.0081 U | W009 | 0.00348 | 0.0032 U | 0.00397 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.0042 UT | 0.0043 JT | W009 | 0.00357 | 0.0043 JT | 0.0043 J |
| Total PAHs | Peristaltic - total | µg/L | 0.0074 UT | 0.0779 JT | W009 | 0.0386 | 0.0343 JT | 0.0735 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.03 U | W009 | 0.0147 | 0.0145 U | 0.015 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.28 U | 0.41 U | W009 | 0.162 | 0.14 U | 0.199 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.026 U | 0.027 U | W009 | 0.0132 | 0.013 U | 0.0135 U |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.000485 U | 0.00129 J | W009 | 0.0006 | 0.000266 U | 0.00119 J |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **RM 06<07** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.31 | 0.47 | W012 | 0.389 | 0.376 | 0.465 |
| Arsenic | Peristaltic - particulate | µg/L | 0.0425 | 0.09 | W012 | 0.0616 | 0.0605 | 0.085 |
| Arsenic | Peristaltic - total | µg/L | 0.353 T | 0.56 | W012 | 0.451 | 0.436 | 0.55 |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.04 U | W015 | 0.0208 | 0.02 | 0.03 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 0 | 0.06 U | W012 | 0.015 | 0.015 U | 0.0275 |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.06 U | W012 | 0.0267 | 0.025 | 0.045 |
| Chromium | Peristaltic - dissolved | µg/L | 0.14 J | 0.19 U | W015 | 0.108 | 0.0925 U | 0.163 J |
| Chromium | Peristaltic - particulate | µg/L | 0.115 J | 0.59 | W012 | 0.285 | 0.253 | 0.538 |
| Chromium | Peristaltic - total | µg/L | 0.26 | 0.59 | W012 | 0.337 | 0.305 | 0.538 |
| Copper | Peristaltic - dissolved | µg/L | 0.42 | 0.85 J | W012 | 0.652 | 0.69 | 0.848 J |
| Copper | Peristaltic - particulate | µg/L | 0.265 | 1.08 J | W012 | 0.458 | 0.355 | 0.913 J |
| Copper | Peristaltic - total | µg/L | 0.685 T | 1.93 J | W012 | 1.11 | 1.01 | 1.76 J |
| Lead | Peristaltic - dissolved | µg/L | 0.009 J | 0.037 | W012 | 0.0213 | 0.022 J | 0.0343 |
| Lead | Peristaltic - particulate | µg/L | 0.068 | 0.356 | W012 | 0.161 | 0.142 J | 0.307 |
| Lead | Peristaltic - total | µg/L | 0.105 T | 0.38 | W012 | 0.182 | 0.158 | 0.332 |
| Mercury | Peristaltic - dissolved | µg/L | 0.04 U | 0.08 U | W012; W015 | 0.0267 | 0.02 U | 0.04 U |
| Mercury | Peristaltic - particulate | µg/L | 0.04 U | 0.08 U | W012; W015 | 0.0267 | 0.02 U | 0.04 U |
| Mercury | Peristaltic - total | µg/L | 0.04 U | 0.08 U | W012; W015 | 0.0267 | 0.02 U | 0.04 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.58 UJ | 1.12 | W012 | 0.648 | 0.675 | 1.03 |
| Nickel | Peristaltic - particulate | µg/L | 0.05 | 0.92 U | W015 | 0.325 | 0.295 | 0.634 J |
| Nickel | Peristaltic - total | µg/L | 0.645 T | 1.36 | W012 | 0.863 | 0.773 | 1.31 |
| Zinc | Peristaltic - dissolved | µg/L | 1.5 | 2.2 | W015 | 1.77 | 1.75 J | 2.1 |
| Zinc | Peristaltic - particulate[d] | µg/L | 0 | 2.5 J | W012 | 1.05 | 0.95 | 2.2 J |
| Zinc | Peristaltic - total | µg/L | 2 T | 4.3 J | W012 | 2.78 | 2.7 J | 3.95 J |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0071 U | W012; W015 | 0.00138 | 0.0003 U | 0.00355 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000254 JT | 0.000639 JT | W015 | 0.000432 | 0.000404 JT | 0.000616 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.000285 JT | 0.00129 T | W015 | 0.000658 | 0.000398 JT | 0.0012 J |
| Total PCBs | Peristaltic - total | µg/L | 0.0025 UJT | 0.0026 UT | W012 | 0.00127 | 0.00125 UT | 0.0013 U |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000539 J | 0.00193 J | W015 | 0.00109 | 0.000802 J | 0.00182 J |
| **PCDD/F Homologs** | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 0.00000201 JT | 0.00000402 T | W015 | 0.000003 | 0.00000296 T | 0.00000391 |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 0.0000436 T | 0.000078 T | W015 | 0.0000563 | 0.0000474 T | 0.0000749 |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 0.0000456 J | 0.000082 | W015 | 0.0000593 | 0.0000504 | 0.0000789 |
| **PCDD/Fs** | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.0000000238 JT | 0.0000000334 JT | W015 | 0.000000027 | 0.0000000239 JT | 0.0000000325 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000333 JT | 0.000000469 JT | W015 | 0.000000406 | 0.000000417 JT | 0.000000464 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000357 J | 0.000000502 J | W015 | 0.000000433 | 0.000000441 J | 0.000000496 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.000000000302 T | 0.00000000242 JT | W015 | 0.00000000158 | 0.00000000202 JT | 0.00000000238 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.00000000619 T | 0.000000015 T | W015 | 0.00000000959 | 0.00000000758 T | 0.0000000143 |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.00000000788 | 0.0000000174 J | W015 | 0.0000000112 | 0.00000000821 J | 0.0000000165 J |
| **Pesticides** | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 0.00000115 J | 0.00000327 J | W015 | 0.00000195 | 0.00000142 J | 0.00000309 J |
| Aldrin | XAD Filter - particulate | µg/L | 0.000000693 J | 0.000013 | W015 | 0.00000498 | 0.00000126 J | 0.0000118 J |
| Aldrin | Peristaltic - total | µg/L | 0.000481 U | 0.00051 U | W012 | 0.000249 | 0.00025 U | 0.000255 U |
| Aldrin | XAD Column+Filter - total | µg/L | 0.00000211 J | 0.0000163 J | W015 | 0.00000693 | 0.00000241 J | 0.0000149 J |
| Dieldrin | XAD Column - dissolved | µg/L | 0.000036 | 0.0000468 | W015 | 0.0000423 | 0.0000441 | 0.0000465 |
| Dieldrin | XAD Filter - particulate | µg/L | 0.00000387 J | 0.0000157 | W015 | 0.00000881 | 0.00000685 J | 0.0000148 J |
| Dieldrin | Peristaltic - total | µg/L | 0.000481 U | 0.00051 U | W012 | 0.000249 | 0.00025 U | 0.000255 U |
| Dieldrin | XAD Column+Filter - total | µg/L | 0.0000399 J | 0.0000625 | W015 | 0.0000511 | 0.000051 J | 0.0000613 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 0.0000298 | 0.0000711 | W015 | 0.0000508 | 0.0000514 | 0.0000691 |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 0.000000147 J | 0.000000862 J | W015 | 0.000000435 | 0.000000296 J | 0.000000805 J |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.000481 U | 0.00051 U | W012 | 0.000249 | 0.00025 U | 0.000255 U |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 0.0000301 J | 0.0000712 J | W015 | 0.0000512 | 0.0000523 J | 0.0000693 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 0.0000216 JT | 0.0000555 JT | W015 | 0.0000341 | 0.0000252 JT | 0.0000525 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 0.0000127 JT | 0.000185 JT | W015 | 0.0000716 | 0.0000172 JT | 0.000168 J |
| Total chlordanes | Peristaltic - total | µg/L | 0.000481 UT | 0.00051 UT | W012 | 0.000249 | 0.00025 UT | 0.000255 U |
| Total chlordanes | XAD Column+Filter - total | µg/L | 0.0000343 J | 0.000241 J | W015 | 0.000106 | 0.0000424 J | 0.000221 J |
| DDx | XAD Column - dissolved | µg/L | 0.00198 T | 0.00346 T | W015 | 0.00251 | 0.0021 T | 0.00332 |
| DDx | XAD Filter - particulate | µg/L | 0.00161 T | 0.00421 T | W015 | 0.00298 | 0.00312 T | 0.0041 |
| DDx | Peristaltic - total | µg/L | 0.0005 UT | 0.000839 T | W012 | 0.000448 | 0.000255 UT | 0.000781 |
| DDx | XAD Column+Filter - total | µg/L | 0.00359 | 0.00767 | W015 | 0.00549 | 0.00522 | 0.00743 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 0.0000632 J | 0.000336 | W015 | 0.000181 | 0.000143 J | 0.000317 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 0.00169 | 0.0063 | W015 | 0.00363 | 0.00289 | 0.00596 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0032 U | 0.15 | W012 | 0.0298 | 0.00285 U | 0.118 |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 0.00175 J | 0.00664 | W015 | 0.00381 | 0.00303 J | 0.00628 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 0.015 JT | 0.0719 JT | W015 | 0.0342 | 0.0157 JT | 0.0663 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 0.0173 T | 0.059 T | W015 | 0.0368 | 0.034 T | 0.0565 |
| Total HPAHs | Peristaltic - total | µg/L | 0.0172 JT | 1.77 JT | W012 | 0.351 | 0.0327 J | 1.39 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 0.0323 J | 0.131 J | W015 | 0.071 | 0.0497 J | 0.123 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 0.0407 T | 0.0973 T | W015 | 0.0618 | 0.0475 T | 0.0923 |
| Total LPAHs | XAD Filter - particulate | µg/L | 0.00045 T | 0.00409 T | W015 | 0.00248 | 0.0029 T | 0.00397 |
| Total LPAHs | Peristaltic - total | µg/L | 0.0034 JT | 1.08 T | W012 | 0.299 | 0.00965 J | 0.982 |
| Total LPAHs | XAD Column+Filter - total | µg/L | 0.0448 | 0.1 | W015 | 0.0643 | 0.048 | 0.095 |
| Naphthalene | XAD Column - dissolved | µg/L | 0.0102 | 0.0276 | W015 | 0.0186 | 0.018 | 0.0266 |
| Naphthalene | XAD Filter - particulate | µg/L | 0.000877 U | 0.00131 U | W015 | 0.000675 | 0.000655 U | 0.000903 |
| Naphthalene | Peristaltic - total | µg/L | 0.0064 U | 0.77 | W012 | 0.153 | 0.00715 J | 0.61 |
| Naphthalene | XAD Column+Filter - total | µg/L | 0.0102 | 0.0285 | W015 | 0.0189 | 0.018 | 0.0275 |
| Phenanthrene | XAD Column - dissolved | µg/L | 0.00597 | 0.0309 | W015 | 0.0159 | 0.0108 | 0.0289 |
| Phenanthrene | XAD Filter - particulate | µg/L | 0.00124 U | 0.00242 | W015 | 0.0013 | 0.000865 U | 0.00226 |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.17 | W012 | 0.037 | 0.0032 U | 0.137 |
| Phenanthrene | XAD Column+Filter - total | µg/L | 0.00597 | 0.0309 | W015 | 0.0167 | 0.0132 | 0.0291 |
| Total cPAHs | XAD Column - dissolved | µg/L | 0.0017 JT | 0.009 T | W015 | 0.00423 | 0.002 JT | 0.0083 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 0.0098 T | 0.037 T | W015 | 0.0219 | 0.019 T | 0.0352 |
| Total cPAHs | Peristaltic - total | µg/L | 0.0029 JT | 0.78 JT | W012 | 0.152 | 0.0071 J | 0.613 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 0.0115 J | 0.046 | W015 | 0.0262 | 0.021 J | 0.0435 J |
| Total PAHs | XAD Column - dissolved | µg/L | 0.0564 JT | 0.169 JT | W015 | 0.096 | 0.0625 JT | 0.158 J |
| Total PAHs | XAD Filter - particulate | µg/L | 0.0178 T | 0.0619 T | W015 | 0.0393 | 0.0381 T | 0.0595 |
| Total PAHs | Peristaltic - total | µg/L | 0.0172 JT | 2.46 JT | W012 | 0.649 | 0.0353 J | 2.17 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 0.0803 J | 0.231 J | W015 | 0.135 | 0.0945 J | 0.217 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.03 U | W012; W015 | 0.0149 | 0.015 U | 0.015 U |
| Bis(2-ethylhexyl) phthalate | XAD Column - dissolved | µg/L | 0.00346 U | 0.00566 U | W015 | 0.00269 | 0.00283 U | 0.00344 J |
| Bis(2-ethylhexyl) phthalate | XAD Filter - particulate | µg/L | 0.00424 J | 0.033 | W015 | 0.0138 | 0.00428 U | 0.0301 |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.29 U | 2.1 U | W015 | 0.383 | 0.26 U | 0.896 U |
| Bis(2-ethylhexyl) phthalate | XAD Column+Filter - total | µg/L | 0.00775 J | 0.033 | W015 | 0.015 | 0.00775 J | 0.0305 J |
| Butylbenzyl phthalate | XAD Column - dissolved | µg/L | 0.000967 J | 0.00733 | W015 | 0.00294 | 0.000967 J | 0.00669 J |
| Butylbenzyl phthalate | XAD Filter - particulate | µg/L | 0.000271 U | 0.00217 | W015 | 0.000838 | 0.00021 U | 0.00197 |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.026 U | 0.027 U | W012; W015 | 0.0134 | 0.0135 U | 0.0135 U |
| Butylbenzyl phthalate | XAD Column+Filter - total | µg/L | 0.000967 J | 0.0095 | W015 | 0.00367 | 0.000967 J | 0.00865 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 0.0000395 | 0.000054 | W015 | 0.0000483 | 0.0000515 | 0.0000538 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 0.0000107 | 0.0000174 | W015 | 0.0000137 | 0.000013 | 0.000017 |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.000481 U | 0.015 U | W015 | 0.00387 | 0.00388 U | 0.0075 U |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 0.0000502 | 0.0000689 | W015 | 0.000062 | 0.000067 | 0.0000687 |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **RM 07<08** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.33 | 0.47 | W017 | 0.384 | 0.376 | 0.464 |
| Arsenic | Peristaltic - particulate | µg/L | 0.043 | 0.128 | W017 | 0.0711 | 0.061 | 0.117 |
| Arsenic | Peristaltic - total | µg/L | 0.373 | 0.56 | W017 | 0.455 | 0.437 | 0.548 |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.03 U | W017 | 0.0136 | 0.01 U | 0.02 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 0 | 0.05 U | W017 | 0.0136 | 0.01 U | 0.0235 |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.05 U | W017 | 0.0179 | 0.01 U | 0.0355 |
| Chromium | Peristaltic - dissolved | µg/L | 0.12 J | 0.21 U | W016-1 | 0.102 | 0.085 U | 0.155 J |
| Chromium | Peristaltic - particulate | µg/L | 0.15 J | 0.48 U | W016-1 | 0.221 | 0.23 U | 0.297 |
| Chromium | Peristaltic - total | µg/L | 0.27 | 0.48 U | W016-1 | 0.262 | 0.27 | 0.328 |
| Copper | Peristaltic - dissolved | µg/L | 0.37 | 1.12 | W016-1 | 0.646 | 0.61 | 1.02 J |
| Copper | Peristaltic - particulate | µg/L | 0.17 | 1 | W017 | 0.453 | 0.36 | 0.877 J |
| Copper | Peristaltic - total | µg/L | 0.69 | 1.77 | W017 | 1.1 | 0.97 | 1.65 J |
| Lead | Peristaltic - dissolved | µg/L | 0.009 U | 0.04 U | W016-1 | 0.0129 | 0.012 J | 0.02 |
| Lead | Peristaltic - particulate | µg/L | 0.107 J | 0.44 | W016-1 | 0.2 | 0.177 J | 0.386 |
| Lead | Peristaltic - total | µg/L | 0.121 | 0.44 | W016-1 | 0.209 | 0.187 | 0.392 |
| Mercury | Peristaltic - dissolved | µg/L | 0.04 U | 0.08 U | W016-1; W017 | 0.0257 | 0.02 U | 0.04 U |
| Mercury | Peristaltic - particulate | µg/L | 0.04 U | 0.08 U | W016-1; W017 | 0.0257 | 0.02 U | 0.04 U |
| Mercury | Peristaltic - total | µg/L | 0.04 U | 0.08 UT | W016-1; W017 | 0.0257 | 0.02 U | 0.04 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.55 UJ | 1.09 | W017 | 0.566 | 0.59 | 0.982 |
| Nickel | Peristaltic - particulate | µg/L | 0.05 | 0.85 U | W016-1 | 0.342 | 0.29 | 0.617 J |
| Nickel | Peristaltic - total | µg/L | 0.61 | 1.14 | W017 | 0.778 | 0.86 | 1.07 |
| Zinc | Peristaltic - dissolved | µg/L | 1.4 U | 2.15 J | W016-1 | 1.49 | 1.7 | 2.05 J |
| Zinc | Peristaltic - particulate | µg/L | 0.45 J | 2.1 | W016-1 | 1.21 | 0.9 | 2.07 |
| Zinc | Peristaltic - total | µg/L | 2 | 3.5 J | W017 | 2.49 | 2.4 | 3.23 J |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0071 U | W016-1; W016-2; W017 | 0.00169 | 0.0003 U | 0.00355 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000137 JT | 0.000581 JT | W016-1 | 0.000322 | 0.000247 JT | 0.000548 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.000201 JT | 0.000695 JT | W016-1 | 0.000378 | 0.000238 JT | 0.000649 J |
| Total PCBs | Peristaltic - total | µg/L | 0.0025 UT | 0.00256 UT | W017 | 0.00127 | 0.00127 U | 0.00128 U |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000375 J | 0.00128 J | W016-1 | 0.0007 | 0.000448 J | 0.00119 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.000000000174 T | 0.00000000288 JT | W016-1 | 0.00000000139 | 0.00000000111 JT | 0.0000000027 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.00000000415 T | 0.0000000123 T | W016-1 | 0.00000000693 | 0.00000000433 JT | 0.0000000115 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.00000000432 | 0.0000000152 J | W016-1 | 0.00000000831 | 0.00000000544 J | 0.0000000142 J |
| **Pesticides** | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 0.000000702 J | 0.00000144 U | W016-1 | 0.000000941 | 0.00000072 U | 0.00000133 J |
| Aldrin | XAD Filter - particulate | µg/L | 0.000000504 UJ | 0.000000979 J | W016-1 | 0.000000628 | 0.000000652 J | 0.000000946 J |
| Aldrin | Peristaltic - total | µg/L | 0.000481 U | 0.00051 U | W017 | 0.00025 | 0.000255 U | 0.000255 U |
| Aldrin | XAD Column+Filter - total | µg/L | 0.000000702 J | 0.00000205 J | W016-1 | 0.00000124 | 0.000000979 J | 0.00000194 J |
| Dieldrin | XAD Column - dissolved | µg/L | 0.000023 | 0.0000424 | W016-1 | 0.0000334 | 0.0000349 | 0.0000417 |
| Dieldrin | XAD Filter - particulate | µg/L | 0.00000203 UJ | 0.00000456 J | W016-1 | 0.00000298 | 0.00000337 J | 0.00000444 J |
| Dieldrin | Peristaltic - total | µg/L | 0.000481 U | 0.00051 U | W017 | 0.00025 | 0.000255 U | 0.000255 U |
| Dieldrin | XAD Column+Filter - total | µg/L | 0.000023 J | 0.000047 J | W016-1 | 0.0000361 | 0.0000383 J | 0.0000461 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 0.0000241 | 0.0000605 | W016-1 | 0.0000367 | 0.0000255 | 0.000057 |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 0.000000154 J | 0.00000128 J | W016-1 | 0.000000564 | 0.000000258 J | 0.00000118 J |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.000481 U | 0.00051 U | W017 | 0.00025 | 0.000255 U | 0.000255 U |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 0.0000243 J | 0.0000618 J | W016-1 | 0.0000373 | 0.0000258 J | 0.0000582 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 0.000014 JT | 0.0000235 JT | W016-1 | 0.0000194 | 0.0000206 JT | 0.0000232 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 0.00000739 JT | 0.0000155 JT | W016-1 | 0.0000108 | 0.00000944 JT | 0.0000149 J |
| Total chlordanes | Peristaltic - total | µg/L | 0.000481 UT | 0.00051 UT | W017 | 0.00025 | 0.000255 UT | 0.000255 U |
| Total chlordanes | XAD Column+Filter - total | µg/L | 0.0000214 J | 0.000039 J | W016-1 | 0.0000301 | 0.00003 J | 0.0000381 J |
| DDx | XAD Column - dissolved | µg/L | 0.000494 JT | 0.00297 T | W016-1 | 0.00142 | 0.000781 T | 0.00275 |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| DDx | XAD Filter - particulate | µg/L | 0.000743 JT | 0.00679 T | W016-1 | 0.00324 | 0.00219 T | 0.00633 |
| DDx | Peristaltic - total | µg/L | 0.00051 UT | 0.000693 JT | W017 | 0.000401 | 0.000255 UT | 0.000649 J |
| DDx | XAD Column+Filter - total | µg/L | 0.00124 J | 0.00976 | W016-1 | 0.00466 | 0.00297 | 0.00908 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 0.0000348 J | 0.00019 U | W016-1 | 0.0000555 | 0.0000367 J | 0.0000892 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 0.000755 | 0.00257 | W016-1 | 0.00139 | 0.000852 | 0.0024 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0016 U | 0.0032 UJ | W016-1; W016-2; W017 | 0.00149 | 0.0016 U | 0.0016 U |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 0.00079 J | 0.00257 | W016-1 | 0.00142 | 0.000889 J | 0.0024 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 0.00341 JT | 0.0398 JT | W016-1 | 0.016 | 0.00472 JT | 0.0363 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 0.00686 T | 0.0304 T | W016-1 | 0.0157 | 0.00985 JT | 0.0283 J |
| Total HPAHs | Peristaltic - total | µg/L | 0.0037 UT | 0.0396 JT | W017 | 0.0142 | 0.0037 UT | 0.0394 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 0.0116 J | 0.0702 J | W016-1 | 0.0317 | 0.0133 J | 0.0645 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 0.00659 T | 0.0275 T | W016-1 | 0.0136 | 0.00672 T | 0.0254 |
| Total LPAHs | XAD Filter - particulate | µg/L | 0.000329 JT | 0.00171 T | W016-1 | 0.000911 | 0.000695 UT | 0.00161 |
| Total LPAHs | Peristaltic - total | µg/L | 0.0064 UT | 0.012 UT | W016-1 | 0.00595 | 0.0048 UT | 0.0109 J |
| Total LPAHs | XAD Column+Filter - total | µg/L | 0.00659 | 0.0292 | W016-1 | 0.0143 | 0.00705 J | 0.027 J |
| Naphthalene | XAD Column - dissolved | µg/L | 0.00424 U | 0.0079 U | W016-1 | 0.00302 | 0.00298 U | 0.00385 U |
| Naphthalene | XAD Filter - particulate | µg/L | 0.000617 U | 0.00139 U | W016-1 | 0.000582 | 0.000695 U | 0.000737 |
| Naphthalene | Peristaltic - total | µg/L | 0.0064 U | 0.014 U | W017 | 0.00475 | 0.0048 U | 0.0067 U |
| Naphthalene | XAD Column+Filter - total | µg/L | 0.000742 | 0.00595 U | W016-1 | 0.00195 | 0.00212 U | 0.00289 U |
| Phenanthrene | XAD Column - dissolved | µg/L | 0.00176 | 0.0136 | W016-1 | 0.0058 | 0.00203 | 0.0124 |
| Phenanthrene | XAD Filter - particulate | µg/L | 0.000822 U | 0.00111 U | W016-1 | 0.000502 | 0.00054 U | 0.000554 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 UJ | 0.0071 J | W017 | 0.00381 | 0.0032 U | 0.00601 J |
| Phenanthrene | XAD Column+Filter - total | µg/L | 0.00176 | 0.0136 | W016-1 | 0.0058 | 0.00203 | 0.0124 |
| Total cPAHs | XAD Column - dissolved | µg/L | 0.00056 JT | 0.0059 T | W016-1 | 0.00236 | 0.00063 JT | 0.00537 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 0.0045 T | 0.02 T | W016-1 | 0.0101 | 0.0059 JT | 0.0186 J |
| Total cPAHs | Peristaltic - total | µg/L | 0.0021 UT | 0.0042 UJT | W016-1; W016-2; W017 | 0.00241 | 0.0021 UT | 0.00374 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 0.00513 J | 0.0259 | W016-1 | 0.0125 | 0.00646 J | 0.024 J |
| Total PAHs | XAD Column - dissolved | µg/L | 0.0101 JT | 0.0673 JT | W016-1 | 0.0296 | 0.0113 JT | 0.0617 J |
| Total PAHs | XAD Filter - particulate | µg/L | 0.00686 T | 0.0321 T | W016-1 | 0.0164 | 0.0102 JT | 0.0299 J |
| Total PAHs | Peristaltic - total | µg/L | 0.0074 UJT | 0.0489 JT | W017 | 0.0172 | 0.008 UT | 0.0459 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 0.0182 J | 0.0994 J | W016-1 | 0.046 | 0.0203 J | 0.0915 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.03 U | W016-1; W016-2; W017 | 0.0148 | 0.015 U | 0.015 U |
| Bis(2-ethylhexyl) phthalate | XAD Column - dissolved | µg/L | 0.00338 U | 0.00435 J | W016-1 | 0.00272 | 0.00213 U | 0.00413 J |
| Bis(2-ethylhexyl) phthalate | XAD Filter - particulate | µg/L | 0.00457 J | 0.00749 U | W016-1 | 0.00387 | 0.00375 U | 0.00449 J |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.27 U | 4.1 U | W017 | 0.531 | 0.145 U | 1.66 U |
| Bis(2-ethylhexyl) phthalate | XAD Column+Filter - total | µg/L | 0.0066 U | 0.00892 J | W016-1 | 0.00532 | 0.00375 U | 0.0084 J |
| Butylbenzyl phthalate | XAD Column - dissolved | µg/L | 0.000874 U | 0.00106 U | W016-1 | 0.000619 | 0.00053 U | 0.000853 J |
| Butylbenzyl phthalate | XAD Filter - particulate | µg/L | 0.0000336 U | 0.000398 U | W016-1 | 0.000125 | 0.000159 U | 0.000195 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.026 U | 0.027 UJ | W016-1; W016-2; W017 | 0.0133 | 0.0135 UJ | 0.0135 U |
| Butylbenzyl phthalate | XAD Column+Filter - total | µg/L | 0.000874 U | 0.00106 U | W016-1 | 0.000619 | 0.00053 U | 0.000853 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 0.0000317 | 0.0000534 | W016-1 | 0.0000436 | 0.0000456 | 0.0000526 |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 0.00000784 | 0.000032 | W016-1 | 0.0000165 | 0.00000977 | 0.0000298 |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.000481 U | 0.015 UJ | W016-1; W016-2 | 0.00451 | 0.0075 UJ | 0.0075 U |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 0.0000395 | 0.0000854 | W016-1 | 0.0000601 | 0.0000554 | 0.0000824 |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **RM 08<09** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.307 | 0.46 | W019 | 0.385 | 0.389 | 0.453 |
| Arsenic | Peristaltic - particulate | µg/L | 0.0565 | 0.08 | W019 | 0.0658 | 0.061 | 0.0781 |
| Arsenic | Peristaltic - total | µg/L | 0.368 | 0.54 | W019 | 0.451 | 0.446 T | 0.531 |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.03 | W019 | 0.02 | 0.02 | 0.029 |
| Cadmium | Peristaltic - particulate[d] | µg/L | 0 | 0.02 U | W019 | 0.00333 | 0 | 0.009 |
| Cadmium | Peristaltic - total | µg/L | 0.02 UT | 0.03 | W019 | 0.02 | 0.02 | 0.029 |
| Chromium | Peristaltic - dissolved | µg/L | 0.13 J | 0.21 U | W019 | 0.132 | 0.13 J | 0.157 J |
| Chromium | Peristaltic - particulate | µg/L | 0.14 J | 0.51 | W019 | 0.282 | 0.195 J | 0.479 J |
| Chromium | Peristaltic - total | µg/L | 0.3 | 0.51 | W019 | 0.378 | 0.325 T | 0.492 |
| Copper | Peristaltic - dissolved | µg/L | 0.44 | 0.85 J | W019 | 0.637 | 0.62 | 0.827 J |
| Copper | Peristaltic - particulate | µg/L | 0.36 | 0.76 J | W019 | 0.503 | 0.39 | 0.723 J |
| Copper | Peristaltic - total | µg/L | 0.8 | 1.61 J | W019 | 1.14 | 1.01 T | 1.55 J |
| Lead | Peristaltic - dissolved | µg/L | 0.009 U | 0.06 | W019 | 0.0248 | 0.01 J | 0.055 J |
| Lead | Peristaltic - particulate | µg/L | 0.147 | 0.39 | W019 | 0.239 | 0.18 J | 0.369 J |
| Lead | Peristaltic - total | µg/L | 0.147 | 0.45 | W019 | 0.262 | 0.19 T | 0.424 |
| Mercury | Peristaltic - dissolved | µg/L | 0.04 U | 0.08 U | W019 | 0.0267 | 0.02 U | 0.038 U |
| Mercury | Peristaltic - particulate | µg/L | 0.04 U | 0.08 U | W019 | 0.0267 | 0.02 U | 0.038 U |
| Mercury | Peristaltic - total | µg/L | 0.04 U | 0.08 U | W019 | 0.0267 | 0.02 UT | 0.038 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.54 U | 0.97 | W019 | 0.637 | 0.67 | 0.94 |
| Nickel | Peristaltic - particulate | µg/L | 0.01 | 0.75 | W019 | 0.265 | 0.035 | 0.679 |
| Nickel | Peristaltic - total | µg/L | 0.68 | 1.01 T | W019 | 0.812 | 0.75 | 0.98 |
| Zinc | Peristaltic - dissolved | µg/L | 1.6 | 1.74 | W019 | 1.68 | 1.7 | 1.74 |
| Zinc | Peristaltic - particulate | µg/L | 0.6 | 1.98 | W019 | 1.24 | 1.15 | 1.9 |
| Zinc | Peristaltic - total | µg/L | 2.2 | 3.72 | W019 | 2.92 | 2.85 T | 3.63 |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0071 U | W019 | 0.00138 | 0.0003 U | 0.00323 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 0.0025 UT | 0.00263 UT | W019 | 0.00128 | 0.00127 UT | 0.00131 U |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.000481 U | 0.0005 U | W019 | 0.000244 | 0.000243 U | 0.000249 U |
| Dieldrin | Peristaltic - total | µg/L | 0.000481 U | 0.0005 U | W019 | 0.000244 | 0.000243 U | 0.000249 U |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.000481 U | 0.0005 U | W019 | 0.000244 | 0.000243 U | 0.000249 U |
| Total chlordanes | Peristaltic - total | µg/L | 0.000481 UT | 0.0005 UT | W019 | 0.000244 | 0.000243 UT | 0.000249 U |
| DDx | Peristaltic - total | µg/L | 0.000481 UT | 0.00115 T | W019 | 0.000544 | 0.000243 UJT | 0.00106 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0032 U | 0.0032 U | W019 | 0.0016 | 0.0016 U | 0.0016 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.0026 JT | 0.045 JT | W019 | 0.0171 | 0.0037 UT | 0.0409 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.0042 JT | 0.011 UT | W019 | 0.0043 | 0.0042 JT | 0.00537 J |
| Naphthalene | Peristaltic - total | µg/L | 0.0064 U | 0.011 U | W019 | 0.00397 | 0.0032 U | 0.00527 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.0064 U | W019 | 0.0032 | 0.0032 U | 0.0032 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.0026 JT | 0.0042 UT | W019 | 0.0029 | 0.0026 JT | 0.00386 J |
| Total PAHs | Peristaltic - total | µg/L | 0.0026 JT | 0.0492 JT | W019 | 0.0185 | 0.0037 UT | 0.0447 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.031 U | W019 | 0.015 | 0.015 U | 0.0155 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.29 U | 0.44 U | W019 | 0.17 | 0.145 U | 0.213 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.026 U | 0.028 U | W019 | 0.0135 | 0.0135 U | 0.014 U |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.000481 U | 0.0005 U | W019 | 0.000244 | 0.000243 U | 0.000249 U |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **RM 09<10** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.397 | 0.493 | W022 | 0.447 | 0.45 | 0.489 |
| Arsenic | Peristaltic - particulate | µg/L | 0.066 | 0.175 | W022 | 0.107 | 0.08 | 0.166 |
| Arsenic | Peristaltic - total | µg/L | 0.463 | 0.668 | W022 | 0.554 | 0.53 | 0.654 |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.03 | W022 | 0.0167 | 0.01 U | 0.028 |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.03 | W022 | 0.02 | 0.02 | 0.029 |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.05 | W022 | 0.03 | 0.03 | 0.048 |
| Chromium | Peristaltic - dissolved | µg/L | 0.11 J | 0.28 | W022 | 0.193 | 0.19 J | 0.271 J |
| Chromium | Peristaltic - particulate[d] | µg/L | 0 | 0.22 J | W022 | 0.133 | 0.18 J | 0.216 J |
| Chromium | Peristaltic - total | µg/L | 0.33 | 0.44 U | W022 | 0.307 | 0.33 | 0.366 |
| Copper | Peristaltic - dissolved | µg/L | 0.49 | 1.64 J | W022 | 1 | 0.88 | 1.56 J |
| Copper | Peristaltic - particulate[d] | µg/L | 0 J | 0.56 | W022 | 0.233 | 0.14 | 0.518 |
| Copper | Peristaltic - total | µg/L | 1.02 | 1.27 J | W022 | 1.11 | 1.05 | 1.25 J |
| Lead | Peristaltic - dissolved | µg/L | 0.015 J | 0.08 | W022 | 0.0393 | 0.023 | 0.0743 |
| Lead | Peristaltic - particulate | µg/L | 0.134 | 0.303 J | W022 | 0.222 | 0.23 | 0.296 J |
| Lead | Peristaltic - total | µg/L | 0.157 | 0.318 | W022 | 0.262 | 0.31 | 0.317 |
| Mercury | Peristaltic - dissolved | µg/L | 0.04 U | 0.08 U | W022 | 0.0267 | 0.02 U | 0.038 U |
| Mercury | Peristaltic - particulate | µg/L | 0.04 U | 0.08 U | W022 | 0.0267 | 0.02 U | 0.038 U |
| Mercury | Peristaltic - total | µg/L | 0.04 U | 0.08 UT | W022 | 0.0267 | 0.02 U | 0.038 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.51 U | 1.08 | W022 | 0.792 | 1.04 | 1.08 |
| Nickel | Peristaltic - particulate | µg/L | 0.09 | 0.65 | W022 | 0.283 | 0.11 | 0.596 |
| Nickel | Peristaltic - total | µg/L | 0.65 | 1.17 | W022 | 0.99 | 1.15 | 1.17 |
| Zinc | Peristaltic - dissolved | µg/L | 2.7 | 41.9 | W022 | 16.1 | 3.7 | 38.1 |
| Zinc | Peristaltic - particulate | µg/L | 1.3 | 16 | W022 | 7.12 | 4.07 | 14.8 |
| Zinc | Peristaltic - total | µg/L | 5 | 57.9 | W022 | 23.2 | 6.77 | 52.8 |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0071 U | W022 | 0.00138 | 0.0003 U | 0.00323 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | Peristaltic - total | µg/L | 0.0025 UT | 0.00467 JT | W022 | 0.00239 | 0.00125 UT | 0.00433 J |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.00049 U | 0.0005 U | W022 | 0.000247 | 0.000245 U | 0.00025 U |
| Dieldrin | Peristaltic - total | µg/L | 0.00049 U | 0.0005 U | W022 | 0.000247 | 0.000245 U | 0.00025 U |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.00049 U | 0.000768 | W022 | 0.000421 | 0.00025 U | 0.000716 |
| Total chlordanes | Peristaltic - total | µg/L | 0.00049 UT | 0.0005 UT | W022 | 0.000247 | 0.000245 UT | 0.00025 U |
| DDx | Peristaltic - total | µg/L | 0.00049 UT | 0.0005 UJT | W022 | 0.000247 | 0.000245 UT | 0.00025 UJ |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0032 U | 0.0032 U | W022 | 0.0016 | 0.0016 U | 0.0016 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.0056 JT | 0.0213 JT | W022 | 0.0114 | 0.0072 JT | 0.0199 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.0064 UT | 0.0151 JT | W022 | 0.00717 | 0.0032 UT | 0.0139 J |
| Naphthalene | Peristaltic - total | µg/L | 0.0064 U | 0.057 U | W022 | 0.0116 | 0.0032 U | 0.026 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.0089 U | W022 | 0.00362 | 0.0032 U | 0.00433 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.0042 UT | 0.0072 JT | W022 | 0.0038 | 0.0021 UT | 0.00669 J |
| Total PAHs | Peristaltic - total | µg/L | 0.0072 JT | 0.0213 JT | W022 | 0.0164 | 0.0207 JT | 0.0212 J |

Table D3.2-4d. Summary Statistics for COIs in Surface Water, Low-Flow Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W022 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.27 U | 0.81 U | W022 | 0.225 | 0.135 U | 0.378 U |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.026 U | 0.026 U | W022 | 0.013 | 0.013 U | 0.013 U |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.00049 U | 0.00701 | W022 | 0.0025 | 0.00025 U | 0.00633 |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

[d] Particulate values were calculated as the difference between total and dissolved concentrations. If the measured dissolved concentration was greater than or equal to the measured total concentration, the calculated particulate concentration was assigned a value of zero.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
XAD - hydrophobic crosslinked polystyrene copolymer resin

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D3.2-5. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (Transect Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Arsenic | Peristaltic - particulate | µg/L | 14 | 4 | 29 | 0.439 J | 0.476 J | W005 | 0.455 | 0.452 J | 0.473 J |
| Arsenic | Peristaltic - total | µg/L | 14 | 4 | 29 | 0.439 J | 0.476 J | W005 | 0.455 | 0.452 J | 0.473 J |
| Cadmium | Peristaltic - dissolved | µg/L | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - total | µg/L | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Copper | Peristaltic - dissolved | µg/L | 14 | 14 | 100 | 0.46 | 1.23 | W023M | 0.582 | 0.55 | 0.814 |
| Copper | Peristaltic - particulate[d] | µg/L | 14 | 14 | 100 | 0 | 0.62 | W024 | 0.326 | 0.32 | 0.51 |
| Copper | Peristaltic - total | µg/L | 14 | 14 | 100 | 0.65 | 1.1 | W024 | 0.867 | 0.86 | 1.05 |
| Lead | Peristaltic - dissolved | µg/L | 14 | 10 | 71 | 0.015 J | 0.041 | W023E | 0.0251 | 0.0245 | 0.0361 |
| Lead | Peristaltic - particulate | µg/L | 14 | 14 | 100 | 0.104 | 0.302 | W005 | 0.19 | 0.202 | 0.297 |
| Lead | Peristaltic - total | µg/L | 14 | 14 | 100 | 0.123 | 0.319 | W023E | 0.208 | 0.215 | 0.308 |
| Mercury | Peristaltic - dissolved | µg/L | 14 | 2 | 14 | 0.02 J | 0.02 J | W005; W023E | 0.02 | 0.02 J | 0.02 J |
| Mercury | Peristaltic - particulate | µg/L | 14 | 4 | 29 | 0 J | 0.03 J | W023M; W023W | 0.015 | 0.015 J | 0.03 J |
| Mercury | Peristaltic - total | µg/L | 14 | 2 | 14 | 0.03 J | 0.03 J | W023M; W023W | 0.03 | 0.03 J | 0.03 J |
| Nickel | Peristaltic - dissolved | µg/L | 14 | 11 | 79 | 0.2 J | 0.84 | W025W | 0.578 | 0.59 | 0.73 |
| Nickel | Peristaltic - particulate | µg/L | 14 | 14 | 100 | 0.04 | 0.4 | W005 | 0.136 | 0.08 | 0.4 |
| Nickel | Peristaltic - total | µg/L | 14 | 14 | 100 | 0.3 | 0.97 | W025W | 0.591 | 0.635 | 0.795 |
| Zinc | Peristaltic - dissolved | µg/L | 14 | 1 | 7 | 5.1 | 5.1 | W025M | 5.1 | 5.1 | 5.1 |
| Zinc | Peristaltic - particulate[d] | µg/L | 14 | 1 | 7 | 0 | 0 | W025M | 0 | 0 | 0 |
| Zinc | Peristaltic - total | µg/L | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 14 | 2 | 14 | 0.001 J | 0.011 J | W024 | 0.006 | 0.006 J | 0.0105 J |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 14 | 14 | 100 | 0.0000777 JT | 0.000954 JT | W025E | 0.000218 | 0.000158 J | 0.00052 J |
| Total PCBs | XAD Filter - particulate | µg/L | 14 | 14 | 100 | 0.0000399 JT | 0.000408 JT | W023E | 0.000154 | 0.000124 J | 0.000361 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 14 | 14 | 100 | 0.000121 J | 0.00129 J | W025E | 0.000372 | 0.000292 J | 0.00081 J |
| **PCDD/F Homologs** | | | | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 14 | 14 | 100 | 0.000000077 T | 0.0000155 JT | W027 | 0.00000481 | 0.00000428 | 0.0000115 J |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 14 | 14 | 100 | 0.00000543 JT | 0.000109 T | W023E | 0.0000309 | 0.0000252 | 0.0000668 |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 14 | 14 | 100 | 0.00000551 J | 0.000118 | W023E | 0.0000357 | 0.000027 | 0.0000754 J |
| **PCDD/Fs** | | | | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 14 | 14 | 100 | 0.00000000033 JT | 0.0000000656 JT | W027 | 0.0000000158 | 0.00000000901 J | 0.0000000558 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 14 | 14 | 100 | 0.0000000127 JT | 0.000000245 JT | W023E | 0.00000007 | 0.0000000593 J | 0.000000149 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 14 | 14 | 100 | 0.0000000133 J | 0.000000278 J | W023E | 0.0000000858 | 0.0000000743 J | 0.000000187 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 14 | 14 | 100 | 0.0000000000489 T | 0.00000000186 JT | W005 | 0.00000000041 | 0.000000000135 J | 0.00000000172 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 14 | 14 | 100 | 0.000000000115 JT | 0.0000000158 T | W023E | 0.00000000417 | 0.00000000302 J | 0.000000011 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 14 | 14 | 100 | 0.00000000019 J | 0.0000000159 J | W023E | 0.00000000458 | 0.00000000353 J | 0.0000000115 J |

Table D3.2-5. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (Transect Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 14 | 7 | 50 | 0.0000011 J | 0.00000366 J | W005 | 0.00000227 | 0.00000201 J | 0.00000362 J |
| Aldrin | XAD Filter - particulate | µg/L | 14 | 4 | 29 | 0.00000119 J | 0.00000263 J | W027 | 0.00000184 | 0.00000176 J | 0.00000257 J |
| Aldrin | Peristaltic - total | µg/L | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Aldrin | XAD Column+Filter - total | µg/L | 14 | 9 | 64 | 0.0000011 J | 0.00000575 J | W027 | 0.00000258 | 0.00000204 J | 0.00000491 J |
| Dieldrin | XAD Column - dissolved | µg/L | 14 | 14 | 100 | 0.0000251 J | 0.0000467 J | W024 | 0.0000333 | 0.0000315 J | 0.0000425 J |
| Dieldrin | XAD Filter - particulate | µg/L | 14 | 6 | 43 | 0.0000012 J | 0.00000785 J | W024 | 0.0000046 | 0.00000479 J | 0.00000763 J |
| Dieldrin | Peristaltic - total | µg/L | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | XAD Column+Filter - total | µg/L | 14 | 14 | 100 | 0.0000251 J | 0.0000537 J | W024 | 0.0000352 | 0.0000331 J | 0.0000501 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 14 | 13 | 93 | 0.000017 J | 0.0000285 J | W023E | 0.000023 | 0.0000232 J | 0.0000278 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 14 | 1 | 7 | 0.00000147 J | 0.00000147 J | W027 | 0.00000147 | 0.00000147 J | 0.00000147 J |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 1 | 1 | 100 | 0.00016 J | 0.00016 J | W027 | 0.00016 | 0.00016 J | 0.00016 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 14 | 13 | 93 | 0.000017 J | 0.0000285 J | W023E | 0.0000231 | 0.0000232 J | 0.0000278 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 14 | 14 | 100 | 0.0000121 JT | 0.0000316 JT | W027 | 0.0000213 | 0.0000211 J | 0.0000291 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 14 | 4 | 29 | 0.00000132 JT | 0.0000098 JT | W027 | 0.000006 | 0.00000643 J | 0.00000936 J |
| Total chlordanes | Peristaltic - total | µg/L | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | XAD Column+Filter - total | µg/L | 14 | 14 | 100 | 0.0000134 J | 0.0000376 J | W027 | 0.0000231 | 0.0000213 J | 0.0000369 J |
| DDx | XAD Column - dissolved | µg/L | 14 | 14 | 100 | 0.0000332 JT | 0.000141 JT | W011 | 0.0000756 | 0.0000715 J | 0.000129 J |
| DDx | XAD Filter - particulate | µg/L | 14 | 13 | 93 | 0.00000786 JT | 0.0000926 JT | W005 | 0.000054 | 0.0000585 JT | 0.0000805 J |
| DDx | Peristaltic - total | µg/L | 1 | 1 | 100 | 0.0019 T | 0.0019 T | W027 | 0.0019 | 0.0019 T | 0.0019 T |
| DDx | XAD Column+Filter - total | µg/L | 14 | 14 | 100 | 0.0000332 J | 0.000201 J | W011 | 0.000126 | 0.000135 J | 0.00019 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 14 | 1 | 7 | 0.000198 J | 0.000198 J | W023E | 0.000198 | 0.000198 J | 0.000198 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 14 | 10 | 71 | 0.000486 J | 0.00175 | W005 | 0.000958 | 0.00102 J | 0.00153 J |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 14 | 10 | 71 | 0.000486 J | 0.00175 | W005 | 0.000978 | 0.00105 J | 0.00153 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 14 | 14 | 100 | 0.000158 JT | 0.0042 JT | W025E | 0.00186 | 0.00206 J | 0.00372 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 14 | 14 | 100 | 0.00168 JT | 0.018 JT | W005 | 0.00796 | 0.00786 J | 0.0148 J |
| Total HPAHs | Peristaltic - total | µg/L | 14 | 6 | 43 | 0.0095 JT | 0.068 JT | W027 | 0.0231 | 0.014 J | 0.0568 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 14 | 14 | 100 | 0.00184 J | 0.021 J | W005 | 0.00981 | 0.011 J | 0.0172 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 14 | 14 | 100 | 0.000904 JT | 0.0238 T | W005 | 0.0064 | 0.00363 J | 0.0202 J |
| Total LPAHs | XAD Filter - particulate | µg/L | 14 | 6 | 43 | 0.0000722 JT | 0.000206 JT | W005 | 0.00013 | 0.00012 J | 0.000202 J |
| Total LPAHs | Peristaltic - total | µg/L | 14 | 4 | 29 | 0.0057 JT | 0.0087 JT | W024 | 0.00713 | 0.00705 J | 0.00855 J |
| Total LPAHs | XAD Column+Filter - total | µg/L | 14 | 14 | 100 | 0.000904 J | 0.0238 | W005 | 0.00645 | 0.0037 J | 0.0202 J |
| Naphthalene | XAD Column - dissolved | µg/L | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Filter - particulate | µg/L | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Column+Filter - total | µg/L | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | XAD Column - dissolved | µg/L | 14 | 4 | 29 | 0.00427 | 0.0047 | W025E | 0.0045 | 0.00452 | 0.00468 |
| Phenanthrene | XAD Filter - particulate | µg/L | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | XAD Column+Filter - total | µg/L | 14 | 4 | 29 | 0.00427 | 0.0047 | W025E | 0.0045 | 0.00452 | 0.00468 |
| Total cPAHs | XAD Column - dissolved | µg/L | 14 | 10 | 71 | 0.00016 JT | 0.0012 JT | W023E | 0.000502 | 0.000385 J | 0.00101 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 14 | 14 | 100 | 0.00041 JT | 0.008 JT | W005 | 0.00346 | 0.0029 J | 0.0067 J |
| Total cPAHs | Peristaltic - total | µg/L | 14 | 1 | 7 | 0.048 JT | 0.048 JT | W027 | 0.048 | 0.048 JT | 0.048 JT |
| Total cPAHs | XAD Column+Filter - total | µg/L | 14 | 14 | 100 | 0.00057 J | 0.00857 J | W005 | 0.00382 | 0.00348 J | 0.00748 J |
| Total PAHs | XAD Column - dissolved | µg/L | 14 | 14 | 100 | 0.00111 JT | 0.0269 JT | W005 | 0.00825 | 0.00591 J | 0.0215 J |
| Total PAHs | XAD Filter - particulate | µg/L | 14 | 14 | 100 | 0.00168 JT | 0.0182 JT | W005 | 0.00801 | 0.00786 J | 0.015 J |
| Total PAHs | Peristaltic - total | µg/L | 14 | 9 | 64 | 0.0057 JT | 0.068 JT | W027 | 0.0185 | 0.012 JT | 0.05 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 14 | 14 | 100 | 0.00279 J | 0.0389 J | W005 | 0.0163 | 0.0163 J | 0.0325 J |

Table D3.2-5. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (Transect Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 14 | 1 | 7 | 6.8 J | 6.8 J | W005 | 6.8 | 6.8 J | 6.8 J |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 14 | 14 | 100 | 0.000011 J | 0.0000215 J | W025E | 0.0000172 | 0.0000176 J | 0.00002 J |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 14 | 2 | 14 | 0.00000262 J | 0.00000418 J | W027 | 0.0000034 | 0.0000034 J | 0.0000041 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 14 | 14 | 100 | 0.0000136 J | 0.0000215 J | W025E | 0.0000177 | 0.0000181 J | 0.0000201 J |

Table D3.2-5. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (Transect Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.372 U | 0.586 U | W025W | 0.201 | 0.197 U | 0.234 UJ |
| Arsenic | Peristaltic - particulate | µg/L | 0.394 UJ | 0.647 UJ | W025W | 0.289 | 0.22 UJ | 0.464 J |
| Arsenic | Peristaltic - total | µg/L | 0.394 UJ | 0.647 UJ | W025W | 0.289 | 0.22 UJ | 0.464 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W005; W011; W023E; W023M; W023W; W024; W025E; W025M; W025W; W027 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W005; W011; W023E; W023M; W023W; W024; W025E; W025M; W025W; W027 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W005; W011; W023E; W023M; W023W; W024; W025E; W025M; W025W; W027 | 0.01 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.14 U | 0.23 U | W005 | 0.0846 | 0.08 U | 0.105 U |
| Chromium | Peristaltic - particulate | µg/L | 0.21 U | 0.39 U | W027 | 0.144 | 0.143 U | 0.192 U |
| Chromium | Peristaltic - total | µg/L | 0.21 U | 0.39 U | W027 | 0.144 | 0.143 U | 0.192 U |
| Copper | Peristaltic - dissolved | µg/L | 0.46 | 1.23 | W023M | 0.582 | 0.55 | 0.814 |
| Copper | Peristaltic - particulate[d] | µg/L | 0 | 0.62 | W024 | 0.326 | 0.32 | 0.51 |
| Copper | Peristaltic - total | µg/L | 0.65 | 1.1 | W024 | 0.867 | 0.86 | 1.05 |
| Lead | Peristaltic - dissolved | µg/L | 0.015 J | 0.047 U | W005 | 0.0241 | 0.0228 | 0.0339 |
| Lead | Peristaltic - particulate | µg/L | 0.104 | 0.302 | W005 | 0.19 | 0.202 | 0.297 |
| Lead | Peristaltic - total | µg/L | 0.123 | 0.319 | W023E | 0.208 | 0.215 | 0.308 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 UJ | 0.02 UJ | W005; W011; W023E; W023M; W023W; W024; W025E; W025M; W025W; W027 | 0.0114 | 0.01 U | 0.02 J |
| Mercury | Peristaltic - particulate | µg/L | 0 J | 0.03 J | W023M; W023W | 0.0114 | 0.01 U | 0.03 J |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.03 J | W023M; W023W | 0.0129 | 0.01 U | 0.03 J |
| Nickel | Peristaltic - dissolved | µg/L | 0.2 U | 0.84 | W025W | 0.476 | 0.59 | 0.697 |
| Nickel | Peristaltic - particulate | µg/L | 0.04 | 0.4 | W005 | 0.136 | 0.08 | 0.4 |
| Nickel | Peristaltic - total | µg/L | 0.3 | 0.97 | W025W | 0.591 | 0.635 | 0.795 |
| Zinc | Peristaltic - dissolved | µg/L | 1.7 U | 5.1 | W025M | 1.67 | 1.35 U | 3.12 |
| Zinc | Peristaltic - particulate[d] | µg/L | 0 | 5.4 U | W024 | 1.81 | 2 U | 2.41 U |
| Zinc | Peristaltic - total | µg/L | 2.6 U | 5.4 U | W024 | 1.9 | 1.85 U | 2.41 UJ |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 UJ | 0.011 J | W024 | 0.00111 | 0.0003 UJ | 0.0045 J |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.0000777 JT | 0.000954 JT | W025E | 0.000218 | 0.000158 J | 0.00052 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.0000399 JT | 0.000408 JT | W023E | 0.000154 | 0.000124 J | 0.000361 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000121 J | 0.00129 J | W025E | 0.000372 | 0.000292 J | 0.00081 J |
| **PCDD/F Homologs** | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 0.000000077 T | 0.0000155 JT | W027 | 0.00000481 | 0.00000428 | 0.0000115 J |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 0.00000543 JT | 0.000109 T | W023E | 0.0000309 | 0.0000252 | 0.0000668 |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 0.00000551 J | 0.000118 | W023E | 0.0000357 | 0.000027 | 0.0000754 J |
| **PCDD/Fs** | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.00000000033 JT | 0.0000000656 JT | W027 | 0.0000000158 | 0.00000000901 J | 0.0000000558 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.0000000127 JT | 0.000000245 JT | W023E | 0.00000007 | 0.0000000593 J | 0.000000149 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.0000000133 J | 0.000000278 J | W023E | 0.0000000858 | 0.0000000743 J | 0.000000187 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.0000000000489 T | 0.00000000186 JT | W005 | 0.00000000041 | 0.000000000135 J | 0.00000000172 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000000115 JT | 0.0000000158 T | W023E | 0.00000000417 | 0.00000000302 J | 0.000000011 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.00000000019 J | 0.0000000159 J | W023E | 0.00000000458 | 0.00000000353 J | 0.0000000115 J |

Table D3.2-5. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (Transect Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Pesticides** | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 0.0000011 J | 0.00000724 U | W027 | 0.00000191 | 0.00000179 J | 0.00000363 J |
| Aldrin | XAD Filter - particulate | µg/L | 0.00000058 U | 0.00000263 J | W027 | 0.000000978 | 0.00000082 U | 0.00000237 J |
| Aldrin | Peristaltic - total | µg/L | 0.00047 U | 0.00047 U | W027 | 0.000235 | 0.000235 U | 0.000235 U |
| Aldrin | XAD Column+Filter - total | µg/L | 0.0000011 J | 0.00000575 J | W027 | 0.00000211 | 0.00000181 J | 0.00000439 J |
| Dieldrin | XAD Column - dissolved | µg/L | 0.0000251 J | 0.0000467 J | W024 | 0.0000333 | 0.0000315 J | 0.0000425 J |
| Dieldrin | XAD Filter - particulate | µg/L | 0.0000012 J | 0.00000785 J | W024 | 0.00000289 | 0.00000192 J | 0.00000728 J |
| Dieldrin | Peristaltic - total | µg/L | 0.0004 U | 0.0004 U | W027 | 0.0002 | 0.0002 U | 0.0002 U |
| Dieldrin | XAD Column+Filter - total | µg/L | 0.0000251 J | 0.0000537 J | W024 | 0.0000352 | 0.0000331 J | 0.0000501 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 0.000017 J | 0.0000285 J | W023E | 0.0000221 | 0.0000231 J | 0.0000277 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 0.000000411 U | 0.00000599 U | W025M | 0.00000122 | 0.00000055 U | 0.00000298 U |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.00016 J | 0.00016 J | W027 | 0.00016 | 0.00016 J | 0.00016 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 0.000017 J | 0.0000285 J | W023E | 0.0000222 | 0.0000231 J | 0.0000277 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 0.0000121 JT | 0.0000316 JT | W027 | 0.0000213 | 0.0000211 J | 0.0000291 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 0.00000132 JT | 0.0000168 UT | W025M | 0.00000689 | 0.0000076 U | 0.00000889 J |
| Total chlordanes | Peristaltic - total | µg/L | 0.0015 UT | 0.0015 UT | W027 | 0.00075 | 0.00075 UT | 0.00075 UT |
| Total chlordanes | XAD Column+Filter - total | µg/L | 0.0000134 J | 0.0000376 J | W027 | 0.0000231 | 0.0000213 J | 0.0000369 J |
| DDx | XAD Column - dissolved | µg/L | 0.0000332 JT | 0.000141 JT | W011 | 0.0000756 | 0.0000715 J | 0.000129 J |
| DDx | XAD Filter - particulate | µg/L | 0.00000786 JT | 0.0000926 JT | W005 | 0.0000504 | 0.0000559 J | 0.0000795 J |
| DDx | Peristaltic - total | µg/L | 0.0019 T | 0.0019 T | W027 | 0.0019 | 0.0019 T | 0.0019 T |
| DDx | XAD Column+Filter - total | µg/L | 0.0000332 J | 0.000201 J | W011 | 0.000126 | 0.000135 J | 0.00019 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 0.0000663 U | 0.000198 J | W023E | 0.0000646 | 0.0000595 U | 0.000121 J |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 0.000228 U | 0.00175 | W005 | 0.000743 | 0.000661 J | 0.00144 J |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0043 U | 0.0086 U | W005; W011; W023E; W023M; W023W; W024; W025E; W025M; W025W; W027 | 0.00399 | 0.0043 U | 0.0043 U |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 0.000228 U | 0.00175 | W005 | 0.000758 | 0.000661 J | 0.00144 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 0.000158 JT | 0.0042 JT | W025E | 0.00186 | 0.00206 J | 0.00372 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 0.00168 JT | 0.018 JT | W005 | 0.00796 | 0.00786 J | 0.0148 J |
| Total HPAHs | Peristaltic - total | µg/L | 0.0095 JT | 0.068 JT | W027 | 0.013 | 0.0055 U | 0.0388 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 0.00184 J | 0.021 J | W005 | 0.00981 | 0.011 J | 0.0172 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 0.000904 JT | 0.0238 T | W005 | 0.0064 | 0.00363 J | 0.0202 J |
| Total LPAHs | XAD Filter - particulate | µg/L | 0.0000722 JT | 0.00112 UT | W024 | 0.000327 | 0.000362 U | 0.000544 U |
| Total LPAHs | Peristaltic - total | µg/L | 0.0057 JT | 0.042 UT | W025W | 0.00971 | 0.0082 J | 0.0191 U |
| Total LPAHs | XAD Column+Filter - total | µg/L | 0.000904 J | 0.0238 | W005 | 0.00645 | 0.0037 J | 0.0202 J |
| Naphthalene | XAD Column - dissolved | µg/L | 0.0431 U | 0.105 U | W011 | 0.0393 | 0.0393 U | 0.0515 U |
| Naphthalene | XAD Filter - particulate | µg/L | 0.000424 U | 0.00121 U | W005 | 0.000457 | 0.000502 U | 0.000582 U |
| Naphthalene | Peristaltic - total | µg/L | 0.0065 U | 0.042 U | W025W | 0.0115 | 0.0115 U | 0.02 U |
| Naphthalene | XAD Column+Filter - total | µg/L | 0.0431 U | 0.105 U | W011 | 0.0393 | 0.0393 U | 0.0515 U |
| Phenanthrene | XAD Column - dissolved | µg/L | 0.00112 U | 0.0047 | W025E | 0.00226 | 0.00169 U | 0.0046 |
| Phenanthrene | XAD Filter - particulate | µg/L | 0.000607 U | 0.00146 U | W005 | 0.000468 | 0.000436 U | 0.000665 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0037 U | 0.012 U | W025W | 0.00409 | 0.00405 U | 0.00568 U |
| Phenanthrene | XAD Column+Filter - total | µg/L | 0.00112 U | 0.0047 | W025E | 0.00226 | 0.00169 U | 0.0046 |
| Total cPAHs | XAD Column - dissolved | µg/L | 0.00016 JT | 0.00344 UT | W025M | 0.00071 | 0.000585 J | 0.00138 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 0.00041 JT | 0.008 JT | W005 | 0.00346 | 0.0029 J | 0.0067 J |
| Total cPAHs | Peristaltic - total | µg/L | 0.0053 UT | 0.048 JT | W027 | 0.00833 | 0.0055 U | 0.0204 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 0.00057 J | 0.00857 J | W005 | 0.00382 | 0.00348 J | 0.00748 J |
| Total PAHs | XAD Column - dissolved | µg/L | 0.00111 JT | 0.0269 JT | W005 | 0.00825 | 0.00591 J | 0.0215 J |
| Total PAHs | XAD Filter - particulate | µg/L | 0.00168 JT | 0.0182 JT | W005 | 0.00801 | 0.00786 J | 0.015 J |
| Total PAHs | Peristaltic - total | µg/L | 0.0057 JT | 0.068 JT | W027 | 0.016 | 0.012 J | 0.0388 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 0.00279 J | 0.0389 J | W005 | 0.0163 | 0.0163 J | 0.0325 J |

Table D3.2-5. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (Transect Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.032 U | W011; W025W | 0.0147 | 0.0145 U | 0.016 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.14 U | 6.8 J | W005 | 0.915 | 0.47 UJ | 3 J |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.023 U | 0.085 UJ | W024 | 0.0286 | 0.031 UJ | 0.0409 UJ |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 0.000011 J | 0.0000215 J | W025E | 0.0000172 | 0.0000176 J | 0.00002 J |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 0.0000019 U | 0.0000106 U | W025M | 0.00000211 | 0.00000162 U | 0.00000457 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.015 U | 0.016 U | W011; W025W | 0.00757 | 0.0075 U | 0.008 U |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 0.0000136 J | 0.0000215 J | W025E | 0.0000177 | 0.0000181 J | 0.0000201 J |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

[d] Particulate values were calculated as the difference between total and dissolved concentrations. If the measured dissolved concentration was greater than or equal to the measured total concentration, the calculated particulate concentration was assigned a value of zero.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
XAD - hydrophobic crosslinked polystyrene copolymer resin

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D3.2-6a. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 26 | 5 | 19 | 0.38 J | 0.48 T | W038 | 0.415 | 0.404 JT | 0.466 |
| Arsenic | Peristaltic - particulate[d] | µg/L | 26 | 20 | 77 | 0 J | 0.512 J | W038 | 0.355 | 0.452 J | 0.483 J |
| Arsenic | Peristaltic - total | µg/L | 26 | 19 | 73 | 0.428 J | 0.526 JT | W038 | 0.463 | 0.458 J | 0.513 J |
| Cadmium | Peristaltic - dissolved | µg/L | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 26 | 1 | 4 | 0.03 J | 0.03 J | W030 | 0.03 | 0.03 J | 0.03 J |
| Cadmium | Peristaltic - total | µg/L | 26 | 1 | 4 | 0.03 J | 0.03 J | W030 | 0.03 | 0.03 J | 0.03 J |
| Chromium | Peristaltic - dissolved | µg/L | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - total | µg/L | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Copper | Peristaltic - dissolved | µg/L | 26 | 26 | 100 | 0.5 | 0.78 | W035 | 0.56 | 0.555 | 0.638 |
| Copper | Peristaltic - particulate | µg/L | 26 | 26 | 100 | 0.26 | 0.56 | W031 | 0.357 | 0.355 | 0.47 |
| Copper | Peristaltic - total | µg/L | 26 | 26 | 100 | 0.79 | 1.14 | W035 | 0.918 | 0.89 | 1.1 |
| Lead | Peristaltic - dissolved | µg/L | 26 | 6 | 23 | 0.023 | 0.026 | W033 | 0.0247 | 0.025 | 0.0258 |
| Lead | Peristaltic - particulate | µg/L | 26 | 26 | 100 | 0.157 | 0.355 | W028 | 0.235 | 0.234 | 0.323 |
| Lead | Peristaltic - total | µg/L | 26 | 26 | 100 | 0.182 | 0.355 | W028 | 0.241 | 0.235 | 0.323 |
| Mercury | Peristaltic - dissolved | µg/L | 26 | 1 | 4 | 0.02 J | 0.02 J | W034 | 0.02 | 0.02 J | 0.02 J |
| Mercury | Peristaltic - particulate[d] | µg/L | 26 | 2 | 8 | 0 J | 0.04 J | W031 | 0.02 | 0.02 J | 0.038 J |
| Mercury | Peristaltic - total | µg/L | 26 | 1 | 4 | 0.04 J | 0.04 J | W031 | 0.04 | 0.04 J | 0.04 J |
| Nickel | Peristaltic - dissolved | µg/L | 26 | 13 | 50 | 0.2 J | 0.63 | W033 | 0.384 | 0.2 JT | 0.612 |
| Nickel | Peristaltic - particulate[d] | µg/L | 26 | 26 | 100 | 0 J | 0.5 | W026 | 0.203 | 0.2 J | 0.375 |
| Nickel | Peristaltic - total | µg/L | 26 | 26 | 100 | 0.2 | 0.71 | W033 | 0.395 | 0.3 | 0.698 |
| Zinc | Peristaltic - dissolved | µg/L | 26 | 4 | 15 | 4.8 | 6.6 | W034 | 5.5 | 5.3 | 6.42 |
| Zinc | Peristaltic - particulate[d] | µg/L | 26 | 4 | 15 | 0 | 0 | W031; W034; W035; W036 | 0 | 0 | 0 |
| Zinc | Peristaltic - total | µg/L | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 26 | 2 | 8 | 0.0013 J | 0.0014 J | W035 | 0.00135 | 0.00135 J | 0.0014 J |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 26 | 26 | 100 | 0.0000893 JT | 0.00237 JT | W030 | 0.000328 | 0.000181 J | 0.000695 J |
| Total PCBs | XAD Filter - particulate | µg/L | 26 | 26 | 100 | 0.0000231 JT | 0.000457 JT | W028 | 0.000179 | 0.000157 J | 0.000417 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 26 | 26 | 100 | 0.000112 J | 0.00259 J | W030 | 0.000507 | 0.000333 J | 0.0011 J |
| **PCDD/F Homologs** | | | | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 8 | 8 | 100 | 0.00000279 T | 0.00000855 T | W033 | 0.00000539 | 0.00000489 J | 0.00000814 |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 8 | 8 | 100 | 0.0000274 T | 0.0000494 T | W032 | 0.0000404 | 0.0000411 | 0.000049 |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 8 | 8 | 100 | 0.000036 | 0.0000552 J | W032 | 0.0000458 | 0.0000465 | 0.0000547 J |
| **PCDD/Fs** | | | | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 8 | 8 | 100 | 0.0000000051 T | 0.0000000173 JT | W033 | 0.00000000977 | 0.00000000843 J | 0.0000000164 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 8 | 8 | 100 | 0.0000000726 JT | 0.000000203 JT | W033 | 0.000000118 | 0.000000101 J | 0.000000194 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 8 | 8 | 100 | 0.0000000777 J | 0.000000212 J | W033 | 0.000000127 | 0.000000108 J | 0.000000202 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 26 | 26 | 100 | 0.0000000000856 T | 0.00000000465 JT | W026 | 0.000000000629 | 0.000000000165 J | 0.00000000373 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 26 | 26 | 100 | 0.0000000000357 T | 0.00000000937 JT | W030 | 0.00000000203 | 0.000000000348 J | 0.00000000665 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 26 | 26 | 100 | 0.000000000131 J | 0.0000000132 J | W030 | 0.00000000266 | 0.000000000759 J | 0.00000000688 J |

Table D3.2-6a. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 12 | 4 | 33 | 0.00000203 J | 0.00000426 J | W033 | 0.00000326 | 0.00000337 J | 0.00000417 J |
| Aldrin | XAD Filter - particulate | µg/L | 12 | 6 | 50 | 0.000000635 J | 0.00000366 J | W031 | 0.0000019 | 0.00000174 J | 0.0000033 J |
| Aldrin | Peristaltic - total | µg/L | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Aldrin | XAD Column+Filter - total | µg/L | 12 | 9 | 75 | 0.000000635 J | 0.00000484 J | W033 | 0.00000272 | 0.00000223 J | 0.00000461 J |
| Dieldrin | XAD Column - dissolved | µg/L | 12 | 12 | 100 | 0.0000319 J | 0.0000498 J | W031 | 0.0000391 | 0.0000367 J | 0.0000479 J |
| Dieldrin | XAD Filter - particulate | µg/L | 12 | 6 | 50 | 0.00000237 J | 0.00000415 J | W031 | 0.00000307 | 0.00000299 J | 0.00000399 J |
| Dieldrin | Peristaltic - total | µg/L | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | XAD Column+Filter - total | µg/L | 12 | 12 | 100 | 0.0000319 J | 0.0000501 J | W031 | 0.0000407 | 0.000037 J | 0.0000499 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 12 | 12 | 100 | 0.0000195 J | 0.0000317 J | W031 | 0.0000262 | 0.0000256 J | 0.0000312 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 12 | 3 | 25 | 0.000000817 J | 0.00000185 J | W032 | 0.00000132 | 0.00000128 J | 0.00000179 J |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 17 | 7 | 41 | 0.00018 J | 0.0004 NJ | W038 | 0.000259 | 0.00025 NJ | 0.000367 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 12 | 12 | 100 | 0.0000203 J | 0.0000317 J | W031 | 0.0000266 | 0.0000263 J | 0.0000312 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 12 | 12 | 100 | 0.00000672 JT | 0.0000299 JT | W032 | 0.0000206 | 0.0000212 J | 0.0000286 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 12 | 11 | 92 | 0.000000597 JT | 0.0000113 JT | W032 | 0.00000616 | 0.0000051 JT | 0.0000106 J |
| Total chlordanes | Peristaltic - total | µg/L | 17 | 2 | 12 | 0.00055 NJT | 0.0016 JT | W036 | 0.00108 | 0.00108 J | 0.00155 J |
| Total chlordanes | XAD Column+Filter - total | µg/L | 12 | 12 | 100 | 0.00000732 J | 0.0000368 J | W033 | 0.0000263 | 0.0000262 J | 0.0000365 J |
| DDx | XAD Column - dissolved | µg/L | 12 | 12 | 100 | 0.0000415 JT | 0.000246 JT | W033 | 0.000126 | 0.000134 J | 0.000224 J |
| DDx | XAD Filter - particulate | µg/L | 12 | 12 | 100 | 0.0000193 JT | 0.000429 JT | W033 | 0.000154 | 0.000144 J | 0.000349 J |
| DDx | Peristaltic - total | µg/L | 17 | 12 | 71 | 0.0015 T | 0.0047 NJT | W037 | 0.00258 | 0.00255 J | 0.00393 J |
| DDx | XAD Column+Filter - total | µg/L | 12 | 12 | 100 | 0.0000767 J | 0.000675 J | W033 | 0.00028 | 0.000282 J | 0.000543 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 8 | 5 | 62 | 0.000501 J | 0.00334 | W033 | 0.00165 | 0.000956 J | 0.00321 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 26 | 1 | 4 | 0.0088 J | 0.0088 J | W033 | 0.0088 | 0.0088 J | 0.0088 J |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 8 | 5 | 62 | 0.000501 J | 0.00334 | W033 | 0.00165 | 0.000956 J | 0.00321 |
| Total HPAHs | XAD Column - dissolved | µg/L | 8 | 8 | 100 | 0.000356 JT | 0.00647 JT | W033 | 0.0032 | 0.00386 J | 0.00581 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 8 | 8 | 100 | 0.00237 JT | 0.0301 JT | W033 | 0.0124 | 0.0101 J | 0.0289 J |
| Total HPAHs | Peristaltic - total | µg/L | 26 | 10 | 38 | 0.011 JT | 0.09 JT | W033 | 0.0347 | 0.031 J | 0.068 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 8 | 8 | 100 | 0.00362 J | 0.0341 J | W033 | 0.0156 | 0.0145 J | 0.0328 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 8 | 8 | 100 | 0.000721 JT | 0.0252 T | W035 | 0.0106 | 0.0119 | 0.022 |
| Total LPAHs | XAD Filter - particulate | µg/L | 8 | 5 | 62 | 0.0000627 JT | 0.000536 JT | W033 | 0.000275 | 0.000157 JT | 0.00053 J |
| Total LPAHs | Peristaltic - total | µg/L | 26 | 6 | 23 | 0.005 JT | 0.034 JT | W033 | 0.0125 | 0.00585 J | 0.0303 J |
| Total LPAHs | XAD Column+Filter - total | µg/L | 8 | 8 | 100 | 0.000784 J | 0.0252 | W035 | 0.0108 | 0.0122 J | 0.0222 J |
| Naphthalene | XAD Column - dissolved | µg/L | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Filter - particulate | µg/L | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Column+Filter - total | µg/L | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | XAD Column - dissolved | µg/L | 8 | 5 | 62 | 0.00574 | 0.00917 | W033 | 0.00679 | 0.0063 | 0.00872 |
| Phenanthrene | XAD Filter - particulate | µg/L | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | XAD Column+Filter - total | µg/L | 8 | 5 | 62 | 0.00574 | 0.00917 | W033 | 0.00679 | 0.0063 | 0.00872 |
| Total cPAHs | XAD Column - dissolved | µg/L | 8 | 8 | 100 | 0.00036 JT | 0.0012 JT | W032 | 0.000756 | 0.000725 J | 0.0012 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 8 | 8 | 100 | 0.00082 JT | 0.014 JT | W033 | 0.00577 | 0.00435 J | 0.0137 J |
| Total cPAHs | Peristaltic - total | µg/L | 26 | 2 | 8 | 0.016 JT | 0.034 JT | W033 | 0.025 | 0.025 J | 0.0331 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 8 | 8 | 100 | 0.00202 J | 0.0145 J | W033 | 0.00652 | 0.00509 J | 0.0142 J |
| Total PAHs | XAD Column - dissolved | µg/L | 8 | 8 | 100 | 0.00108 JT | 0.0298 JT | W035 | 0.0138 | 0.0158 J | 0.027 J |
| Total PAHs | XAD Filter - particulate | µg/L | 8 | 8 | 100 | 0.00237 JT | 0.0306 JT | W033 | 0.0126 | 0.0101 J | 0.0294 J |
| Total PAHs | Peristaltic - total | µg/L | 26 | 12 | 46 | 0.005 JT | 0.12 JT | W033 | 0.0349 | 0.032 J | 0.087 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 8 | 8 | 100 | 0.00586 J | 0.0507 J | W033 | 0.0264 | 0.0287 J | 0.0486 J |

Table D3.2-6a. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 26 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 26 | 1 | 4 | 0.15 J | 0.15 J | W028 | 0.15 | 0.15 J | 0.15 J |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 12 | 11 | 92 | 0.0000175 J | 0.0000213 J | W033 | 0.0000191 | 0.0000192 J | 0.000021 J |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 12 | 10 | 83 | 0.00000105 J | 0.00000575 J | W035 | 0.00000372 | 0.00000388 J | 0.00000512 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 28 | 2 | 7 | 0.00011 J | 0.00016 J | W030 | 0.000135 | 0.000135 J | 0.000158 J |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 12 | 12 | 100 | 0.00000419 J | 0.0000265 J | W035 | 0.0000206 | 0.0000213 J | 0.000026 J |

Table D3.2-6a. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.38 J | 0.48 T | W038 | 0.243 | 0.201 U | 0.41 J |
| Arsenic | Peristaltic - particulate[d] | µg/L | 0 J | 0.512 J | W038 | 0.324 | 0.438 J | 0.48 J |
| Arsenic | Peristaltic - total | µg/L | 0.412 UJ | 0.526 JT | W038 | 0.398 | 0.452 J | 0.505 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W026; W028; W029; W030; W031; W032; W033; W034; W035; W036; W037; W038 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.03 J | W030 | 0.0108 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.03 J | W030 | 0.0108 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.1 U | 0.21 U | W032 | 0.0804 | 0.08 U | 0.1 U |
| Chromium | Peristaltic - particulate | µg/L | 0.23 U | 0.42 U | W032 | 0.16 | 0.158 U | 0.194 U |
| Chromium | Peristaltic - total | µg/L | 0.23 U | 0.42 U | W032 | 0.16 | 0.158 U | 0.194 U |
| Copper | Peristaltic - dissolved | µg/L | 0.5 | 0.78 | W035 | 0.56 | 0.555 | 0.638 |
| Copper | Peristaltic - particulate | µg/L | 0.26 | 0.56 | W031 | 0.357 | 0.355 | 0.47 |
| Copper | Peristaltic - total | µg/L | 0.79 | 1.14 | W035 | 0.918 | 0.89 | 1.1 |
| Lead | Peristaltic - dissolved | µg/L | 0.023 | 0.058 U | W028 | 0.0228 | 0.0223 U | 0.0279 |
| Lead | Peristaltic - particulate | µg/L | 0.157 | 0.355 | W028 | 0.235 | 0.234 | 0.323 |
| Lead | Peristaltic - total | µg/L | 0.182 | 0.355 | W028 | 0.241 | 0.235 | 0.323 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 UJ | 0.02 UJ | W026; W028; W029; W030; W031; W032; W033; W034; W035; W036; W037; W038 | 0.0104 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - particulate[d] | µg/L | 0 J | 0.04 J | W031 | 0.0108 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.04 J | W031 | 0.0112 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.2 U | 0.63 | W033 | 0.242 | 0.15 J | 0.6 |
| Nickel | Peristaltic - particulate[d] | µg/L | 0 J | 0.5 | W026 | 0.203 | 0.2 J | 0.375 |
| Nickel | Peristaltic - total | µg/L | 0.2 | 0.71 | W033 | 0.395 | 0.3 | 0.698 |
| Zinc | Peristaltic - dissolved | µg/L | 2.2 U | 6.6 | W034 | 2.08 | 1.43 U | 5.35 |
| Zinc | Peristaltic - particulate[d] | µg/L | 0 | 7 U | W028 | 1.76 | 1.85 U | 2.88 U |
| Zinc | Peristaltic - total | µg/L | 3 U | 7 U | W028 | 2.05 | 1.9 U | 2.88 U |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 UJ | 0.0045 U | W034 | 0.000456 | 0.0003 U | 0.00138 J |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.0000893 JT | 0.00237 JT | W030 | 0.000328 | 0.000181 J | 0.000695 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.0000231 JT | 0.000457 JT | W028 | 0.000179 | 0.000157 J | 0.000417 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000112 J | 0.00259 J | W030 | 0.000507 | 0.000333 J | 0.0011 J |
| **PCDD/F Homologs** | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 0.00000279 T | 0.00000855 T | W033 | 0.00000539 | 0.00000489 J | 0.00000814 |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 0.0000274 T | 0.0000494 T | W032 | 0.0000404 | 0.0000411 | 0.000049 |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 0.000036 | 0.0000552 J | W032 | 0.0000458 | 0.0000465 | 0.0000547 J |
| **PCDD/Fs** | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.0000000051 T | 0.0000000173 JT | W033 | 0.00000000977 | 0.00000000843 J | 0.0000000164 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.0000000726 JT | 0.000000203 JT | W033 | 0.000000118 | 0.000000101 J | 0.000000194 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.0000000777 J | 0.000000212 J | W033 | 0.000000127 | 0.000000108 J | 0.000000202 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.0000000000856 T | 0.00000000465 JT | W026 | 0.000000000629 | 0.000000000165 J | 0.00000000373 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.0000000000357 T | 0.00000000937 JT | W030 | 0.00000000203 | 0.000000000348 J | 0.00000000665 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000000131 J | 0.0000000132 J | W030 | 0.00000000266 | 0.000000000759 J | 0.00000000688 J |

Table D3.2-6a. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Pesticides** | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 0.00000187 U | 0.00000426 J | W033 | 0.00000208 | 0.00000193 U | 0.00000394 J |
| Aldrin | XAD Filter - particulate | µg/L | 0.000000635 J | 0.0000167 U | W035 | 0.00000222 | 0.00000156 J | 0.00000577 J |
| Aldrin | Peristaltic - total | µg/L | 0.000057 U | 0.0005 U | W026 | 0.000166 | 0.00016 U | 0.000242 U |
| Aldrin | XAD Column+Filter - total | µg/L | 0.000000635 J | 0.0000167 U | W035 | 0.00000303 | 0.00000215 J | 0.00000642 J |
| Dieldrin | XAD Column - dissolved | µg/L | 0.0000319 J | 0.0000498 J | W031 | 0.0000391 | 0.0000367 J | 0.0000479 J |
| Dieldrin | XAD Filter - particulate | µg/L | 0.00000203 U | 0.00000415 J | W031 | 0.00000222 | 0.00000209 J | 0.00000379 J |
| Dieldrin | Peristaltic - total | µg/L | 0.0004 U | 0.00042 U | W029; W037 | 0.000201 | 0.0002 U | 0.00021 U |
| Dieldrin | XAD Column+Filter - total | µg/L | 0.0000319 J | 0.0000501 J | W031 | 0.0000407 | 0.000037 J | 0.0000499 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 0.0000195 J | 0.0000317 J | W031 | 0.0000262 | 0.0000256 J | 0.0000312 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 0.000000641 U | 0.00000618 U | W033 | 0.00000192 | 0.00000232 J | 0.00000304 U |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.000092 U | 0.0005 U | W036 | 0.000222 | 0.00024 U | 0.000312 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 0.0000203 J | 0.0000317 J | W031 | 0.0000266 | 0.0000263 J | 0.0000312 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 0.00000672 JT | 0.0000299 JT | W032 | 0.0000206 | 0.0000212 J | 0.0000286 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 0.000000597 JT | 0.0000327 UT | W034 | 0.00000701 | 0.00000687 J | 0.0000136 J |
| Total chlordanes | Peristaltic - total | µg/L | 0.00055 NJT | 0.0024 UT | W030 | 0.00076 | 0.0007 UT | 0.00128 J |
| Total chlordanes | XAD Column+Filter - total | µg/L | 0.00000732 J | 0.0000368 J | W033 | 0.0000263 | 0.0000262 J | 0.0000365 J |
| DDx | XAD Column - dissolved | µg/L | 0.0000415 JT | 0.000246 JT | W033 | 0.000126 | 0.000134 J | 0.000224 J |
| DDx | XAD Filter - particulate | µg/L | 0.0000193 JT | 0.000429 JT | W033 | 0.000154 | 0.000144 J | 0.000349 J |
| DDx | Peristaltic - total | µg/L | 0.001 UT | 0.0047 NJT | W037 | 0.00201 | 0.002 NJT | 0.00358 J |
| DDx | XAD Column+Filter - total | µg/L | 0.0000767 J | 0.000675 J | W033 | 0.00028 | 0.000282 J | 0.000543 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 0.0000622 U | 0.000149 U | W033 | 0.0000478 | 0.0000448 U | 0.0000708 U |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 0.000336 U | 0.00334 | W033 | 0.00113 | 0.000646 J | 0.00311 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0088 J | W033 | 0.00447 | 0.0043 U | 0.0043 U |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 0.000336 U | 0.00334 | W033 | 0.00113 | 0.000646 J | 0.00311 |
| Total HPAHs | XAD Column - dissolved | µg/L | 0.000356 JT | 0.00647 JT | W033 | 0.0032 | 0.00386 J | 0.00581 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 0.00237 JT | 0.0301 JT | W033 | 0.0124 | 0.0101 J | 0.0289 J |
| Total HPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.09 JT | W033 | 0.0167 | 0.0055 U | 0.0393 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 0.00362 J | 0.0341 J | W033 | 0.0156 | 0.0145 J | 0.0328 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 0.000721 JT | 0.0252 T | W035 | 0.0106 | 0.0119 | 0.022 |
| Total LPAHs | XAD Filter - particulate | µg/L | 0.0000627 JT | 0.00194 UT | W035 | 0.000401 | 0.000406 J | 0.000825 U |
| Total LPAHs | Peristaltic - total | µg/L | 0.005 JT | 0.034 UT | W029; W033 | 0.00865 | 0.0065 U | 0.0185 J |
| Total LPAHs | XAD Column+Filter - total | µg/L | 0.000784 J | 0.0252 | W035 | 0.0108 | 0.0122 J | 0.0222 J |
| Naphthalene | XAD Column - dissolved | µg/L | 0.0436 U | 0.107 U | W033 | 0.035 | 0.032 U | 0.0532 U |
| Naphthalene | XAD Filter - particulate | µg/L | 0.00061 U | 0.00156 U | W033 | 0.000522 | 0.000506 U | 0.000745 U |
| Naphthalene | Peristaltic - total | µg/L | 0.013 U | 0.034 U | W029 | 0.0084 | 0.0065 U | 0.0145 U |
| Naphthalene | XAD Column+Filter - total | µg/L | 0.0436 U | 0.107 U | W033 | 0.035 | 0.032 U | 0.0532 U |
| Phenanthrene | XAD Column - dissolved | µg/L | 0.002 U | 0.00917 | W033 | 0.00466 | 0.00578 | 0.00838 |
| Phenanthrene | XAD Filter - particulate | µg/L | 0.000485 U | 0.00254 U | W033 | 0.00067 | 0.000545 U | 0.00127 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.02 U | W033 | 0.00428 | 0.00325 U | 0.00688 U |
| Phenanthrene | XAD Column+Filter - total | µg/L | 0.002 U | 0.00917 | W033 | 0.00466 | 0.00578 | 0.00838 |
| Total cPAHs | XAD Column - dissolved | µg/L | 0.00036 JT | 0.0012 JT | W032 | 0.000756 | 0.000725 J | 0.0012 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 0.00082 JT | 0.014 JT | W033 | 0.00577 | 0.00435 J | 0.0137 J |
| Total cPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.034 JT | W033 | 0.007 | 0.0055 U | 0.0134 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 0.00202 J | 0.0145 J | W033 | 0.00652 | 0.00509 J | 0.0142 J |
| Total PAHs | XAD Column - dissolved | µg/L | 0.00108 JT | 0.0298 JT | W035 | 0.0138 | 0.0158 J | 0.027 J |
| Total PAHs | XAD Filter - particulate | µg/L | 0.00237 JT | 0.0306 JT | W033 | 0.0126 | 0.0101 J | 0.0294 J |
| Total PAHs | Peristaltic - total | µg/L | 0.005 JT | 0.12 JT | W033 | 0.0197 | 0.0065 U | 0.0538 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 0.00586 J | 0.0507 J | W033 | 0.0264 | 0.0287 J | 0.0486 J |

Table D3.2-6a. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.034 U | W026 | 0.0146 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.21 UJ | 2.6 UJ | W032 | 0.353 | 0.26 UJ | 1.03 UJ |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.022 UJ | 0.15 J | W028 | 0.0291 | 0.0255 UJ | 0.0406 UJ |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 0.0000175 J | 0.0000213 J | W033 | 0.0000183 | 0.0000188 J | 0.000021 J |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 0.00000105 J | 0.00000575 J | W035 | 0.00000347 | 0.00000351 J | 0.00000499 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.00011 J | 0.017 U | W026 | 0.00648 | 0.0075 U | 0.0075 U |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 0.00000419 J | 0.0000265 J | W035 | 0.0000206 | 0.0000213 J | 0.000026 J |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

[d] Particulate values were calculated as the difference between total and dissolved concentrations. If the measured dissolved concentration was greater than or equal to the measured total concentration, the calculated particulate concentration was assigned a value of zero.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
XAD - hydrophobic crosslinked polystyrene copolymer resin

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D3.2-6b. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events
(East Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| **RM 01.9<03** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Arsenic | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.458 J | 0.481 J | W026 | 0.47 | 0.47 J | 0.48 J |
| Arsenic | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.458 J | 0.481 J | W026 | 0.47 | 0.47 J | 0.48 J |
| Cadmium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Copper | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.54 | 0.63 | W026 | 0.585 | 0.585 | 0.626 |
| Copper | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.34 | 0.44 | W026 | 0.39 | 0.39 | 0.435 |
| Copper | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.88 | 1.07 | W026 | 0.975 | 0.975 | 1.06 |
| Lead | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Lead | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.242 | 0.332 | W026 | 0.287 | 0.287 | 0.328 |
| Lead | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.242 | 0.332 | W026 | 0.287 | 0.287 | 0.328 |
| Mercury | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.3 | 0.5 | W026 | 0.4 | 0.4 | 0.49 |
| Nickel | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.3 | 0.5 | W026 | 0.4 | 0.4 | 0.49 |
| Zinc | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000634 JT | 0.00069 JT | W026 | 0.000662 | 0.000662 J | 0.000687 J |
| Total PCBs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000239 JT | 0.000263 JT | W026 | 0.000251 | 0.000251 J | 0.000262 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000897 J | 0.000929 J | W026 | 0.000913 | 0.000913 J | 0.000927 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000000000428 JT | 0.00000000465 JT | W026 | 0.00000000254 | 0.00000000254 J | 0.00000000444 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000000000503 JT | 0.000000000573 JT | W026 | 0.000000000538 | 0.000000000538 J | 0.00000000057 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000000001 J | 0.00000000515 J | W026 | 0.00000000308 | 0.00000000308 J | 0.00000000495 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.011 JT | 0.011 JT | W026 | 0.011 | 0.011 JT | 0.011 JT |
| Total LPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PAHs | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.011 JT | 0.011 JT | W026 | 0.011 | 0.011 JT | 0.011 JT |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |

Table D3.2-6b. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events
(East Channel Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **RM 03<04** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Arsenic | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.442 J | 0.478 J | W028 | 0.46 | 0.46 J | 0.476 J |
| Arsenic | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.442 J | 0.478 J | W028 | 0.46 | 0.46 J | 0.476 J |
| Cadmium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Copper | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.56 | 0.64 | W028 | 0.6 | 0.6 | 0.636 |
| Copper | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.3 | 0.36 | W028 | 0.33 | 0.33 | 0.357 |
| Copper | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.92 | 0.94 | W028 | 0.93 | 0.93 | 0.939 |
| Lead | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Lead | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.278 | 0.355 | W028 | 0.317 | 0.317 | 0.351 |
| Lead | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.278 | 0.355 | W028 | 0.317 | 0.317 | 0.351 |
| Mercury | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.3 | 0.3 | W028 | 0.3 | 0.3 | 0.3 |
| Nickel | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.3 | 0.3 | W028 | 0.3 | 0.3 | 0.3 |
| Zinc | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000353 JT | 0.000696 JT | W028 | 0.000525 | 0.000525 J | 0.000679 J |
| Total PCBs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000769 JT | 0.000457 JT | W028 | 0.000267 | 0.000267 J | 0.000438 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00043 J | 0.00115 J | W028 | 0.000791 | 0.000791 J | 0.00112 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000000000221 JT | 0.000000000604 JT | W028 | 0.000000000413 | 0.000000000413 J | 0.000000000585 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000000000922 JT | 0.000000000858 JT | W028 | 0.000000000475 | 0.000000000475 J | 0.00000000082 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000000000313 J | 0.00000000146 J | W028 | 0.000000000888 | 0.000000000888 J | 0.0000000014 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.00018 J | 0.00018 J | W028 | 0.00018 | 0.00018 J | 0.00018 J |
| Total chlordanes | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.0019 T | 0.0019 T | W028 | 0.0019 | 0.0019 T | 0.0019 T |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total LPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.15 J | 0.15 J | W028 | 0.15 | 0.15 J | 0.15 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |

Table D3.2-6b. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events
(East Channel Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **RM 05<06** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Arsenic | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.428 J | 0.453 J | W030 | 0.441 | 0.441 J | 0.452 J |
| Arsenic | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.428 J | 0.453 J | W030 | 0.441 | 0.441 J | 0.452 J |
| Cadmium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 2 | 1 | 50 | 0.03 J | 0.03 J | W030 | 0.03 | 0.03 J | 0.03 J |
| Cadmium | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.03 J | 0.03 J | W030 | 0.03 | 0.03 J | 0.03 J |
| Chromium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Copper | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.58 | 0.6 | W030 | 0.59 | 0.59 | 0.599 |
| Copper | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.33 | 0.37 | W030 | 0.35 | 0.35 | 0.368 |
| Copper | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.93 | 0.95 | W030 | 0.94 | 0.94 | 0.949 |
| Lead | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Lead | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.23 | 0.241 | W030 | 0.236 | 0.236 | 0.24 |
| Lead | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.23 | 0.241 | W030 | 0.236 | 0.236 | 0.24 |
| Mercury | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 2 | 1 | 50 | 0.2 J | 0.2 J | W030 | 0.2 | 0.2 J | 0.2 J |
| Nickel | Peristaltic - particulate[d] | µg/L | 2 | 2 | 100 | 0 J | 0.3 | W030 | 0.15 | 0.15 J | 0.285 J |
| Nickel | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.2 | 0.3 | W030 | 0.25 | 0.25 | 0.295 |
| Zinc | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000215 JT | 0.00237 JT | W030 | 0.00129 | 0.00129 J | 0.00226 J |
| Total PCBs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000162 JT | 0.000216 JT | W030 | 0.000189 | 0.000189 J | 0.000213 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000377 J | 0.00259 J | W030 | 0.00148 | 0.00148 J | 0.00248 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000000000169 JT | 0.00000000379 JT | W030 | 0.00000000198 | 0.00000000198 J | 0.00000000361 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000000000272 JT | 0.00000000937 JT | W030 | 0.00000000482 | 0.00000000482 J | 0.00000000892 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000000000441 J | 0.0000000132 J | W030 | 0.0000000068 | 0.0000000068 J | 0.0000000125 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.00022 J | 0.00022 J | W030 | 0.00022 | 0.00022 J | 0.00022 J |
| Total chlordanes | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.002 JT | 0.0033 NJT | W030 | 0.00265 | 0.00265 J | 0.00324 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total LPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |

Table D3.2-6b. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events
(East Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| Hexachlorobenzene | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.00016 J | 0.00016 J | W030 | 0.00016 | 0.00016 J | 0.00016 J |
| **RM 06<07** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.38 J | 0.404 JT | W032 | 0.392 | 0.392 J | 0.403 J |
| Arsenic | Peristaltic - particulate[d] | µg/L | 2 | 2 | 100 | 0 J | 0.054 J | W032 | 0.027 | 0.027 J | 0.0513 J |
| Arsenic | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.458 J | 0.458 J | W032 | 0.458 | 0.458 J | 0.458 J |
| Cadmium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Copper | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.58 | 0.59 | W032 | 0.585 | 0.585 | 0.59 |
| Copper | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.29 | 0.35 | W032 | 0.32 | 0.32 | 0.347 |
| Copper | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.88 | 0.93 | W032 | 0.905 | 0.905 | 0.928 |
| Lead | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Lead | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.212 | 0.249 | W032 | 0.231 | 0.231 | 0.247 |
| Lead | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.212 | 0.249 | W032 | 0.231 | 0.231 | 0.247 |
| Mercury | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.2 J | 0.2 J | W032 | 0.2 | 0.2 J | 0.2 J |
| Nickel | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.1 J | 0.1 J | W032 | 0.1 | 0.1 J | 0.1 J |
| Nickel | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.3 | 0.3 | W032 | 0.3 | 0.3 | 0.3 |
| Zinc | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000229 JT | 0.000335 JT | W032 | 0.000282 | 0.000282 J | 0.00033 J |
| Total PCBs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00027 JT | 0.000321 JT | W032 | 0.000296 | 0.000296 J | 0.000318 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000499 J | 0.000656 J | W032 | 0.000578 | 0.000578 J | 0.000648 J |
| **PCDD/F Homologs** | | | | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00000402 T | 0.00000576 JT | W032 | 0.00000489 | 0.00000489 J | 0.00000567 J |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000343 T | 0.0000494 T | W032 | 0.0000419 | 0.0000419 | 0.0000486 |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000383 | 0.0000552 J | W032 | 0.0000467 | 0.0000467 J | 0.0000543 J |
| **PCDD/Fs** | | | | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000000051 T | 0.00000000779 JT | W032 | 0.00000000645 | 0.00000000645 J | 0.00000000766 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000000726 JT | 0.0000000931 JT | W032 | 0.0000000829 | 0.0000000829 J | 0.0000000921 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000000777 J | 0.000000101 J | W032 | 0.0000000893 | 0.0000000893 J | 0.0000000997 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000000000153 JT | 0.000000000159 JT | W032 | 0.000000000156 | 0.000000000156 J | 0.000000000159 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00000000339 JT | 0.00000000369 JT | W032 | 0.00000000354 | 0.00000000354 J | 0.00000000368 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00000000354 J | 0.00000000385 J | W032 | 0.0000000037 | 0.0000000037 J | 0.00000000383 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 2 | 1 | 50 | 0.00000203 J | 0.00000203 J | W032 | 0.00000203 | 0.00000203 J | 0.00000203 J |
| Aldrin | XAD Filter - particulate | µg/L | 2 | 1 | 50 | 0.00000223 J | 0.00000223 J | W032 | 0.00000223 | 0.00000223 J | 0.00000223 J |
| Aldrin | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00000203 J | 0.00000223 J | W032 | 0.00000213 | 0.00000213 J | 0.00000222 J |
| Dieldrin | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000433 J | 0.0000463 J | W032 | 0.0000448 | 0.0000448 J | 0.0000462 J |
| Dieldrin | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00000293 J | 0.00000304 J | W032 | 0.00000299 | 0.00000299 J | 0.00000303 J |
| Dieldrin | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000462 J | 0.0000493 J | W032 | 0.0000478 | 0.0000478 J | 0.0000492 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000251 J | 0.000027 J | W032 | 0.0000261 | 0.0000261 J | 0.0000269 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 2 | 1 | 50 | 0.00000185 J | 0.00000185 J | W032 | 0.00000185 | 0.00000185 J | 0.00000185 J |

Table D3.2-6b. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events
(East Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000027 J | 0.000027 J | W032 | 0.000027 | 0.000027 J | 0.000027 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000212 JT | 0.0000299 JT | W032 | 0.0000256 | 0.0000256 J | 0.0000295 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000051 JT | 0.0000113 JT | W032 | 0.0000082 | 0.0000082 J | 0.000011 J |
| Total chlordanes | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000325 J | 0.000035 J | W032 | 0.0000338 | 0.0000338 J | 0.0000349 J |
| DDx | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000461 JT | 0.0000479 JT | W032 | 0.000047 | 0.000047 J | 0.0000478 J |
| DDx | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000453 JT | 0.0000535 JT | W032 | 0.0000494 | 0.0000494 J | 0.0000531 J |
| DDx | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000914 J | 0.000101 J | W032 | 0.0000964 | 0.0000964 J | 0.000101 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 2 | 1 | 50 | 0.000501 J | 0.000501 J | W032 | 0.000501 | 0.000501 J | 0.000501 J |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 2 | 1 | 50 | 0.000501 J | 0.000501 J | W032 | 0.000501 | 0.000501 J | 0.000501 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00119 JT | 0.00125 JT | W032 | 0.00122 | 0.00122 J | 0.00125 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00237 JT | 0.00334 JT | W032 | 0.00286 | 0.00286 J | 0.00329 J |
| Total HPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00362 J | 0.00453 J | W032 | 0.00408 | 0.00408 J | 0.00448 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00117 JT | 0.00243 JT | W032 | 0.0018 | 0.0018 J | 0.00237 J |
| Total LPAHs | XAD Filter - particulate | µg/L | 2 | 1 | 50 | 0.000157 JT | 0.000157 JT | W032 | 0.000157 | 0.000157 JT | 0.000157 JT |
| Total LPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total LPAHs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00133 J | 0.00243 J | W032 | 0.00188 | 0.00188 J | 0.00237 J |
| Naphthalene | XAD Column - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Filter - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Column+Filter - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | XAD Column - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | XAD Filter - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | XAD Column+Filter - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0012 JT | 0.0012 JT | W032 | 0.0012 | 0.0012 J | 0.0012 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00082 JT | 0.0015 JT | W032 | 0.00116 | 0.00116 J | 0.00147 J |
| Total cPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00202 J | 0.0027 J | W032 | 0.00236 | 0.00236 J | 0.00267 J |
| Total PAHs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00236 JT | 0.00368 JT | W032 | 0.00302 | 0.00302 J | 0.00361 J |
| Total PAHs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00237 JT | 0.0035 JT | W032 | 0.00294 | 0.00294 J | 0.00344 J |
| Total PAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PAHs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00586 J | 0.00605 J | W032 | 0.00596 | 0.00596 J | 0.00604 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000175 J | 0.0000178 J | W032 | 0.0000177 | 0.0000177 J | 0.0000178 J |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00000338 J | 0.0000042 J | W032 | 0.00000379 | 0.00000379 J | 0.00000416 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000209 J | 0.000022 J | W032 | 0.0000214 | 0.0000214 J | 0.0000219 J |
| **RM 08<09** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Arsenic | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.457 J | 0.464 J | W035 | 0.461 | 0.461 J | 0.464 J |
| Arsenic | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.457 J | 0.464 J | W035 | 0.461 | 0.461 J | 0.464 J |
| Cadmium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |

Table D3.2-6b. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (East Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| Copper | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.53 | 0.78 | W035 | 0.655 | 0.655 | 0.768 |
| Copper | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.36 | 0.48 | W035 | 0.42 | 0.42 | 0.474 |
| Copper | Peristaltic - total | µg/L | 2 | 2 | 100 | 1.01 | 1.14 | W035 | 1.08 | 1.08 | 1.13 |
| Lead | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Lead | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.226 | 0.294 | W035 | 0.26 | 0.26 | 0.291 |
| Lead | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.226 | 0.294 | W035 | 0.26 | 0.26 | 0.291 |
| Mercury | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.3 | 0.3 | W035 | 0.3 | 0.3 | 0.3 |
| Nickel | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.3 | 0.3 | W035 | 0.3 | 0.3 | 0.3 |
| Zinc | Peristaltic - dissolved | µg/L | 2 | 1 | 50 | 5.2 | 5.2 | W035 | 5.2 | 5.2 | 5.2 |
| Zinc | Peristaltic - particulate[d] | µg/L | 2 | 1 | 50 | 0 | 0 | W035 | 0 | 0 | 0 |
| Zinc | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.0014 J | 0.0014 J | W035 | 0.0014 | 0.0014 J | 0.0014 J |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000231 JT | 0.000294 JT | W035 | 0.000263 | 0.000263 J | 0.000291 J |
| Total PCBs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000295 JT | 0.000449 JT | W035 | 0.000372 | 0.000372 J | 0.000441 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000589 J | 0.00068 J | W035 | 0.000635 | 0.000635 J | 0.000675 J |
| **PCDD/F Homologs** | | | | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00000342 T | 0.0000073 T | W035 | 0.00000536 | 0.00000536 | 0.00000711 |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000453 T | 0.0000465 T | W035 | 0.0000459 | 0.0000459 | 0.0000464 |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000487 | 0.0000538 | W035 | 0.0000513 | 0.0000513 | 0.0000535 |
| **PCDD/Fs** | | | | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000000069 JT | 0.0000000119 JT | W035 | 0.0000000094 | 0.0000000094 J | 0.0000000117 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000000108 JT | 0.000000124 JT | W035 | 0.000000116 | 0.000000116 J | 0.000000123 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000000115 J | 0.000000136 J | W035 | 0.000000125 | 0.000000125 J | 0.000000135 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000000000183 JT | 0.00000000025 JT | W035 | 0.000000000217 | 0.000000000217 J | 0.000000000247 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00000000643 JT | 0.00000000672 JT | W035 | 0.00000000658 | 0.00000000658 J | 0.00000000671 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00000000661 J | 0.00000000697 J | W035 | 0.00000000679 | 0.00000000679 J | 0.00000000695 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Aldrin | XAD Filter - particulate | µg/L | 2 | 1 | 50 | 0.00000141 J | 0.00000141 J | W035 | 0.00000141 | 0.00000141 J | 0.00000141 J |
| Aldrin | XAD Column+Filter - total | µg/L | 2 | 1 | 50 | 0.00000141 J | 0.00000141 J | W035 | 0.00000141 | 0.00000141 J | 0.00000141 J |
| Dieldrin | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000326 J | 0.0000444 J | W035 | 0.0000385 | 0.0000385 J | 0.0000438 J |
| Dieldrin | XAD Filter - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000326 J | 0.0000444 J | W035 | 0.0000385 | 0.0000385 J | 0.0000438 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000257 J | 0.0000308 J | W035 | 0.0000283 | 0.0000283 J | 0.0000305 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000257 J | 0.0000308 J | W035 | 0.0000283 | 0.0000283 J | 0.0000305 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000162 JT | 0.0000206 JT | W035 | 0.0000184 | 0.0000184 J | 0.0000204 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00000905 JT | 0.00000998 JT | W035 | 0.00000952 | 0.00000952 J | 0.00000993 J |
| Total chlordanes | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000253 J | 0.0000306 J | W035 | 0.0000279 | 0.0000279 J | 0.0000303 J |
| DDx | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000415 JT | 0.0000469 JT | W035 | 0.0000442 | 0.0000442 J | 0.0000466 J |
| DDx | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000352 JT | 0.0000597 JT | W035 | 0.0000475 | 0.0000475 J | 0.0000585 J |
| DDx | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000767 J | 0.000107 J | W035 | 0.0000916 | 0.0000916 J | 0.000105 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |

Table D3.2-6b. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events
(East Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| Total HPAHs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000356 JT | 0.00458 JT | W035 | 0.00247 | 0.00247 J | 0.00437 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00555 JT | 0.00955 JT | W035 | 0.00755 | 0.00755 J | 0.00935 J |
| Total HPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00591 J | 0.0141 J | W035 | 0.01 | 0.01 J | 0.0137 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000721 JT | 0.0252 T | W035 | 0.013 | 0.013 J | 0.024 J |
| Total LPAHs | XAD Filter - particulate | µg/L | 2 | 1 | 50 | 0.0000627 JT | 0.0000627 JT | W035 | 0.0000627 | 0.0000627 JT | 0.0000627 JT |
| Total LPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total LPAHs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000784 J | 0.0252 | W035 | 0.013 | 0.013 J | 0.024 J |
| Naphthalene | XAD Column - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Filter - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Column+Filter - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | XAD Column - dissolved | µg/L | 2 | 1 | 50 | 0.00582 | 0.00582 | W035 | 0.00582 | 0.00582 | 0.00582 |
| Phenanthrene | XAD Filter - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | XAD Column+Filter - total | µg/L | 2 | 1 | 50 | 0.00582 | 0.00582 | W035 | 0.00582 | 0.00582 | 0.00582 |
| Total cPAHs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00036 JT | 0.00077 JT | W035 | 0.000565 | 0.000565 J | 0.00075 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.003 JT | 0.0042 JT | W035 | 0.0036 | 0.0036 J | 0.00414 J |
| Total cPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00336 J | 0.00497 J | W035 | 0.00417 | 0.00417 J | 0.00489 J |
| Total PAHs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00108 JT | 0.0298 JT | W035 | 0.0154 | 0.0154 J | 0.0284 J |
| Total PAHs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00562 JT | 0.00955 JT | W035 | 0.00759 | 0.00759 J | 0.00935 J |
| Total PAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PAHs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0067 J | 0.0394 J | W035 | 0.023 | 0.023 J | 0.0377 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000175 J | 0.0000207 J | W035 | 0.0000191 | 0.0000191 J | 0.0000205 J |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00000294 J | 0.00000575 J | W035 | 0.00000435 | 0.00000435 J | 0.00000561 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000204 J | 0.0000265 J | W035 | 0.0000234 | 0.0000234 J | 0.0000261 J |
| **RM 09<10** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 2 | 1 | 50 | 0.48 T | 0.48 T | W038 | 0.48 | 0.48 T | 0.48 T |
| Arsenic | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.046 J | 0.512 J | W038 | 0.279 | 0.279 J | 0.489 J |
| Arsenic | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.512 JT | 0.526 JT | W038 | 0.519 | 0.519 J | 0.525 J |
| Cadmium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Copper | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.5 T | 0.5 T | W038 | 0.5 | 0.5 | 0.5 |
| Copper | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.35 | 0.36 | W038 | 0.355 | 0.355 | 0.36 |
| Copper | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.85 T | 0.86 T | W038 | 0.855 | 0.855 | 0.86 |
| Lead | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Lead | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.223 | 0.225 | W038 | 0.224 | 0.224 | 0.225 |
| Lead | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.223 T | 0.225 T | W038 | 0.224 | 0.224 | 0.225 |
| Mercury | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.2 JT | 0.2 JT | W038 | 0.2 | 0.2 J | 0.2 J |
| Nickel | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.1 J | 0.1 J | W038 | 0.1 | 0.1 J | 0.1 J |
| Nickel | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.3 T | 0.3 T | W038 | 0.3 | 0.3 | 0.3 |

Table D3.2-6b. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events
(East Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| Zinc | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000893 JT | 0.0000946 JT | W038 | 0.000092 | 0.000092 J | 0.0000943 J |
| Total PCBs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000231 JT | 0.0000874 JT | W038 | 0.0000553 | 0.0000553 J | 0.0000842 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000112 J | 0.000182 J | W038 | 0.000147 | 0.000147 J | 0.000179 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000000000856 T | 0.0000000000948 JT | W038 | 0.0000000000902 | 0.0000000000902 J | 0.0000000000943 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000000000357 T | 0.000000000133 JT | W038 | 0.0000000000844 | 0.0000000000844 J | 0.000000000128 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000000000131 J | 0.000000000219 J | W038 | 0.000000000175 | 0.000000000175 J | 0.000000000214 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.00025 NJ | 0.0004 NJ | W038 | 0.000325 | 0.000325 J | 0.000393 J |
| Total chlordanes | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.00055 NJT | 0.00055 NJT | W038 | 0.00055 | 0.00055 NJT | 0.00055 NJT |
| DDx | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.0015 T | 0.0026 NJT | W038 | 0.00205 | 0.00205 J | 0.00255 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total LPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.00011 J | 0.00011 J | W038 | 0.00011 | 0.00011 J | 0.00011 J |

Table D3.2-6b. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events
(East Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **RM 01.9<03** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.422 U | 0.425 U | W026 | 0.212 | 0.212 U | 0.212 U |
| Arsenic | Peristaltic - particulate | µg/L | 0.458 J | 0.481 J | W026 | 0.47 | 0.47 J | 0.48 J |
| Arsenic | Peristaltic - total | µg/L | 0.458 J | 0.481 J | W026 | 0.47 | 0.47 J | 0.48 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W026 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W026 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W026 | 0.01 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.13 U | 0.15 U | W026 | 0.07 | 0.07 U | 0.0745 U |
| Chromium | Peristaltic - particulate | µg/L | 0.34 U | 0.38 U | W026 | 0.18 | 0.18 U | 0.189 U |
| Chromium | Peristaltic - total | µg/L | 0.34 U | 0.38 U | W026 | 0.18 | 0.18 U | 0.189 U |
| Copper | Peristaltic - dissolved | µg/L | 0.54 | 0.63 | W026 | 0.585 | 0.585 | 0.626 |
| Copper | Peristaltic - particulate | µg/L | 0.34 | 0.44 | W026 | 0.39 | 0.39 | 0.435 |
| Copper | Peristaltic - total | µg/L | 0.88 | 1.07 | W026 | 0.975 | 0.975 | 1.06 |
| Lead | Peristaltic - dissolved | µg/L | 0.043 U | 0.045 U | W026 | 0.022 | 0.022 U | 0.0225 U |
| Lead | Peristaltic - particulate | µg/L | 0.242 | 0.332 | W026 | 0.287 | 0.287 | 0.328 |
| Lead | Peristaltic - total | µg/L | 0.242 | 0.332 | W026 | 0.287 | 0.287 | 0.328 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 UJ | 0.02 UJ | W026 | 0.01 | 0.01 UJ | 0.01 UJ |
| Mercury | Peristaltic - particulate | µg/L | 0.02 UJ | 0.02 UJ | W026 | 0.01 | 0.01 UJ | 0.01 UJ |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W026 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.2 U | 0.2 U | W026 | 0.1 | 0.1 U | 0.1 U |
| Nickel | Peristaltic - particulate | µg/L | 0.3 | 0.5 | W026 | 0.4 | 0.4 | 0.49 |
| Nickel | Peristaltic - total | µg/L | 0.3 | 0.5 | W026 | 0.4 | 0.4 | 0.49 |
| Zinc | Peristaltic - dissolved | µg/L | 2.4 U | 4.4 U | W026 | 1.7 | 1.7 U | 2.15 U |
| Zinc | Peristaltic - particulate | µg/L | 4.4 U | 4.9 U | W026 | 2.33 | 2.33 U | 2.44 U |
| Zinc | Peristaltic - total | µg/L | 4.3 U | 4.9 U | W026 | 2.3 | 2.3 U | 2.44 U |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0006 U | W026 | 0.0003 | 0.0003 U | 0.0003 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000634 JT | 0.00069 JT | W026 | 0.000662 | 0.000662 J | 0.000687 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.000239 JT | 0.000263 JT | W026 | 0.000251 | 0.000251 J | 0.000262 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000897 J | 0.000929 J | W026 | 0.000913 | 0.000913 J | 0.000927 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.000000000428 JT | 0.00000000465 JT | W026 | 0.00000000254 | 0.00000000254 J | 0.00000000444 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000000503 JT | 0.000000000573 JT | W026 | 0.000000000538 | 0.000000000538 J | 0.000000000057 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000001 J | 0.00000000515 J | W026 | 0.00000000308 | 0.00000000308 J | 0.00000000495 J |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.00048 U | 0.0005 U | W026 | 0.000245 | 0.000245 U | 0.00025 U |
| Dieldrin | Peristaltic - total | µg/L | 0.0004 U | 0.0004 U | W026 | 0.0002 | 0.0002 U | 0.0002 U |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.000092 U | 0.00014 U | W026 | 0.000058 | 0.000058 U | 0.0000688 U |
| Total chlordanes | Peristaltic - total | µg/L | 0.0015 UT | 0.0018 UT | W026 | 0.000825 | 0.000825 U | 0.000893 U |
| DDx | Peristaltic - total | µg/L | 0.001 UT | 0.0011 UT | W026 | 0.000525 | 0.000525 U | 0.000548 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0086 U | W026 | 0.0043 | 0.0043 U | 0.0043 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W026 | 0.00825 | 0.00825 J | 0.0107 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W026 | 0.0065 | 0.0065 U | 0.0065 U |
| Naphthalene | Peristaltic - total | µg/L | 0.013 U | 0.013 U | W026 | 0.0065 | 0.0065 U | 0.0065 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.0064 U | W026 | 0.0032 | 0.0032 U | 0.0032 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W026 | 0.0055 | 0.0055 U | 0.0055 U |
| Total PAHs | Peristaltic - total | µg/L | 0.011 JT | 0.013 UT | W026 | 0.00875 | 0.00875 J | 0.0108 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.034 U | W026 | 0.0158 | 0.0158 U | 0.0169 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.52 UJ | 0.79 UJ | W026 | 0.328 | 0.328 UJ | 0.388 UJ |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.037 UJ | 0.076 UJ | W026 | 0.0283 | 0.0283 UJ | 0.037 UJ |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.015 U | 0.017 U | W026 | 0.008 | 0.008 U | 0.00845 U |

Table D3.2-6b. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events
(East Channel Single-Point Locations).

| Analyte | Method | Units | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th Percentile (half DL)[b] |
| **RM 03<04** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.384 UJ | 0.395 UJ | W028 | 0.195 | 0.195 UJ | 0.197 UJ |
| Arsenic | Peristaltic - particulate | µg/L | 0.442 J | 0.478 J | W028 | 0.46 | 0.46 J | 0.476 J |
| Arsenic | Peristaltic - total | µg/L | 0.442 J | 0.478 J | W028 | 0.46 | 0.46 J | 0.476 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W028 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W028 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W028 | 0.01 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.18 U | 0.2 U | W028 | 0.095 | 0.095 U | 0.0995 U |
| Chromium | Peristaltic - particulate | µg/L | 0.31 U | 0.34 U | W028 | 0.163 | 0.163 U | 0.169 U |
| Chromium | Peristaltic - total | µg/L | 0.31 U | 0.34 U | W028 | 0.163 | 0.163 U | 0.169 U |
| Copper | Peristaltic - dissolved | µg/L | 0.56 | 0.64 | W028 | 0.6 | 0.6 | 0.636 |
| Copper | Peristaltic - particulate | µg/L | 0.3 | 0.36 | W028 | 0.33 | 0.33 | 0.357 |
| Copper | Peristaltic - total | µg/L | 0.92 | 0.94 | W028 | 0.93 | 0.93 | 0.939 |
| Lead | Peristaltic - dissolved | µg/L | 0.044 U | 0.058 U | W028 | 0.0255 | 0.0255 U | 0.0287 U |
| Lead | Peristaltic - particulate | µg/L | 0.278 | 0.355 | W028 | 0.317 | 0.317 | 0.351 |
| Lead | Peristaltic - total | µg/L | 0.278 | 0.355 | W028 | 0.317 | 0.317 | 0.351 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 UJ | 0.02 UJ | W028 | 0.01 | 0.01 UJ | 0.01 UJ |
| Mercury | Peristaltic - particulate | µg/L | 0.02 UJ | 0.02 UJ | W028 | 0.01 | 0.01 UJ | 0.01 UJ |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W028 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.2 U | 0.2 U | W028 | 0.1 | 0.1 U | 0.1 U |
| Nickel | Peristaltic - particulate | µg/L | 0.3 | 0.3 | W028 | 0.3 | 0.3 | 0.3 |
| Nickel | Peristaltic - total | µg/L | 0.3 | 0.3 | W028 | 0.3 | 0.3 | 0.3 |
| Zinc | Peristaltic - dissolved | µg/L | 2.2 U | 3.7 U | W028 | 1.48 | 1.48 U | 1.81 U |
| Zinc | Peristaltic - particulate | µg/L | 5 U | 7 U | W028 | 3 | 3 U | 3.45 U |
| Zinc | Peristaltic - total | µg/L | 5 U | 7 U | W028 | 3 | 3 U | 3.45 U |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0006 U | W028 | 0.0003 | 0.0003 U | 0.0003 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000353 JT | 0.000696 JT | W028 | 0.000525 | 0.000525 J | 0.000679 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.0000769 JT | 0.000457 JT | W028 | 0.000267 | 0.000267 J | 0.000438 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.00043 J | 0.00115 J | W028 | 0.000791 | 0.000791 J | 0.00112 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.000000000221 JT | 0.000000000604 JT | W028 | 0.000000000413 | 0.000000000413 J | 0.000000000585 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.0000000000922 JT | 0.000000000858 JT | W028 | 0.000000000475 | 0.000000000475 J | 0.000000000082 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000000313 J | 0.00000000146 J | W028 | 0.000000000888 | 0.000000000888 J | 0.0000000014 J |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.0002 U | 0.00023 U | W028 | 0.000108 | 0.000108 U | 0.000114 U |
| Dieldrin | Peristaltic - total | µg/L | 0.0004 U | 0.0004 U | W028 | 0.0002 | 0.0002 U | 0.0002 U |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.00018 J | 0.00034 U | W028 | 0.000175 | 0.000175 J | 0.00018 J |
| Total chlordanes | Peristaltic - total | µg/L | 0.0013 UT | 0.002 UT | W028 | 0.000825 | 0.000825 U | 0.000983 U |
| DDx | Peristaltic - total | µg/L | 0.0015 UT | 0.0019 T | W028 | 0.00133 | 0.00133 | 0.00184 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0086 U | W028 | 0.0043 | 0.0043 U | 0.0043 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W028 | 0.0055 | 0.0055 U | 0.0055 U |
| Total LPAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W028 | 0.0065 | 0.0065 U | 0.0065 U |
| Naphthalene | Peristaltic - total | µg/L | 0.013 U | 0.013 U | W028 | 0.0065 | 0.0065 U | 0.0065 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.0064 U | W028 | 0.0032 | 0.0032 U | 0.0032 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W028 | 0.0055 | 0.0055 U | 0.0055 U |
| Total PAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W028 | 0.0065 | 0.0065 U | 0.0065 U |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W028 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.52 UJ | 2.1 UJ | W028 | 0.655 | 0.655 UJ | 1.01 UJ |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.022 UJ | 0.15 J | W028 | 0.0805 | 0.0805 J | 0.143 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.015 U | 0.015 U | W028 | 0.0075 | 0.0075 U | 0.0075 U |

Table D3.2-6b. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (East Channel Single-Point Locations).

| Analyte | Method | Units | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Minimum (full DL)[a] | Maximum (full DL)[a] | Maximum Location(s) | Mean (half DL) | Median (half DL)[b] | 95th Percentile (half DL)[b] |
| **RM 05<06** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.395 U | 0.405 UJ | W030 | 0.2 | 0.2 UJ | 0.202 UJ |
| Arsenic | Peristaltic - particulate | µg/L | 0.428 J | 0.453 J | W030 | 0.441 | 0.441 J | 0.452 J |
| Arsenic | Peristaltic - total | µg/L | 0.428 J | 0.453 J | W030 | 0.441 | 0.441 J | 0.452 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W030 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.03 J | W030 | 0.02 | 0.02 J | 0.029 J |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.03 J | W030 | 0.02 | 0.02 J | 0.029 J |
| Chromium | Peristaltic - dissolved | µg/L | 0.14 U | 0.18 U | W030 | 0.08 | 0.08 U | 0.089 U |
| Chromium | Peristaltic - particulate | µg/L | 0.29 U | 0.3 U | W030 | 0.148 | 0.148 U | 0.15 U |
| Chromium | Peristaltic - total | µg/L | 0.29 U | 0.3 U | W030 | 0.148 | 0.148 U | 0.15 U |
| Copper | Peristaltic - dissolved | µg/L | 0.58 | 0.6 | W030 | 0.59 | 0.59 | 0.599 |
| Copper | Peristaltic - particulate | µg/L | 0.33 | 0.37 | W030 | 0.35 | 0.35 | 0.368 |
| Copper | Peristaltic - total | µg/L | 0.93 | 0.95 | W030 | 0.94 | 0.94 | 0.949 |
| Lead | Peristaltic - dissolved | µg/L | 0.042 U | 0.044 U | W030 | 0.0215 | 0.0215 U | 0.022 U |
| Lead | Peristaltic - particulate | µg/L | 0.23 | 0.241 | W030 | 0.236 | 0.236 | 0.24 |
| Lead | Peristaltic - total | µg/L | 0.23 | 0.241 | W030 | 0.236 | 0.236 | 0.24 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 UJ | 0.02 UJ | W030 | 0.01 | 0.01 UJ | 0.01 UJ |
| Mercury | Peristaltic - particulate | µg/L | 0.02 UJ | 0.02 UJ | W030 | 0.01 | 0.01 UJ | 0.01 UJ |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W030 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.2 U | 0.2 U | W030 | 0.15 | 0.15 J | 0.195 J |
| Nickel | Peristaltic - particulate[d] | µg/L | 0 J | 0.3 | W030 | 0.15 | 0.15 J | 0.285 J |
| Nickel | Peristaltic - total | µg/L | 0.2 | 0.3 | W030 | 0.25 | 0.25 | 0.295 |
| Zinc | Peristaltic - dissolved | µg/L | 2.6 U | 2.7 U | W030 | 1.33 | 1.33 U | 1.35 U |
| Zinc | Peristaltic - particulate | µg/L | 3.4 U | 3.7 U | W030 | 1.78 | 1.78 U | 1.84 U |
| Zinc | Peristaltic - total | µg/L | 3.4 U | 3.7 U | W030 | 1.78 | 1.78 U | 1.84 U |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0006 U | W030 | 0.0003 | 0.0003 U | 0.0003 U |
| **PCBs**[c] | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000215 JT | 0.00237 JT | W030 | 0.00129 | 0.00129 J | 0.00226 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.000162 JT | 0.000216 JT | W030 | 0.000189 | 0.000189 J | 0.000213 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000377 J | 0.00259 J | W030 | 0.00148 | 0.00148 J | 0.00248 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.000000000169 JT | 0.00000000379 JT | W030 | 0.00000000198 | 0.00000000198 J | 0.00000000361 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000000272 JT | 0.00000000937 JT | W030 | 0.00000000482 | 0.00000000482 J | 0.00000000892 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000000441 J | 0.0000000132 J | W030 | 0.0000000068 | 0.0000000068 J | 0.0000000125 J |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.00023 U | 0.00029 U | W030 | 0.00013 | 0.00013 U | 0.000144 U |
| Dieldrin | Peristaltic - total | µg/L | 0.0004 U | 0.0004 U | W030 | 0.0002 | 0.0002 U | 0.0002 U |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.00022 J | 0.00044 U | W030 | 0.00022 | 0.00022 J | 0.00022 J |
| Total chlordanes | Peristaltic - total | µg/L | 0.0014 UT | 0.0024 UT | W030 | 0.00095 | 0.00095 U | 0.00118 U |
| DDx | Peristaltic - total | µg/L | 0.002 JT | 0.0033 NJT | W030 | 0.00265 | 0.00265 J | 0.00324 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0086 U | W030 | 0.0043 | 0.0043 U | 0.0043 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W030 | 0.0055 | 0.0055 U | 0.0055 U |
| Total LPAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W030 | 0.0065 | 0.0065 U | 0.0065 U |
| Naphthalene | Peristaltic - total | µg/L | 0.013 U | 0.013 U | W030 | 0.0065 | 0.0065 U | 0.0065 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.0064 U | W030 | 0.0032 | 0.0032 U | 0.0032 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W030 | 0.0055 | 0.0055 U | 0.0055 U |
| Total PAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W030 | 0.0065 | 0.0065 U | 0.0065 U |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W030 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.29 UJ | 0.76 UJ | W030 | 0.263 | 0.263 UJ | 0.368 UJ |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.03 UJ | 0.063 UJ | W030 | 0.0233 | 0.0233 UJ | 0.0307 UJ |

Table D3.2-6b. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events
(East Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.00016 J | 0.015 U | W030 | 0.00383 | 0.00383 J | 0.00713 J |
| **RM 06<07** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.38 J | 0.404 JT | W032 | 0.392 | 0.392 J | 0.403 J |
| Arsenic | Peristaltic - particulate[d] | µg/L | 0 J | 0.054 J | W032 | 0.027 | 0.027 J | 0.0513 J |
| Arsenic | Peristaltic - total | µg/L | 0.456 UJ | 0.458 J | W032 | 0.343 | 0.343 J | 0.447 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W032 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W032 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W032 | 0.01 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.17 U | 0.21 U | W032 | 0.095 | 0.095 U | 0.104 U |
| Chromium | Peristaltic - particulate | µg/L | 0.33 U | 0.42 U | W032 | 0.188 | 0.188 U | 0.208 U |
| Chromium | Peristaltic - total | µg/L | 0.33 U | 0.42 U | W032 | 0.188 | 0.188 U | 0.208 U |
| Copper | Peristaltic - dissolved | µg/L | 0.58 | 0.59 | W032 | 0.585 | 0.585 | 0.59 |
| Copper | Peristaltic - particulate | µg/L | 0.29 | 0.35 | W032 | 0.32 | 0.32 | 0.347 |
| Copper | Peristaltic - total | µg/L | 0.88 | 0.93 | W032 | 0.905 | 0.905 | 0.928 |
| Lead | Peristaltic - dissolved | µg/L | 0.039 U | 0.044 U | W032 | 0.0208 | 0.0208 U | 0.0219 U |
| Lead | Peristaltic - particulate | µg/L | 0.212 | 0.249 | W032 | 0.231 | 0.231 | 0.247 |
| Lead | Peristaltic - total | µg/L | 0.212 | 0.249 | W032 | 0.231 | 0.231 | 0.247 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W032 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W032 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W032 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.2 J | 0.2 J | W032 | 0.2 | 0.2 J | 0.2 J |
| Nickel | Peristaltic - particulate | µg/L | 0.1 J | 0.1 J | W032 | 0.1 | 0.1 J | 0.1 J |
| Nickel | Peristaltic - total | µg/L | 0.3 | 0.3 | W032 | 0.3 | 0.3 | 0.3 |
| Zinc | Peristaltic - dissolved | µg/L | 3.1 U | 3.9 U | W032 | 1.75 | 1.75 U | 1.93 U |
| Zinc | Peristaltic - particulate | µg/L | 3.9 U | 3.9 U | W032 | 1.95 | 1.95 U | 1.95 U |
| Zinc | Peristaltic - total | µg/L | 3.3 U | 3.9 U | W032 | 1.8 | 1.8 U | 1.94 U |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0006 U | W032 | 0.0003 | 0.0003 U | 0.0003 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000229 JT | 0.000335 JT | W032 | 0.000282 | 0.000282 J | 0.00033 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.00027 JT | 0.000321 JT | W032 | 0.000296 | 0.000296 J | 0.000318 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000499 J | 0.000656 J | W032 | 0.000578 | 0.000578 J | 0.000648 J |
| **PCDD/F Homologs** | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 0.00000402 T | 0.00000576 JT | W032 | 0.00000489 | 0.00000489 J | 0.00000567 J |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 0.0000343 T | 0.0000494 T | W032 | 0.0000419 | 0.0000419 | 0.0000486 |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 0.0000383 | 0.0000552 J | W032 | 0.0000467 | 0.0000467 J | 0.0000543 J |
| **PCDD/Fs** | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.0000000051 T | 0.00000000779 JT | W032 | 0.00000000645 | 0.00000000645 J | 0.00000000766 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.0000000726 JT | 0.0000000931 JT | W032 | 0.0000000829 | 0.0000000829 J | 0.0000000921 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.0000000777 J | 0.000000101 J | W032 | 0.0000000893 | 0.0000000893 J | 0.0000000997 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.000000000153 JT | 0.000000000159 JT | W032 | 0.000000000156 | 0.000000000156 J | 0.000000000159 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.00000000339 JT | 0.00000000369 JT | W032 | 0.00000000354 | 0.00000000354 J | 0.00000000368 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.00000000354 J | 0.00000000385 J | W032 | 0.0000000037 | 0.0000000037 J | 0.00000000383 J |
| **Pesticides** | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 0.00000195 U | 0.00000203 J | W032 | 0.0000015 | 0.0000015 J | 0.00000198 J |
| Aldrin | XAD Filter - particulate | µg/L | 0.00000155 U | 0.00000223 J | W032 | 0.0000015 | 0.0000015 J | 0.00000216 J |
| Aldrin | XAD Column+Filter - total | µg/L | 0.00000203 J | 0.00000223 J | W032 | 0.00000213 | 0.00000213 J | 0.00000222 J |
| Dieldrin | XAD Column - dissolved | µg/L | 0.0000433 J | 0.0000463 J | W032 | 0.0000448 | 0.0000448 J | 0.0000462 J |
| Dieldrin | XAD Filter - particulate | µg/L | 0.00000293 J | 0.00000304 J | W032 | 0.00000299 | 0.00000299 J | 0.00000303 J |
| Dieldrin | XAD Column+Filter - total | µg/L | 0.0000462 J | 0.0000493 J | W032 | 0.0000478 | 0.0000478 J | 0.0000492 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 0.0000251 J | 0.000027 J | W032 | 0.0000261 | 0.0000261 J | 0.0000269 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 0.00000185 J | 0.00000567 U | W032 | 0.00000234 | 0.00000234 J | 0.00000279 J |

Table D3.2-6b. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (East Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 0.000027 J | 0.000027 J | W032 | 0.000027 | 0.000027 J | 0.000027 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 0.0000212 JT | 0.0000299 JT | W032 | 0.0000256 | 0.0000256 J | 0.0000295 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 0.0000051 JT | 0.0000113 JT | W032 | 0.0000082 | 0.0000082 J | 0.000011 J |
| Total chlordanes | XAD Column+Filter - total | µg/L | 0.0000325 J | 0.000035 J | W032 | 0.0000338 | 0.0000338 J | 0.0000349 J |
| DDx | XAD Column - dissolved | µg/L | 0.0000461 JT | 0.0000479 JT | W032 | 0.000047 | 0.000047 J | 0.0000478 J |
| DDx | XAD Filter - particulate | µg/L | 0.0000453 JT | 0.0000535 JT | W032 | 0.0000494 | 0.0000494 J | 0.0000531 J |
| DDx | XAD Column+Filter - total | µg/L | 0.0000914 J | 0.000101 J | W032 | 0.0000964 | 0.0000964 J | 0.000101 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 0.0000622 U | 0.0000802 U | W032 | 0.0000356 | 0.0000356 U | 0.0000397 U |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 0.000336 U | 0.000501 J | W032 | 0.000335 | 0.000335 J | 0.000484 J |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0086 U | W032 | 0.0043 | 0.0043 U | 0.0043 U |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 0.000336 U | 0.000501 J | W032 | 0.000335 | 0.000335 J | 0.000484 J |
| Total HPAHs | XAD Column - dissolved | µg/L | 0.00119 JT | 0.00125 JT | W032 | 0.00122 | 0.00122 J | 0.00125 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 0.00237 JT | 0.00334 JT | W032 | 0.00286 | 0.00286 J | 0.00329 J |
| Total HPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W032 | 0.0055 | 0.0055 U | 0.0055 U |
| Total HPAHs | XAD Column+Filter - total | µg/L | 0.00362 J | 0.00453 J | W032 | 0.00408 | 0.00408 J | 0.00448 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 0.00117 JT | 0.00243 JT | W032 | 0.0018 | 0.0018 J | 0.00237 J |
| Total LPAHs | XAD Filter - particulate | µg/L | 0.000157 JT | 0.00061 UT | W032 | 0.000231 | 0.000231 J | 0.000298 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W032 | 0.0065 | 0.0065 U | 0.0065 U |
| Total LPAHs | XAD Column+Filter - total | µg/L | 0.00133 J | 0.00243 J | W032 | 0.00188 | 0.00188 J | 0.00237 J |
| Naphthalene | XAD Column - dissolved | µg/L | 0.0436 U | 0.063 U | W032 | 0.0267 | 0.0267 U | 0.031 U |
| Naphthalene | XAD Filter - particulate | µg/L | 0.00061 U | 0.00104 U | W032 | 0.000413 | 0.000413 U | 0.000509 U |
| Naphthalene | Peristaltic - total | µg/L | 0.013 U | 0.013 U | W032 | 0.0065 | 0.0065 U | 0.0065 U |
| Naphthalene | XAD Column+Filter - total | µg/L | 0.0436 U | 0.063 U | W032 | 0.0267 | 0.0267 U | 0.031 U |
| Phenanthrene | XAD Column - dissolved | µg/L | 0.00224 U | 0.00236 U | W032 | 0.00115 | 0.00115 U | 0.00118 U |
| Phenanthrene | XAD Filter - particulate | µg/L | 0.000485 U | 0.000754 U | W032 | 0.00031 | 0.00031 U | 0.00037 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.0064 U | W032 | 0.0032 | 0.0032 U | 0.0032 U |
| Phenanthrene | XAD Column+Filter - total | µg/L | 0.00224 U | 0.00236 U | W032 | 0.00115 | 0.00115 U | 0.00118 U |
| Total cPAHs | XAD Column - dissolved | µg/L | 0.0012 JT | 0.0012 JT | W032 | 0.0012 | 0.0012 J | 0.0012 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 0.00082 JT | 0.0015 JT | W032 | 0.00116 | 0.00116 J | 0.00147 J |
| Total cPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W032 | 0.0055 | 0.0055 U | 0.0055 U |
| Total cPAHs | XAD Column+Filter - total | µg/L | 0.00202 J | 0.0027 J | W032 | 0.00236 | 0.00236 J | 0.00267 J |
| Total PAHs | XAD Column - dissolved | µg/L | 0.00236 JT | 0.00368 JT | W032 | 0.00302 | 0.00302 J | 0.00361 J |
| Total PAHs | XAD Filter - particulate | µg/L | 0.00237 JT | 0.0035 JT | W032 | 0.00294 | 0.00294 J | 0.00344 J |
| Total PAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W032 | 0.0065 | 0.0065 U | 0.0065 U |
| Total PAHs | XAD Column+Filter - total | µg/L | 0.00586 J | 0.00605 J | W032 | 0.00596 | 0.00596 J | 0.00604 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W032 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.83 UJ | 2.6 UJ | W032 | 0.858 | 0.858 UJ | 1.26 UJ |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.039 UJ | 0.053 UJ | W032 | 0.023 | 0.023 UJ | 0.0262 UJ |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 0.0000175 J | 0.0000178 J | W032 | 0.0000177 | 0.0000177 J | 0.0000178 J |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 0.00000338 J | 0.0000042 J | W032 | 0.00000379 | 0.00000379 J | 0.00000416 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.015 U | 0.015 U | W032 | 0.0075 | 0.0075 U | 0.0075 U |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 0.0000209 J | 0.000022 J | W032 | 0.0000214 | 0.0000214 J | 0.0000219 J |
| **RM 08<09** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.402 U | 0.404 U | W035 | 0.202 | 0.202 U | 0.202 U |
| Arsenic | Peristaltic - particulate | µg/L | 0.457 J | 0.464 J | W035 | 0.461 | 0.461 J | 0.464 J |
| Arsenic | Peristaltic - total | µg/L | 0.457 J | 0.464 J | W035 | 0.461 | 0.461 J | 0.464 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W035 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W035 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W035 | 0.01 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.13 U | 0.16 U | W035 | 0.0725 | 0.0725 U | 0.0793 U |
| Chromium | Peristaltic - particulate | µg/L | 0.34 U | 0.39 U | W035 | 0.183 | 0.183 U | 0.194 U |
| Chromium | Peristaltic - total | µg/L | 0.34 U | 0.39 U | W035 | 0.183 | 0.183 U | 0.194 U |

Table D3.2-6b. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (East Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| Copper | Peristaltic - dissolved | µg/L | 0.53 | 0.78 | W035 | 0.655 | 0.655 | 0.768 |
| Copper | Peristaltic - particulate | µg/L | 0.36 | 0.48 | W035 | 0.42 | 0.42 | 0.474 |
| Copper | Peristaltic - total | µg/L | 1.01 | 1.14 | W035 | 1.08 | 1.08 | 1.13 |
| Lead | Peristaltic - dissolved | µg/L | 0.044 U | 0.049 U | W035 | 0.0233 | 0.0233 U | 0.0244 U |
| Lead | Peristaltic - particulate | µg/L | 0.226 | 0.294 | W035 | 0.26 | 0.26 | 0.291 |
| Lead | Peristaltic - total | µg/L | 0.226 | 0.294 | W035 | 0.26 | 0.26 | 0.291 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 UJ | 0.02 UJ | W035 | 0.01 | 0.01 UJ | 0.01 UJ |
| Mercury | Peristaltic - particulate | µg/L | 0.02 UJ | 0.02 UJ | W035 | 0.01 | 0.01 UJ | 0.01 UJ |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W035 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.2 U | 0.2 U | W035 | 0.1 | 0.1 U | 0.1 U |
| Nickel | Peristaltic - particulate | µg/L | 0.3 | 0.3 | W035 | 0.3 | 0.3 | 0.3 |
| Nickel | Peristaltic - total | µg/L | 0.3 | 0.3 | W035 | 0.3 | 0.3 | 0.3 |
| Zinc | Peristaltic - dissolved | µg/L | 2.4 U | 5.2 | W035 | 3.2 | 3.2 | 5 |
| Zinc | Peristaltic - particulate[d] | µg/L | 0 | 6 U | W035 | 1.5 | 1.5 | 2.85 |
| Zinc | Peristaltic - total | µg/L | 4.8 U | 6 U | W035 | 2.7 | 2.7 U | 2.97 U |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0014 J | W035 | 0.00085 | 0.00085 J | 0.00135 J |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000231 JT | 0.000294 JT | W035 | 0.000263 | 0.000263 J | 0.000291 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.000295 JT | 0.000449 JT | W035 | 0.000372 | 0.000372 J | 0.000441 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000589 J | 0.00068 J | W035 | 0.000635 | 0.000635 J | 0.000675 J |
| **PCDD/F Homologs** | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 0.00000342 T | 0.0000073 T | W035 | 0.00000536 | 0.00000536 | 0.00000711 |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 0.0000453 T | 0.0000465 T | W035 | 0.0000459 | 0.0000459 | 0.0000464 |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 0.0000487 | 0.0000538 | W035 | 0.0000513 | 0.0000513 | 0.0000535 |
| **PCDD/Fs** | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.0000000069 JT | 0.0000000119 JT | W035 | 0.0000000094 | 0.0000000094 J | 0.0000000117 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000108 JT | 0.000000124 JT | W035 | 0.000000116 | 0.000000116 J | 0.000000123 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000115 J | 0.000000136 J | W035 | 0.000000125 | 0.000000125 J | 0.000000135 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.000000000183 JT | 0.00000000025 JT | W035 | 0.000000000217 | 0.000000000217 J | 0.000000000247 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.00000000643 JT | 0.00000000672 JT | W035 | 0.00000000658 | 0.00000000658 J | 0.00000000671 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.00000000661 J | 0.00000000697 J | W035 | 0.00000000679 | 0.00000000679 J | 0.00000000695 J |
| **Pesticides** | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 0.00000187 U | 0.00000258 U | W035 | 0.00000111 | 0.00000111 U | 0.00000127 U |
| Aldrin | XAD Filter - particulate | µg/L | 0.00000141 J | 0.0000167 U | W035 | 0.00000488 | 0.00000488 J | 0.000008 J |
| Aldrin | XAD Column+Filter - total | µg/L | 0.00000141 J | 0.0000167 U | W035 | 0.00000488 | 0.00000488 J | 0.000008 J |
| Dieldrin | XAD Column - dissolved | µg/L | 0.0000326 J | 0.0000444 J | W035 | 0.0000385 | 0.0000385 J | 0.0000438 J |
| Dieldrin | XAD Filter - particulate | µg/L | 0.00000281 U | 0.0000036 U | W035 | 0.0000016 | 0.0000016 U | 0.00000178 U |
| Dieldrin | XAD Column+Filter - total | µg/L | 0.0000326 J | 0.0000444 J | W035 | 0.0000385 | 0.0000385 J | 0.0000438 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 0.0000257 J | 0.0000308 J | W035 | 0.0000283 | 0.0000283 J | 0.0000305 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 0.00000556 U | 0.00000561 U | W035 | 0.00000279 | 0.00000279 U | 0.0000028 U |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 0.0000257 J | 0.0000308 J | W035 | 0.0000283 | 0.0000283 J | 0.0000305 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 0.0000162 JT | 0.0000206 JT | W035 | 0.0000184 | 0.0000184 J | 0.0000204 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 0.00000905 JT | 0.00000998 JT | W035 | 0.00000952 | 0.00000952 J | 0.00000993 J |
| Total chlordanes | XAD Column+Filter - total | µg/L | 0.0000253 J | 0.0000306 J | W035 | 0.0000279 | 0.0000279 J | 0.0000303 J |
| DDx | XAD Column - dissolved | µg/L | 0.0000415 JT | 0.0000469 JT | W035 | 0.0000442 | 0.0000442 J | 0.0000466 J |
| DDx | XAD Filter - particulate | µg/L | 0.0000352 JT | 0.0000597 JT | W035 | 0.0000475 | 0.0000475 J | 0.0000585 J |
| DDx | XAD Column+Filter - total | µg/L | 0.0000767 J | 0.000107 J | W035 | 0.0000916 | 0.0000916 J | 0.000105 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 0.000069 U | 0.0000961 U | W035 | 0.0000413 | 0.0000413 U | 0.0000474 U |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 0.000555 U | 0.000662 U | W035 | 0.000304 | 0.000304 U | 0.000328 U |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0086 U | W035 | 0.0043 | 0.0043 U | 0.0043 U |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 0.000555 U | 0.000662 U | W035 | 0.000304 | 0.000304 U | 0.000328 U |

Table D3.2-6b. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events
(East Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| Total HPAHs | XAD Column - dissolved | µg/L | 0.000356 JT | 0.00458 JT | W035 | 0.00247 | 0.00247 J | 0.00437 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 0.00555 JT | 0.00955 JT | W035 | 0.00755 | 0.00755 J | 0.00935 J |
| Total HPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W035 | 0.0055 | 0.0055 U | 0.0055 U |
| Total HPAHs | XAD Column+Filter - total | µg/L | 0.00591 J | 0.0141 J | W035 | 0.01 | 0.01 J | 0.0137 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 0.000721 JT | 0.0252 T | W035 | 0.013 | 0.013 J | 0.024 J |
| Total LPAHs | XAD Filter - particulate | µg/L | 0.0000627 JT | 0.00194 UT | W035 | 0.000516 | 0.000516 J | 0.000925 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W035 | 0.0065 | 0.0065 U | 0.0065 U |
| Total LPAHs | XAD Column+Filter - total | µg/L | 0.000784 J | 0.0252 | W035 | 0.013 | 0.013 J | 0.024 J |
| Naphthalene | XAD Column - dissolved | µg/L | 0.0478 U | 0.0643 U | W035 | 0.028 | 0.028 U | 0.0317 U |
| Naphthalene | XAD Filter - particulate | µg/L | 0.000638 U | 0.0013 U | W035 | 0.000485 | 0.000485 U | 0.000633 U |
| Naphthalene | Peristaltic - total | µg/L | 0.013 U | 0.013 U | W035 | 0.0065 | 0.0065 U | 0.0065 U |
| Naphthalene | XAD Column+Filter - total | µg/L | 0.0478 U | 0.0643 U | W035 | 0.028 | 0.028 U | 0.0317 U |
| Phenanthrene | XAD Column - dissolved | µg/L | 0.002 U | 0.00582 | W035 | 0.00341 | 0.00341 | 0.00558 |
| Phenanthrene | XAD Filter - particulate | µg/L | 0.000885 U | 0.00136 U | W035 | 0.000561 | 0.000561 U | 0.000668 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.0066 U | W035 | 0.00325 | 0.00325 U | 0.0033 U |
| Phenanthrene | XAD Column+Filter - total | µg/L | 0.002 U | 0.00582 | W035 | 0.00341 | 0.00341 | 0.00558 |
| Total cPAHs | XAD Column - dissolved | µg/L | 0.00036 JT | 0.00077 JT | W035 | 0.000565 | 0.000565 J | 0.00075 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 0.003 JT | 0.0042 JT | W035 | 0.0036 | 0.0036 J | 0.00414 J |
| Total cPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W035 | 0.0055 | 0.0055 U | 0.0055 U |
| Total cPAHs | XAD Column+Filter - total | µg/L | 0.00336 J | 0.00497 J | W035 | 0.00417 | 0.00417 J | 0.00489 J |
| Total PAHs | XAD Column - dissolved | µg/L | 0.00108 JT | 0.0298 JT | W035 | 0.0154 | 0.0154 J | 0.0284 J |
| Total PAHs | XAD Filter - particulate | µg/L | 0.00562 JT | 0.00955 JT | W035 | 0.00759 | 0.00759 J | 0.00935 J |
| Total PAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W035 | 0.0065 | 0.0065 U | 0.0065 U |
| Total PAHs | XAD Column+Filter - total | µg/L | 0.0067 J | 0.0394 J | W035 | 0.023 | 0.023 J | 0.0377 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W035 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.82 UJ | 1.9 UJ | W035 | 0.68 | 0.68 UJ | 0.923 UJ |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.024 UJ | 0.043 UJ | W035 | 0.0168 | 0.0168 UJ | 0.021 UJ |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 0.0000175 J | 0.0000207 J | W035 | 0.0000191 | 0.0000191 J | 0.0000205 J |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 0.00000294 J | 0.00000575 J | W035 | 0.00000435 | 0.00000435 J | 0.00000561 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.015 U | 0.015 U | W035 | 0.0075 | 0.0075 U | 0.0075 U |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 0.0000204 J | 0.0000265 J | W035 | 0.0000234 | 0.0000234 J | 0.0000261 J |
| **RM 09<10** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.468 UJT | 0.48 T | W038 | 0.357 | 0.357 J | 0.468 J |
| Arsenic | Peristaltic - particulate | µg/L | 0.046 J | 0.512 J | W038 | 0.279 | 0.279 J | 0.489 J |
| Arsenic | Peristaltic - total | µg/L | 0.512 JT | 0.526 JT | W038 | 0.519 | 0.519 J | 0.525 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 UT | 0.02 UT | W038 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W038 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 UT | 0.02 UT | W038 | 0.01 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.15 UT | 0.16 UT | W038 | 0.0775 | 0.0775 U | 0.0798 U |
| Chromium | Peristaltic - particulate | µg/L | 0.32 U | 0.36 U | W038 | 0.17 | 0.17 U | 0.179 U |
| Chromium | Peristaltic - total | µg/L | 0.32 UT | 0.36 UT | W038 | 0.17 | 0.17 U | 0.179 U |
| Copper | Peristaltic - dissolved | µg/L | 0.5 T | 0.5 T | W038 | 0.5 | 0.5 | 0.5 |
| Copper | Peristaltic - particulate | µg/L | 0.35 | 0.36 | W038 | 0.355 | 0.355 | 0.36 |
| Copper | Peristaltic - total | µg/L | 0.85 T | 0.86 T | W038 | 0.855 | 0.855 | 0.86 |
| Lead | Peristaltic - dissolved | µg/L | 0.039 UT | 0.039 UT | W038 | 0.0195 | 0.0195 U | 0.0195 U |
| Lead | Peristaltic - particulate | µg/L | 0.223 | 0.225 | W038 | 0.224 | 0.224 | 0.225 |
| Lead | Peristaltic - total | µg/L | 0.223 T | 0.225 T | W038 | 0.224 | 0.224 | 0.225 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W038 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W038 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - total | µg/L | 0.02 UT | 0.02 UT | W038 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.2 JT | 0.2 JT | W038 | 0.2 | 0.2 J | 0.2 J |
| Nickel | Peristaltic - particulate | µg/L | 0.1 J | 0.1 J | W038 | 0.1 | 0.1 J | 0.1 J |
| Nickel | Peristaltic - total | µg/L | 0.3 T | 0.3 T | W038 | 0.3 | 0.3 | 0.3 |

Table D3.2-6b. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (East Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| Zinc | Peristaltic - dissolved | µg/L | 3.1 UT | 3.6 UT | W038 | 1.68 | 1.68 U | 1.79 U |
| Zinc | Peristaltic - particulate | µg/L | 3.1 U | 4.6 U | W038 | 1.93 | 1.93 U | 2.26 U |
| Zinc | Peristaltic - total | µg/L | 3 UT | 4.6 UT | W038 | 1.9 | 1.9 U | 2.26 U |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0006 U | W038 | 0.0003 | 0.0003 U | 0.0003 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.0000893 JT | 0.0000946 JT | W038 | 0.000092 | 0.000092 J | 0.0000943 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.0000231 JT | 0.0000874 JT | W038 | 0.0000553 | 0.0000553 J | 0.0000842 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000112 J | 0.000182 J | W038 | 0.000147 | 0.000147 J | 0.000179 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.0000000000856 T | 0.0000000000948 JT | W038 | 0.0000000000902 | 0.0000000000902 J | 0.0000000000943 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.0000000000357 T | 0.000000000133 JT | W038 | 0.0000000000844 | 0.0000000000844 J | 0.000000000128 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000000131 J | 0.000000000219 J | W038 | 0.000000000175 | 0.000000000175 J | 0.000000000214 J |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.00021 U | 0.00034 U | W038 | 0.000138 | 0.000138 U | 0.000167 U |
| Dieldrin | Peristaltic - total | µg/L | 0.0004 U | 0.0004 U | W038 | 0.0002 | 0.0002 U | 0.0002 U |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.00025 NJ | 0.0004 NJ | W038 | 0.000325 | 0.000325 J | 0.000393 J |
| Total chlordanes | Peristaltic - total | µg/L | 0.00055 NJT | 0.0014 UT | W038 | 0.000625 | 0.000625 J | 0.000693 J |
| DDx | Peristaltic - total | µg/L | 0.0015 T | 0.0026 NJT | W038 | 0.00205 | 0.00205 J | 0.00255 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0086 U | W038 | 0.0043 | 0.0043 U | 0.0043 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W038 | 0.0055 | 0.0055 U | 0.0055 U |
| Total LPAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W038 | 0.0065 | 0.0065 U | 0.0065 U |
| Naphthalene | Peristaltic - total | µg/L | 0.013 U | 0.013 U | W038 | 0.0065 | 0.0065 U | 0.0065 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.0064 U | W038 | 0.0032 | 0.0032 U | 0.0032 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W038 | 0.0055 | 0.0055 U | 0.0055 U |
| Total PAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W038 | 0.0065 | 0.0065 U | 0.0065 U |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W038 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.73 UJ | 0.75 UJ | W038 | 0.37 | 0.37 UJ | 0.375 UJ |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.024 UJ | 0.028 UJ | W038 | 0.013 | 0.013 UJ | 0.0139 UJ |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.00011 J | 0.015 U | W038 | 0.00381 | 0.00381 J | 0.00713 J |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

[d] Particulate values were calculated as the difference between total and dissolved concentrations. If the measured dissolved concentration was greater than or equal to the measured total concentration, the calculated particulate concentration was assigned a value of zero.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
XAD - hydrophobic crosslinked polystyrene copolymer resin

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D3.2-6c. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (Mid-Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| No data for this table. | | | | | | | | | | | |

Table D3.2-6c. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (Mid-Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| No data for this table. | | | | | | | | |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
XAD - hydrophobic crosslinked polystyrene copolymer resin

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D3.2-6d. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events
(West Channel Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **RM 04<05** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Arsenic | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Arsenic | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Copper | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.5 | 0.54 | W029 | 0.52 | 0.52 | 0.538 |
| Copper | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.3 | 0.38 | W029 | 0.34 | 0.34 | 0.376 |
| Copper | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.84 | 0.88 | W029 | 0.86 | 0.86 | 0.878 |
| Lead | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.025 | 0.025 | W029 | 0.025 | 0.025 | 0.025 |
| Lead | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.157 | 0.166 | W029 | 0.162 | 0.162 | 0.166 |
| Lead | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.182 | 0.191 | W029 | 0.187 | 0.187 | 0.191 |
| Mercury | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.59 | 0.6 | W029 | 0.595 | 0.595 | 0.6 |
| Nickel | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.07 | 0.09 | W029 | 0.08 | 0.08 | 0.089 |
| Nickel | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.66 | 0.69 | W029 | 0.675 | 0.675 | 0.689 |
| Zinc | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000165 JT | 0.000179 JT | W029 | 0.000172 | 0.000172 J | 0.000178 J |
| Total PCBs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000085 JT | 0.0000946 JT | W029 | 0.0000898 | 0.0000898 J | 0.0000941 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00025 J | 0.000274 J | W029 | 0.000262 | 0.000262 J | 0.000272 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00000000014 JT | 0.000000000159 JT | W029 | 0.00000000015 | 0.00000000015 J | 0.000000000158 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000000000162 JT | 0.000000000206 JT | W029 | 0.000000000184 | 0.000000000184 J | 0.000000000204 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000000000321 J | 0.000000000346 J | W029 | 0.000000000334 | 0.000000000334 J | 0.000000000345 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.00021 J | 0.00026 J | W029 | 0.000235 | 0.000235 J | 0.000258 J |
| Total chlordanes | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.002 NJT | 0.0025 NJT | W029 | 0.00225 | 0.00225 J | 0.00248 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.024 JT | 0.032 JT | W029 | 0.028 | 0.028 J | 0.0316 J |
| Total LPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PAHs | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.024 JT | 0.032 JT | W029 | 0.028 | 0.028 J | 0.0316 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |

Table D3.2-6d. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events
(West Channel Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **RM 06<07** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Arsenic | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.451 J | 0.458 J | W031 | 0.455 | 0.455 J | 0.458 J |
| Arsenic | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.451 J | 0.458 J | W031 | 0.455 | 0.455 J | 0.458 J |
| Cadmium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Copper | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.55 | 0.58 | W031 | 0.565 | 0.565 | 0.579 |
| Copper | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.37 | 0.56 | W031 | 0.465 | 0.465 | 0.551 |
| Copper | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.95 | 1.11 | W031 | 1.03 | 1.03 | 1.1 |
| Lead | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Lead | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.244 | 0.249 | W031 | 0.247 | 0.247 | 0.249 |
| Lead | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.244 | 0.249 | W031 | 0.247 | 0.247 | 0.249 |
| Mercury | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 2 | 1 | 50 | 0.04 J | 0.04 J | W031 | 0.04 | 0.04 J | 0.04 J |
| Mercury | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.04 J | 0.04 J | W031 | 0.04 | 0.04 J | 0.04 J |
| Nickel | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.2 | 0.3 | W031 | 0.25 | 0.25 | 0.295 |
| Nickel | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.2 | 0.3 | W031 | 0.25 | 0.25 | 0.295 |
| Zinc | Peristaltic - dissolved | µg/L | 2 | 1 | 50 | 5.4 | 5.4 | W031 | 5.4 | 5.4 | 5.4 |
| Zinc | Peristaltic - particulate[d] | µg/L | 2 | 1 | 50 | 0 | 0 | W031 | 0 | 0 | 0 |
| Zinc | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000155 JT | 0.000173 JT | W031 | 0.000164 | 0.000164 J | 0.000172 J |
| Total PCBs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00011 JT | 0.000125 JT | W031 | 0.000118 | 0.000118 J | 0.000124 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000265 J | 0.000298 J | W031 | 0.000282 | 0.000282 J | 0.000296 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000000000161 T | 0.00000000355 JT | W031 | 0.00000000186 | 0.00000000186 J | 0.00000000338 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000000000437 JT | 0.000000000214 JT | W031 | 0.000000000129 | 0.000000000129 J | 0.000000000205 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000000000205 J | 0.00000000376 J | W031 | 0.00000000198 | 0.00000000198 J | 0.00000000359 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Aldrin | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000000635 J | 0.00000366 J | W031 | 0.00000215 | 0.00000215 J | 0.00000351 J |
| Aldrin | Peristaltic - total | µg/L | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Aldrin | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000000635 J | 0.00000366 J | W031 | 0.00000215 | 0.00000215 J | 0.00000351 J |
| Dieldrin | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000459 J | 0.0000498 J | W031 | 0.0000479 | 0.0000479 J | 0.0000496 J |
| Dieldrin | XAD Filter - particulate | µg/L | 2 | 1 | 50 | 0.00000415 J | 0.00000415 J | W031 | 0.00000415 | 0.00000415 J | 0.00000415 J |
| Dieldrin | Peristaltic - total | µg/L | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000498 J | 0.0000501 J | W031 | 0.0000499 | 0.0000499 J | 0.00005 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000279 J | 0.0000317 J | W031 | 0.0000298 | 0.0000298 J | 0.0000315 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 2 | 1 | 50 | 0.00000128 J | 0.00000128 J | W031 | 0.00000128 | 0.00000128 J | 0.00000128 J |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.0000292 J | 0.0000317 J | W031 | 0.0000304 | 0.0000304 J | 0.0000316 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.00000672 JT | 0.0000208 JT | W031 | 0.0000138 | 0.0000138 J | 0.0000201 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000000597 JT | 0.00000365 JT | W031 | 0.00000212 | 0.00000212 J | 0.0000035 J |
| Total chlordanes | Peristaltic - total | µg/L | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.00000732 J | 0.0000245 J | W031 | 0.0000159 | 0.0000159 J | 0.0000236 J |
| DDx | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000167 JT | 0.000177 JT | W031 | 0.000172 | 0.000172 J | 0.000176 J |

Table D3.2-6d. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events
(West Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| DDx | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000193 JT | 0.000145 JT | W031 | 0.000082 | 0.000082 J | 0.000138 J |
| DDx | Peristaltic - total | µg/L | 1 | 1 | 100 | 0.0029 JT | 0.0029 JT | W031 | 0.0029 | 0.0029 JT | 0.0029 JT |
| DDx | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000196 J | 0.000311 J | W031 | 0.000254 | 0.000254 J | 0.000305 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.027 JT | 0.032 JT | W031 | 0.0295 | 0.0295 J | 0.0318 J |
| Total LPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PAHs | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.027 JT | 0.032 JT | W031 | 0.0295 | 0.0295 J | 0.0318 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.0000197 J | 0.0000199 J | W031 | 0.0000198 | 0.0000198 J | 0.0000199 J |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.00000105 J | 0.00000356 J | W031 | 0.00000231 | 0.00000231 J | 0.00000343 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000021 J | 0.0000233 J | W031 | 0.0000221 | 0.0000221 J | 0.0000231 J |
| **RM 07<08** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 6 | 1 | 17 | 0.412 | 0.412 | W034 | 0.412 | 0.412 | 0.412 |
| Arsenic | Peristaltic - particulate | µg/L | 6 | 2 | 33 | 0.03 J | 0.439 J | W034 | 0.235 | 0.235 J | 0.419 J |
| Arsenic | Peristaltic - total | µg/L | 6 | 2 | 33 | 0.439 J | 0.442 J | W034 | 0.441 | 0.441 J | 0.442 J |
| Cadmium | Peristaltic - dissolved | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Copper | Peristaltic - dissolved | µg/L | 6 | 6 | 100 | 0.5 | 0.56 | W033 | 0.518 | 0.51 | 0.55 |
| Copper | Peristaltic - particulate | µg/L | 6 | 6 | 100 | 0.26 | 0.38 | W034 | 0.332 | 0.35 | 0.378 |
| Copper | Peristaltic - total | µg/L | 6 | 6 | 100 | 0.79 | 0.89 | W033; W034 | 0.85 | 0.855 | 0.89 |
| Lead | Peristaltic - dissolved | µg/L | 6 | 4 | 67 | 0.023 | 0.026 | W033 | 0.0245 | 0.0245 | 0.0259 |
| Lead | Peristaltic - particulate | µg/L | 6 | 6 | 100 | 0.166 | 0.249 | W034 | 0.206 | 0.206 | 0.245 |
| Lead | Peristaltic - total | µg/L | 6 | 6 | 100 | 0.192 | 0.249 | W034 | 0.222 | 0.228 | 0.246 |
| Mercury | Peristaltic - dissolved | µg/L | 6 | 1 | 17 | 0.02 J | 0.02 J | W034 | 0.02 | 0.02 J | 0.02 J |
| Mercury | Peristaltic - particulate[d] | µg/L | 6 | 1 | 17 | 0 J | 0 J | W034 | 0 | 0 J | 0 J |
| Mercury | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 6 | 4 | 67 | 0.58 | 0.63 | W033 | 0.6 | 0.595 | 0.626 |
| Nickel | Peristaltic - particulate | µg/L | 6 | 6 | 100 | 0.05 | 0.4 | W034 | 0.172 | 0.1 | 0.375 |
| Nickel | Peristaltic - total | µg/L | 6 | 6 | 100 | 0.3 | 0.71 | W033 | 0.572 | 0.66 | 0.708 |
| Zinc | Peristaltic - dissolved | µg/L | 6 | 1 | 17 | 6.6 | 6.6 | W034 | 6.6 | 6.6 | 6.6 |
| Zinc | Peristaltic - particulate[d] | µg/L | 6 | 1 | 17 | 0 | 0 | W034 | 0 | 0 | 0 |
| Zinc | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 6 | 1 | 17 | 0.0013 J | 0.0013 J | W033 | 0.0013 | 0.0013 J | 0.0013 J |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.000135 JT | 0.000199 JT | W033 | 0.000169 | 0.000175 J | 0.000197 J |
| Total PCBs | XAD Filter - particulate | µg/L | 6 | 6 | 100 | 0.00011 JT | 0.000179 JT | W033 | 0.000145 | 0.000149 J | 0.000175 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.000245 J | 0.000368 J | W033 | 0.000314 | 0.000333 J | 0.000361 J |
| **PCDD/F Homologs** | | | | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 4 | 4 | 100 | 0.00000279 T | 0.00000855 T | W033 | 0.00000566 | 0.00000566 | 0.00000837 |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 4 | 4 | 100 | 0.0000274 T | 0.0000483 T | W033 | 0.0000369 | 0.000036 | 0.0000466 |

Table D3.2-6d. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events
(West Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 4 | 4 | 100 | 0.000036 | 0.0000511 | W033 | 0.0000426 | 0.0000417 | 0.0000501 |
| **PCDD/Fs** | | | | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 4 | 4 | 100 | 0.00000000547 JT | 0.0000000173 JT | W033 | 0.0000000116 | 0.0000000118 J | 0.0000000169 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 4 | 4 | 100 | 0.0000000795 JT | 0.000000203 JT | W033 | 0.000000136 | 0.000000131 J | 0.000000199 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 4 | 4 | 100 | 0.0000000968 J | 0.000000212 J | W033 | 0.000000148 | 0.000000141 J | 0.000000208 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.000000000116 JT | 0.000000000191 JT | W033 | 0.000000000157 | 0.000000000162 J | 0.000000000187 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 6 | 6 | 100 | 0.000000000214 JT | 0.00000000482 JT | W033 | 0.0000000032 | 0.00000000452 J | 0.00000000481 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.00000000035 J | 0.00000000499 J | W033 | 0.00000000335 | 0.00000000465 J | 0.00000000498 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 6 | 3 | 50 | 0.00000306 J | 0.00000426 J | W033 | 0.00000366 | 0.00000367 J | 0.0000042 J |
| Aldrin | XAD Filter - particulate | µg/L | 6 | 2 | 33 | 0.0000017 J | 0.00000178 J | W033 | 0.00000174 | 0.00000174 J | 0.00000178 J |
| Aldrin | XAD Column+Filter - total | µg/L | 6 | 4 | 67 | 0.0000017 J | 0.00000484 J | W033 | 0.00000362 | 0.00000397 J | 0.00000475 J |
| Dieldrin | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.0000319 J | 0.0000368 J | W034 | 0.0000345 | 0.0000342 J | 0.0000368 J |
| Dieldrin | XAD Filter - particulate | µg/L | 6 | 3 | 50 | 0.00000237 J | 0.00000349 J | W033 | 0.00000276 | 0.00000242 J | 0.00000338 J |
| Dieldrin | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.0000319 J | 0.000037 J | W033 | 0.0000359 | 0.0000367 J | 0.000037 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.0000195 J | 0.0000288 J | W034 | 0.0000244 | 0.0000247 J | 0.000028 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 6 | 1 | 17 | 0.000000817 J | 0.000000817 J | W034 | 0.000000817 | 0.000000817 J | 0.000000817 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.0000203 J | 0.0000288 J | W034 | 0.0000246 | 0.0000247 J | 0.000028 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.0000106 JT | 0.0000275 JT | W033 | 0.0000221 | 0.000023 J | 0.0000274 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 6 | 5 | 83 | 0.00000201 JT | 0.00000964 JT | W033 | 0.00000561 | 0.00000447 JT | 0.00000944 J |
| Total chlordanes | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.0000106 J | 0.0000368 J | W033 | 0.0000267 | 0.0000262 J | 0.0000367 J |
| DDx | XAD Column - dissolved | µg/L | 6 | 6 | 100 | 0.000111 JT | 0.000246 JT | W033 | 0.000164 | 0.000147 J | 0.000236 J |
| DDx | XAD Filter - particulate | µg/L | 6 | 6 | 100 | 0.000142 JT | 0.000429 JT | W033 | 0.000248 | 0.000222 J | 0.000392 J |
| DDx | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.000253 J | 0.000675 J | W033 | 0.000412 | 0.000396 J | 0.000615 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 4 | 4 | 100 | 0.00079 J | 0.00334 | W033 | 0.00194 | 0.00181 J | 0.00324 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 6 | 1 | 17 | 0.0088 J | 0.0088 J | W033 | 0.0088 | 0.0088 J | 0.0088 J |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 4 | 4 | 100 | 0.00079 J | 0.00334 | W033 | 0.00194 | 0.00181 J | 0.00324 |
| Total HPAHs | XAD Column - dissolved | µg/L | 4 | 4 | 100 | 0.00375 JT | 0.00647 JT | W033 | 0.00456 | 0.00402 J | 0.00611 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 4 | 4 | 100 | 0.0107 JT | 0.0301 JT | W033 | 0.0196 | 0.0188 J | 0.0296 J |
| Total HPAHs | Peristaltic - total | µg/L | 6 | 4 | 67 | 0.026 JT | 0.09 JT | W033 | 0.0468 | 0.0355 J | 0.0827 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 4 | 4 | 100 | 0.0149 J | 0.0341 J | W033 | 0.0242 | 0.0239 J | 0.0335 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 4 | 4 | 100 | 0.00999 T | 0.0161 T | W033 | 0.0138 | 0.0146 | 0.016 |
| Total LPAHs | XAD Filter - particulate | µg/L | 4 | 3 | 75 | 0.000113 JT | 0.000536 JT | W033 | 0.000385 | 0.000507 JT | 0.000533 J |
| Total LPAHs | Peristaltic - total | µg/L | 6 | 5 | 83 | 0.0052 JT | 0.034 JT | W033 | 0.014 | 0.0062 JT | 0.031 J |
| Total LPAHs | XAD Column+Filter - total | µg/L | 4 | 4 | 100 | 0.0101 J | 0.0166 J | W033 | 0.0141 | 0.0148 J | 0.0164 J |
| Naphthalene | XAD Column - dissolved | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Filter - particulate | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Naphthalene | XAD Column+Filter - total | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | XAD Column - dissolved | µg/L | 4 | 4 | 100 | 0.00574 | 0.00917 | W033 | 0.00703 | 0.00661 | 0.00883 |
| Phenanthrene | XAD Filter - particulate | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | XAD Column+Filter - total | µg/L | 4 | 4 | 100 | 0.00574 | 0.00917 | W033 | 0.00703 | 0.00661 | 0.00883 |
| Total cPAHs | XAD Column - dissolved | µg/L | 4 | 4 | 100 | 0.00053 JT | 0.00075 JT | W033 | 0.00063 | 0.00062 J | 0.000743 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 4 | 4 | 100 | 0.0045 JT | 0.014 JT | W033 | 0.00915 | 0.00905 J | 0.0139 J |
| Total cPAHs | Peristaltic - total | µg/L | 6 | 2 | 33 | 0.016 JT | 0.034 JT | W033 | 0.025 | 0.025 J | 0.0331 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 4 | 4 | 100 | 0.0052 J | 0.0145 J | W033 | 0.00978 | 0.00969 J | 0.0144 J |
| Total PAHs | XAD Column - dissolved | µg/L | 4 | 4 | 100 | 0.014 JT | 0.0218 JT | W033 | 0.0184 | 0.0188 J | 0.0215 J |
| Total PAHs | XAD Filter - particulate | µg/L | 4 | 4 | 100 | 0.0107 JT | 0.0306 JT | W033 | 0.0199 | 0.0191 J | 0.0301 J |
| Total PAHs | Peristaltic - total | µg/L | 6 | 5 | 83 | 0.0062 JT | 0.12 JT | W033 | 0.0506 | 0.035 JT | 0.108 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 4 | 4 | 100 | 0.0249 J | 0.0507 J | W033 | 0.0382 | 0.0387 J | 0.0498 J |

Table D3.2-6d. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events
(West Channel Single-Point Locations).

| Analyte | Method | Units | # Analyzed | # Detected | % Detected | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Minimum[a] | Maximum[a] | Maximum Location(s) | Mean | Median[b] | 95th Percentile[b] |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 6 | 5 | 83 | 0.0000182 J | 0.0000213 J | W033 | 0.0000195 | 0.0000192 J | 0.0000211 J |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 6 | 4 | 67 | 0.00000345 J | 0.00000436 J | W033 | 0.00000407 | 0.00000424 J | 0.00000435 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 6 | 6 | 100 | 0.00000419 J | 0.0000256 J | W033 | 0.0000189 | 0.000021 J | 0.0000249 J |
| **RM 08<09** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Arsenic | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.436 J | 0.46 J | W036 | 0.448 | 0.448 J | 0.459 J |
| Arsenic | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.436 J | 0.46 J | W036 | 0.448 | 0.448 J | 0.459 J |
| Cadmium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Copper | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.54 | 0.58 | W036 | 0.56 | 0.56 | 0.578 |
| Copper | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.32 | 0.42 | W036 | 0.37 | 0.37 | 0.415 |
| Copper | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.9 | 0.96 | W036 | 0.93 | 0.93 | 0.957 |
| Lead | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Lead | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.233 | 0.264 | W036 | 0.249 | 0.249 | 0.262 |
| Lead | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.233 | 0.264 | W036 | 0.249 | 0.249 | 0.262 |
| Mercury | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 2 | 1 | 50 | 0.2 J | 0.2 J | W036 | 0.2 | 0.2 J | 0.2 J |
| Nickel | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.2 J | 0.3 | W036 | 0.25 | 0.25 J | 0.295 J |
| Nickel | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.3 | 0.4 | W036 | 0.35 | 0.35 | 0.395 |
| Zinc | Peristaltic - dissolved | µg/L | 2 | 1 | 50 | 4.8 | 4.8 | W036 | 4.8 | 4.8 | 4.8 |
| Zinc | Peristaltic - particulate[d] | µg/L | 2 | 1 | 50 | 0 | 0 | W036 | 0 | 0 | 0 |
| Zinc | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000135 JT | 0.000181 JT | W036 | 0.000158 | 0.000158 J | 0.000179 J |
| Total PCBs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000118 JT | 0.000156 JT | W036 | 0.000137 | 0.000137 J | 0.000154 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000291 J | 0.000299 J | W036 | 0.000295 | 0.000295 J | 0.000299 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000000000117 JT | 0.000000000204 JT | W036 | 0.000000000161 | 0.000000000161 J | 0.0000000002 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.000000000248 JT | 0.000000000353 JT | W036 | 0.000000000301 | 0.000000000301 J | 0.000000000348 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000000000452 J | 0.00000000047 J | W036 | 0.000000000461 | 0.000000000461 J | 0.000000000469 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total chlordanes | Peristaltic - total | µg/L | 4 | 1 | 25 | 0.0016 JT | 0.0016 JT | W036 | 0.0016 | 0.0016 JT | 0.0016 JT |
| DDx | Peristaltic - total | µg/L | 4 | 3 | 75 | 0.0021 T | 0.0029 JT | W036 | 0.00253 | 0.0026 T | 0.00287 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total LPAHs | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.005 JT | 0.005 JT | W036 | 0.005 | 0.005 JT | 0.005 JT |

Table D3.2-6d. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events
(West Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| Naphthalene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PAHs | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.005 JT | 0.005 JT | W036 | 0.005 | 0.005 JT | 0.005 JT |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | Peristaltic - total | µg/L | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **RM 09<10** | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 2 | 1 | 50 | 0.401 J | 0.401 J | W037 | 0.401 | 0.401 J | 0.401 J |
| Arsenic | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.083 J | 0.467 J | W037 | 0.275 | 0.275 J | 0.448 J |
| Arsenic | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.467 JT | 0.484 J | W037 | 0.476 | 0.476 J | 0.483 J |
| Cadmium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Cadmium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Chromium | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Copper | Peristaltic - dissolved | µg/L | 2 | 2 | 100 | 0.56 T | 0.58 | W037 | 0.57 | 0.57 | 0.579 |
| Copper | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.31 | 0.31 | W037 | 0.31 | 0.31 | 0.31 |
| Copper | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.87 T | 0.89 | W037 | 0.88 | 0.88 | 0.889 |
| Lead | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Lead | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.223 | 0.236 | W037 | 0.23 | 0.23 | 0.235 |
| Lead | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.223 T | 0.236 | W037 | 0.23 | 0.23 | 0.235 |
| Mercury | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Mercury | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Nickel | Peristaltic - dissolved | µg/L | 2 | 1 | 50 | 0.2 J | 0.2 J | W037 | 0.2 | 0.2 J | 0.2 J |
| Nickel | Peristaltic - particulate | µg/L | 2 | 2 | 100 | 0.1 J | 0.3 | W037 | 0.2 | 0.2 J | 0.29 J |
| Nickel | Peristaltic - total | µg/L | 2 | 2 | 100 | 0.3 | 0.3 | W037 | 0.3 | 0.3 | 0.3 |
| Zinc | Peristaltic - dissolved | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - particulate | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Zinc | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **Organometallic Compounds** | | | | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| **PCBs[c]** | | | | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000143 JT | 0.000154 JT | W037 | 0.000149 | 0.000149 J | 0.000153 J |
| Total PCBs | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000534 JT | 0.000172 JT | W037 | 0.000113 | 0.000113 J | 0.000166 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000196 J | 0.000326 J | W037 | 0.000261 | 0.000261 J | 0.00032 J |
| **PCB TEQ** | | | | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 2 | 2 | 100 | 0.000000000142 JT | 0.000000000155 JT | W037 | 0.000000000149 | 0.000000000149 J | 0.000000000154 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 2 | 2 | 100 | 0.0000000000751 JT | 0.000000000246 JT | W037 | 0.000000000161 | 0.000000000161 J | 0.000000000237 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 2 | 2 | 100 | 0.000000000217 J | 0.000000000401 J | W037 | 0.000000000309 | 0.000000000309 J | 0.000000000392 J |
| **Pesticides** | | | | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Dieldrin | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.00029 J | 0.00029 J | W037 | 0.00029 | 0.00029 J | 0.00029 J |
| Total chlordanes | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| DDx | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.0047 NJT | 0.0047 NJT | W037 | 0.0047 | 0.0047 NJT | 0.0047 NJT |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total HPAHs | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.034 JT | 0.034 JT | W037 | 0.034 | 0.034 JT | 0.034 JT |
| Total LPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |

Table D3.2-6d. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events
(West Channel Single-Point Locations).

| | | | | | | Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** |
| Naphthalene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Phenanthrene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total cPAHs | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Total PAHs | Peristaltic - total | µg/L | 2 | 1 | 50 | 0.034 JT | 0.034 JT | W037 | 0.034 | 0.034 JT | 0.034 JT |
| **Semivolatile Organic Compounds** | | | | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |
| Hexachlorobenzene | Peristaltic - total | µg/L | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- |

Table D3.2-6d. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **RM 04<05** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.39 U | 0.418 U | W029 | 0.202 | 0.202 U | 0.208 U |
| Arsenic | Peristaltic - particulate | µg/L | 0.457 UJ | 0.457 UJ | W029 | 0.229 | 0.229 UJ | 0.229 UJ |
| Arsenic | Peristaltic - total | µg/L | 0.457 UJ | 0.457 UJ | W029 | 0.229 | 0.229 UJ | 0.229 UJ |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W029 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W029 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W029 | 0.01 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.1 U | 0.16 U | W029 | 0.065 | 0.065 U | 0.0785 U |
| Chromium | Peristaltic - particulate | µg/L | 0.24 U | 0.26 U | W029 | 0.125 | 0.125 U | 0.13 U |
| Chromium | Peristaltic - total | µg/L | 0.24 U | 0.26 U | W029 | 0.125 | 0.125 U | 0.13 U |
| Copper | Peristaltic - dissolved | µg/L | 0.5 | 0.54 | W029 | 0.52 | 0.52 | 0.538 |
| Copper | Peristaltic - particulate | µg/L | 0.3 | 0.38 | W029 | 0.34 | 0.34 | 0.376 |
| Copper | Peristaltic - total | µg/L | 0.84 | 0.88 | W029 | 0.86 | 0.86 | 0.878 |
| Lead | Peristaltic - dissolved | µg/L | 0.025 | 0.025 | W029 | 0.025 | 0.025 | 0.025 |
| Lead | Peristaltic - particulate | µg/L | 0.157 | 0.166 | W029 | 0.162 | 0.162 | 0.166 |
| Lead | Peristaltic - total | µg/L | 0.182 | 0.191 | W029 | 0.187 | 0.187 | 0.191 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W029 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W029 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W029 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.59 | 0.6 | W029 | 0.595 | 0.595 | 0.6 |
| Nickel | Peristaltic - particulate | µg/L | 0.07 | 0.09 | W029 | 0.08 | 0.08 | 0.089 |
| Nickel | Peristaltic - total | µg/L | 0.66 | 0.69 | W029 | 0.675 | 0.675 | 0.689 |
| Zinc | Peristaltic - dissolved | µg/L | 2.2 U | 2.8 U | W029 | 1.25 | 1.25 U | 1.39 U |
| Zinc | Peristaltic - particulate | µg/L | 3.2 U | 3.7 U | W029 | 1.73 | 1.73 U | 1.84 U |
| Zinc | Peristaltic - total | µg/L | 3.2 U | 3.7 U | W029 | 1.73 | 1.73 U | 1.84 U |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 UJ | 0.0006 UJ | W029 | 0.0003 | 0.0003 UJ | 0.0003 UJ |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000165 JT | 0.000179 JT | W029 | 0.000172 | 0.000172 J | 0.000178 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.000085 JT | 0.0000946 JT | W029 | 0.0000898 | 0.0000898 J | 0.0000941 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.00025 J | 0.000274 J | W029 | 0.000262 | 0.000262 J | 0.000272 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.00000000014 JT | 0.000000000159 JT | W029 | 0.00000000015 | 0.00000000015 J | 0.000000000158 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000000162 JT | 0.000000000206 JT | W029 | 0.000000000184 | 0.000000000184 J | 0.000000000204 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000000321 J | 0.000000000346 J | W029 | 0.000000000334 | 0.000000000334 J | 0.000000000345 J |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.00046 U | 0.00048 U | W029 | 0.000235 | 0.000235 U | 0.00024 U |
| Dieldrin | Peristaltic - total | µg/L | 0.0004 U | 0.00042 U | W029 | 0.000205 | 0.000205 U | 0.00021 U |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.00021 J | 0.00026 J | W029 | 0.000235 | 0.000235 J | 0.000258 J |
| Total chlordanes | Peristaltic - total | µg/L | 0.0013 UT | 0.0016 UT | W029 | 0.000725 | 0.000725 U | 0.000793 U |
| DDx | Peristaltic - total | µg/L | 0.002 NJT | 0.0025 NJT | W029 | 0.00225 | 0.00225 J | 0.00248 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0086 U | W029 | 0.0043 | 0.0043 U | 0.0043 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.024 JT | 0.032 JT | W029 | 0.028 | 0.028 J | 0.0316 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.026 UT | 0.034 UT | W029 | 0.015 | 0.015 U | 0.0168 U |
| Naphthalene | Peristaltic - total | µg/L | 0.026 U | 0.034 U | W029 | 0.015 | 0.015 U | 0.0168 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.01 U | 0.014 U | W029 | 0.006 | 0.006 U | 0.0069 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W029 | 0.0055 | 0.0055 U | 0.0055 U |
| Total PAHs | Peristaltic - total | µg/L | 0.024 JT | 0.032 JT | W029 | 0.028 | 0.028 J | 0.0316 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W029 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.28 UJ | 0.79 UJ | W029 | 0.268 | 0.268 UJ | 0.382 UJ |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.062 UJ | 0.083 UJ | W029 | 0.0363 | 0.0363 UJ | 0.041 UJ |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.015 U | 0.015 U | W029 | 0.0075 | 0.0075 U | 0.0075 U |

Table D3.2-6d. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **RM 06<07** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.393 UJ | 0.399 UJ | W031 | 0.198 | 0.198 UJ | 0.199 UJ |
| Arsenic | Peristaltic - particulate | µg/L | 0.451 J | 0.458 J | W031 | 0.455 | 0.455 J | 0.458 J |
| Arsenic | Peristaltic - total | µg/L | 0.451 J | 0.458 J | W031 | 0.455 | 0.455 J | 0.458 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W031 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W031 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W031 | 0.01 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.13 U | 0.17 U | W031 | 0.075 | 0.075 U | 0.084 U |
| Chromium | Peristaltic - particulate | µg/L | 0.29 U | 0.36 U | W031 | 0.163 | 0.163 U | 0.178 U |
| Chromium | Peristaltic - total | µg/L | 0.29 U | 0.36 U | W031 | 0.163 | 0.163 U | 0.178 U |
| Copper | Peristaltic - dissolved | µg/L | 0.55 | 0.58 | W031 | 0.565 | 0.565 | 0.579 |
| Copper | Peristaltic - particulate | µg/L | 0.37 | 0.56 | W031 | 0.465 | 0.465 | 0.551 |
| Copper | Peristaltic - total | µg/L | 0.95 | 1.11 | W031 | 1.03 | 1.03 | 1.1 |
| Lead | Peristaltic - dissolved | µg/L | 0.044 U | 0.057 U | W031 | 0.0253 | 0.0253 U | 0.0282 U |
| Lead | Peristaltic - particulate | µg/L | 0.244 | 0.249 | W031 | 0.247 | 0.247 | 0.249 |
| Lead | Peristaltic - total | µg/L | 0.244 | 0.249 | W031 | 0.247 | 0.247 | 0.249 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 UJ | 0.02 UJ | W031 | 0.01 | 0.01 UJ | 0.01 UJ |
| Mercury | Peristaltic - particulate | µg/L | 0.02 UJ | 0.04 J | W031 | 0.025 | 0.025 J | 0.0385 J |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.04 J | W031 | 0.025 | 0.025 J | 0.0385 J |
| Nickel | Peristaltic - dissolved | µg/L | 0.2 U | 0.2 U | W031 | 0.1 | 0.1 U | 0.1 U |
| Nickel | Peristaltic - particulate | µg/L | 0.2 | 0.3 | W031 | 0.25 | 0.25 | 0.295 |
| Nickel | Peristaltic - total | µg/L | 0.2 | 0.3 | W031 | 0.25 | 0.25 | 0.295 |
| Zinc | Peristaltic - dissolved | µg/L | 2.6 U | 5.4 | W031 | 3.35 | 3.35 | 5.2 |
| Zinc | Peristaltic - particulate[d] | µg/L | 0 | 3.4 U | W031 | 0.85 | 0.85 | 1.62 |
| Zinc | Peristaltic - total | µg/L | 3.4 U | 3.5 U | W031 | 1.73 | 1.73 U | 1.75 U |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0006 U | W031 | 0.0003 | 0.0003 U | 0.0003 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000155 JT | 0.000173 JT | W031 | 0.000164 | 0.000164 J | 0.000172 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.00011 JT | 0.000125 JT | W031 | 0.000118 | 0.000118 J | 0.000124 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000265 J | 0.000298 J | W031 | 0.000282 | 0.000282 J | 0.000296 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.000000000161 T | 0.00000000355 JT | W031 | 0.00000000186 | 0.00000000186 J | 0.00000000338 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.0000000000437 JT | 0.000000000214 JT | W031 | 0.000000000129 | 0.000000000129 J | 0.000000000205 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000000205 J | 0.00000000376 J | W031 | 0.00000000198 | 0.00000000198 J | 0.00000000359 J |
| **Pesticides** | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 0.0000038 U | 0.00000391 U | W031 | 0.00000193 | 0.00000193 U | 0.00000195 U |
| Aldrin | XAD Filter - particulate | µg/L | 0.000000635 J | 0.00000366 J | W031 | 0.00000215 | 0.00000215 J | 0.00000351 J |
| Aldrin | Peristaltic - total | µg/L | 0.00027 U | 0.00027 U | W031 | 0.000135 | 0.000135 U | 0.000135 U |
| Aldrin | XAD Column+Filter - total | µg/L | 0.000000635 J | 0.00000366 J | W031 | 0.00000215 | 0.00000215 J | 0.00000351 J |
| Dieldrin | XAD Column - dissolved | µg/L | 0.0000459 J | 0.0000498 J | W031 | 0.0000479 | 0.0000479 J | 0.0000496 J |
| Dieldrin | XAD Filter - particulate | µg/L | 0.00000203 U | 0.00000415 J | W031 | 0.00000258 | 0.00000258 J | 0.00000399 J |
| Dieldrin | Peristaltic - total | µg/L | 0.0004 U | 0.0004 U | W031 | 0.0002 | 0.0002 U | 0.0002 U |
| Dieldrin | XAD Column+Filter - total | µg/L | 0.0000498 J | 0.0000501 J | W031 | 0.0000499 | 0.0000499 J | 0.00005 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 0.0000279 J | 0.0000317 J | W031 | 0.0000298 | 0.0000298 J | 0.0000315 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 0.000000641 U | 0.00000128 J | W031 | 0.0000008 | 0.0000008 J | 0.00000123 J |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.00048 U | 0.00048 U | W031 | 0.00024 | 0.00024 U | 0.00024 U |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 0.0000292 J | 0.0000317 J | W031 | 0.0000304 | 0.0000304 J | 0.0000316 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 0.00000672 JT | 0.0000208 JT | W031 | 0.0000138 | 0.0000138 J | 0.0000201 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 0.000000597 JT | 0.00000365 JT | W031 | 0.00000212 | 0.00000212 J | 0.0000035 J |
| Total chlordanes | Peristaltic - total | µg/L | 0.0013 UT | 0.0013 UT | W031 | 0.00065 | 0.00065 UT | 0.00065 UT |
| Total chlordanes | XAD Column+Filter - total | µg/L | 0.00000732 J | 0.0000245 J | W031 | 0.0000159 | 0.0000159 J | 0.0000236 J |
| DDx | XAD Column - dissolved | µg/L | 0.000167 JT | 0.000177 JT | W031 | 0.000172 | 0.000172 J | 0.000176 J |

Table D3.2-6d. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| DDx | XAD Filter - particulate | µg/L | 0.0000193 JT | 0.000145 JT | W031 | 0.000082 | 0.000082 J | 0.000138 J |
| DDx | Peristaltic - total | µg/L | 0.0029 JT | 0.0029 JT | W031 | 0.0029 | 0.0029 JT | 0.0029 JT |
| DDx | XAD Column+Filter - total | µg/L | 0.000196 J | 0.000311 J | W031 | 0.000254 | 0.000254 J | 0.000305 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0086 U | W031 | 0.0043 | 0.0043 U | 0.0043 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.027 JT | 0.032 JT | W031 | 0.0295 | 0.0295 J | 0.0318 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W031 | 0.0065 | 0.0065 U | 0.0065 U |
| Naphthalene | Peristaltic - total | µg/L | 0.013 U | 0.013 U | W031 | 0.0065 | 0.0065 U | 0.0065 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0078 U | 0.0089 U | W031 | 0.00418 | 0.00418 U | 0.00442 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W031 | 0.0055 | 0.0055 U | 0.0055 U |
| Total PAHs | Peristaltic - total | µg/L | 0.027 JT | 0.032 JT | W031 | 0.0295 | 0.0295 J | 0.0318 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W031 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.32 UJ | 0.48 UJ | W031 | 0.2 | 0.2 UJ | 0.236 UJ |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.033 UJ | 0.039 UJ | W031 | 0.018 | 0.018 UJ | 0.0194 UJ |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 0.0000197 J | 0.0000199 J | W031 | 0.0000198 | 0.0000198 J | 0.0000199 J |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 0.00000105 J | 0.00000356 J | W031 | 0.00000231 | 0.00000231 J | 0.00000343 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.015 U | 0.015 U | W031 | 0.0075 | 0.0075 U | 0.0075 U |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 0.000021 J | 0.0000233 J | W031 | 0.0000221 | 0.0000221 J | 0.0000231 J |
| **RM 07<08** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.381 U | 0.412 | W034 | 0.231 | 0.195 U | 0.359 |
| Arsenic | Peristaltic - particulate | µg/L | 0.03 J | 0.441 UJ | W033 | 0.223 | 0.22 UJ | 0.384 J |
| Arsenic | Peristaltic - total | µg/L | 0.412 UJ | 0.442 J | W034 | 0.291 | 0.22 UJ | 0.441 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W033; W034 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W033; W034 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W033; W034 | 0.01 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.13 U | 0.2 U | W033 | 0.0817 | 0.08 U | 0.0988 U |
| Chromium | Peristaltic - particulate | µg/L | 0.23 U | 0.34 U | W034 | 0.146 | 0.15 U | 0.168 U |
| Chromium | Peristaltic - total | µg/L | 0.23 U | 0.34 U | W034 | 0.146 | 0.15 U | 0.168 U |
| Copper | Peristaltic - dissolved | µg/L | 0.5 | 0.56 | W033 | 0.518 | 0.51 | 0.55 |
| Copper | Peristaltic - particulate | µg/L | 0.26 | 0.38 | W034 | 0.332 | 0.35 | 0.378 |
| Copper | Peristaltic - total | µg/L | 0.79 | 0.89 | W033; W034 | 0.85 | 0.855 | 0.89 |
| Lead | Peristaltic - dissolved | µg/L | 0.023 | 0.045 U | W034 | 0.0238 | 0.0235 | 0.0258 |
| Lead | Peristaltic - particulate | µg/L | 0.166 | 0.249 | W034 | 0.206 | 0.206 | 0.245 |
| Lead | Peristaltic - total | µg/L | 0.192 | 0.249 | W034 | 0.222 | 0.228 | 0.246 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W033; W034 | 0.0117 | 0.01 U | 0.0175 J |
| Mercury | Peristaltic - particulate[d] | µg/L | 0 J | 0.02 U | W033; W034 | 0.00833 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W033; W034 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.2 U | 0.63 | W033 | 0.433 | 0.585 | 0.623 |
| Nickel | Peristaltic - particulate | µg/L | 0.05 | 0.4 | W034 | 0.172 | 0.1 | 0.375 |
| Nickel | Peristaltic - total | µg/L | 0.3 | 0.71 | W033 | 0.572 | 0.66 | 0.708 |
| Zinc | Peristaltic - dissolved | µg/L | 2.3 U | 6.6 | W034 | 2.33 | 1.58 U | 5.39 |
| Zinc | Peristaltic - particulate[d] | µg/L | 0 | 4.6 U | W033 | 1.67 | 1.9 U | 2.28 U |
| Zinc | Peristaltic - total | µg/L | 3 U | 4.6 U | W033 | 1.92 | 1.9 U | 2.28 U |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 UJ | 0.0045 U | W034 | 0.000792 | 0.0003 UJ | 0.00201 J |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000135 JT | 0.000199 JT | W033 | 0.000169 | 0.000175 J | 0.000197 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.00011 JT | 0.000179 JT | W033 | 0.000145 | 0.000149 J | 0.000175 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000245 J | 0.000368 J | W033 | 0.000314 | 0.000333 J | 0.000361 J |
| **PCDD/F Homologs** | | | | | | | | |
| Total PCDD/Fs | XAD Column - dissolved | µg/L | 0.00000279 T | 0.00000855 T | W033 | 0.00000566 | 0.00000566 | 0.00000837 |
| Total PCDD/Fs | XAD Filter - particulate | µg/L | 0.0000274 T | 0.0000483 T | W033 | 0.0000369 | 0.000036 | 0.0000466 |

Table D3.2-6d. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| Total PCDD/Fs | XAD Column+Filter - total | µg/L | 0.000036 | 0.0000511 | W033 | 0.0000426 | 0.0000417 | 0.0000501 |
| **PCDD/Fs** | | | | | | | | |
| TCDD TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.00000000547 JT | 0.0000000173 JT | W033 | 0.0000000116 | 0.0000000118 J | 0.0000000169 J |
| TCDD TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.0000000795 JT | 0.000000203 JT | W033 | 0.000000136 | 0.000000131 J | 0.000000199 J |
| TCDD TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.0000000968 J | 0.000000212 J | W033 | 0.000000148 | 0.000000141 J | 0.000000208 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.000000000116 JT | 0.000000000191 JT | W033 | 0.000000000157 | 0.000000000162 J | 0.000000000187 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000000214 JT | 0.00000000482 JT | W033 | 0.0000000032 | 0.00000000452 J | 0.00000000481 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.00000000035 J | 0.00000000499 J | W033 | 0.00000000335 | 0.00000000465 J | 0.00000000498 J |
| **Pesticides** | | | | | | | | |
| Aldrin | XAD Column - dissolved | µg/L | 0.00000262 U | 0.00000426 J | W033 | 0.00000265 | 0.00000256 J | 0.00000411 J |
| Aldrin | XAD Filter - particulate | µg/L | 0.00000128 U | 0.00000637 U | W033 | 0.00000161 | 0.00000144 J | 0.00000283 J |
| Aldrin | XAD Column+Filter - total | µg/L | 0.0000017 J | 0.00000484 J | W033 | 0.00000302 | 0.00000287 J | 0.0000047 J |
| Dieldrin | XAD Column - dissolved | µg/L | 0.0000319 J | 0.0000368 J | W034 | 0.0000345 | 0.0000342 J | 0.0000368 J |
| Dieldrin | XAD Filter - particulate | µg/L | 0.00000237 J | 0.00000349 J | W033 | 0.00000205 | 0.00000189 J | 0.00000322 J |
| Dieldrin | XAD Column+Filter - total | µg/L | 0.0000319 J | 0.000037 J | W033 | 0.0000359 | 0.0000367 J | 0.000037 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column - dissolved | µg/L | 0.0000195 J | 0.0000288 J | W034 | 0.0000244 | 0.0000247 J | 0.000028 J |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Filter - particulate | µg/L | 0.000000817 J | 0.00000618 U | W033 | 0.00000187 | 0.00000193 U | 0.00000307 U |
| gamma-Hexachlorocyclohexane (Lindane) | XAD Column+Filter - total | µg/L | 0.0000203 J | 0.0000288 J | W034 | 0.0000246 | 0.0000247 J | 0.000028 J |
| Total chlordanes | XAD Column - dissolved | µg/L | 0.0000106 JT | 0.0000275 JT | W033 | 0.0000221 | 0.000023 J | 0.0000274 J |
| Total chlordanes | XAD Filter - particulate | µg/L | 0.00000201 JT | 0.0000327 UT | W034 | 0.0000074 | 0.00000656 J | 0.0000147 J |
| Total chlordanes | XAD Column+Filter - total | µg/L | 0.0000106 J | 0.0000368 J | W033 | 0.0000267 | 0.0000262 J | 0.0000367 J |
| DDx | XAD Column - dissolved | µg/L | 0.000111 JT | 0.000246 JT | W033 | 0.000164 | 0.000147 J | 0.000236 J |
| DDx | XAD Filter - particulate | µg/L | 0.000142 JT | 0.000429 JT | W033 | 0.000248 | 0.000222 J | 0.000392 J |
| DDx | XAD Column+Filter - total | µg/L | 0.000253 J | 0.000675 J | W033 | 0.000412 | 0.000396 J | 0.000615 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | XAD Column - dissolved | µg/L | 0.0000829 U | 0.000149 U | W033 | 0.0000572 | 0.0000564 U | 0.0000729 U |
| Benzo(a)pyrene | XAD Filter - particulate | µg/L | 0.00079 J | 0.00334 | W033 | 0.00194 | 0.00181 J | 0.00324 |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0088 J | W033 | 0.00505 | 0.0043 U | 0.00768 J |
| Benzo(a)pyrene | XAD Column+Filter - total | µg/L | 0.00079 J | 0.00334 | W033 | 0.00194 | 0.00181 J | 0.00324 |
| Total HPAHs | XAD Column - dissolved | µg/L | 0.00375 JT | 0.00647 JT | W033 | 0.00456 | 0.00402 J | 0.00611 J |
| Total HPAHs | XAD Filter - particulate | µg/L | 0.0107 JT | 0.0301 JT | W033 | 0.0196 | 0.0188 J | 0.0296 J |
| Total HPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.09 JT | W033 | 0.033 | 0.028 J | 0.0778 J |
| Total HPAHs | XAD Column+Filter - total | µg/L | 0.0149 J | 0.0341 J | W033 | 0.0242 | 0.0239 J | 0.0335 J |
| Total LPAHs | XAD Column - dissolved | µg/L | 0.00999 T | 0.0161 T | W033 | 0.0138 | 0.0146 | 0.016 |
| Total LPAHs | XAD Filter - particulate | µg/L | 0.000113 JT | 0.00111 UT | W033 | 0.000428 | 0.000522 J | 0.000552 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.0052 JT | 0.034 JT | W033 | 0.0132 | 0.00785 J | 0.0303 J |
| Total LPAHs | XAD Column+Filter - total | µg/L | 0.0101 J | 0.0166 J | W033 | 0.0141 | 0.0148 J | 0.0164 J |
| Naphthalene | XAD Column - dissolved | µg/L | 0.0636 U | 0.107 U | W033 | 0.0428 | 0.0429 U | 0.0534 U |
| Naphthalene | XAD Filter - particulate | µg/L | 0.000854 U | 0.00156 U | W033 | 0.000595 | 0.000586 U | 0.000765 U |
| Naphthalene | Peristaltic - total | µg/L | 0.019 U | 0.03 U | W034 | 0.0112 | 0.0103 U | 0.0144 U |
| Naphthalene | XAD Column+Filter - total | µg/L | 0.0636 U | 0.107 U | W033 | 0.0428 | 0.0429 U | 0.0534 U |
| Phenanthrene | XAD Column - dissolved | µg/L | 0.00574 | 0.00917 | W033 | 0.00703 | 0.00661 | 0.00883 |
| Phenanthrene | XAD Filter - particulate | µg/L | 0.00107 U | 0.00254 U | W033 | 0.000905 | 0.000908 U | 0.00127 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0093 U | 0.02 U | W033 | 0.00636 | 0.006 U | 0.00913 U |
| Phenanthrene | XAD Column+Filter - total | µg/L | 0.00574 | 0.00917 | W033 | 0.00703 | 0.00661 | 0.00883 |
| Total cPAHs | XAD Column - dissolved | µg/L | 0.00053 JT | 0.00075 JT | W033 | 0.00063 | 0.00062 J | 0.000743 J |
| Total cPAHs | XAD Filter - particulate | µg/L | 0.0045 JT | 0.014 JT | W033 | 0.00915 | 0.00905 J | 0.0139 J |
| Total cPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.034 JT | W033 | 0.012 | 0.0055 U | 0.0295 J |
| Total cPAHs | XAD Column+Filter - total | µg/L | 0.0052 J | 0.0145 J | W033 | 0.00978 | 0.00969 J | 0.0144 J |
| Total PAHs | XAD Column - dissolved | µg/L | 0.014 JT | 0.0218 JT | W033 | 0.0184 | 0.0188 J | 0.0215 J |
| Total PAHs | XAD Filter - particulate | µg/L | 0.0107 JT | 0.0306 JT | W033 | 0.0199 | 0.0191 J | 0.0301 J |
| Total PAHs | Peristaltic - total | µg/L | 0.0062 JT | 0.12 JT | W033 | 0.0438 | 0.0335 J | 0.105 J |
| Total PAHs | XAD Column+Filter - total | µg/L | 0.0249 J | 0.0507 J | W033 | 0.0382 | 0.0387 J | 0.0498 J |

Table D3.2-6d. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W033; W034 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.21 UJ | 0.47 UJ | W034 | 0.143 | 0.133 UJ | 0.213 UJ |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.056 UJ | 0.068 UJ | W033 | 0.031 | 0.0313 UJ | 0.0339 UJ |
| Hexachlorobenzene | XAD Column - dissolved | µg/L | 0.0000182 J | 0.0000213 J | W033 | 0.0000178 | 0.0000188 J | 0.0000211 J |
| Hexachlorobenzene | XAD Filter - particulate | µg/L | 0.00000345 J | 0.00000514 U | W033 | 0.00000345 | 0.00000382 J | 0.00000434 J |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.015 U | 0.015 U | W033; W034 | 0.0075 | 0.0075 U | 0.0075 U |
| Hexachlorobenzene | XAD Column+Filter - total | µg/L | 0.00000419 J | 0.0000256 J | W033 | 0.0000189 | 0.000021 J | 0.0000249 J |
| **RM 08<09** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.387 U | 0.4 U | W036 | 0.197 | 0.197 U | 0.2 U |
| Arsenic | Peristaltic - particulate | µg/L | 0.436 J | 0.46 J | W036 | 0.448 | 0.448 J | 0.459 J |
| Arsenic | Peristaltic - total | µg/L | 0.436 J | 0.46 J | W036 | 0.448 | 0.448 J | 0.459 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W036 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W036 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W036 | 0.01 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.16 U | 0.2 U | W036 | 0.09 | 0.09 U | 0.099 U |
| Chromium | Peristaltic - particulate | µg/L | 0.29 U | 0.37 U | W036 | 0.165 | 0.165 U | 0.183 U |
| Chromium | Peristaltic - total | µg/L | 0.29 U | 0.37 U | W036 | 0.165 | 0.165 U | 0.183 U |
| Copper | Peristaltic - dissolved | µg/L | 0.54 | 0.58 | W036 | 0.56 | 0.56 | 0.578 |
| Copper | Peristaltic - particulate | µg/L | 0.32 | 0.42 | W036 | 0.37 | 0.37 | 0.415 |
| Copper | Peristaltic - total | µg/L | 0.9 | 0.96 | W036 | 0.93 | 0.93 | 0.957 |
| Lead | Peristaltic - dissolved | µg/L | 0.042 U | 0.044 U | W036 | 0.0215 | 0.0215 U | 0.022 U |
| Lead | Peristaltic - particulate | µg/L | 0.233 | 0.264 | W036 | 0.249 | 0.249 | 0.262 |
| Lead | Peristaltic - total | µg/L | 0.233 | 0.264 | W036 | 0.249 | 0.249 | 0.262 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 UJ | 0.02 UJ | W036 | 0.01 | 0.01 UJ | 0.01 UJ |
| Mercury | Peristaltic - particulate | µg/L | 0.02 UJ | 0.02 UJ | W036 | 0.01 | 0.01 UJ | 0.01 UJ |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W036 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.2 U | 0.2 U | W036 | 0.15 | 0.15 J | 0.195 J |
| Nickel | Peristaltic - particulate | µg/L | 0.2 J | 0.3 | W036 | 0.25 | 0.25 J | 0.295 J |
| Nickel | Peristaltic - total | µg/L | 0.3 | 0.4 | W036 | 0.35 | 0.35 | 0.395 |
| Zinc | Peristaltic - dissolved | µg/L | 2.5 U | 4.8 | W036 | 3.03 | 3.03 | 4.62 |
| Zinc | Peristaltic - particulate[d] | µg/L | 0 | 3.7 U | W036 | 0.925 | 0.925 | 1.76 |
| Zinc | Peristaltic - total | µg/L | 3.7 U | 4.5 U | W036 | 2.05 | 2.05 U | 2.23 U |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 UJ | 0.0006 UJ | W036 | 0.0003 | 0.0003 UJ | 0.0003 UJ |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000135 JT | 0.000181 JT | W036 | 0.000158 | 0.000158 J | 0.000179 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.000118 JT | 0.000156 JT | W036 | 0.000137 | 0.000137 J | 0.000154 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000291 J | 0.000299 J | W036 | 0.000295 | 0.000295 J | 0.000299 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.000000000117 JT | 0.000000000204 JT | W036 | 0.000000000161 | 0.000000000161 J | 0.0000000002 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.000000000248 JT | 0.000000000353 JT | W036 | 0.000000000301 | 0.000000000301 J | 0.000000000348 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000000452 J | 0.00000000047 J | W036 | 0.000000000461 | 0.000000000461 J | 0.000000000469 J |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.00032 U | 0.00048 U | W036 | 0.000201 | 0.000203 U | 0.00024 U |
| Dieldrin | Peristaltic - total | µg/L | 0.0004 U | 0.0004 U | W036 | 0.0002 | 0.0002 U | 0.0002 U |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.00048 U | 0.0005 U | W036 | 0.000245 | 0.000245 U | 0.00025 U |
| Total chlordanes | Peristaltic - total | µg/L | 0.00073 UT | 0.0018 UT | W036 | 0.000823 | 0.000663 U | 0.0015 J |
| DDx | Peristaltic - total | µg/L | 0.0016 UT | 0.0029 JT | W036 | 0.0021 | 0.00235 | 0.00286 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0086 U | W036 | 0.0043 | 0.0043 U | 0.0043 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W036 | 0.0055 | 0.0055 U | 0.0055 U |
| Total LPAHs | Peristaltic - total | µg/L | 0.005 JT | 0.013 UT | W036 | 0.00575 | 0.00575 J | 0.00643 J |

Table D3.2-6d. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events (West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| Naphthalene | Peristaltic - total | µg/L | 0.013 U | 0.022 U | W036 | 0.00875 | 0.00875 U | 0.0108 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.009 U | W036 | 0.00385 | 0.00385 U | 0.00444 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W036 | 0.0055 | 0.0055 U | 0.0055 U |
| Total PAHs | Peristaltic - total | µg/L | 0.005 JT | 0.013 UT | W036 | 0.00575 | 0.00575 J | 0.00643 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W036 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.35 UJ | 0.78 UJ | W036 | 0.283 | 0.283 UJ | 0.379 UJ |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.029 UJ | 0.064 UJ | W036 | 0.0233 | 0.0233 UJ | 0.0311 UJ |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.00014 U | 0.015 U | W036 | 0.00383 | 0.00387 U | 0.0075 U |
| **RM 09<10** | | | | | | | | |
| **Metals** | | | | | | | | |
| Arsenic | Peristaltic - dissolved | µg/L | 0.401 J | 0.425 UJT | W037 | 0.307 | 0.307 J | 0.392 J |
| Arsenic | Peristaltic - particulate | µg/L | 0.083 J | 0.467 J | W037 | 0.275 | 0.275 J | 0.448 J |
| Arsenic | Peristaltic - total | µg/L | 0.467 JT | 0.484 J | W037 | 0.476 | 0.476 J | 0.483 J |
| Cadmium | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W037 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W037 | 0.01 | 0.01 U | 0.01 U |
| Cadmium | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W037 | 0.01 | 0.01 U | 0.01 U |
| Chromium | Peristaltic - dissolved | µg/L | 0.14 UT | 0.18 U | W037 | 0.08 | 0.08 U | 0.089 U |
| Chromium | Peristaltic - particulate | µg/L | 0.31 U | 0.31 U | W037 | 0.155 | 0.155 U | 0.155 U |
| Chromium | Peristaltic - total | µg/L | 0.31 U | 0.31 U | W037 | 0.155 | 0.155 U | 0.155 U |
| Copper | Peristaltic - dissolved | µg/L | 0.56 T | 0.58 | W037 | 0.57 | 0.57 | 0.579 |
| Copper | Peristaltic - particulate | µg/L | 0.31 | 0.31 | W037 | 0.31 | 0.31 | 0.31 |
| Copper | Peristaltic - total | µg/L | 0.87 T | 0.89 | W037 | 0.88 | 0.88 | 0.889 |
| Lead | Peristaltic - dissolved | µg/L | 0.038 UT | 0.046 U | W037 | 0.021 | 0.021 U | 0.0228 U |
| Lead | Peristaltic - particulate | µg/L | 0.223 | 0.236 | W037 | 0.23 | 0.23 | 0.235 |
| Lead | Peristaltic - total | µg/L | 0.223 T | 0.236 | W037 | 0.23 | 0.23 | 0.235 |
| Mercury | Peristaltic - dissolved | µg/L | 0.02 U | 0.02 U | W037 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - particulate | µg/L | 0.02 U | 0.02 U | W037 | 0.01 | 0.01 U | 0.01 U |
| Mercury | Peristaltic - total | µg/L | 0.02 U | 0.02 U | W037 | 0.01 | 0.01 U | 0.01 U |
| Nickel | Peristaltic - dissolved | µg/L | 0.2 UT | 0.2 UT | W037 | 0.15 | 0.15 J | 0.195 J |
| Nickel | Peristaltic - particulate | µg/L | 0.1 J | 0.3 | W037 | 0.2 | 0.2 J | 0.29 J |
| Nickel | Peristaltic - total | µg/L | 0.3 | 0.3 | W037 | 0.3 | 0.3 | 0.3 |
| Zinc | Peristaltic - dissolved | µg/L | 2.6 UT | 2.8 U | W037 | 1.35 | 1.35 U | 1.4 U |
| Zinc | Peristaltic - particulate | µg/L | 3.1 U | 4.7 U | W037 | 1.95 | 1.95 U | 2.31 U |
| Zinc | Peristaltic - total | µg/L | 3.1 UT | 4.7 U | W037 | 1.95 | 1.95 U | 2.31 U |
| **Organometallic Compounds** | | | | | | | | |
| Tributyltin ion | Peristaltic - total | µg/L | 0.0006 U | 0.0006 U | W037 | 0.0003 | 0.0003 U | 0.0003 U |
| **PCBs[c]** | | | | | | | | |
| Total PCBs | XAD Column - dissolved | µg/L | 0.000143 JT | 0.000154 JT | W037 | 0.000149 | 0.000149 J | 0.000153 J |
| Total PCBs | XAD Filter - particulate | µg/L | 0.0000534 JT | 0.000172 JT | W037 | 0.000113 | 0.000113 J | 0.000166 J |
| Total PCBs | XAD Column+Filter - total | µg/L | 0.000196 J | 0.000326 J | W037 | 0.000261 | 0.000261 J | 0.00032 J |
| **PCB TEQ** | | | | | | | | |
| Total PCB TEQ (ND=0) | XAD Column - dissolved | µg/L | 0.000000000142 JT | 0.000000000155 JT | W037 | 0.000000000149 | 0.000000000149 J | 0.000000000154 J |
| Total PCB TEQ (ND=0) | XAD Filter - particulate | µg/L | 0.0000000000751 JT | 0.000000000246 JT | W037 | 0.000000000161 | 0.000000000161 J | 0.000000000237 J |
| Total PCB TEQ (ND=0) | XAD Column+Filter - total | µg/L | 0.000000000217 J | 0.000000000401 J | W037 | 0.000000000309 | 0.000000000309 J | 0.000000000392 J |
| **Pesticides** | | | | | | | | |
| Aldrin | Peristaltic - total | µg/L | 0.000057 U | 0.00028 U | W037 | 0.0000843 | 0.0000843 U | 0.000134 U |
| Dieldrin | Peristaltic - total | µg/L | 0.0004 U | 0.00042 U | W037 | 0.000205 | 0.000205 U | 0.00021 U |
| gamma-Hexachlorocyclohexane (Lindane) | Peristaltic - total | µg/L | 0.00029 J | 0.00049 U | W037 | 0.000268 | 0.000268 J | 0.000288 J |
| Total chlordanes | Peristaltic - total | µg/L | 0.00077 UT | 0.0014 UT | W037 | 0.000543 | 0.000543 U | 0.000684 U |
| DDx | Peristaltic - total | µg/L | 0.0013 UT | 0.0047 NJT | W037 | 0.00268 | 0.00268 J | 0.0045 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | |
| Benzo(a)pyrene | Peristaltic - total | µg/L | 0.0086 U | 0.0086 U | W037 | 0.0043 | 0.0043 U | 0.0043 U |
| Total HPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.034 JT | W037 | 0.0198 | 0.0198 J | 0.0326 J |
| Total LPAHs | Peristaltic - total | µg/L | 0.013 UT | 0.013 UT | W037 | 0.0065 | 0.0065 U | 0.0065 U |

Table D3.2-6d. Summary Statistics for COIs in Surface Water, Stormwater-Influenced Events
(West Channel Single-Point Locations).

| | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| Naphthalene | Peristaltic - total | µg/L | 0.013 U | 0.013 U | W037 | 0.0065 | 0.0065 U | 0.0065 U |
| Phenanthrene | Peristaltic - total | µg/L | 0.0064 U | 0.0068 U | W037 | 0.0033 | 0.0033 U | 0.00339 U |
| Total cPAHs | Peristaltic - total | µg/L | 0.011 UT | 0.011 UT | W037 | 0.0055 | 0.0055 U | 0.0055 U |
| Total PAHs | Peristaltic - total | µg/L | 0.013 UT | 0.034 JT | W037 | 0.0203 | 0.0203 J | 0.0326 J |
| **Semivolatile Organic Compounds** | | | | | | | | |
| Pentachlorophenol | Peristaltic - total | µg/L | 0.029 U | 0.029 U | W037 | 0.0145 | 0.0145 U | 0.0145 U |
| Bis(2-ethylhexyl) phthalate | Peristaltic - total | µg/L | 0.4 UJ | 0.62 UJ | W037 | 0.255 | 0.255 UJ | 0.305 UJ |
| Butylbenzyl phthalate | Peristaltic - total | µg/L | 0.045 UJ | 0.049 UJ | W037 | 0.0235 | 0.0235 UJ | 0.0244 UJ |
| Hexachlorobenzene | Peristaltic - total | µg/L | 0.015 U | 0.015 U | W037 | 0.0075 | 0.0075 U | 0.0075 U |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

[c] Total PCBs are total PCB congeners whenever available and total Aroclors if not.

[d] Particulate values were calculated as the difference between total and dissolved concentrations. If the measured dissolved concentration was greater than or equal to the measured total concentration, the calculated particulate concentration was assigned a value of zero.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PCDD/F - dioxin/furan
RM - river mile
TCDD - tetrachlorodibenzo-p-dioxin
TEQ - toxicity equivalence
XAD - hydrophobic crosslinked polystyrene copolymer resin

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D3.3
# PATTERNS AND TRENDS OF PCBS, PCDD/FS, DDX, AND PAHS IN SURFACE WATER

**FINAL**

February 8, 2016

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# APPENDIX D3.3 PATTERNS AND TRENDS OF PCBS, PCDD/FS, DDX, AND PAHS IN SURFACE WATER

## D3.3.1 Introduction

This appendix provides additional details on the nature of the four grouped indicator contaminants, polychlorinated biphenyls (PCBs), polychlorinated dibenzo-p-dioxins/furans (PCDD/Fs), DDx, and polycyclic aromatic hydrocarbons (PAHs), in surface water by examining the patterns in the occurrence of the constituent contaminants that make up these compound groups.

## D3.3.2 Patterns and Trends of PCBs in Surface Water

The patterns and trends of PCB homologs in surface water XAD column and filter samples are discussed below. Stacked bar graphs depicting the PCB homolog distributions in the surface water dissolved (XAD column) and particulate (XAD filter) samples by flow condition and river mile are presented in Figures D3.3-1 and D3.3-2. Station location labels and flow conditions are provided on the x-axis, and river mile is indicted on the secondary x-axis along the top of the chart. In this data presentation, non-detected (U-qualified) data were assigned a value of zero; therefore, they do not appear on the bar charts. The discussion of patterns and trends in the PCB homologs is qualitative based on visual examinations of the stacked bar graphs.

The PCB composition of the particulate fraction generally exhibited a more highly chlorinated pattern than the PCBs in the dissolved phase. Several November 2006 stormwater-influenced samples, which exhibited greater contributions from monochlorobiphenyls (monoCBs) and/or dichlorobiphenyls (diCBs) than other particulate samples and their dissolved counterparts, were exceptions to this pattern. This PCB distribution reflects the greater solubility and lower partitioning coefficients of the less-chlorinated congeners.

The PCB composition was generally similar in the dissolved fractions of the four study area transect locations and the downstream transect (Station W027, Multnomah Channel) during all sampling events. The dissolved PCBs at the transect locations generally consisted of a fairly equal mixture of diCBs, trichlorbiphenyls (triCBs), tetrachlorobiphenyls (tetraCBs), and pentachlorobiphenyls (pentaCBs), with contributions from hexachlorobiphenyls (hexaCBs). The sample from transect W005 (RM 4) collected during the January 2006 high-flow event had a high percentage of tetraCBs and no diCBs. However, this sample had a relatively low total PCB congener concentration (73 pg/L) and, therefore, this homolog distribution may be reflective of this low concentration.

Generally, the PCB compositions in the dissolved fraction of the upstream transect (W024, RM 16) exhibited a less chlorinated pattern than the PCBs in the study area transect samples. The samples from the low-flow events collected at Station W024 had high proportions of diCBs. Conversely, the sample from this station collected during

the January 2007 high-flow event was characterized by a high proportion of monoCBs. The PCB homolog patterns in stormwater-influenced samples collected from W024 were similar to stormwater-influenced samples from the study area.

The more highly chlorinated PCB composition of the particulate fractions of the transect locations is reflected in the predominance of tetraCBs, pentaCBs, hexaCBs, and heptachlorobiphenyls (heptaCBs), with spatial variations in the proportions of each homolog present. The PCBs at transects W023 (RM 11) in November 2004 (low-flow), from W023E in September 2006, and the near-bottom (NB) sample from W005 (RM 4) in January 2007 (high-flow) contained higher proportions of hexaCBs and heptaCBs than samples collected during other events. The sample from transect W025E (RM 2) collected during the November 2006 stormwater-influenced event contained a higher proportion of triCBs than samples from other events. The W023 (RM 11) sample collected during the November 2004 low-flow event may have been influenced by stormwater discharges from a nearby outfall (OF-45) due to a relatively heavy rainfall event (0.37 inch) on the day the sample was collected (Integral 2006); however, the September 2006 low-flow sample from the east side of this transect had a higher total PCBs concentration and a similar PCB composition to the November 2004 sample. No stormwater discharges were noted during the collection of the September 2006 sample. The interpretation of these surface water samples may be confounded by maintenance dredging conducted at Glacier's docking facility located at RM 11.3. Glacier apparently conducted dredging following approval in June 2004 by the U.S. Army Corps of Engineers. Attempts to obtain post-dredging information have not been successful.

The PCB composition of particulate fractions of the upstream transect station W024 (RM 16) generally exhibited a less chlorinated pattern than the PCBs in the study area transect samples upstream of RM 2 for the low- and high-flow sampling events. The stormwater-influenced (September 2006) NB sample at this station had a similar PCB composition to the study area transect profiles, while the near-surface (NS) transect from this event exhibited the same less-chlorinated pattern observed at this station during the other sampling events.

The particulate fractions of the Multnomah Channel transect, station W027, exhibited PCB profiles similar to that of the study area transect stations during the high- and low-flow sampling events. The PCB profile at station W027 during the September 2006 stormwater-influenced event was similar to the profiles of the west and mid-channel samples from transect W025 (RM 2) collected during the same event, exhibiting a more highly chlorinated PCB profile. The east sample from transect W025 exhibited a less chlorinated PCB profile than other transect stations during the stormwater-influenced event. PCB patterns in several other samples from location W025 were also less chlorinated than other study area transect samples.

Several of the single-point particulate fraction samples from the November 2006 stormwater-influenced sampling contained unusually high proportions of the less

chlorinated homolog groups in comparison to the other sampling events. At station W037 (RM 9.6, west bank), the NB sample had a higher proportion of diCBs and the NS sample had higher proportions of monoCBs and diCBs. Similarly, the station W038 (RM 9.9, east bank) NB sample had higher proportions of monoCBs and diCBs. Higher proportions of monoCBs and diCBs were observed in the NS sample at station W031 (RM 6.1) and in the NB sample at station W028 (RM 3.6). The dissolved fractions of these samples had a similar homolog distribution to the other samples from these locations. MonoCBs accounted for 91 percent of PCBs in the dissolved fraction of the NS sample at station W030 (RM 5.5). This sample had a high total PCB congener concentration (2,370 J pg/L). With the exception of station W037 (RM 9.6), the corresponding NS or NB samples did not exhibit similar distributions. These findings would point to a stormwater-related source of monoCBs and diCBs near these locations.

The PCB homolog composition in samples from the NS and NB locations differed from that of the transect samples to varying degrees, likely reflecting local sediment conditions or upland sources. With the exceptions mentioned above, the NS and NB samples exhibited similar PCB distributions at both the NB/NS transect and single-point stations. The PCBs in Swan Island Lagoon, stations W018 (RM 8.3) and W035 (RM 8.5), were slightly more chlorinated overall than PCBs in the transect samples and the sampling locations in the main river channel, with the exception of particulate fractions from Willamette Cove (station W013, RM 6.7) and station W029 (RM 4.4), both of which are discussed below. The predominant homolog groups in this area are pentaCBs, hexaCB, and heptaCBs.

At station W015 (RM 6.9) on the west bank, the abundance of tetraCBs was generally slightly less than at station W016, located less than half a mile upstream. However, in November 2004, the triCBs were unusually abundant at this station in both the particulate and dissolved fractions. The total PCB congener concentration in the November 2004 sample was also unusually high (1,290 pg/L in the particulate fraction and 639 J pg/L in the dissolved fraction). The PCB concentration and homolog profiles imply contributions from an additional source or sources in November 2004. Because rainfall of 0.24 inch was recorded on this sampling date (Integral 2006), a source or sources related to stormwater discharge near this sampling location is possible.

In Willamette Cove, station W013 (RM 6.7) east bank, the total PCB concentration was high relative to other areas (maximum of 9,560 J pg/L for particulate PCBs and 2,420 J pg/L for dissolved PCBs). The PCB profile in the particulate fraction was more chlorinated than other areas, dominated by hexaCBs and heptaCBs. The dissolved PCB profile was similar to that of the transect samples.

### D3.3.3 Patterns and Trends of PCDD/Fs in Surface Water

Stacked bar graphs depicting the PCDD/F homolog distributions in the surface water dissolved (XAD column) and particulate (XAD filter) samples by flow condition and river mile are presented in Figures D3.3-3 and D3.3-4. The discussion of patterns and

trends in the PCDD/F homologs is qualitative based on visual examinations of the stacked bar graphs.

Overall, the PCDD/F homolog profiles were dominated by octachlorodibenzo-p-dioxin (OCDD) and heptachlorodibenzo-p-dioxins (HpCDDs) in both the dissolved and particulate fractions. At most transect stations and in most sampling events, OCDD constituted more than half of the PCDD/Fs in the particulate fraction, and from 30 to 95 percent of the PCDD/Fs in the dissolved fraction. HpCDDs accounted for another 15 to 30 percent of the total in both the dissolved and particulate fractions. As would be expected, the dissolved fraction generally contained a greater abundance of the less chlorinated homolog groups than the particulate fraction. The homolog pattern for the particulate fraction PCDD/Fs varied little from transect to transect and from upstream to downstream of the study area.

In the dissolved fraction of the transect samples, only a few samples differed from the trend of OCDD and HpCDD dominance. The NS sample from the eastern bank at transect W024 (RM 16) and the eastern bank sample from transect W025 (RM 2) from the January 2007 sampling event, and the November 2006 sample from the west bank at transect W025 exhibited high abundance of tetrachlorodibenzo-p-dioxins (TCDDs). Two samples from the November 2006 sampling event had very low (<0.01 pg/L) total PCDD/Fs concentrations, and only TCDDs were detected in these samples. With these exceptions, only minor differences between the transects were observed; the low-flow sampling events exhibited higher proportions of the less chlorinated homolog groups in the dissolved fraction, and the upriver stations exhibited a less chlorinated profile than those in the study area.

The NS and NB transects had very similar particulate PCDD/F homolog profiles during all sampling events, with similar dissolved profiles during low-flow events. Homolog patterns in the NS samples were different than their corresponding NB samples at stations W011 (RM 6.3) and W005 (RM 4) in the November 2006 stormwater-influenced sampling event and at station W024 (RM 16) in the January 2007 high-flow sampling event. The NS and NB single-point samples also generally exhibited similar particulate and dissolved PCDD/F homolog profiles during all events.

The single-point samples from stations W035 (RM 8.5) and W033 (RM 7) exhibited similar PCDD/F homolog profiles to the transect stations in both the dissolved and particulate fractions under high-flow and stormwater-influenced conditions. These stations were not sampled under low-flow conditions.

However, at Station W015, on the western riverbank at RM 6.9, furans were somewhat more abundant than at other locations during all sampling events, in both the dissolved and particulate fractions. The pattern of the dioxins was similar to that of the transect locations. This area may be influenced by a different PCDD/F source compared to the river as a whole.

In Willamette Cove, stations W013 and W032 (both at RM 6.7), the profile for PCDD/Fs in the dissolved and particulate fractions generally resembled the profiles at the transect locations during each sampling event, but the particulate PCDD/F concentrations found at this location were consistently higher than at nearby transect station W011 (RM 6.3). The PCDD/F patterns in field replicate samples LW2-W3013-2 F (particulate phase, July 2005) and LW2-W2013-2 C (dissolved phase, March 2005) included a distinctly larger fraction of dioxins and a smaller furan fraction than the respective "parent" samples and were not similar to transect Station W011. These replicate samples were collected sequentially, a day apart, and may reflect temporal differences in the PCDD/Fs in Willamette Cove.

### D3.3.4 Patterns and Trends of DDx in Surface Water

Stacked bar graphs depicting the DDx patterns for the surface water dissolved (XAD column) and particulate (XAD filter) samplings by flow condition and river mile are presented in Figures D3.3-5 and D3.3-6. The discussion of patterns and trends in the DDx distributions is qualitative based on visual examinations of the stacked bar graphs.

The DDx distributions for the dissolved fractions varied little from transect to transect within each sampling event, including the stations upstream and downstream of the study area. Patterns differed between flow conditions, however. The high-flow transect samples were dominated by the 4,4´-isomers of DDE and DDT, with generally decreasing contributions from DDT as the transects move downriver. The low-flow and stormwater-influenced transect samples had much higher proportions of DDD, primarily the 4,4´-isomer, with a substantial contribution by 2,4´'-DDD. For the transects, the contribution of 4,4´-DDD varied with sampling event, whereas the contribution of 2,4´-DDD increased overall moving downriver.

Patterns for particulate DDx were similar to dissolved DDx for high-flow transects, dominated by the 4,4´-isomers of DDE and DDT. The proportion of 4,4´-DDT was more consistent upstream to downstream in the particulate fraction than in the dissolved fraction. 2,4´- and 4,4´-DDD dominated the particulate DDx under low-flow conditions at most transects, with generally decreasing contributions from 4,4´-DDT and increasing contributions from 2,4´-DDD as the transects move downriver. The March and July 2005 transect samples at stations W023 (RM 11) and W005 (RM 4) had higher fractions of 4,4´-DDE than other transect samples, while the 4,4´-DDE contribution in the dissolved fractions of these samples was similar to other transects. The particulate DDx patterns for the transect samples taken during stormwater-influenced flow conditions were also generally dominated by the DDD isomers, although 4,4´-DDE and 4,4´-DDT were also prevalent in these samples. The DDD isomers were not detected in stormwater-influenced samples from the upriver transects (W023 and W024), or from the downriver transect at RM 2 (W025) east bank sample. The DDx concentrations at RM 16 and RM 2 transects were low during the stormwater-influenced event relative to other transects.

The NS and NB samples were generally similar in most flow conditions for both dissolved and particulate DDx in both transect and single-point samples. Patterns for the NB and NS samples were different at station W011 (RM 6.3; November 2006 stormwater-influenced sampling event), station W031 (RM 6.1; January 2007 high-flow sampling event), and for station W024 (RM 16; November 2006 stormwater-influenced sampling event), where the patterns may be obscured by method sensitivity limits.

The DDx compound distribution for the dissolved and particulate fractions of the single-point stations were generally similar to those of the transect samples in high-flow conditions, with the exception of particulate DDx in the NB sample and dissolved DDx in both samples for location W031 (RM 6.1). The particulate W031 NB sample shows higher fractions of the DDD isomers and less 4,4´-DDT than the paired NS sample and the other single-point or transect stations.

During low-flow conditions, stations W016 (RM 7.2) and W015 (RM 6.9) DDx concentrations were much higher than the other samples (5 to 60 times higher in the dissolved fraction and 14 to 80 times higher in the particulate fraction). These stations are both on the west bank of the river, located a short distance apart (0.3 mile). The particulate DDx patterns varied fairly widely between the two stations and between sampling events at each location, and were distinct from patterns in surrounding areas and at the transect locations at RM 6.3 and 11. Dissolved DDx patterns at these two locations were more consistent and included a larger fraction of DDD than is typical in the study area. Under stormwater-influenced conditions, the DDx concentration at nearby station W033 (RM 7) was higher than surrounding areas, but the DDx composition did not vary as distinctly.

### D3.3.5 Patterns and Trends of PAHs in Surface Water

Stacked bar graphs depicting the PAH distribution by individual PAHs and summed by number of rings in the surface water dissolved (XAD column) and particulate (XAD filter) samples by flow condition and river mile are presented in Figures D3.3-7 and D3.3-8. A list of PAHs included in each sum is provided in Appendix D1.5, Table D1.5-1.

The dissolved PAH profiles varied between locations and flow events. During all sampling events, low-molecular-weight polycyclic aromatic hydrocarbons (LPAHs) (i.e., two-ring and three-ring PAHs) accounted for at least 50 percent of the dissolved PAHs at most transect, as well as single-point, stations. The two-ring PAHs (i.e., naphthalene and 2-methylnaphthalene) were dominant in many samples. In several samples, these results were restated as not detected during data validation, as discussed below, confounding the interpretation. The principal three-ring PAHs in many of the samples were acenaphthene and phenanthrene, although fluorene and anthracene were also present in many of the samples. Fluorene was dominant in two stormwater-influenced samples, collected from W023 (RM 11) and W024 (RM 16).

Generally, the remainder of the dissolved PAH profile consisted of four-ring high-molecular-weight polycyclic aromatic hydrocarbons (HPAHs), primarily fluoranthene and pyrene in the high- and low-flow events. With several exceptions, the four-ring PAHs in the November 2006 stormwater-influenced sampling event were chiefly chrysene upstream of RM 8.5 and fluoranthene downstream of this point.

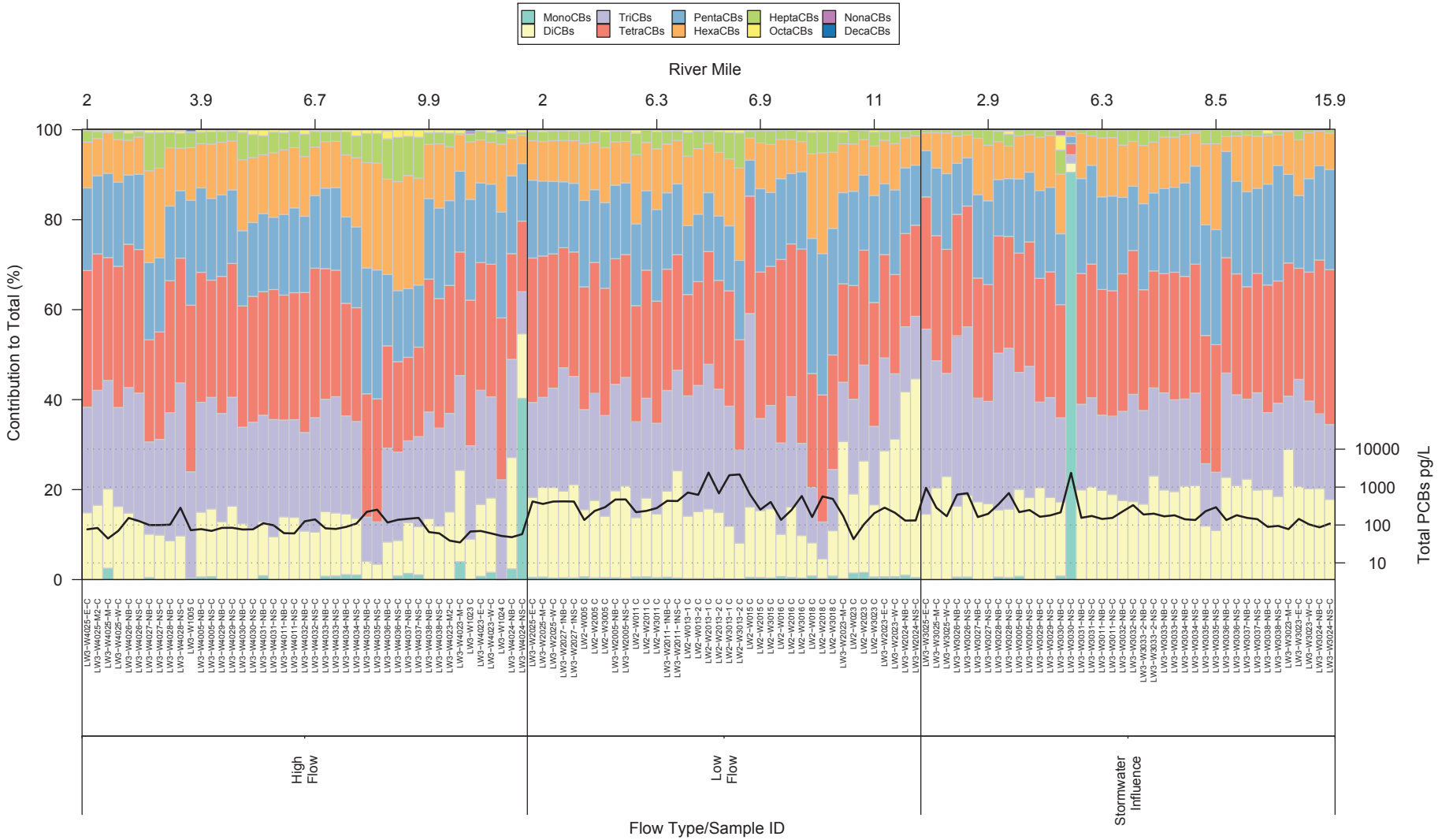
PAH patterns are affected by the presence of elevated detection limits, which result when individual PAHs are restated as not detected in the samples, since non-detects are treated as zeros in the evaluation of PAH patterns. Elevated detection limits may obscure the presence of a PAH at a concentration above the method detection limit. The concentrations reported by the laboratory for each of the PAHs in one or more samples were restated as not detected during data validation. Reasons for restating data as not detected included PAHs detected in laboratory and field blanks and details related to identification of the PAHs (i.e., ion abundance criteria were not met on the mass spectrometer). Data for XAD filter and column samples were affected. Results for LPAHs were restated as not detected more frequently than HPAHs. The evaluation of PAHs in this section takes elevated detection limits into consideration.

The PAH profiles in the particulate fractions also varied between sampling locations and flow events. Among transect locations, the low-flow and stormwater-influenced samples included primarily HPAHs with four and five rings, with fluoranthene, pyrene, and the benzofluoranthene isomers prevalent but many other HPAHs present as well. Samples from the high-flow sampling events were still predominantly four- and five-ring HPAHs but had more contribution of LPAHs, primarily the three-ring phenanthrene. The six-ring PAHs in the high- and low-flow events consisted of both benzo(g,h,i)perylene and indeno(1,2,3-cd)pyrene, while the stormwater event consisted almost entirely of benzo(g,h,i)perylene. Particulate PAHs in single-point samples varied from these patterns in many locations, particularly during low-flow conditions.

There was generally little difference in composition between the NS and NB samples for both transect and single-point samples. In the November 2006 stormwater-influenced sampling event, the dissolved NS samples at stations W024 (RM 16), W035 (RM 8.5), and W005 (RM 4) all had high contributions from 2-methylnaphthalene (a two-ring PAH) that was not present in the NB samples. The NS samples also had total dissolved PAH concentrations more than double the NB samples. A similar pattern is not seen in the particulate fractions of these samples. The higher NS concentrations may be related to a hydrocarbon sheen observed during sample collection for the stormwater event that was not thoroughly mixed within the water column, resulting in higher concentrations in the NS samples than the NB samples.

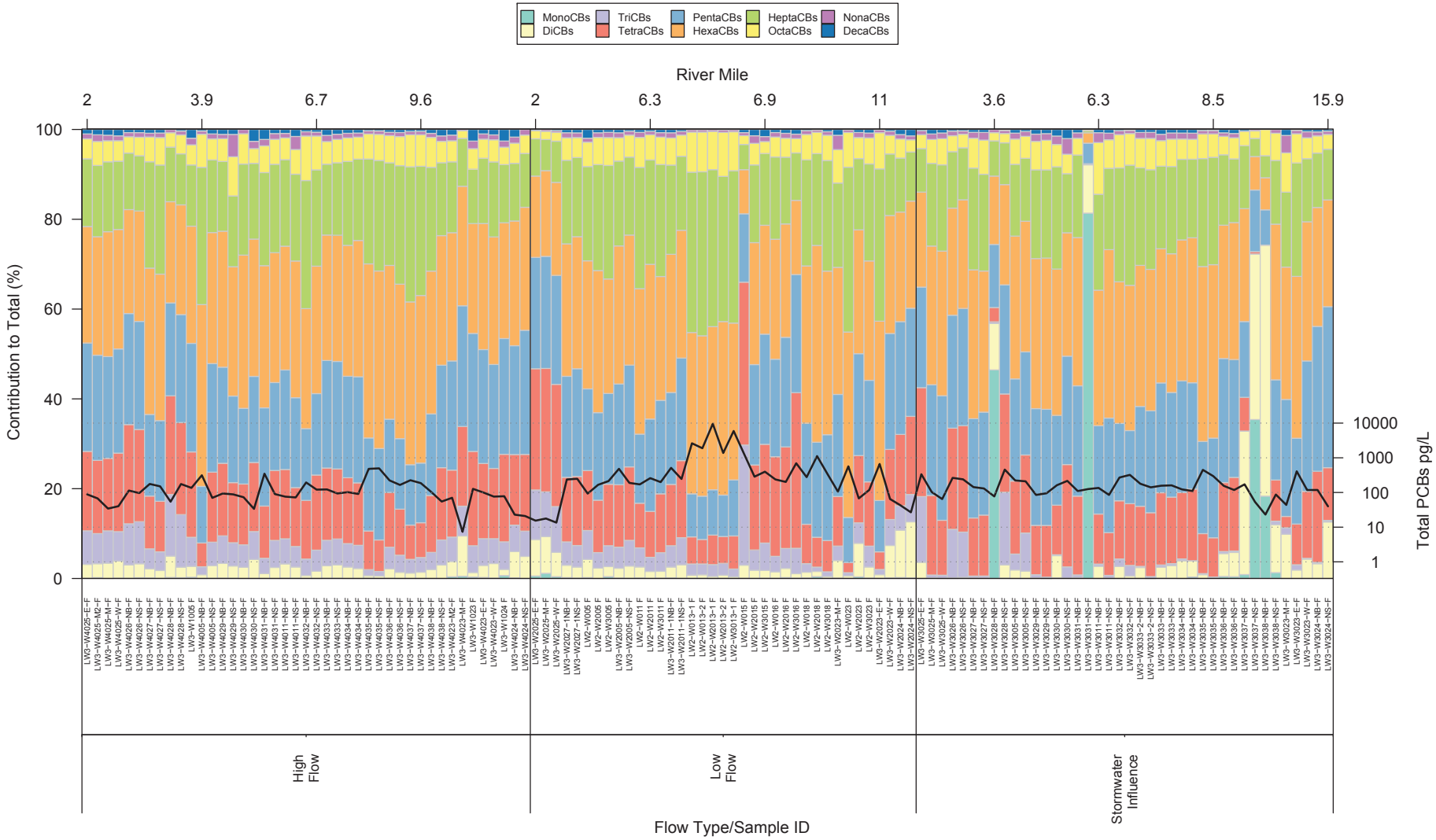
### D3.3.6 References

Integral. 2006. Portland Harbor RI/FS Round 2A Surface Water Site Characterization Summary Report. Draft. IC06-0006. Prepared for the Lower Willamette Group, Portland, OR. Integral Consulting Inc., Mercer Island, WA.



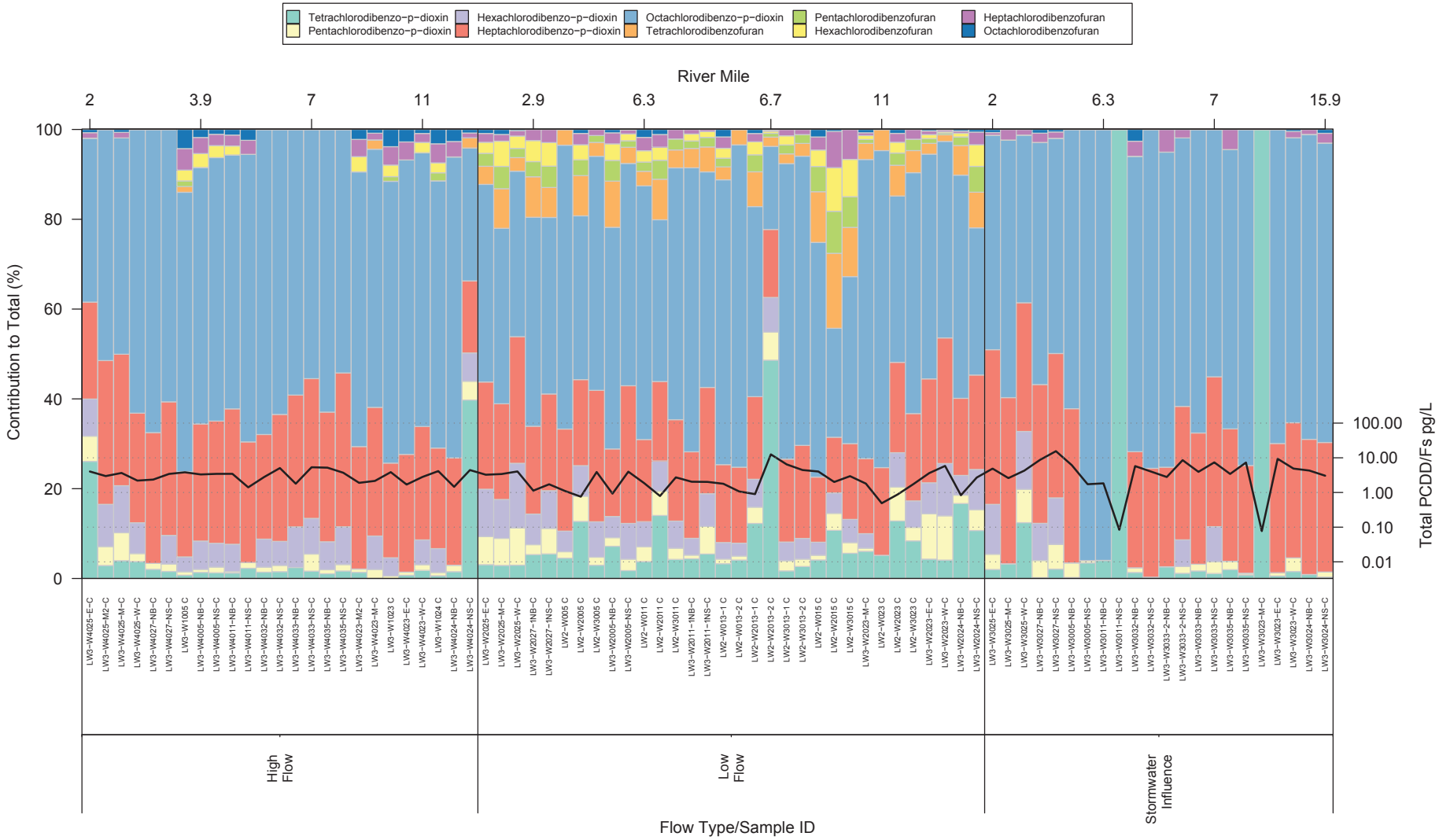

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

**Figure D3.3-1**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of Dissolved Total PCB Patterns
in Surface Water



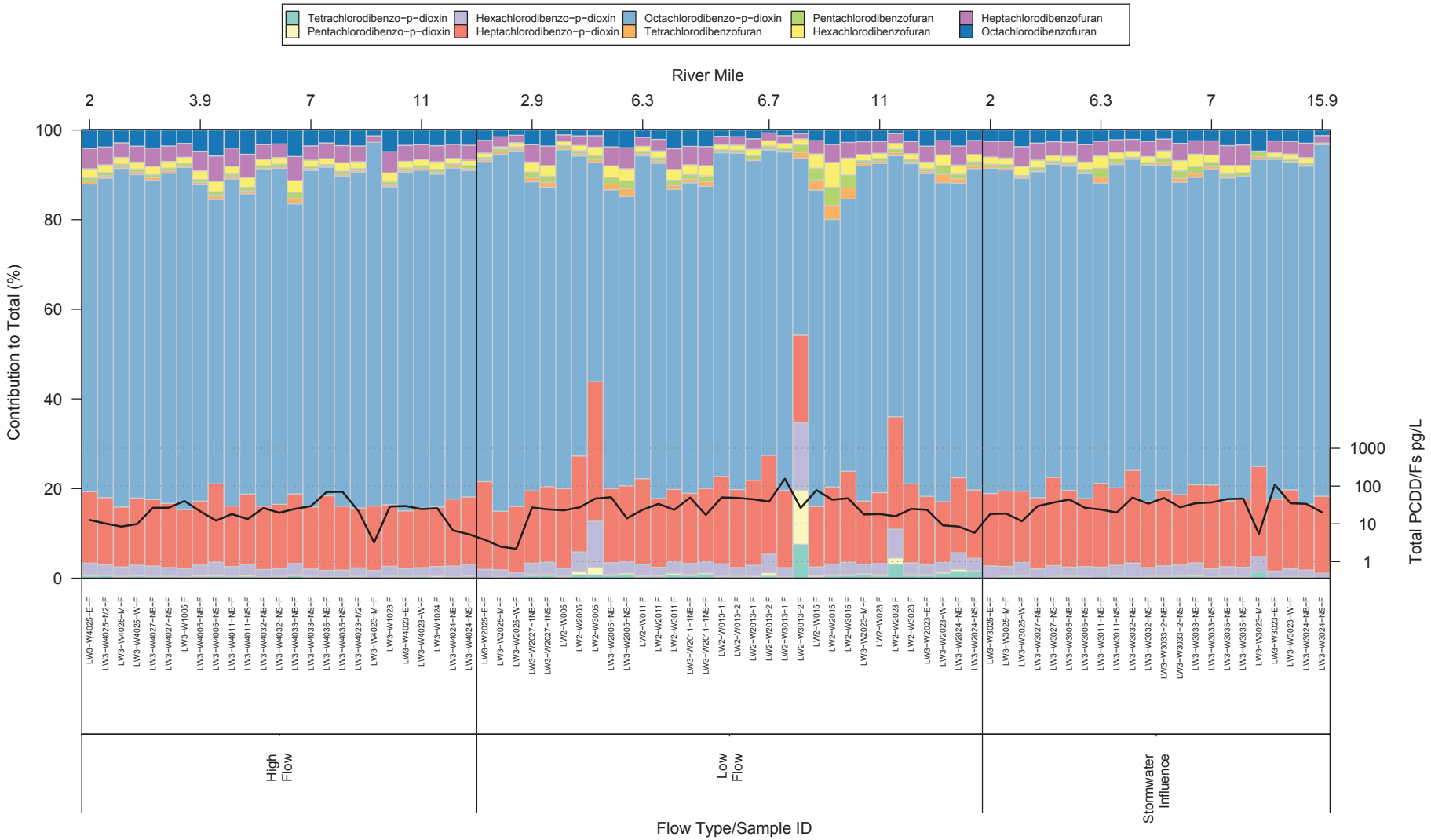

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

**Figure D3.3-2**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of Particulate Total PCB Patterns
in Surface Water



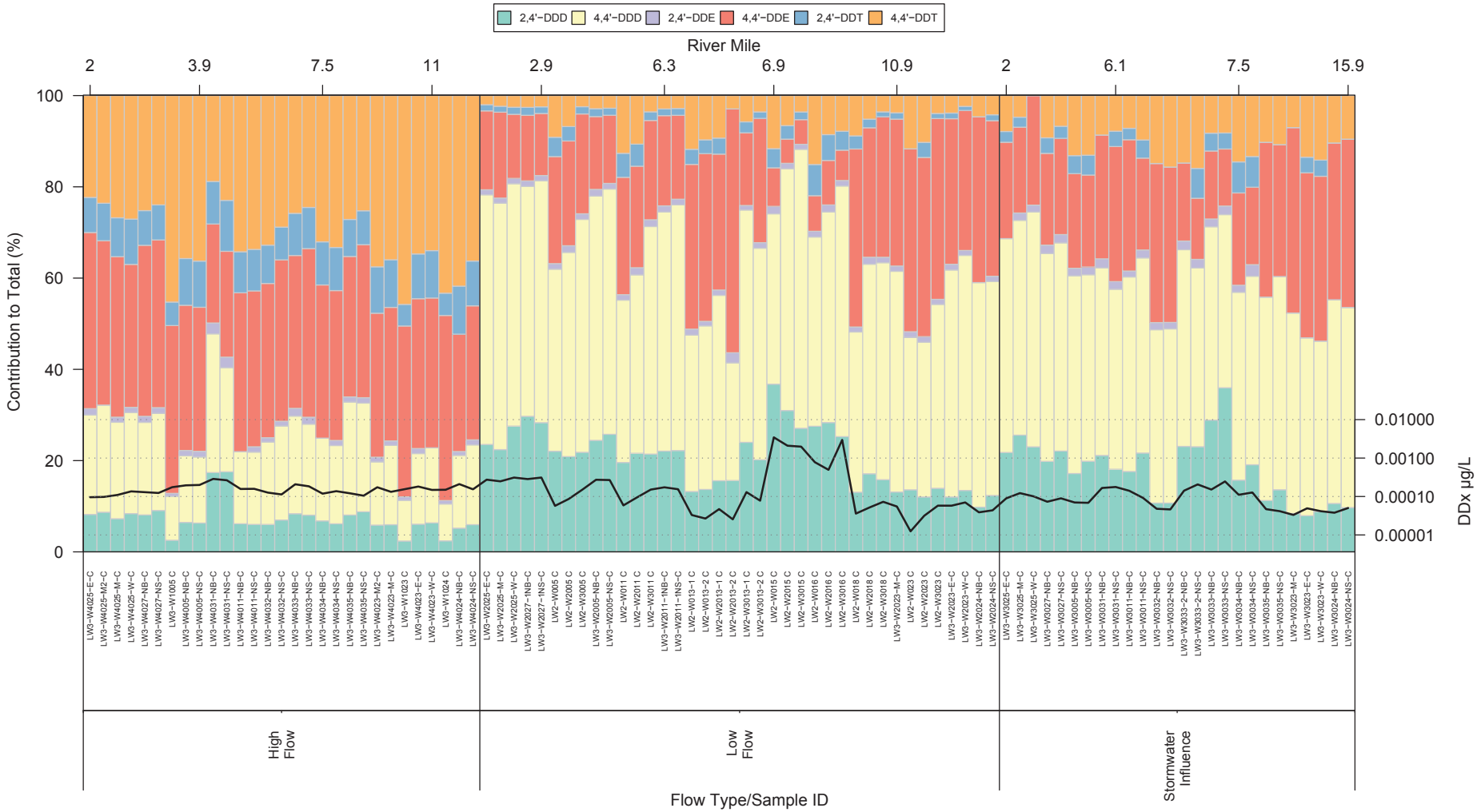

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

**Figure D3.3-3**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of Dissolved Total PCDD/F Patterns
in Surface Water



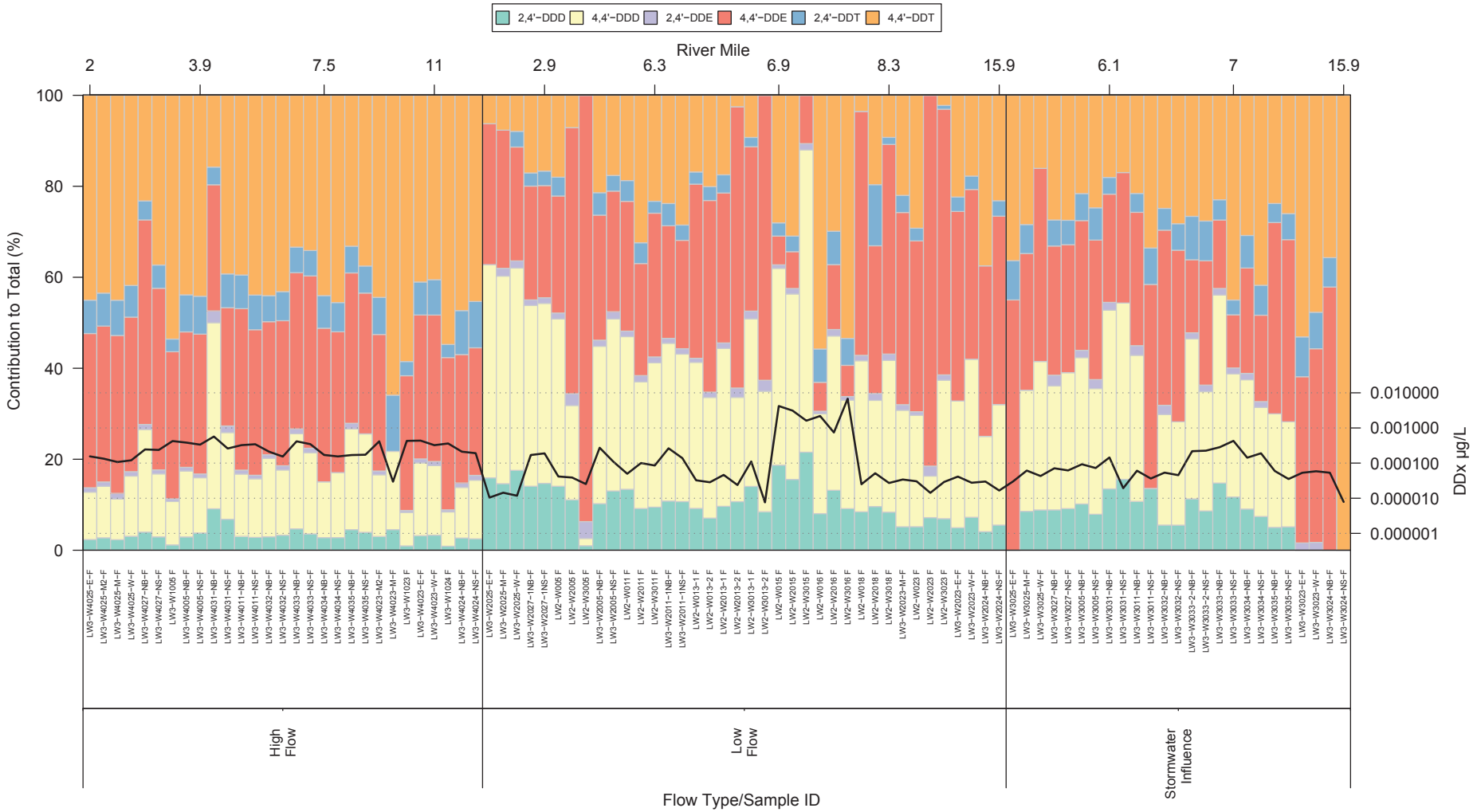

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

**Figure D3.3-4**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of Particulate Total PCDD/F Patterns
in Surface Water



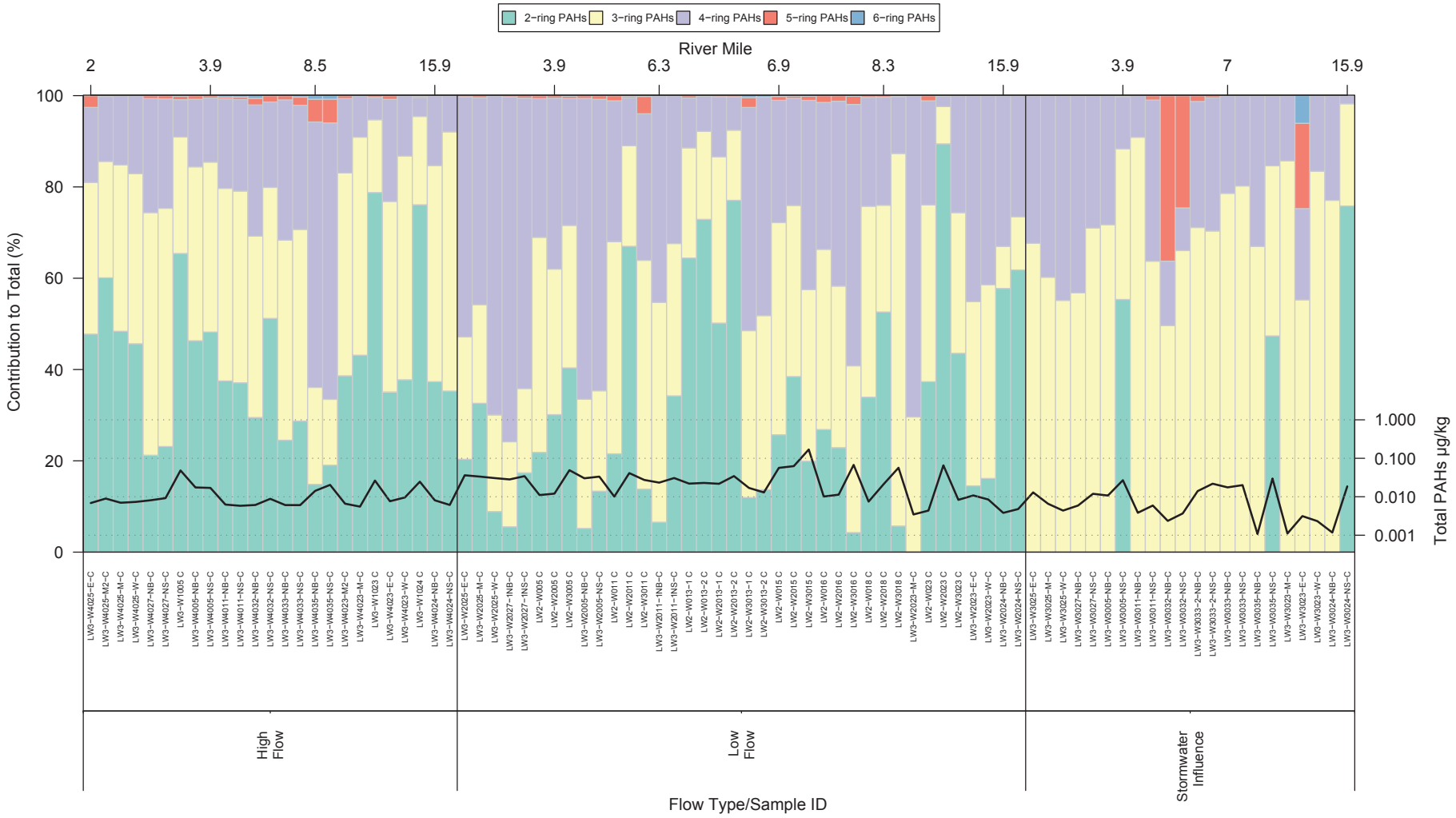

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

**Figure D3.3-5**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of Dissolved DDx Patterns
in Surface Water



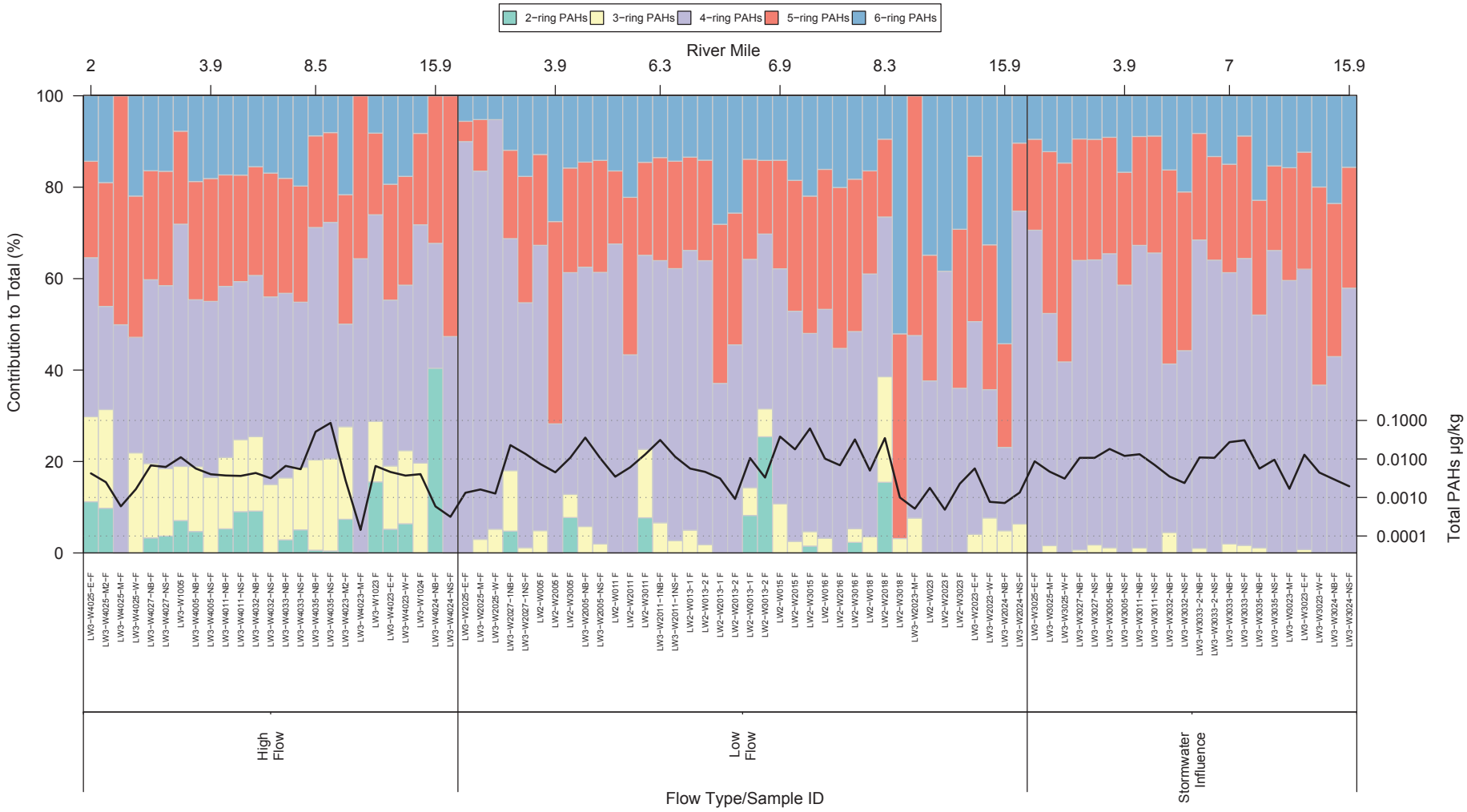

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

**Figure D3.3-6**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of Particulate DDx Patterns
in Surface Water




Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

**Figure D3.3-7**
Portland Harbor Report
Remedial Investigation Report
Stacked Bar Chart of Dissolved Total PAH Patterns
in Surface Water




Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

**Figure D3.3-8**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of Particulate Total PAH Patterns
in Surface Water

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D4
# TRANSITION ZONE WATER AND SEEPS

**FINAL**

February 8, 2016

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D4.1
# CONTAMINANT SUMMARY STATISTICS FOR TRANSITION ZONE WATER AND SEEPS—TABLES

**FINAL**

February 8, 2016

# LIST OF TABLES

Table D4.1-1. Summary Statistics for Other Contaminants in Transition Zone Water, Differentiated by Sample Method, Filtration, and Sample Depth

Table D4.1-2. Summary Statistics for Other Contaminants in Seeps

Table D4.1-1. Summary Statistics for Other Contaminants in Transition Zone Water, Differentiated by Sample Method, Filtration, and Sample Depth.

| | | | | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **Sample Method** | **Filtration** | **Sample Depth (cm bml)** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Metals** | | | | | | | | | | | | | | | | | | |
| Cadmium | µg/L | Peeper | n/a | 0-38 | 35 | 15 | 43 | 0.035 T | 36 | R2CP01PR | 2.64 | 0.09 | 12.4 | 0.004 U | 36 | R2CP01PR | 1.14 | 0.0385 U | 0.855 |
| Cadmium | µg/L | Trident | filtered | 0-30 | 57 | 36 | 63 | 0.006 J | 0.52 | R2RP03TR | 0.0921 | 0.0543 J | 0.298 | 0.002 U | 0.52 | R2RP03TR | 0.0666 | 0.041 J | 0.277 |
| Cadmium | µg/L | Trident | unfiltered | 0-30 | 60 | 41 | 68 | 0.005 J | 0.793 | RP03ETR | 0.201 | 0.13 | 0.699 J | 0.005 J | 0.793 | RP03ETR | 0.148 | 0.0895 J | 0.662 J |
| Cadmium | µg/L | Trident | filtered | 60-150 | 12 | 9 | 75 | 0.004 J | 0.289 | RP03CTR | 0.0818 | 0.04 | 0.231 | 0.004 J | 0.289 | RP03CTR | 0.0754 | 0.05 | 0.209 |
| Cadmium | µg/L | Trident | unfiltered | 60-150 | 24 | 18 | 75 | 0.06 | 1.12 | CP07DTR | 0.31 | 0.193 J | 0.692 | 0.025 U | 1.12 | CP07DTR | 0.244 | 0.135 J | 0.605 |
| Cadmium | µg/L | GeoProbe | filtered | 0-90 | 4 | 3 | 75 | 0.009 | 0.029 | GS-B1 | 0.017 | 0.013 | 0.0274 | 0.007 U | 0.029 | GS-B1 | 0.0136 | 0.011 | 0.0266 |
| Cadmium | µg/L | GeoProbe | unfiltered | 0-90 | 22 | 20 | 91 | 0.014 J | 3.53 | GS-B9 | 1.23 | 0.505 | 3.41 | 0.008 U | 3.53 | GS-B9 | 1.12 | 0.234 | 3.4 |
| Lead | µg/L | Peeper | n/a | 0-38 | 39 | 5 | 13 | 2.99 | 18.3 | ARC03B | 6.83 | 3.74 | 15.8 | 0.11 U | 18.3 | ARC03B | 1.11 | 0.225 UT | 3.94 |
| Lead | µg/L | Trident | filtered | 0-30 | 60 | 22 | 37 | 0.01 J | 2.51 J | R2AR03TR | 0.432 | 0.15 | 1.6 | 0.01 U | 2.51 J | R2AR03TR | 0.173 | 0.03 | 0.925 |
| Lead | µg/L | Trident | unfiltered | 0-30 | 64 | 49 | 77 | 0.46 | 99.8 J | R2AR03TR | 12.3 | 5.47 | 44.1 | 0.16 U | 99.8 J | R2AR03TR | 9.51 | 4.64 | 27.3 |
| Lead | µg/L | Trident | filtered | 60-150 | 12 | 5 | 42 | 0.018 J | 0.62 T | EM03ATR | 0.236 | 0.14 | 0.552 J | 0.01 U | 0.62 T | EM03ATR | 0.112 | 0.0375 U | 0.433 J |
| Lead | µg/L | Trident | unfiltered | 60-150 | 24 | 20 | 83 | 0.51 | 131 | AP03ATR | 20.2 | 11.7 J | 60.1 | 0.35 U | 131 | AP03ATR | 16.9 | 11.3 | 51.6 |
| Lead | µg/L | GeoProbe | filtered | 0-90 | 4 | 4 | 100 | 0.052 | 0.144 J | GS-B2 | 0.0888 | 0.0795 J | 0.137 J | 0.052 | 0.144 J | GS-B2 | 0.0888 | 0.0795 J | 0.137 J |
| Lead | µg/L | GeoProbe | unfiltered | 0-90 | 35 | 23 | 66 | 0.155 | 382 J | GS-B2 | 97.5 | 15.7 | 315 J | 0.155 | 382 J | GS-B2 | 67.5 | 10 U | 277 J |
| Mercury | µg/L | Peeper | n/a | 0-38 | 35 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.08 U | 0.09 U | CP07DPR; CP09DPR; R2CP01PR | 0.0406 | 0.04 U | 0.045 U |
| Mercury | µg/L | Trident | filtered | 0-30 | 57 | 5 | 9 | 0.08 J | 0.36 | GS08DTR | 0.18 | 0.134 J | 0.334 | 0.08 U | 0.36 | GS08DTR | 0.0523 | 0.04 U | 0.107 J |
| Mercury | µg/L | Trident | unfiltered | 0-30 | 60 | 11 | 18 | 0.08 J | 0.495 | CP06ATR | 0.165 | 0.115 JT | 0.383 | 0.08 U | 0.495 | CP06ATR | 0.063 | 0.04 U | 0.151 J |
| Mercury | µg/L | Trident | filtered | 60-150 | 12 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.08 U | 0.08 U | AR01ATR; EM01ATR; EM03ATR; EM04CTR; GN01ETR; GN05ATR; R2AR02TR; RP03CTR; RP03ETR; SL04ATR | 0.04 | 0.04 U | 0.04 U |
| Mercury | µg/L | Trident | unfiltered | 60-150 | 24 | 9 | 38 | 0.09 J | 0.293 | CP06ATR | 0.17 | 0.19 J | 0.274 | 0.08 U | 0.293 | CP06ATR | 0.0889 | 0.04 U | 0.241 |
| Mercury | µg/L | GeoProbe | filtered | 0-90 | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.03 U | 0.03 U | GS-B1; GS-B2; GS-B4; GS-B5 | 0.015 | 0.015 U | 0.015 U |
| Mercury | µg/L | GeoProbe | unfiltered | 0-90 | 22 | 14 | 64 | 0.03 J | 2.94 | GS-B2 | 0.778 | 0.61 | 2.58 | 0.03 U | 2.94 | GS-B2 | 0.503 | 0.0825 | 2.31 |
| Nickel | µg/L | Peeper | n/a | 0-38 | 35 | 33 | 94 | 0.7 J | 142 | R2CP01PR | 10.7 | 3.95 T | 36.9 | 0.2 UJ | 142 | R2CP01PR | 10.1 | 3.69 | 34.6 |
| Nickel | µg/L | Trident | filtered | 0-30 | 57 | 54 | 95 | 0.3 J | 25.5 | CP06ATR | 4.87 | 2.7 J | 16.3 | 0.3 J | 25.5 | CP06ATR | 4.81 | 2.7 J | 16 |
| Nickel | µg/L | Trident | unfiltered | 0-30 | 60 | 49 | 82 | 0.2 J | 55.1 J | RP03ETR | 11 | 7.95 J | 27.2 J | 0.2 J | 55.1 J | RP03ETR | 9.35 | 7.25 | 24.1 J |
| Nickel | µg/L | Trident | filtered | 60-150 | 12 | 10 | 83 | 1.7 | 9.1 J | EM04CTR | 3.8 | 2.95 J | 7.36 J | 1.4 U | 20 U | RP03CTR | 4.06 | 2.95 J | 9.51 J |
| Nickel | µg/L | Trident | unfiltered | 60-150 | 24 | 20 | 83 | 2.9 J | 60.5 | CP07DTR | 19.5 | 13.8 J | 57.7 | 1.1 UJ | 60.5 | CP07DTR | 16.8 | 12.7 J | 54.8 |
| Nickel | µg/L | GeoProbe | filtered | 0-90 | 4 | 4 | 100 | 1.32 | 6.36 | GS-B5 | 3.22 | 2.6 | 5.92 | 1.32 | 6.36 | GS-B5 | 3.22 | 2.6 | 5.92 |
| Nickel | µg/L | GeoProbe | unfiltered | 0-90 | 35 | 29 | 83 | 2.38 J | 367 | GS-B2 | 68.9 | 24.1 | 250 | 2.38 J | 367 | GS-B2 | 57.5 | 18.9 J | 222 |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/L | Peeper | n/a | 0-38 | 24 | 3 | 12 | 0.0076 J | 0.082 | GS01BPR | 0.0352 | 0.016 J | 0.0754 J | 0.0028 U | 0.082 | GS01BPR | 0.00643 | 0.00155 U | 0.0147 J |
| Benzo(a)pyrene | µg/L | Trident | filtered | 0-30 | 39 | 4 | 10 | 0.0063 J | 0.11 | GS02ATR | 0.0494 | 0.0407 J | 0.105 | 0.0018 U | 0.11 | GS02ATR | 0.00663 | 0.0012 U | 0.0133 J |
| Benzo(a)pyrene | µg/L | Trident | unfiltered | 0-30 | 42 | 22 | 52 | 0.0025 J | 3 | GS02ATR | 0.402 | 0.0815 | 2.63 | 0.0021 U | 3 | GS02ATR | 0.215 | 0.019 U | 1.16 J |
| Benzo(a)pyrene | µg/L | Trident | filtered | 60-150 | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.0021 U | 0.0029 U | R2AR02TR | 0.0012 | 0.00115 U | 0.00141 U |
| Benzo(a)pyrene | µg/L | Trident | unfiltered | 60-150 | 10 | 5 | 50 | 0.039 J | 4.4 | GS08DTR | 1.41 | 0.17 | 3.98 | 0.0047 U | 4.4 | GS08DTR | 0.708 | 0.0225 J | 3.46 |
| Benzo(a)pyrene | µg/L | GeoProbe | unfiltered | 0-90 | 34 | 33 | 97 | 0.0047 J | 50 | GS-B2 | 9.25 | 3.09 | 38.7 J | 0.0043 U | 50 | GS-B2 | 8.98 | 2.95 | 38.6 J |
| Naphthalene | µg/L | Peeper | n/a | 0-38 | 43 | 18 | 42 | 0.048 | 250 | GS01BPR | 15 | 0.705 J | 41.5 | 0.015 U | 250 | GS01BPR | 6.79 | 0.145 U | 4.67 |
| Naphthalene | µg/L | Trident | filtered | 0-30 | 39 | 8 | 21 | 0.23 | 1100 | GS02ATR | 276 | 0.89 | 1100 | 0.015 U | 1100 | GS02ATR | 56.6 | 0.04 U | 113 |
| Naphthalene | µg/L | Trident | unfiltered | 0-30 | 70 | 23 | 33 | 0.24 | 3100 | GS07BTR | 229 | 0.6 J | 1090 | 0.0063 U | 3100 | GS07BTR | 75.3 | 0.145 U | 20.2 |
| Naphthalene | µg/L | Trident | filtered | 60-150 | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.035 U | 0.18 U | AR01ATR | 0.0443 | 0.0348 U | 0.0822 U |
| Naphthalene | µg/L | Trident | unfiltered | 60-150 | 25 | 11 | 44 | 0.31 | 32 | SL04ATR | 8.46 | 3.1 | 30.5 | 0.035 U | 150 U | AP03ATR | 7.08 | 0.31 | 31.4 |
| Naphthalene | µg/L | GeoProbe | unfiltered | 0-90 | 63 | 54 | 86 | 0.012 J | 13700 | GP73 | 1660 | 14.3 | 12200 | 0.003 U | 13700 | GP73 | 1420 | 5.29 | 12100 |
| Naphthalene | µg/L | GeoProbe | unfiltered | 91 | 24 | 22 | 92 | 1.58 | 11200 | GP76 | 1360 | 233 | 3520 | 1 U | 11200 | GP76 | 1250 | 103 | 3450 |
| Phenanthrene | µg/L | Peeper | n/a | 0-38 | 24 | 22 | 92 | 0.012 J | 34 | SL04FPR | 4.94 | 0.67 | 16 | 0.012 J | 34 | SL04FPR | 4.53 | 0.365 | 15.9 |
| Phenanthrene | µg/L | Trident | filtered | 0-30 | 39 | 21 | 54 | 0.084 | 21 | GS02ATR | 5.35 | 3.4 | 19 | 0.004 U | 21 | GS02ATR | 2.91 | 0.13 | 14.5 |
| Phenanthrene | µg/L | Trident | unfiltered | 0-30 | 42 | 23 | 55 | 0.14 | 79 | GS07BTR | 15.3 | 7.7 | 49.5 | 0.0066 U | 79 | GS07BTR | 8.45 | 0.26 | 45 |
| Phenanthrene | µg/L | Trident | filtered | 60-150 | 4 | 3 | 75 | 0.14 | 7.3 | EM03ATR | 2.61 | 0.39 | 6.61 | 0.11 U | 7.3 | EM03ATR | 1.97 | 0.265 | 6.26 |
| Phenanthrene | µg/L | Trident | unfiltered | 60-150 | 10 | 6 | 60 | 1.9 | 110 | GS08DTR | 36.2 | 14.5 | 98.8 | 0.084 U | 110 | GS08DTR | 21.7 | 6.45 | 89.7 |
| Phenanthrene | µg/L | GeoProbe | unfiltered | 0-90 | 35 | 35 | 100 | 0.0087 J | 520 | GS-B2 | 74.2 | 19 | 277 | 0.0087 J | 520 | GS-B2 | 74.2 | 19 | 277 |
| Total cPAHs | µg/L | Peeper | n/a | 0-38 | 24 | 16 | 67 | 0.0047 JT | 0.57 JT | GS01BPR | 0.0826 | 0.046 J | 0.255 J | 0.0037 UT | 0.57 JT | GS01BPR | 0.0557 | 0.0145 J | 0.147 J |
| Total cPAHs | µg/L | Trident | filtered | 0-30 | 39 | 11 | 28 | 0.0033 JT | 0.84 JT | GS02ATR | 0.166 | 0.027 JT | 0.74 J | 0.0024 UT | 0.84 JT | GS02ATR | 0.0488 | 0.0033 UT | 0.235 J |
| Total cPAHs | µg/L | Trident | unfiltered | 0-30 | 42 | 29 | 69 | 0.0025 JT | 18 T | GS02ATR | 1.73 | 0.19 T | 11.7 | 0.0025 JT | 18 T | GS02ATR | 1.2 | 0.0645 J | 7.96 J |
| Total cPAHs | µg/L | Trident | filtered | 60-150 | 4 | 2 | 50 | 0.0072 JT | 0.018 JT | EM03ATR | 0.0126 | 0.0126 J | 0.0175 J | 0.0031 UT | 0.018 JT | EM03ATR | 0.00716 | 0.00455 J | 0.0164 J |
| Total cPAHs | µg/L | Trident | unfiltered | 60-150 | 10 | 5 | 50 | 0.11 JT | 25 T | GS08DTR | 8.16 | 0.99 JT | 22.8 | 0.015 UT | 25 T | GS08DTR | 4.09 | 0.0648 J | 20.1 |
| Total cPAHs | µg/L | GeoProbe | unfiltered | 0-90 | 35 | 35 | 100 | 0.0047 JT | 300 T | GS-B2 | 44 | 14 T | 176 J | 0.0047 JT | 300 T | GS-B2 | 44 | 14 T | 176 J |
| Total HPAHs | µg/L | Peeper | n/a | 0-38 | 24 | 24 | 100 | 0.037 JT | 7.6 JT | GS01BPR | 1.57 | 0.508 J | 5.33 J | 0.037 JT | 7.6 JT | GS01BPR | 1.57 | 0.508 J | 5.33 J |
| Total HPAHs | µg/L | Trident | filtered | 0-30 | 39 | 19 | 49 | 0.0064 JT | 5.77 JT | GS02ATR | 1.45 | 1.1 T | 5.49 J | 0.0064 JT | 5.77 JT | GS02ATR | 0.72 | 0.049 UT | 2.46 J |
| Total HPAHs | µg/L | Trident | unfiltered | 0-30 | 42 | 33 | 79 | 0.0025 JT | 67.9 T | GS02ATR | 8.13 | 2.3 T | 55.2 J | 0.0025 JT | 67.9 T | GS02ATR | 6.41 | 0.492 | 47.5 J |
| Total HPAHs | µg/L | Trident | filtered | 60-150 | 4 | 2 | 50 | 0.307 JT | 2.26 JT | EM03ATR | 1.28 | 1.28 J | 2.16 J | 0.042 UT | 2.26 JT | EM03ATR | 0.654 | 0.167 J | 1.97 J |
| Total HPAHs | µg/L | Trident | unfiltered | 60-150 | 10 | 7 | 70 | 0.144 JT | 109 T | GS08DTR | 26 | 3.99 JT | 93.5 | 0.144 JT | 109 T | GS08DTR | 18.3 | 2.74 | 85.8 |
| Total HPAHs | µg/L | GeoProbe | unfiltered | 0-90 | 35 | 35 | 100 | 0.022 JT | 880 T | GS-B2 | 121 | 41 T | 462 J | 0.022 JT | 880 T | GS-B2 | 121 | 41 T | 462 J |
| Total LPAHs | µg/L | Peeper | n/a | 0-38 | 24 | 24 | 100 | 0.044 JT | 290 T | GS01BPR | 38.5 | 7.41 J | 172 J | 0.044 JT | 290 T | GS01BPR | 38.5 | 7.41 J | 172 J |

Table D4.1-1. Summary Statistics for Other Contaminants in Transition Zone Water, Differentiated by Sample Method, Filtration, and Sample Depth.

| | | | | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **Sample Method** | **Filtration** | **Sample Depth (cm bml)** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| Total LPAHs | µg/L | Trident | filtered | 0-30 | 39 | 37 | 95 | 0.0031 JT | 1190 T | GS02ATR | 76.5 | 1.97 JT | 312 | 0.0031 JT | 1190 T | GS02ATR | 72.6 | 1.62 JT | 202 |
| Total LPAHs | µg/L | Trident | unfiltered | 0-30 | 42 | 38 | 90 | 0.065 T | 3430 T | GS07BTR | 175 | 3.8 | 1160 | 0.016 UT | 3430 T | GS07BTR | 159 | 2.55 J | 1090 |
| Total LPAHs | µg/L | Trident | filtered | 60-150 | 4 | 4 | 100 | 0.182 JT | 13.5 JT | EM03ATR | 3.69 | 0.539 J | 11.6 J | 0.182 JT | 13.5 JT | EM03ATR | 3.69 | 0.539 J | 11.6 J |
| Total LPAHs | µg/L | Trident | unfiltered | 60-150 | 10 | 10 | 100 | 0.61 T | 321 T | GS08DTR | 72.4 | 12.6 J | 260 | 0.61 T | 321 T | GS08DTR | 72.4 | 12.6 J | 260 |
| Total LPAHs | µg/L | GeoProbe | unfiltered | 0-90 | 35 | 35 | 100 | 0.014 JT | 14600 JA | GP73 | 2170 | 96 JA | 12600 J | 0.014 JT | 14600 JA | GP73 | 2170 | 96 JA | 12600 J |
| **Petroleum** | | | | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | µg/L | Peeper | n/a | 0-38 | 21 | 5 | 24 | 190 J | 1300 J | SL04FPR | 794 | 840 J | 1240 J | 88 U | 1300 J | SL04FPR | 270 | 130 U | 1000 J |
| Total Petroleum Hydrocarbons (Diesel) | µg/L | Trident | filtered | 0-30 | 36 | 27 | 75 | 26 J | 3600 J | GS02ATR | 757 | 370 | 2880 J | 26 J | 3600 J | GS02ATR | 587 | 320 J | 2250 J |
| Total Petroleum Hydrocarbons (Diesel) | µg/L | Trident | unfiltered | 0-30 | 38 | 30 | 79 | 210 J | 6100 J | GS07BTR | 1070 | 540 J | 3470 J | 22 U | 6100 J | GS07BTR | 859 | 443 J | 3350 J |
| Total Petroleum Hydrocarbons (Diesel) | µg/L | Trident | filtered | 60-150 | 5 | 5 | 100 | 440 J | 1100 J | EM04CTR | 674 | 600 J | 1020 J | 440 J | 1100 J | EM04CTR | 674 | 600 J | 1020 J |
| Total Petroleum Hydrocarbons (Diesel) | µg/L | Trident | unfiltered | 60-150 | 10 | 10 | 100 | 240 J | 3600 J | EM01ATR | 1310 | 710 J | 3240 J | 240 J | 3600 J | EM01ATR | 1310 | 710 J | 3240 J |
| Total Petroleum Hydrocarbons (Residual) | µg/L | Peeper | n/a | 0-38 | 21 | 3 | 14 | 61 J | 340 J | AR04BPR | 161 | 82 J | 314 J | 46 U | 340 J | AR04BPR | 58.2 | 39 U | 125 U |
| Total Petroleum Hydrocarbons (Residual) | µg/L | Trident | filtered | 0-30 | 36 | 15 | 42 | 83 J | 710 J | R2KM01TR | 280 | 240 J | 563 J | 34 U | 710 J | R2KM01TR | 152 | 93 J | 470 J |
| Total Petroleum Hydrocarbons (Residual) | µg/L | Trident | unfiltered | 0-30 | 38 | 20 | 53 | 110 J | 1200 J | GS07BTR | 427 | 295 J | 830 J | 38 U | 1200 J | GS07BTR | 269 | 170 J | 802 J |
| Total Petroleum Hydrocarbons (Residual) | µg/L | Trident | filtered | 60-150 | 5 | 1 | 20 | 380 J | 380 J | AR01ATR | 380 | 380 J | 380 J | 210 U | 380 J | AR01ATR | 166 | 115 U | 328 J |
| Total Petroleum Hydrocarbons (Residual) | µg/L | Trident | unfiltered | 60-150 | 10 | 4 | 40 | 170 J | 700 J | GS08DTR | 513 | 590 J | 697 J | 170 J | 700 J | GS08DTR | 284 | 153 J | 691 J |
| Total Petroleum Hydrocarbons | µg/L | Peeper | n/a | 0-38 | 21 | 13 | 62 | 19 JT | 2350 JT | SL04FPR | 732 | 340 JT | 2060 J | 19 JT | 2350 JT | SL04FPR | 481 | 95 UT | 1860 JT |
| Total Petroleum Hydrocarbons | µg/L | Trident | filtered | 0-30 | 36 | 28 | 78 | 26 JT | 4100 JT | GS02ATR | 880 | 505 J | 3260 J | 26 JT | 4100 JT | GS02ATR | 700 | 387 J | 2690 J |
| Total Petroleum Hydrocarbons | µg/L | Trident | unfiltered | 0-30 | 38 | 34 | 89 | 13 JT | 11300 JT | GS07BTR | 1570 | 694 J | 5740 J | 13 JT | 11300 JT | GS07BTR | 1410 | 637 J | 5660 J |
| Total Petroleum Hydrocarbons | µg/L | Trident | filtered | 60-150 | 5 | 5 | 100 | 540 JT | 1100 JT | EM04CTR | 750 | 690 JT | 1040 J | 540 JT | 1100 JT | EM04CTR | 750 | 690 JT | 1040 J |
| Total Petroleum Hydrocarbons | µg/L | Trident | unfiltered | 60-150 | 10 | 10 | 100 | 410 JT | 5200 JT | GS08DTR | 1930 | 1370 J | 4730 J | 410 JT | 5200 JT | GS08DTR | 1930 | 1370 J | 4730 J |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
bml - below mudline
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
n/a - not applicable

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D4.1-2 Summary Statistics for Other Contaminants in Seeps.

| | | | | | | | Detected Concentrations | | | | | Detected and Not Detected Concentrations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **Seep ID** | **Fraction** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | µg/L | WLCGND05SEEP01 | total | 2 | 0 | 0 | -- | -- | -- | -- | -- | 1 U | 1 U | 0.5 | 0.5 U | 0.5 U |
| Cadmium | µg/L | WLCGND05SEEP02 | total | 2 | 2 | 100 | 1.72 | 1.81 | 1.77 | 1.77 | 1.81 | 1.72 | 1.81 | 1.77 | 1.77 | 1.81 |
| Cadmium | µg/L | WLCGND05SEEP03 | total | 2 | 0 | 0 | -- | -- | -- | -- | -- | 1 U | 1 U | 0.5 | 0.5 U | 0.5 U |
| Cadmium | µg/L | WLCRPI04OF22B | total | 2 | 1 | 50 | 0.122 | 0.122 | 0.122 | 0.122 | 0.122 | 0.122 | 0.138 U | 0.0955 | 0.0955 | 0.119 |
| Cadmium | µg/L | WLCRPI04OF22C | total | 4 | 0 | 0 | -- | -- | -- | -- | -- | 0.0071 U | 0.138 U | 0.0364 | 0.0365 U | 0.0641 U |
| Cadmium | µg/L | WLCRPI04OF22B | dissolved | 1 | 0 | 0 | -- | -- | -- | -- | -- | 0.138 U | 0.138 U | 0.069 | 0.069 U | 0.069 U |
| Cadmium | µg/L | WLCRPI04OF22C | dissolved | 2 | 0 | 0 | -- | -- | -- | -- | -- | 0.073 U | 0.073 U | 0.0365 | 0.0365 U | 0.0365 U |
| Lead | µg/L | WLCGND05SEEP01 | total | 2 | 2 | 100 | 21.2 | 42.1 | 31.7 | 31.7 | 41.1 | 21.2 | 42.1 | 31.7 | 31.7 | 41.1 |
| Lead | µg/L | WLCGND05SEEP02 | total | 2 | 2 | 100 | 331 | 371 | 351 | 351 | 369 | 331 | 371 | 351 | 351 | 369 |
| Lead | µg/L | WLCGND05SEEP03 | total | 2 | 2 | 100 | 35 | 802 | 419 | 419 | 764 | 35 | 802 | 419 | 419 | 764 |
| Lead | µg/L | WLCRPI04OF22B | total | 5 | 4 | 80 | 0.64 | 14 | 5.67 | 4.03 | 12.7 | 0.64 | 14 | 5.04 | 2.97 | 12.2 |
| Lead | µg/L | WLCRPI04OF22C | total | 4 | 2 | 50 | 0.63 | 1.69 | 1.16 | 1.16 | 1.64 | 0.082 U | 1.69 | 0.618 | 0.371 | 1.53 |
| Lead | µg/L | WLCRPI04OF22B | dissolved | 1 | 0 | 0 | -- | -- | -- | -- | -- | 0.224 U | 0.224 U | 0.112 | 0.112 U | 0.112 U |
| Lead | µg/L | WLCRPI04OF22C | dissolved | 2 | 2 | 100 | 0.18 | 0.45 | 0.315 | 0.315 | 0.437 | 0.18 | 0.45 | 0.315 | 0.315 | 0.437 |
| Mercury | µg/L | WLCGND05SEEP01 | total | 2 | 0 | 0 | -- | -- | -- | -- | -- | 0.2 U | 0.2 U | 0.1 | 0.1 U | 0.1 U |
| Mercury | µg/L | WLCGND05SEEP02 | total | 2 | 2 | 100 | 0.5 | 0.676 | 0.588 | 0.588 | 0.667 | 0.5 | 0.676 | 0.588 | 0.588 | 0.667 |
| Mercury | µg/L | WLCGND05SEEP03 | total | 2 | 0 | 0 | -- | -- | -- | -- | -- | 0.2 U | 0.2 U | 0.1 | 0.1 U | 0.1 U |
| Mercury | µg/L | WLCRPI04OF22B | total | 2 | 1 | 50 | 0.00632 | 0.00632 | 0.00632 | 0.00632 | 0.00632 | 0.00632 | 0.131 U | 0.0359 | 0.0359 | 0.0625 |
| Mercury | µg/L | WLCRPI04OF22C | total | 4 | 1 | 25 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.131 U | 0.0268 | 0.0183 | 0.0604 U |
| Mercury | µg/L | WLCRPI04OF22B | dissolved | 1 | 0 | 0 | -- | -- | -- | -- | -- | 0.00107 U | 0.00107 U | 0.000535 | 0.000535 U | 0.000535 U |
| Mercury | µg/L | WLCRPI04OF22C | dissolved | 2 | 1 | 50 | 0.0075 | 0.0075 | 0.0075 | 0.0075 | 0.0075 | 0.00375 U | 0.0075 | 0.00469 | 0.00469 | 0.00722 |
| Nickel | µg/L | WLCGND05SEEP01 | total | 2 | 2 | 100 | 5.18 | 12.8 | 8.99 | 8.99 | 12.4 | 5.18 | 12.8 | 8.99 | 8.99 | 12.4 |
| Nickel | µg/L | WLCGND05SEEP02 | total | 2 | 2 | 100 | 28.3 | 43.7 | 36 | 36 | 42.9 | 28.3 | 43.7 | 36 | 36 | 42.9 |
| Nickel | µg/L | WLCGND05SEEP03 | total | 2 | 2 | 100 | 2.05 | 14.4 | 8.23 | 8.23 | 13.8 | 2.05 | 14.4 | 8.23 | 8.23 | 13.8 |
| Nickel | µg/L | WLCRPI04OF22B | total | 2 | 2 | 100 | 2.2 J | 2.62 | 2.41 | 2.41 J | 2.6 J | 2.2 J | 2.62 | 2.41 | 2.41 J | 2.6 J |
| Nickel | µg/L | WLCRPI04OF22C | total | 4 | 4 | 100 | 1.06 J | 2.23 | 1.66 | 1.67 | 2.15 | 1.06 J | 2.23 | 1.66 | 1.67 | 2.15 |
| Nickel | µg/L | WLCRPI04OF22B | dissolved | 1 | 1 | 100 | 2.44 | 2.44 | 2.44 | 2.44 | 2.44 | 2.44 | 2.44 | 2.44 | 2.44 | 2.44 |
| Nickel | µg/L | WLCRPI04OF22C | dissolved | 2 | 2 | 100 | 1.4 | 1.56 | 1.48 | 1.48 | 1.55 | 1.4 | 1.56 | 1.48 | 1.48 | 1.55 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/L | WLCRPI04OF22B | total | 3 | 0 | 0 | -- | -- | -- | -- | -- | 0.00732 U | 0.05 U | 0.0179 | 0.025 U | 0.025 U |
| gamma-Hexachlorocyclohexane (Lindane) | µg/L | WLCRPI04OF22C | total | 4 | 1 | 25 | 0.0143 N | 0.0143 N | 0.0143 | 0.0143 N | 0.0143 N | 0.00472 U | 0.05 U | 0.012 | 0.0103 | 0.0234 |
| **PAHs** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/L | WLCGND05SEEP01 | total | 1 | 0 | 0 | -- | -- | -- | -- | -- | 0.1 U | 0.1 U | 0.05 | 0.05 U | 0.05 U |
| Benzo(a)pyrene | µg/L | WLCGND05SEEP02 | total | 2 | 1 | 50 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 U | 0.1 | 0.1 | 0.1 |
| Benzo(a)pyrene | µg/L | WLCRPI04OF22B | total | 2 | 0 | 0 | -- | -- | -- | -- | -- | 0.0465 U | 0.05 U | 0.0241 | 0.0241 U | 0.0249 U |
| Benzo(a)pyrene | µg/L | WLCRPI04OF22C | total | 4 | 0 | 0 | -- | -- | -- | -- | -- | 0.0451 U | 0.05 U | 0.0244 | 0.025 U | 0.025 U |
| Naphthalene | µg/L | WLCGND05SEEP01 | total | 1 | 0 | 0 | -- | -- | -- | -- | -- | 0.1 U | 0.1 U | 0.05 | 0.05 U | 0.05 U |
| Naphthalene | µg/L | WLCGND05SEEP02 | total | 2 | 0 | 0 | -- | -- | -- | -- | -- | 0.1 U | 0.2 U | 0.075 | 0.075 U | 0.0975 U |
| Naphthalene | µg/L | WLCGND05SEEP03 | total | 2 | 0 | 0 | -- | -- | -- | -- | -- | 2 U | 2 U | 1 | 1 U | 1 U |
| Naphthalene | µg/L | WLCRPI04OF22B | total | 2 | 1 | 50 | 0.132 | 0.132 | 0.132 | 0.132 | 0.132 | 0.0989 U | 0.132 | 0.0907 | 0.0907 | 0.128 |
| Naphthalene | µg/L | WLCRPI04OF22C | total | 4 | 4 | 100 | 0.39 | 7.18 | 2.9 | 2.02 | 6.61 | 0.39 | 7.18 | 2.9 | 2.02 | 6.61 |
| Phenanthrene | µg/L | WLCGND05SEEP01 | total | 1 | 0 | 0 | -- | -- | -- | -- | -- | 0.1 U | 0.1 U | 0.05 | 0.05 U | 0.05 U |
| Phenanthrene | µg/L | WLCGND05SEEP02 | total | 2 | 2 | 100 | 0.238 | 0.256 | 0.247 | 0.247 | 0.255 | 0.238 | 0.256 | 0.247 | 0.247 | 0.255 |
| Phenanthrene | µg/L | WLCRPI04OF22B | total | 2 | 2 | 100 | 0.139 N | 0.175 | 0.157 | 0.157 | 0.173 | 0.139 N | 0.175 | 0.157 | 0.157 | 0.173 |
| Phenanthrene | µg/L | WLCRPI04OF22C | total | 4 | 3 | 75 | 0.243 | 1.05 | 0.657 | 0.679 | 1.01 | 0.05 U | 1.05 | 0.499 | 0.461 | 0.994 |
| Total cPAHs | µg/L | WLCGND05SEEP01 | total | 1 | 0 | 0 | -- | -- | -- | -- | -- | 0.2 UT | 0.2 UT | 0.1 | 0.1 UT | 0.1 UT |
| Total cPAHs | µg/L | WLCGND05SEEP02 | total | 2 | 2 | 100 | 0.79 T | 0.92 T | 0.855 | 0.855 | 0.914 | 0.79 T | 0.92 T | 0.855 | 0.855 | 0.914 |
| Total cPAHs | µg/L | WLCRPI04OF22B | total | 2 | 0 | 0 | -- | -- | -- | -- | -- | 0.0465 UT | 0.1 UT | 0.0366 | 0.0366 U | 0.0487 U |
| Total cPAHs | µg/L | WLCRPI04OF22C | total | 4 | 0 | 0 | -- | -- | -- | -- | -- | 0.0451 UT | 0.1 UT | 0.0431 | 0.05 U | 0.05 U |
| Total HPAHs | µg/L | WLCGND05SEEP01 | total | 1 | 0 | 0 | -- | -- | -- | -- | -- | 0.2 UT | 0.2 UT | 0.1 | 0.1 UT | 0.1 UT |
| Total HPAHs | µg/L | WLCGND05SEEP02 | total | 2 | 2 | 100 | 2.65 T | 3.5 T | 3.08 | 3.08 | 3.46 | 2.65 T | 3.5 T | 3.08 | 3.08 | 3.46 |
| Total HPAHs | µg/L | WLCRPI04OF22B | total | 2 | 1 | 50 | 0.229 T | 0.229 T | 0.229 | 0.229 T | 0.229 T | 0.15 UT | 0.229 T | 0.152 | 0.152 | 0.221 |
| Total HPAHs | µg/L | WLCRPI04OF22C | total | 4 | 4 | 100 | 0.127 T | 4.14 T | 2.07 | 2.01 J | 3.92 J | 0.127 T | 4.14 T | 2.07 | 2.01 J | 3.92 J |
| Total LPAHs | µg/L | WLCGND05SEEP01 | total | 1 | 0 | 0 | -- | -- | -- | -- | -- | 0.1 UA | 0.1 UA | 0.05 | 0.05 UA | 0.05 UA |
| Total LPAHs | µg/L | WLCGND05SEEP02 | total | 2 | 2 | 100 | 0.539 JA | 1.03 JA | 0.785 | 0.785 J | 1.01 J | 0.539 JA | 1.03 JA | 0.785 | 0.785 J | 1.01 J |
| Total LPAHs | µg/L | WLCRPI04OF22B | total | 2 | 2 | 100 | 0.4 T | 0.859 NJT | 0.63 | 0.63 J | 0.836 J | 0.4 T | 0.859 NJT | 0.63 | 0.63 J | 0.836 J |
| Total LPAHs | µg/L | WLCRPI04OF22C | total | 4 | 4 | 100 | 0.618 T | 40.3 JT | 21.2 | 21.9 J | 38.6 J | 0.618 T | 40.3 JT | 21.2 | 21.9 J | 38.6 J |

Table D4.1-2 Summary Statistics for Other Contaminants in Seeps.

| | | | | | | | Detected Concentrations | | | | | Detected and Not Detected Concentrations | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **Seep ID** | **Fraction** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/L | WLCGND05SEEP01 | total | 2 | 0 | 0 | -- | -- | -- | -- | -- | 0.5 U | 0.5 U | 0.25 | 0.25 U | 0.25 U |
| Butylbenzyl phthalate | µg/L | WLCGND05SEEP02 | total | 2 | 0 | 0 | -- | -- | -- | -- | -- | 0.5 U | 0.5 U | 0.25 | 0.25 U | 0.25 U |
| Butylbenzyl phthalate | µg/L | WLCGND05SEEP03 | total | 2 | 0 | 0 | -- | -- | -- | -- | -- | 0.5 U | 0.5 U | 0.25 | 0.25 U | 0.25 U |
| Butylbenzyl phthalate | µg/L | WLCRPI04OF22B | total | 2 | 0 | 0 | -- | -- | -- | -- | -- | 1.85 U | 3 U | 1.21 | 1.21 U | 1.47 U |
| Butylbenzyl phthalate | µg/L | WLCRPI04OF22C | total | 3 | 0 | 0 | -- | -- | -- | -- | -- | 1.79 U | 3 U | 1.3 | 1.5 U | 1.5 U |
| **Semivolatile Organics** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/L | WLCRPI04OF22B | total | 3 | 0 | 0 | -- | -- | -- | -- | -- | 0.05 U | 3 U | 0.541 | 0.099 U | 1.36 U |
| Hexachlorobenzene | µg/L | WLCRPI04OF22C | total | 3 | 0 | 0 | -- | -- | -- | -- | -- | 0.00472 U | 0.192 U | 0.0349 | 0.00625 U | 0.087 U |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/L | WLCRPI04OF22B | total | 4 | 1 | 25 | 0.157 | 0.157 | 0.157 | 0.157 | 0.157 | 0.157 | 10 U | 2.16 | 1.75 U | 4.63 U |
| Pentachlorophenol | µg/L | WLCRPI04OF22C | total | 4 | 0 | 0 | -- | -- | -- | -- | -- | 0.0279 U | 5 U | 1.88 | 2.5 U | 2.5 U |
| **Petroleum** | | | | | | | | | | | | | | | | |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | WLCEMH04CMP104 | total | 1 | 0 | 0 | -- | -- | -- | -- | -- | 50 U | 50 U | 25 | 25 U | 25 U |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | WLCEMH04CMP204 | total | 1 | 0 | 0 | -- | -- | -- | -- | -- | 50 U | 50 U | 25 | 25 U | 25 U |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | WLCGND05SEEP01 | total | 2 | 0 | 0 | -- | -- | -- | -- | -- | 472 U | 630 U | 276 | 276 U | 311 U |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | WLCGND05SEEP02 | total | 2 | 0 | 0 | -- | -- | -- | -- | -- | 245 U | 630 U | 219 | 219 U | 305 U |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | WLCGND05SEEP03 | total | 2 | 2 | 100 | 289 | 2550 | 1420 | 1420 | 2440 | 289 | 2550 | 1420 | 1420 | 2440 |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | WLCRPI04OF22B | total | 1 | 0 | 0 | -- | -- | -- | -- | -- | 630 U | 630 U | 315 | 315 U | 315 U |
| Total Petroleum Hydrocarbons (Diesel) | mg/kg | WLCRPI04OF22C | total | 2 | 0 | 0 | -- | -- | -- | -- | -- | 630 U | 630 U | 315 | 315 U | 315 U |
| Total Petroleum Hydrocarbons (Diesel) | µg/L | WLCEMH04CMP104 | total | 1 | 0 | 0 | -- | -- | -- | -- | -- | 50 U | 50 U | 25 | 25 U | 25 U |
| Total Petroleum Hydrocarbons (Diesel) | µg/L | WLCEMH04CMP204 | total | 1 | 0 | 0 | -- | -- | -- | -- | -- | 50 U | 50 U | 25 | 25 U | 25 U |
| Total Petroleum Hydrocarbons (Diesel) | µg/L | WLCGND05SEEP01 | total | 2 | 0 | 0 | -- | -- | -- | -- | -- | 472 U | 630 U | 276 | 276 U | 311 U |
| Total Petroleum Hydrocarbons (Diesel) | µg/L | WLCGND05SEEP02 | total | 2 | 0 | 0 | -- | -- | -- | -- | -- | 245 U | 630 U | 219 | 219 U | 305 U |
| Total Petroleum Hydrocarbons (Diesel) | µg/L | WLCGND05SEEP03 | total | 2 | 2 | 100 | 289 | 2550 | 1420 | 1420 | 2440 | 289 | 2550 | 1420 | 1420 | 2440 |
| Total Petroleum Hydrocarbons (Diesel) | µg/L | WLCRPI04OF22B | total | 1 | 0 | 0 | -- | -- | -- | -- | -- | 630 U | 630 U | 315 | 315 U | 315 U |
| Total Petroleum Hydrocarbons (Diesel) | µg/L | WLCRPI04OF22C | total | 2 | 0 | 0 | -- | -- | -- | -- | -- | 630 U | 630 U | 315 | 315 U | 315 U |
| Total Petroleum Hydrocarbons | mg/kg | WLCEMH04CMP104 | total | 1 | 0 | 0 | -- | -- | -- | -- | -- | 100 UT | 100 UT | 50 | 50 UT | 50 UT |
| Total Petroleum Hydrocarbons | mg/kg | WLCEMH04CMP204 | total | 1 | 0 | 0 | -- | -- | -- | -- | -- | 100 UT | 100 UT | 50 | 50 UT | 50 UT |
| Total Petroleum Hydrocarbons | mg/kg | WLCGND05SEEP01 | total | 2 | 1 | 50 | 943 T | 943 T | 943 | 943 T | 943 T | 630 UT | 943 T | 629 | 629 | 912 |
| Total Petroleum Hydrocarbons | mg/kg | WLCGND05SEEP02 | total | 2 | 1 | 50 | 775 T | 775 T | 775 | 775 T | 775 T | 630 UT | 775 T | 545 | 545 | 752 |
| Total Petroleum Hydrocarbons | mg/kg | WLCGND05SEEP03 | total | 2 | 2 | 100 | 289 A | 7140 A | 3710 | 3710 | 6800 | 289 A | 7140 A | 3710 | 3710 | 6800 |
| Total Petroleum Hydrocarbons | mg/kg | WLCRPI04OF22B | total | 1 | 0 | 0 | -- | -- | -- | -- | -- | 630 UT | 630 UT | 315 | 315 UT | 315 UT |
| Total Petroleum Hydrocarbons | mg/kg | WLCRPI04OF22C | total | 2 | 0 | 0 | -- | -- | -- | -- | -- | 630 UT | 630 UT | 315 | 315 U | 315 U |
| Total Petroleum Hydrocarbons | µg/L | WLCEMH04CMP104 | total | 1 | 0 | 0 | -- | -- | -- | -- | -- | 100 UT | 100 UT | 50 | 50 UT | 50 UT |
| Total Petroleum Hydrocarbons | µg/L | WLCEMH04CMP204 | total | 1 | 0 | 0 | -- | -- | -- | -- | -- | 100 UT | 100 UT | 50 | 50 UT | 50 UT |
| Total Petroleum Hydrocarbons | µg/L | WLCGND05SEEP01 | total | 2 | 1 | 50 | 943 T | 943 T | 943 | 943 T | 943 T | 630 UT | 943 T | 629 | 629 | 912 |
| Total Petroleum Hydrocarbons | µg/L | WLCGND05SEEP02 | total | 2 | 1 | 50 | 775 T | 775 T | 775 | 775 T | 775 T | 630 UT | 775 T | 545 | 545 | 752 |
| Total Petroleum Hydrocarbons | µg/L | WLCGND05SEEP03 | total | 2 | 2 | 100 | 289 A | 7140 A | 3710 | 3710 | 6800 | 289 A | 7140 A | 3710 | 3710 | 6800 |
| Total Petroleum Hydrocarbons | µg/L | WLCRPI04OF22B | total | 1 | 0 | 0 | -- | -- | -- | -- | -- | 630 UT | 630 UT | 315 | 315 UT | 315 UT |
| Total Petroleum Hydrocarbons | µg/L | WLCRPI04OF22C | total | 2 | 0 | 0 | -- | -- | -- | -- | -- | 630 UT | 630 UT | 315 | 315 U | 315 U |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon

Reason codes for qualifiers:

J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:

A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D4.2
# CONTAMINANTS IN TRANSITION ZONE WATER AND SEEPS—MAPS

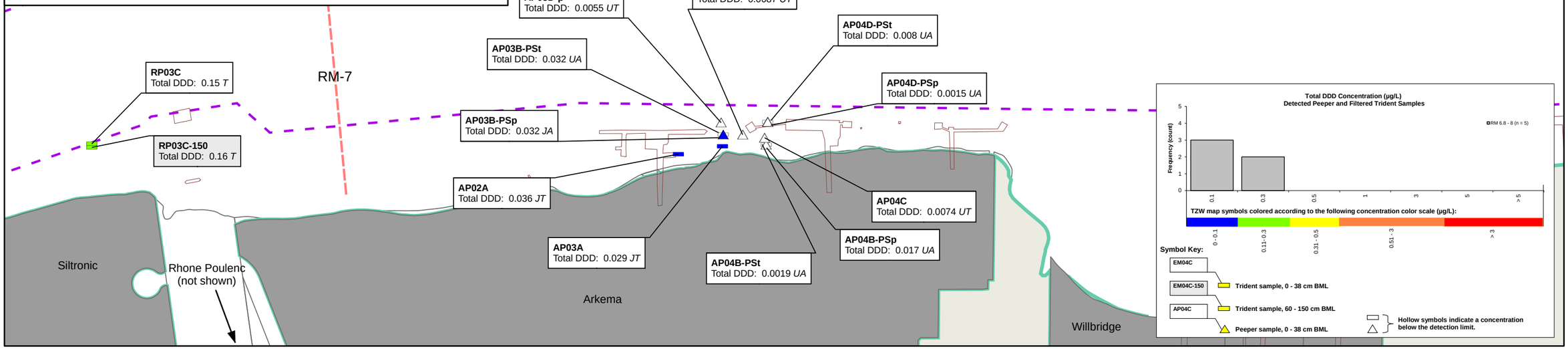
**FINAL**

February 8, 2016

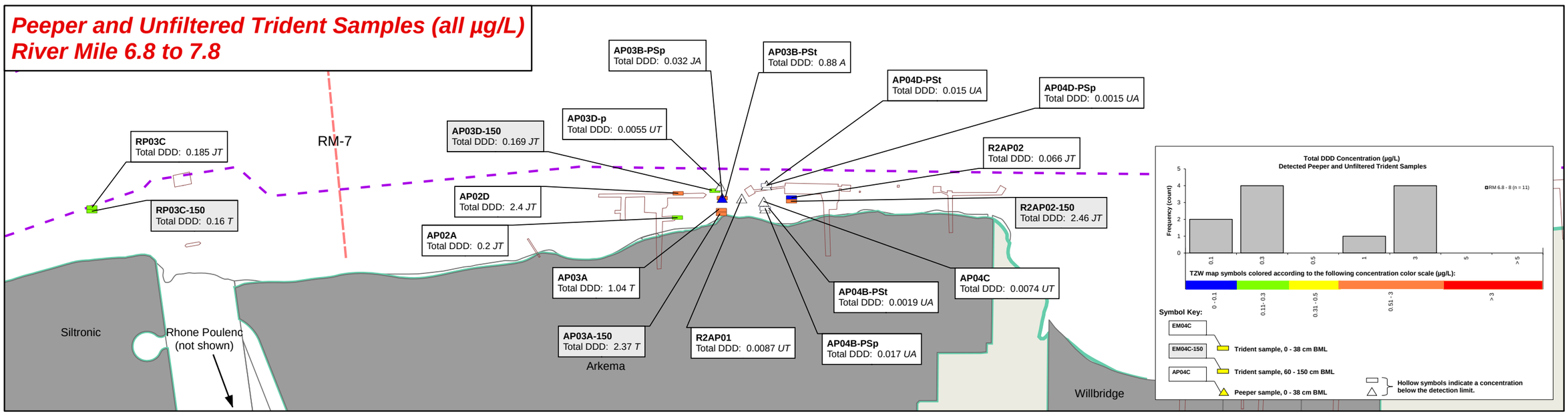
# LIST OF MAPS

Map D4.2-1a. Transition Zone Water Chemistry, Total DDD (µg/L)
Map D4.2-1b. Transition Zone Water Chemistry, Total DDE (µg/L)
Map D4.2-1c. Transition Zone Water Chemistry, Total DDT (µg/L)
Map D4.2-2a-d. Transition Zone Water Chemistry, Total cPAHs (µg/L)
Map D4.2-3a-e. Transition Zone Water Chemistry, Naphthalene (µg/L)
Map D4.2-4a-d. Transition Zone Water Chemistry, Benzo(a)pyrene (µg/L)
Map D4.2-5a-d. Transition Zone Water Chemistry, Total Petroleum Hydrocarbons (µg/L)
Map D4.2-6. Transition Zone Water Chemistry, Silvex (µg/L)
Map D4.2-7. Transition Zone Water Chemistry, Cyanide (mg/L)
Map D4.2-8. Transition Zone Water Chemistry, Perchlorate (µg/L)
Map D4.2-9a-e. Transition Zone Water Chemistry, Monochlorobenzene (µg/L) and 1,2-Dichlorobenzene (µg/L)
Map D4.2-10a-b. Transition Zone Water Chemistry, 1,2-Dichloroethane (µg/L) and 1,1,2-Trichloroethane (µg/L)
Map D4.2-11a-f. Transition Zone Water Chemistry, Chloroethane (µg/L) and Vinyl Chloride (µg/L)
Map D4.2-12a-d. Transition Zone Water Chemistry, Chloroform (µg/L) and Methylene Chloride (µg/L)
Map D4.2-13a-f. Concentrations in Transition Zone Water, cis1,2-Dichloroethene (µg/L) and Trichloroethene
Map D4.2-14a-e. Transition Zone Water Chemistry, Carbon Disulfide (µg/L) and 1,2,4-Trimethylbenzene (µg/L)
Map D4.2-15a-h. Transition Zone Water Chemistry, Benzene, Toluene, Ethylbenzene, and Xylenes (µg/L)

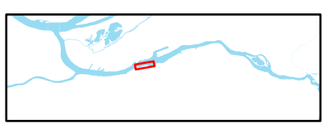
## Peeper and Filtered Trident Samples (all µg/L)
## River Mile 6.8 to 7.8




## Peeper and Unfiltered Trident Samples (all µg/L)
## River Mile 6.8 to 7.8




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos



**PSt** Indicates sample collected during the GWPA Pilot Study by Trident sampler.
**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

Qualifiers:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

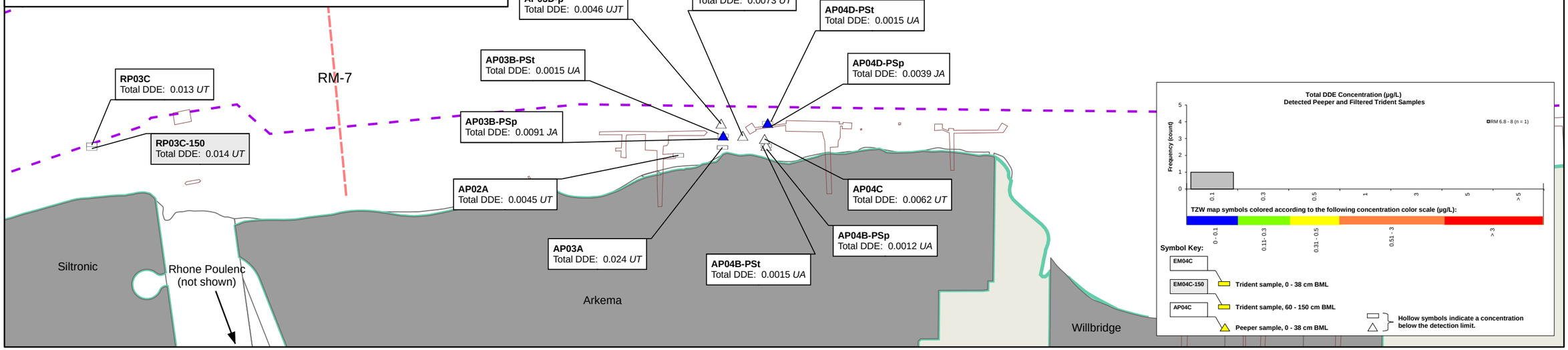
**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

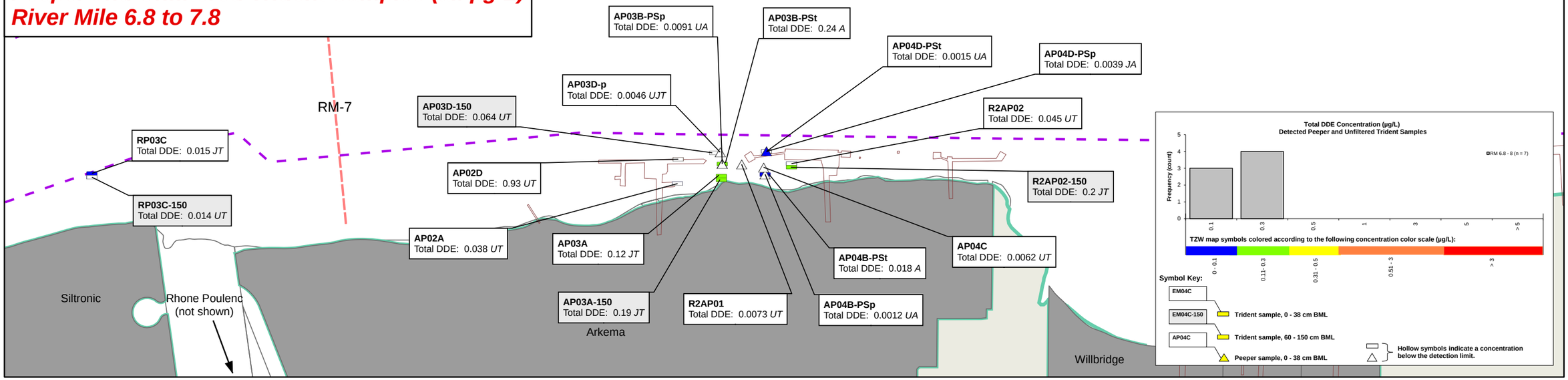
0 250 500 750 1,000 Feet

**Map D4.2-1a**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Total DDD (µg/L)
River Mile 6.8 to 7.8

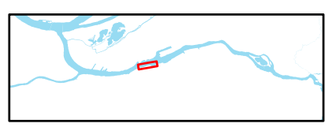
# Peeper and Filtered Trident Samples (all µg/L)
# River Mile 6.8 to 7.8




# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 6.8 to 7.8




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos



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Qualifiers:
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A Total value based on a limited number of analytes.

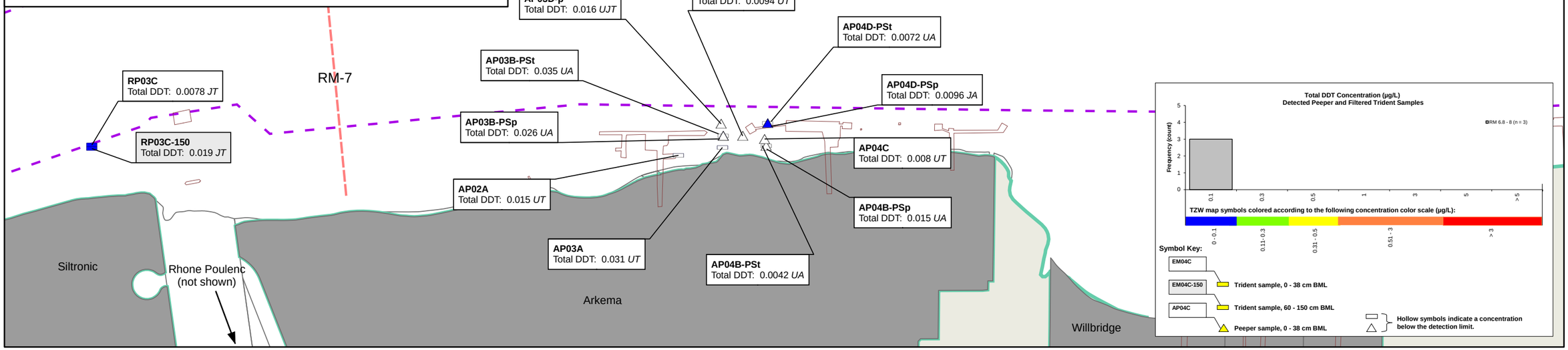
**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

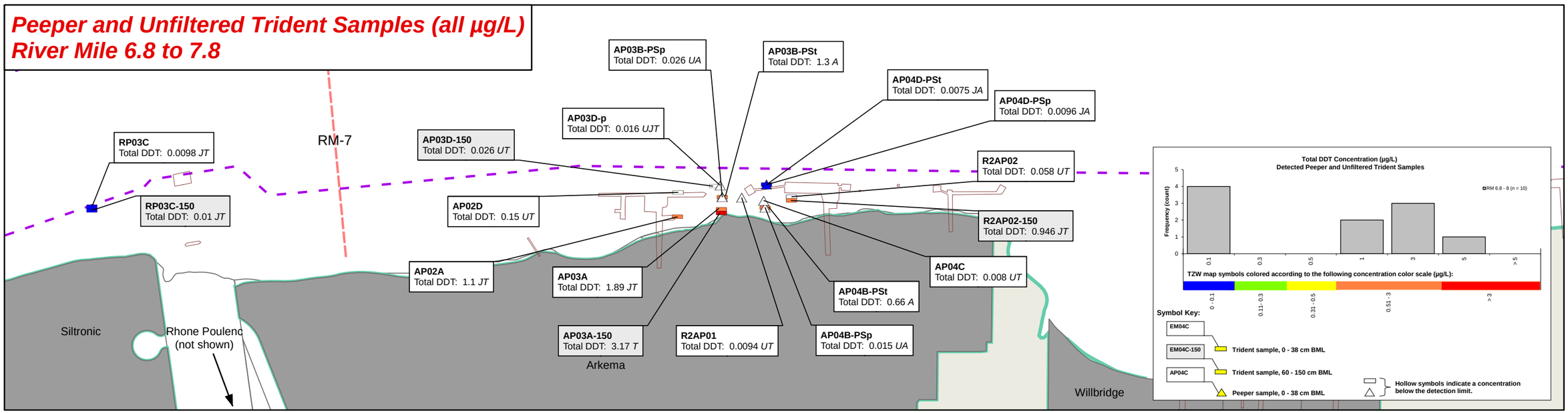
0 250 500 750 1,000 Feet

**Map D4.2-1b**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Total DDE (µg/L)
River Mile 6.8 to 7.8

## Peeper and Filtered Trident Samples (all µg/L)
## River Mile 6.8 to 7.8




## Peeper and Unfiltered Trident Samples (all µg/L)
## River Mile 6.8 to 7.8




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

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**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

Qualifiers:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**Map D4.2-1c**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Total DDT (µg/L)
River Mile 6.8 to 7.8

# Peeper and Filtered Trident Samples (all µg/L)
# River Mile 04 to 05

RM-4

RM-5

**KM06A**
cPAH: 0.0038 *UT*
cPAH BaPEq: 0.0029 *UT*

**R2KM02-p**
cPAH: 0.0037 *UT*
cPAH BaPEq: 0.0029 *UT*

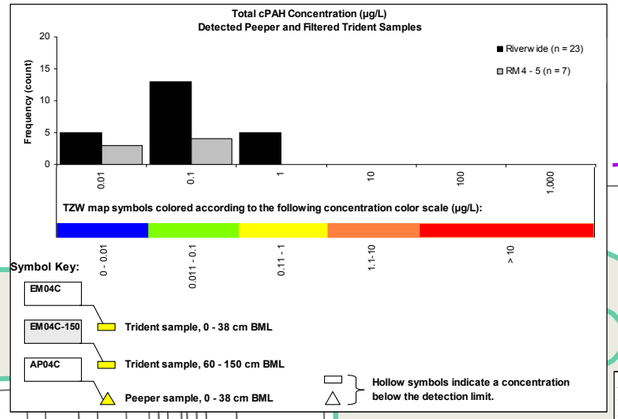
**KM11B**
cPAH: 0.0041 *UT*
cPAH BaPEq: 0.0032 *UT*

**R2KM01**
cPAH: 0.0026 *UT*
cPAH BaPEq: 0.002 *UT*

**KM08A**
cPAH: 0.0081 *UT*
cPAH BaPEq: 0.0063 *UT*

**KM10A**
cPAH: 0.013 *JT*
cPAH BaPEq: 0.00622 *JT*

Kinder Morgan Linnton




**ARC03B-PSp**
cPAH: 0.072 *JT*
cPAH BaPEq: 0.00354 *JT*

**ARC03B-PSt**
cPAH: 0.0066 *UT*
cPAH BaPEq: 0.0066 *UT*

**R2AR03**
cPAH: 0.003 *UT*
cPAH BaPEq: 0.0023 *UT*

**R2AR01**
cPAH: 0.0064 *JT*
cPAH BaPEq: 0.0064 *JT*

**AR01A**
cPAH: 0.0032 *UT*
cPAH BaPEq: 0.0025 *UT*

**AR01A-150**
cPAH: 0.0072 *JT*
cPAH BaPEq: 0.00405 *JT*

**AR02A**
cPAH: 0.0032 *UT*
cPAH BaPEq: 0.0025 *UT*

**AR04B**
cPAH: 0.0047 *JT*
cPAH BaPEq: 0.000005 *JT*

**ARC02B-PSp**
cPAH: 0.011 *JT*
cPAH BaPEq: 0.0011 *JT*

**ARC02B-PSt**
cPAH: 0.0066 *UT*
cPAH BaPEq: 0.0066 *UT*

**EM04A**
cPAH: 0.19 *JT*
cPAH BaPEq: 0.0109 *JT*

**ARC06B-PSp**
cPAH: 0.049 *JT*
cPAH BaPEq: 0.00252 *JT*

**EM02A**
cPAH: 0.0028 *UT*
cPAH BaPEq: 0.0022 *UT*

**ARC06B-PSt**
cPAH: 0.0066 *UT*
cPAH BaPEq: 0.0066 *UT*

**EM01A**
cPAH: 0.0024 *UT*
cPAH BaPEq: 0.0019 *UT*

**R2AR02**
cPAH: 0.0027 *UT*
cPAH BaPEq: 0.0021 *UT*

**R2AR02-90**
cPAH: 0.0031 *UT*
cPAH BaPEq: 0.0024 *UT*

**R2AR04**
cPAH: 0.003 *UT*
cPAH BaPEq: 0.0024 *UT*

ARCO

**EM03A**
cPAH: 0.0024 *UT*
cPAH BaPEq: 0.0018 *UT*

**EM03A-120**
cPAH: 0.018 *JT*
cPAH BaPEq: 0.00077 *JT*

ExxonMobil

**EM05A**
cPAH: 0.0045 *JT*
cPAH BaPEq: 0.000005 *JT*

**EM06B**
cPAH: 0.0033 *JT*
cPAH BaPEq: 0.000003 *JT*

# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 04 to 05

RM-4

RM-5

**KM06A**
cPAH: 0.0038 *UT*
cPAH BaPEq: 0.0029 *UT*

**R2KM02-p**
cPAH: 0.0037 *UT*
cPAH BaPEq: 0.0029 *UT*

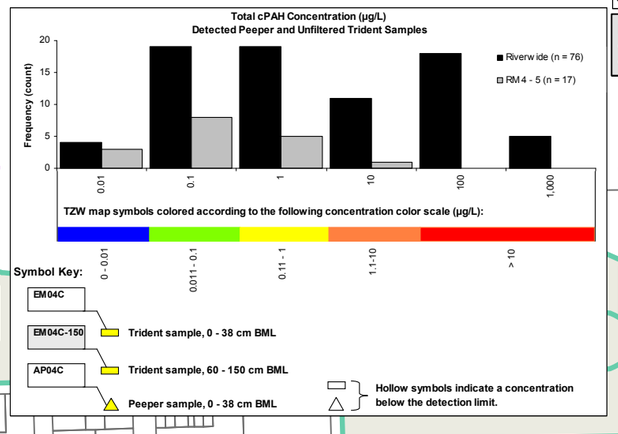
**KM11B**
cPAH: 0.0041 *UT*
cPAH BaPEq: 0.0032 *UT*

**R2KM01**
cPAH: 0.17 *T*
cPAH BaPEq: 0.007 *T*

**KM08A**
cPAH: 0.019 *UT*
cPAH BaPEq: 0.013 *UT*

**KM10A**
cPAH: 0.013 *JT*
cPAH BaPEq: 0.00622 *JT*

Kinder Morgan Linnton




**R2AR03**
cPAH: 0.0033 *JT*
cPAH BaPEq: 0.0033 *JT*

**ARC03B-PSp**
cPAH: 0.072 *JT*
cPAH BaPEq: 0.00354 *JT*

**ARC06B-PSp**
cPAH: 0.049 *JT*
cPAH BaPEq: 0.00252 *JT*

**ARC03B-PSt**
cPAH: 0.37 *T*
cPAH BaPEq: 0.098 *T*

**R2AR02**
cPAH: 0.029 *JT*
cPAH BaPEq: 0.0051 *JT*

**R2AR02-90**
cPAH: 0.026 *UT*
cPAH BaPEq: 0.012 *UT*

**AR02A**
cPAH: 0.045 *JT*
cPAH BaPEq: 0.0091 *JT*

**AR01A**
cPAH: 0.19 *JT*
cPAH BaPEq: 0.107 *JT*

**AR01A-150**
cPAH: 0.69 *JT*
cPAH BaPEq: 0.224 *JT*

**AR04B**
cPAH: 0.0047 *JT*
cPAH BaPEq: 0.000005 *JT*

**R2AR01**
cPAH: 0.063 *JT*
cPAH BaPEq: 0.014 *JT*

**R2AR04**
cPAH: 0.0077 *UT*
cPAH BaPEq: 0.0022 *UT*

**ARC06B-PSt**
cPAH: 0.066 *T*
cPAH BaPEq: 0.0178 *T*

**ARC02B-PSp**
cPAH: 0.011 *JT*
cPAH BaPEq: 0.0011 *JT*

**ARC02B-PSt**
cPAH: 0.22 *T*
cPAH BaPEq: 0.0577 *T*

**EM04C**
cPAH: 1.6 *JT*
cPAH BaPEq: 0.29 *JT*

**EM06B**
cPAH: 0.086 *UT*
cPAH BaPEq: 0.028 *UT*

**EM04C-150**
cPAH: 0.99 *JT*
cPAH BaPEq: 0.207 *JT*

**EM02C**
cPAH: 1.6 *JT*
cPAH BaPEq: 0.455 *JT*

**EM02A**
cPAH: 0.0025 *JT*
cPAH BaPEq: 0.0025 *JT*

**EM04A**
cPAH: 0.071 *UT*
cPAH BaPEq: 0.018 *UT*

ARCO

**EM03A**
cPAH: 0.013 *UT*
cPAH BaPEq: 0.0045 *UT*

**EM01A**
cPAH: 0.026 *UT*
cPAH BaPEq: 0.018 *UT*

**EM03A-120**
cPAH: 0.021 *UT*
cPAH BaPEq: 0.0047 *UT*

**EM01A-150**
cPAH: 0.039 *UT*
cPAH BaPEq: 0.0048 *UT*

**EM05A**
cPAH: 0.81 *JT*
cPAH BaPEq: 0.183 *JT*

FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

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**Map D4.2-2a**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Total cPAHs (µg/L)
River Mile 04 to 05

X:\Projects\B0101__Portland_Harbor\SubTasks\Round3_ TZW\Production_MXDs\TZW_TCPAH_Mile_4_to_5_20090818.mxd - 8/18/2009 @ 11:51:34 AM

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## Peeper and Filtered Trident Samples (all µg/L)
## River Mile 05 to 06

**ARC03B-PSt**
cPAH: 0.0066 *UT*
cPAH BaPEq: 0.0066 *UT*

**ARC03B-PSp**
cPAH: 0.072 *JT*
cPAH BaPEq: 0.00354 *JT*

**ARC06B-PSp**
cPAH: 0.049 *JT*
cPAH BaPEq: 0.00252 *JT*

**ARC02B-PSp**
cPAH: 0.011 *JT*
cPAH BaPEq: 0.0011 *JT*

**ARC02B-PSt**
cPAH: 0.0066 *UT*
cPAH BaPEq: 0.0066 *UT*

**EM01A**
cPAH: 0.0024 *UT*
cPAH BaPEq: 0.0019 *UT*

RM-5

**EM03A**
cPAH: 0.0024 *UT*
cPAH BaPEq: 0.0018 *UT*

**EM03A-120**
cPAH: 0.018 *JT*
cPAH BaPEq: 0.00077 *JT*

**EM04A**
cPAH: 0.19 *JT*
cPAH BaPEq: 0.0109 *JT*

**EM06B**
cPAH: 0.0033 *JT*
cPAH BaPEq: 0.000003 *JT*

**R2EM01**
cPAH: 0.027 *JT*
cPAH BaPEq: 0.00112 *JT*

ARCO

**R2AR04**
cPAH: 0.003 *UT*
cPAH BaPEq: 0.0024 *UT*

**EM05A**
cPAH: 0.0045 *JT*
cPAH BaPEq: 0.000005 *JT*

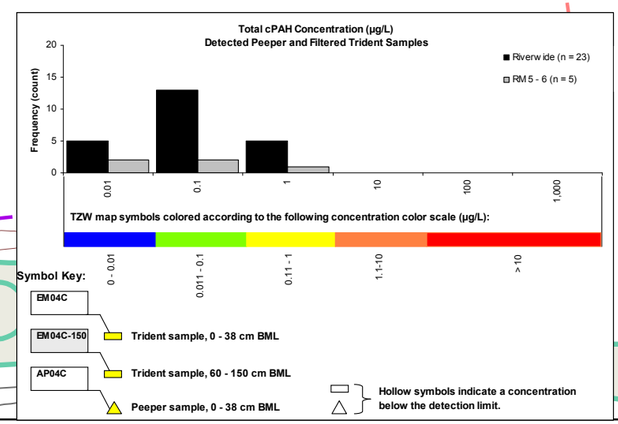
**EM08A**
cPAH: 0.0033 *UT*
cPAH BaPEq: 0.0025 *UT*

**ARC06B-PSt**
cPAH: 0.0066 *UT*
cPAH BaPEq: 0.0066 *UT*

**EM02A**
cPAH: 0.0028 *UT*
cPAH BaPEq: 0.0022 *UT*

ExxonMobil

**R2AR03**
cPAH: 0.003 *UT*
cPAH BaPEq: 0.0023 *UT*




## Peeper and Unfiltered Trident Samples (all µg/L)
## River Mile 05 to 06

**ARC03B-PSt**
cPAH: 0.37 *T*
cPAH BaPEq: 0.098 *T*

**ARC03B-PSp**
cPAH: 0.072 *JT*
cPAH BaPEq: 0.00354 *JT*

**ARC06B-PSt**
cPAH: 0.066 *T*
cPAH BaPEq: 0.0178 *T*

**ARC02B-PSp**
cPAH: 0.011 *JT*
cPAH BaPEq: 0.0011 *JT*

**ARC02B-PSt**
cPAH: 0.22 *T*
cPAH BaPEq: 0.0577 *T*

RM-5

**EM01A**
cPAH: 0.026 *UT*
cPAH BaPEq: 0.018 *UT*

**EM02C**
cPAH: 1.6 *JT*
cPAH BaPEq: 0.455 *JT*

**EM01A-150**
cPAH: 0.039 *UT*
cPAH BaPEq: 0.0048 *UT*

**EM04C**
cPAH: 1.6 *JT*
cPAH BaPEq: 0.29 *JT*

**EM04C-150**
cPAH: 0.99 *JT*
cPAH BaPEq: 0.207 *JT*

**EM04A**
cPAH: 0.071 *UT*
cPAH BaPEq: 0.018 *UT*

ARCO

**R2AR04**
cPAH: 0.0077 *UT*
cPAH BaPEq: 0.0022 *UT*

**EM03A**
cPAH: 0.013 *UT*
cPAH BaPEq: 0.0045 *UT*

**EM05A**
cPAH: 0.81 *JT*
cPAH BaPEq: 0.183 *JT*

ExxonMobil

**EM08A**
cPAH: 0.016 *UT*
cPAH BaPEq: 0.0036 *UT*

**R2EM01**
cPAH: 1.1 *JT*
cPAH BaPEq: 0.276 *JT*

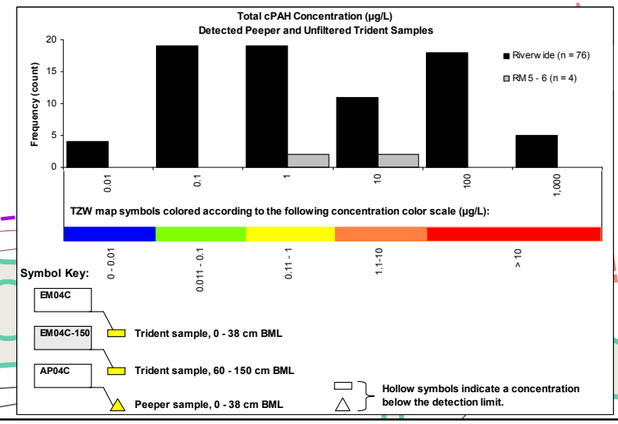
**ARC06B-PSp**
cPAH: 0.049 *JT*
cPAH BaPEq: 0.00252 *JT*

**EM03A-120**
cPAH: 0.021 *UT*
cPAH BaPEq: 0.0047 *UT*

**EM06B**
cPAH: 0.086 *UT*
cPAH BaPEq: 0.028 *UT*

**R2AR03**
cPAH: 0.0033 *JT*
cPAH BaPEq: 0.0033 *JT*

**EM02A**
cPAH: 0.0025 *JT*
cPAH BaPEq: 0.0025 *JT*




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**PSt** Indicates sample collected during the GWPA Pilot Study by Trident sampler.
**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

Qualifiers:
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UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**Map D4.2-2b**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Total cPAHs (µg/L)
River Mile 05 to 06

# Peeper and Filtered Trident Samples (all µg/L)
# River Mile 06 to 07

**SL01E**
cPAH: 0.017 *JT*
cPAH BaPEq: 0.000651 *JT*

**SL02E**
cPAH: 0.051 *JT*
cPAH BaPEq: 0.00263 *JT*

**SL03F**
cPAH: 0.014 *JT*
cPAH BaPEq: 0.000895 *JT*

**SL04F**
cPAH: 0.15 *JT*
cPAH BaPEq: 0.0149 *JT*

**GS07D**
cPAH: 0.13 *JT*
cPAH BaPEq: 0.0215 *JT*

**SL01A**
cPAH: 0.025 *JT*
cPAH BaPEq: 0.00102 *JT*

RM-6

**GS01B**
cPAH: 0.57 *JT*
cPAH BaPEq: 0.111 *JT*

**SL03C**
cPAH: 0.02 *JT*
cPAH BaPEq: 0.000743 *JT*

**SL05A**
cPAH: 0.0039 *UT*
cPAH BaPEq: 0.0025 *UT*

**GS02A**
cPAH: 0.64 *JT*
cPAH BaPEq: 0.104 *JT*

**GS08D**
cPAH: 0.047 *JT*
cPAH BaPEq: 0.00818 *JT*

**GS08A**
cPAH: 0.0027 *UT*
cPAH BaPEq: 0.0021 *UT*

Gasco

**SL04A**
cPAH: 0.0035 *UT*
cPAH BaPEq: 0.0024 *UT*

Siltronic

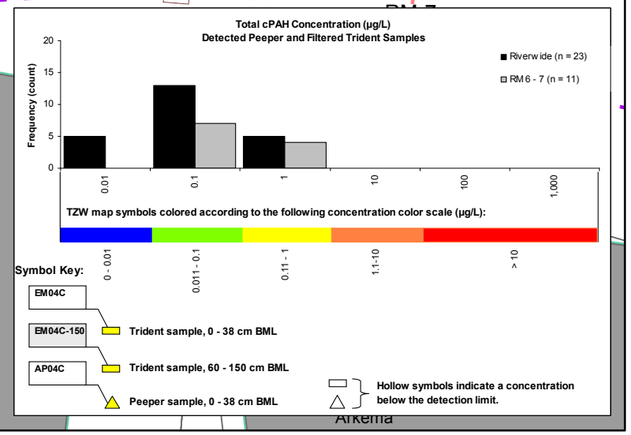
**SL02C**
cPAH: 0.015 *JT*
cPAH BaPEq: 0.000569 *JT*

**SL02A**
cPAH: 0.0029 *UT*
cPAH BaPEq: 0.0022 *UT*

**SL03A**
cPAH: 0.0035 *UT*
cPAH BaPEq: 0.0027 *UT*

Rhone Poulenc
(not shown)

Arkema




# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L)
# River Mile 06 to 07

**GS-D1**
cPAH: 17 *T*
cPAH BaPEq: 4.41 *T*

**GS-D2**
cPAH: 0.044 *JT*
cPAH BaPEq: 0.0113 *JT*

**GS-C3**
cPAH: 150 *T*
cPAH BaPEq: 42.8 *T*

RM-6

**GS-C1**
cPAH: 2.7 *T*
cPAH BaPEq: 0.695 *T*

**GS-C4**
cPAH: 140 *T*
cPAH BaPEq: 33.9 *T*

**GS-B1**
cPAH: 74 *T*
cPAH BaPEq: 19.5 *T*

For a detailed map of this area, see Map 5.4-3d

**GS01B**
cPAH: 0.57 *JT*
cPAH BaPEq: 0.111 *JT*

**GS-B5**
cPAH: 190 *JT*
cPAH BaPEq: 53.8 *JT*

**GS-C5**
cPAH: 13 *T*
cPAH BaPEq: 2.61 *T*

**GS-B2**
cPAH: 300 *T*
cPAH BaPEq: 70.3 *T*

Gasco

Siltronic

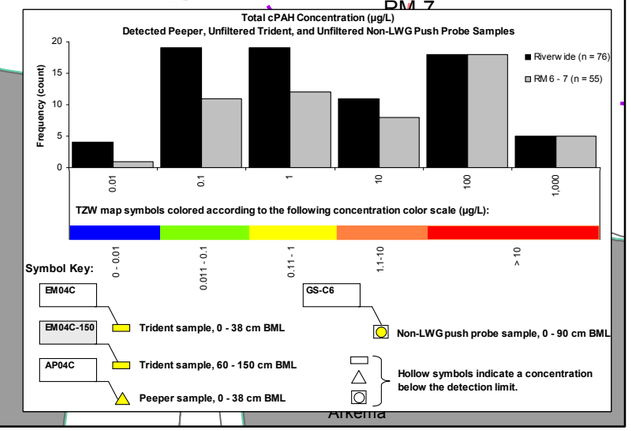
**GS02A**
cPAH: 18 *T*
cPAH BaPEq: 4.16 *T*

**GS-B3**
cPAH: 39 *T*
cPAH BaPEq: 10.1 *T*

**GS-B4**
cPAH: 35 *T*
cPAH BaPEq: 8.88 *T*

Rhone Poulenc
(not shown)

Arkema

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FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

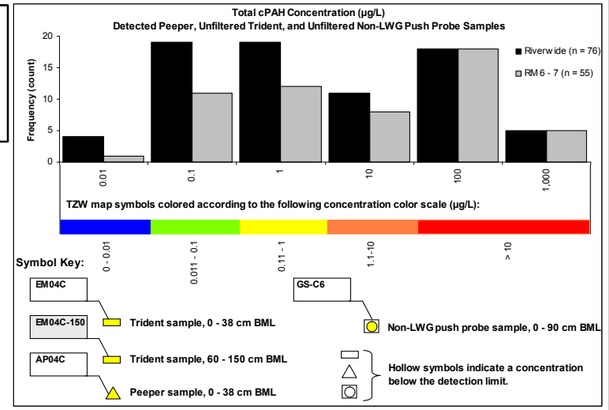
0 250 500 750 1,000 Feet

**PSt** Indicates sample collected during the GWPA Pilot Study by Trident sampler.
**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

Qualifiers:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

**Map D4.2-2c**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Total cPAHs (µg/L)
River Mile 06 to 07

# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07




**GS-D3**
cPAH: 0.02 *JA*
cPAH BaPEq: 0.00122 *JA*

**GS-D4**
cPAH: 0.033 *JT*
cPAH BaPEq: 0.00665 *JT*

**GS-D5**
cPAH: 0.081 *JT*
cPAH BaPEq: 0.0174 *JT*

**GS-C8**
cPAH: 62 *T*
cPAH BaPEq: 16 *T*

**GP61**
cPAH: 0.27 *T*
cPAH BaPEq: 0.0611 *T*

**GP63**
cPAH: 0.57 *T*
cPAH BaPEq: 0.0931 *T*

**GS-C9**
cPAH: 0.67 *JT*
cPAH BaPEq: 0.17 *JT*

**GS-C6**
cPAH: 0.0047 *JT*
cPAH BaPEq: 0.00047 *JT*

**GP64**
cPAH: 16 *T*
cPAH BaPEq: 4.75 *T*

**GP69**
cPAH: 69 *T*
cPAH BaPEq: 20.1 *T*

**GP73**
cPAH: 170 *T*
cPAH BaPEq: 49.9 *T*

**SL01E**
cPAH: 0.017 *JT*
cPAH BaPEq: 0.000651 *JT*

**GS-C7**
cPAH: 16 *T*
cPAH BaPEq: 3.82 *T*

**GP70**
cPAH: 61 *T*
cPAH BaPEq: 17.8 *T*

**SL02E**
cPAH: 0.051 *JT*
cPAH BaPEq: 0.00263 *JT*

**SL03F-120**
cPAH: 0.11 *JT*
cPAH BaPEq: 0.0458 *JT*

**SL03F**
cPAH: 0.014 *JT*
cPAH BaPEq: 0.000895 *JT*

**SL04F**
cPAH: 0.15 *JT*
cPAH BaPEq: 0.0149 *JT*

**GP68**
cPAH: 100 *T*
cPAH BaPEq: 31.9 *T*

**GP81**
cPAH: 21 *T*
cPAH BaPEq: 6.14 *T*

**GP55**
cPAH: 1.9 *T*
cPAH BaPEq: 0.436 *T*

**GP75**
cPAH: 5.9 *T*
cPAH BaPEq: 1.6 *T*

**GP62**
cPAH: 5.5 *T*
cPAH BaPEq: 1.26 *T*

**GS-B9**
cPAH: 1.9 *T*
cPAH BaPEq: 0.482 *T*

**GS08D**
cPAH: 0.54 *JT*
cPAH BaPEq: 0.154 *JT*

**GP76**
cPAH: 4.2 *T*
cPAH BaPEq: 1.11 *T*

**GS08D-150**
cPAH: 25 *T*
cPAH BaPEq: 5.67 *T*

**SL03C**
cPAH: 0.02 *JT*
cPAH BaPEq: 0.000743 *JT*

**SL05A**
cPAH: 0.039 *JT*
cPAH BaPEq: 0.0255 *JT*

**GS-B6**
cPAH: 25 *T*
cPAH BaPEq: 5.32 *T*

**GS-B7**
cPAH: 1.7 *T*
cPAH BaPEq: 0.37 *T*

**GP82**
cPAH: 14 *T*
cPAH BaPEq: 4.13 *T*

**SL04A**
cPAH: 0.12 *T*
cPAH BaPEq: 0.0803 *T*

**GS07D**
cPAH: 0.13 *JT*
cPAH BaPEq: 0.0215 *JT*

**SL01A**
cPAH: 0.33 *JT*
cPAH BaPEq: 0.00261 *JT*

**GS-B8**
cPAH: 4.2 *T*
cPAH BaPEq: 1.2 *T*

**SL03A**
cPAH: 0.1 *T*
cPAH BaPEq: 0.0697 *T*

**SL04A-90**
cPAH: 14 *T*
cPAH BaPEq: 3.08 *T*

**GS07B**
cPAH: 14 *T*
cPAH BaPEq: 3.51 *T*

**SL02A**
cPAH: 0.2 *T*
cPAH BaPEq: 0.0745 *T*

**SL02C**
cPAH: 0.015 *JT*
cPAH BaPEq: 0.000569 *JT*

**GS08A**
cPAH: 0.14 *JT*
cPAH BaPEq: 0.0909 *JT*

Gasco

Siltronic

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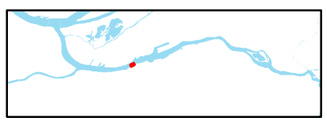
FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos



**PSt** Indicates sample collected during the GWPA Pilot Study by Trident sampler.
**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

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UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

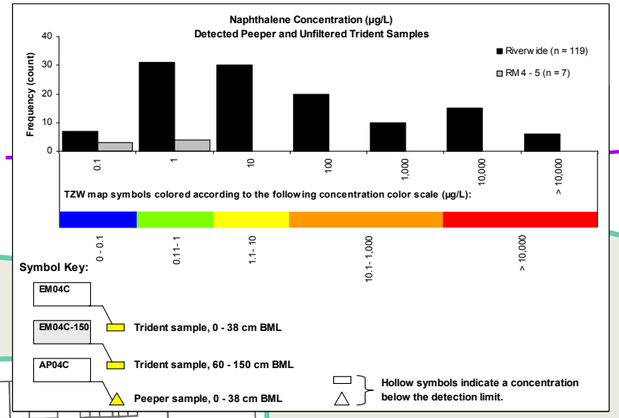
0 90 180 270 360 Feet

**Map D4.2-2d**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Total cPAHs (µg/L)
River Mile 06 to 07, Zoom

# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 04 to 05

RM-4

R2KM02-t 0.29 *U*
R2KM02-150 0.29 *U*
R2KM02-p 0.027 *U*
KM06A 0.026 *U*
KM11B 0.025 *U*
KM10A 0.015 *U*
R2KM01 0.041 *U*
KM08A 0.022 *U*
Kinder Morgan Linnton



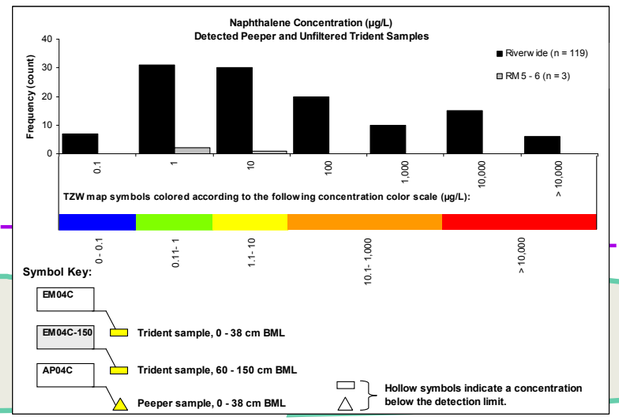

RM-5

R2AR01 0.026 *U*
AR02A 0.031 *U*
AR01A 0.62
AR01A-150 0.29 *U*
AR04B 0.04 *U*
R2AR02 0.033 *U*
R2AR02-90 0.16 *U*
R2AR03 0.78 *J*
ARC06B-PSt 0.45 *U*
ARC06B-PSp 0.076
ARC02B-PSt 0.13 *U*
ARC02B-PSp 0.078
ARC03B-PSt 0.22 *U*
ARC03B-PSp 0.056 *J*
R2AR04 0.04 *U*
ARCO
EM02C 0.16 *U*
EM02A 0.0067 *U*
EM04C 0.069 *U*
EM04C-150 6.6
EM04A 0.11 *U*
EM06B 0.35 *J*
EM01A 0.44 *J*
EM01A-150 0.61 *J*
EM03A 0.032 *U*
EM03A-120 0.041 *U*
EM05A 0.24
ExxonMobil

# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 05 to 06

RM-5

ARC06B-PSp 0.076
ARC03B-PSp 0.056 *J*
ARC06B-PSt 0.45 *U*
ARC02B-PSp 0.078
R2AR03 0.78 *J*
ARC02B-PSt 0.13 *U*
ARC03B-PSt 0.22 *U*
R2AR04 0.04 *U*
EM01A 0.44 *J*
EM01A-150 0.61 *J*
EM02A 0.0067 *U*
EM02C 0.16 *U*
EM04C 0.069 *U*
EM04C-150 6.6
EM04A 0.11 *U*
EM05A 0.24
EM06B 0.35 *J*
R2EM01 0.12 *U*
EM03A 0.032 *U*
EM03A-120 0.041 *U*
EM08A 0.072 *U*
ExxonMobil
ARCO




RM-6

FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

Map Features
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

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U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

**Map D4.2-3a**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Naphthalene (µg/L)
River Miles 04 to 06

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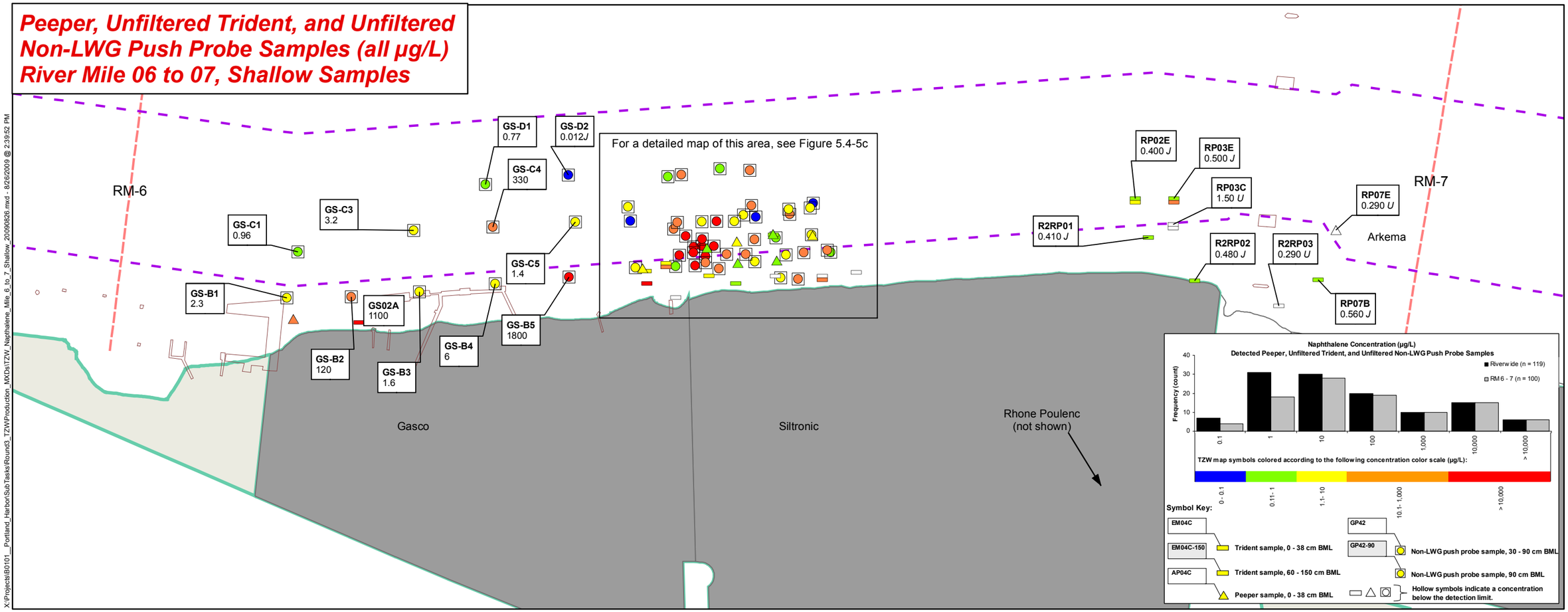
# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07, Shallow Samples

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FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

Map Features
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

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UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

**Map D4.2-3b**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Naphthalene (µg/L)
River Mile 06 to 07, Shallow Samples

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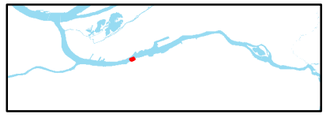
GS-D3 0.003*U*
GS-D4 0.680*J*
GP72 22.9
GS-D5 0.130
GP74 670
GP49 2.51
GS-C6 0.0360
GP41 37.9
GP40 5.29
GS-C7 85.0
GP73 13700
GP69 11400
GP71 12400
GP68 12300
GP64 12200
GP70 4820
GP54 3630
GS08D 6.50
GS-B6 8.50
GS07D 4.40
GP81 8480*T*
GS-B7 0.450
GP82 3890
GP76 42.7
SL01A 2.30
GS07B 3100
GS08A 0.110 *U*
SL01E 1.00 *J*
GP67 2520
GP80 59.4
GP84 47.3
GP53 1.94
GS-C8 8.00*J*
GP65 44.9
GP61 0.0677*T*
GP50 1*U*
SL02E 1.60 *J*
GP52 29.6
SL02C 0.630 *J*
SL02A 0.470
GP75 53.9
GP51 1*U*
SL03C 0.520 *J*
GS-B8 1.70*J*
GP62 1.85
GP39 1*U*
GP66 8.08
GP58 1*U*
GP38 1*U*
GP63 20.0
SL03F 0.780 *J*
GP55 0.229
GP57 1*U*
SL03A 0.0910 *U*
GP47 2.53
GP45 57.6
GP46 24.8
GS-C9 0.0880
GP42 2.52
GP48 1*U*
GP56 3.79
SL04F 2.90
GP43 1*UT*
SL04A 0.190 *U*
SL05A 0.0430 *U*
GP44 678
GS-B9 0.210

Gasco
Siltronic
Rhone Poulenc (not shown)

Map Features
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland Sites (2008)
- Waterfront Taxlots

0 60 120 180 240 Feet

FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos



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**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

Qualifiers:
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U The analyte was not detected above the reported sample quantitation limit.
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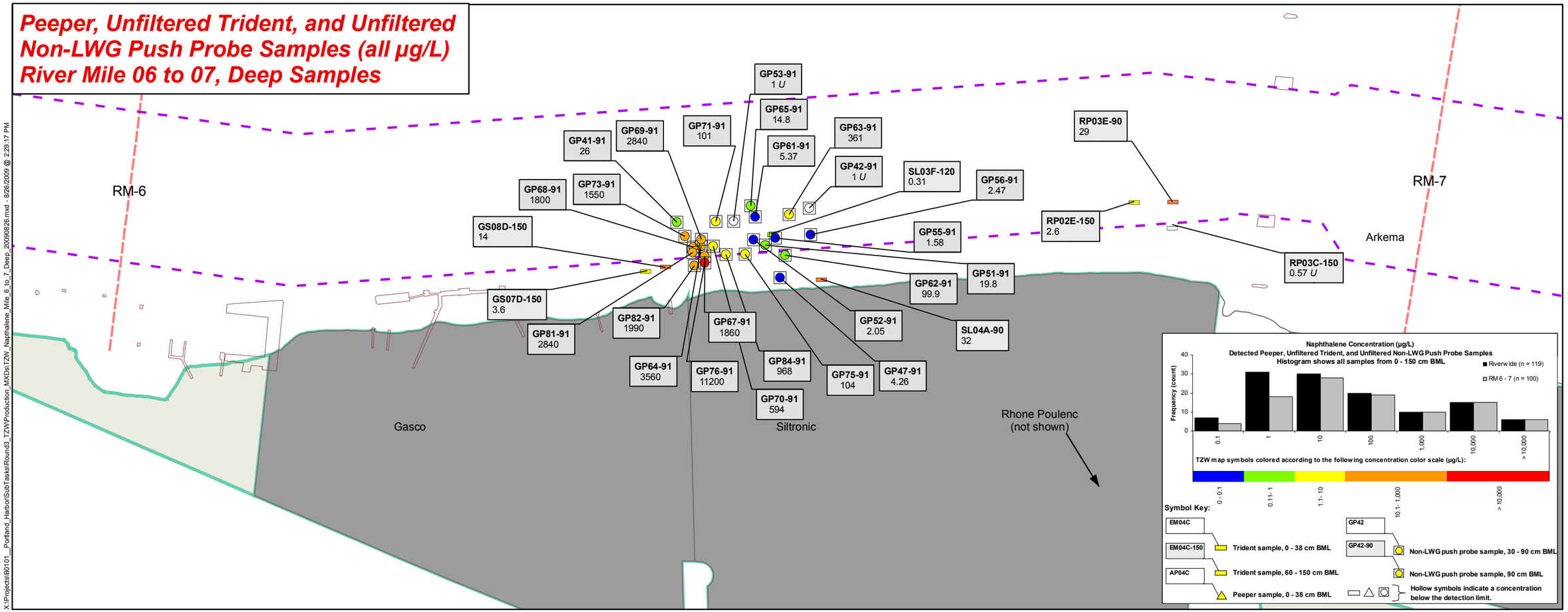
A Total value based on a limited number of analytes.

**Map D4.2-3c**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Naphthalene (µg/L)
River Mile 06 to 07, Shallow Zoom

# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07, Deep Samples

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Map Features
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**PSt** Indicates sample collected during the GWPA Pilot Study by Trident sampler.
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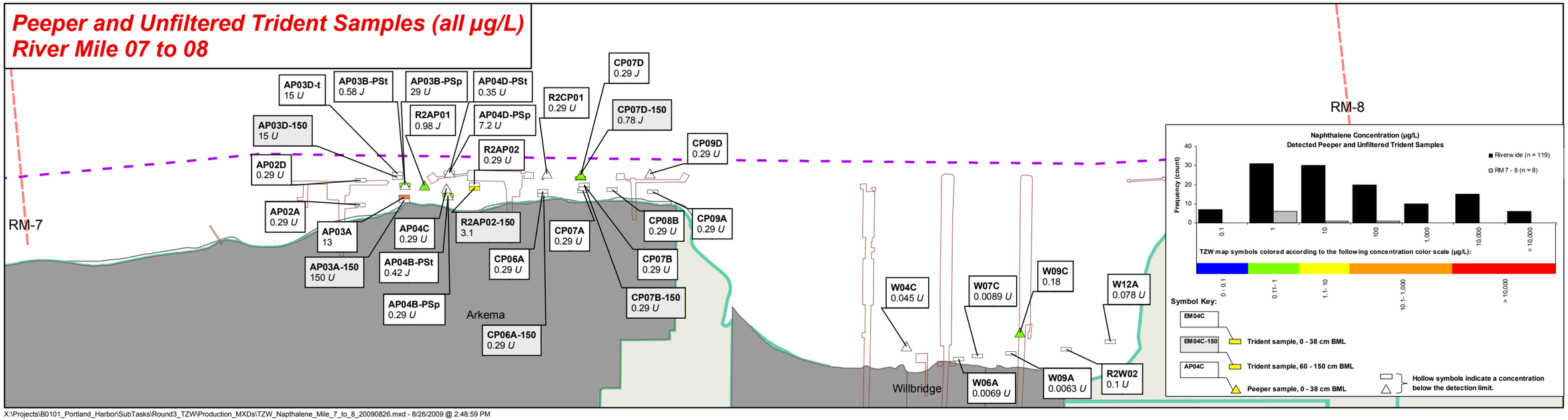
**Map D4.2-3d**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Naphthalene (µg/L)
River Mile 06 to 07, Deep Samples

# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 07 to 08

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**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

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A Total value based on a limited number of analytes.

**Map D4.2-3e**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Naphthalene (µg/L)
River Mile 07 to 08

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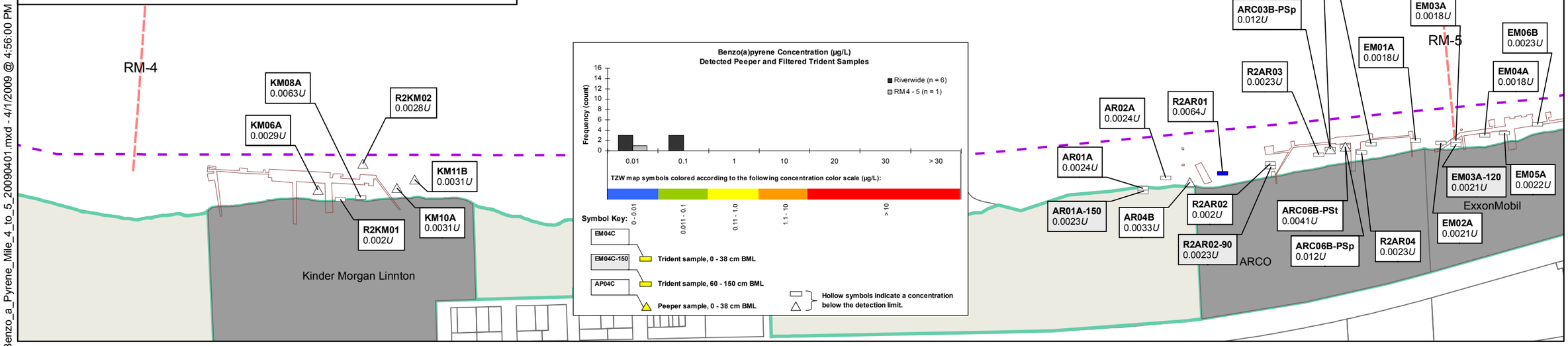
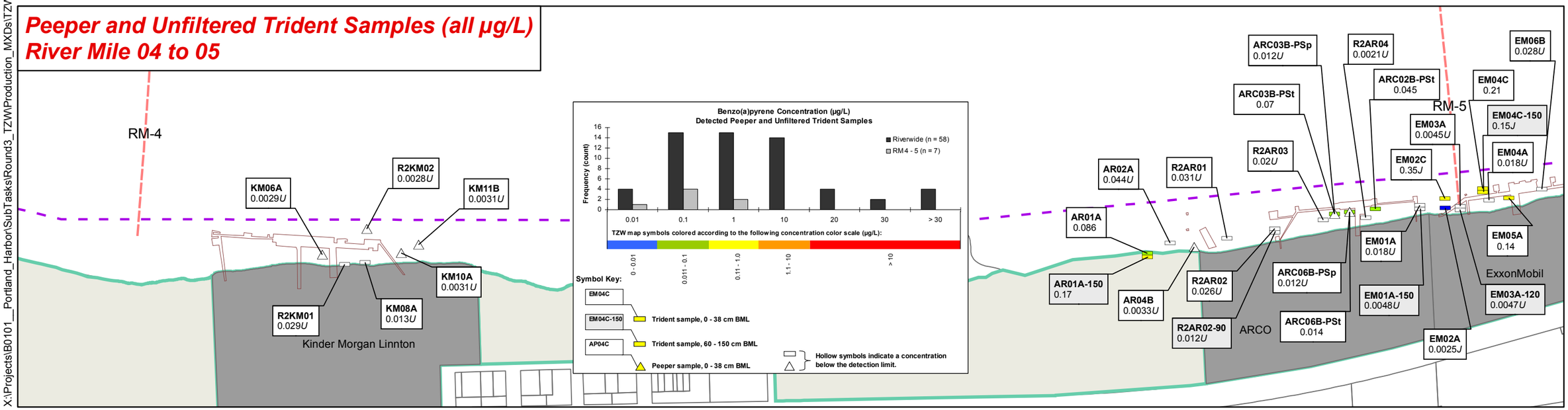
# Peeper and Filtered Trident Samples (all µg/L)
# River Mile 04 to 05




# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 04 to 05




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

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**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**Map D4.2-4a**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Benzo(a)pyrene (µg/L)
River Mile 04 to 05

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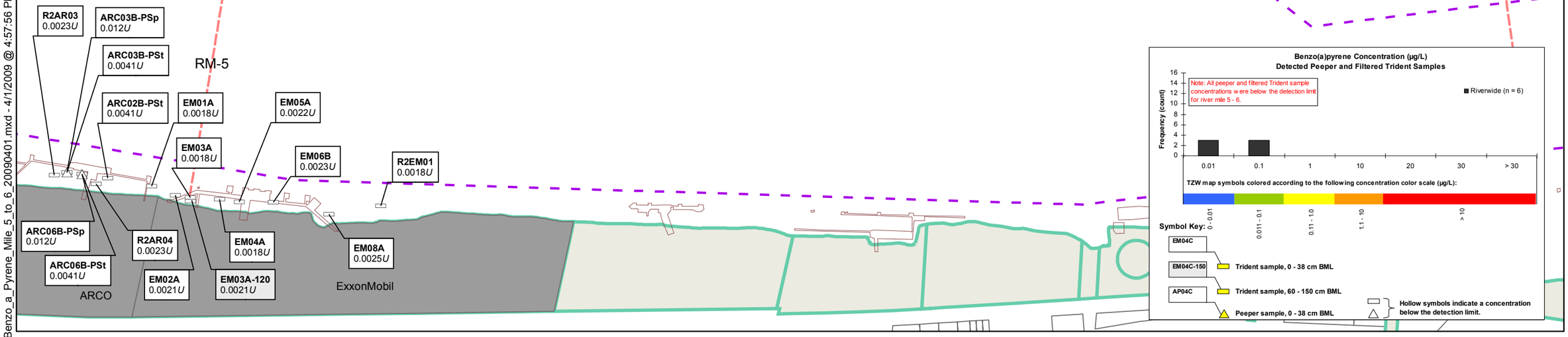
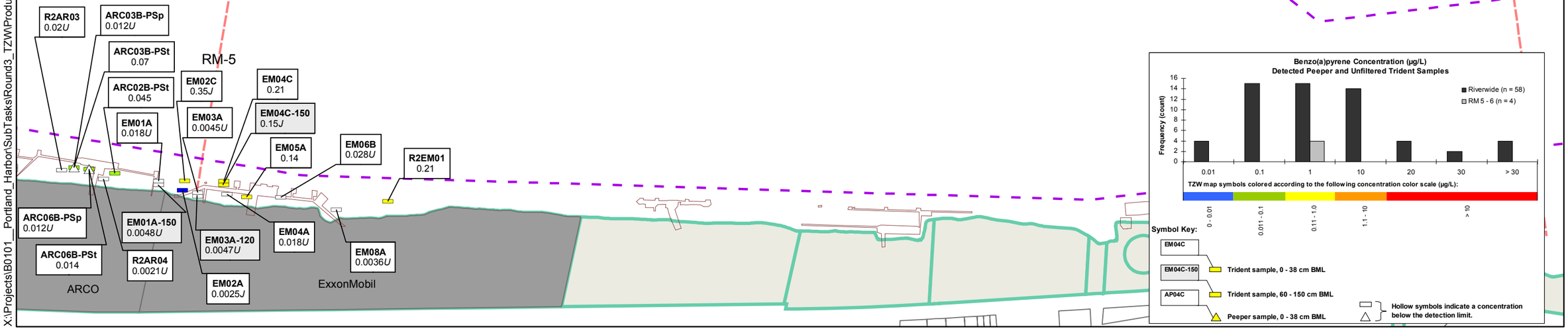
## Peeper and Filtered Trident Samples (all µg/L)
## River Mile 05 to 06




## Peeper and Unfiltered Trident Samples (all µg/L)
## River Mile 05 to 06




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

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**Map D4.2-4b**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Benzo(a)pyrene (ug/L)
River Mile 05 to 06

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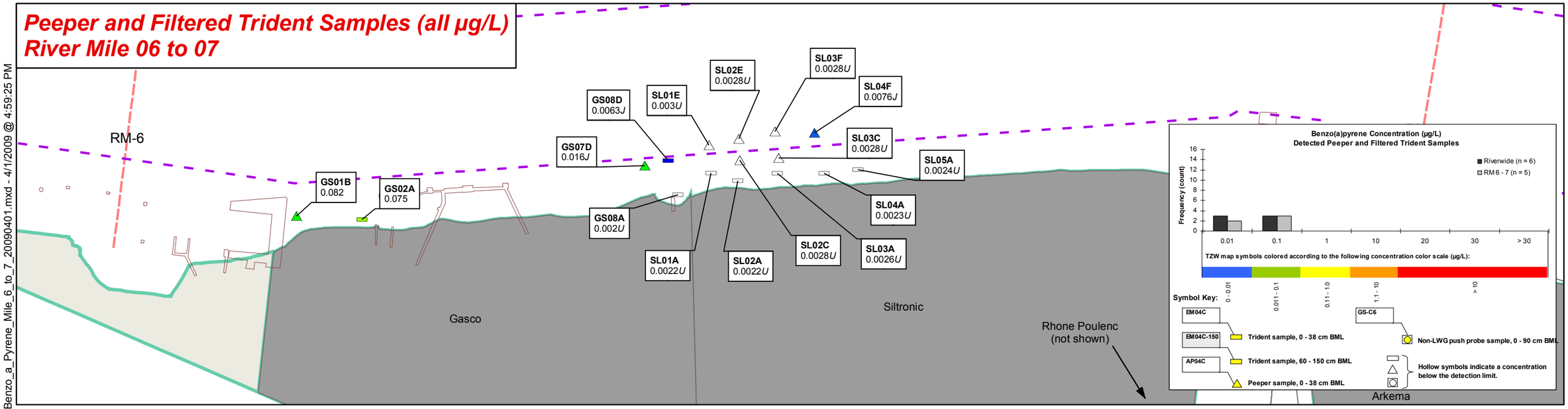
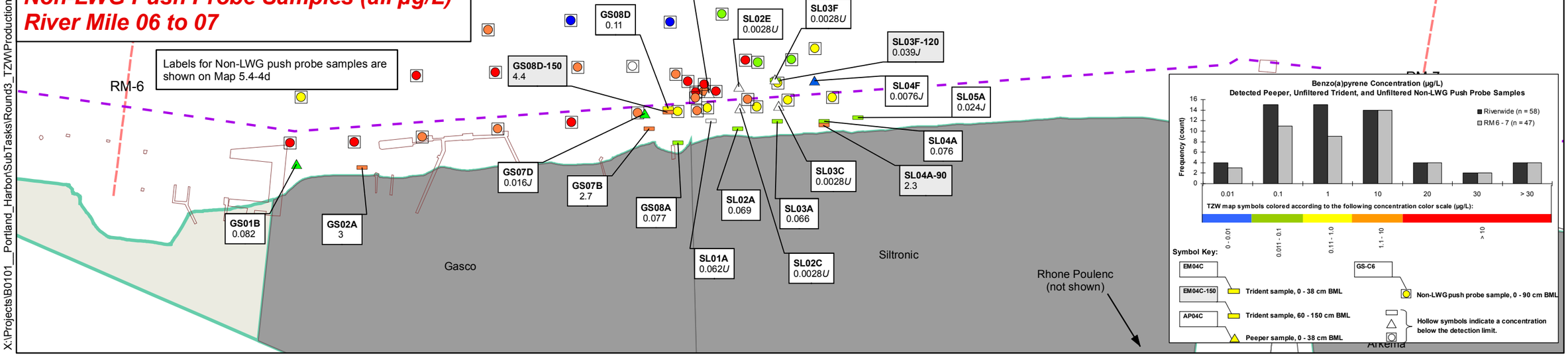
## Peeper and Filtered Trident Samples (all µg/L)
## River Mile 06 to 07




## Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L)
## River Mile 06 to 07

Labels for Non-LWG push probe samples are shown on Map 5.4-4d




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

Qualifiers:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**Map D4.2-4c**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Benzo(a)pyrene (µg/L)
River Mile 06 to 07

# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07

Labels for trident and peeper samples are shown on Map 5.4-4c

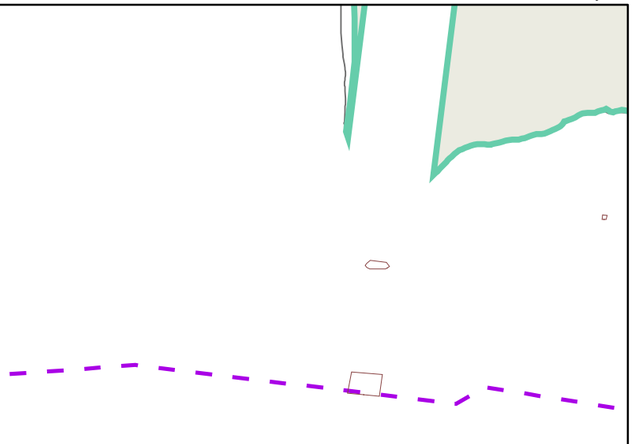
RM-6

RM-7

GS-D1 3.3
GS-D2 0.0058*J*
GS-D4 0.0047*J*
GS-D5 0.013*J*
GS-C6 0.0043*U*
GS-C8 12
GP61 0.0484*T*
GS-C9 0.12
GS-C3 32
GP73 37.8
GP64 3.57
GP63 0.067
GS-C1 0.5
GS-C5 1.7
GS-C7 2.8
GS-C4 25
GP55 0.343
GS-B9 0.26
GS-B5 40*J*
GP68 24.2
GP62 0.881
GS-B1 14
GP75 1.17
GS-B2 50
GP70 13.5
GS-B8 0.81
GS-B7 0.26
GP69 15.2
GS-B3 7
GS-B6 3.9
GP81 4.59
GS-B4 6.3
GP82 3.09
GP76 0.81

Gasco

Siltronic

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**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**PSt** Indicates sample collected during the GWPA Pilot Study by Trident sampler.
**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

Qualifiers:
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A Total value based on a limited number of analytes.

**Map D4.2-4d**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Benzo(a)pyrene (µg/L)
River Mile 06 to 07, zoom

# Peeper and Filtered Trident Samples (all µg/L)
# River Mile 04 to 05

RM-4

RM-5

**KM06A**
TPH-DRH: 190 *U*
TPH-RRH: 58 *U*

**R2KM02**
TPH-DRH: 88 *U*
TPH-RRH: 47 *U*

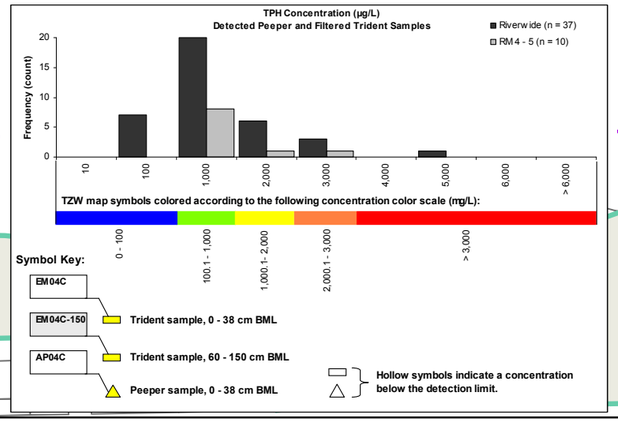
**KM10A**
TPH-DRH: 94 *U*
TPH-RRH: 54 *U*

**KM11B**
TPH-DRH: 170 *U*
TPH-RRH: 77 *U*

**R2KM01**
TPH-DRH: 1400 *J*
TPH-RRH: 710 *J*

**KM08A**
TPH-DRH: 96 *U*
TPH-RRH: 80 *U*

Kinder Morgan Linnton




**AR02A**
TPH-DRH: 98 *U*
TPH-RRH: 140 *U*

**R2AR01**
TPH-DRH: 470 *J*
TPH-RRH: 180 *U*

**R2AR03**
TPH-DRH: 1400 *J*
TPH-RRH: 100 *U*

**R2AR04**
TPH-DRH: 160 *U*
TPH-RRH: 64 *U*

**EM02C**
TPH-DRH: 360 *J*
TPH-RRH: 130 *U*

**EM04C**
TPH-DRH: 260 *U*
TPH-RRH: 170 *J*

**EM04C-150**
TPH-DRH: 1100*J*
TPH-RRH: 240 *U*

**EM05A**
TPH-DRH: 1200 *J*
TPH-RRH: 400 *J*

**ARC03B-PSp**
TPH-DRH: 190 *J*
TPH-RRH: 82 *J*

**EM04A**
TPH-DRH: 540 *J*
TPH-RRH: 270 *J*

**AR01A**
TPH-DRH: 250 *J*
TPH-RRH: 260 *J*

ExxonMobil

**EM01A**
TPH-DRH: 890 *J*
TPH-RRH: 160 *U*

**EM03A**
TPH-DRH: 410 *J*
TPH-RRH: 170 *J*

**AR01A-150**
TPH-DRH: 440 *J*
TPH-RRH: 380 *J*

**R2AR02**
TPH-DRH: 610 *J*
TPH-RRH: 210 *U*

**EM02A**
TPH-DRH: 58 *U*
TPH-RRH: 47 *U*

**EM03A-120**
TPH-DRH: 540 *J*
TPH-RRH: 210 *U*

ARCO

**R2AR02-90**
TPH-DRH: 600 *J*
TPH-RRH: 230 *U*

**AR04B**
TPH-DRH: 260 *U*
TPH-RRH: 130 *U*

**EM06B**
TPH-DRH: 320 *J*
TPH-RRH: 83 *J*

# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 04 to 05

RM-4

RM-5

**KM06A**
TPH-DRH: 190 *U*
TPH-RRH: 58 *U*
TPH-GRH: 13 *U*

**R2KM02**
TPH-DRH: 88 *U*
TPH-RRH: 47 *U*
TPH-GRH: 21 *U*

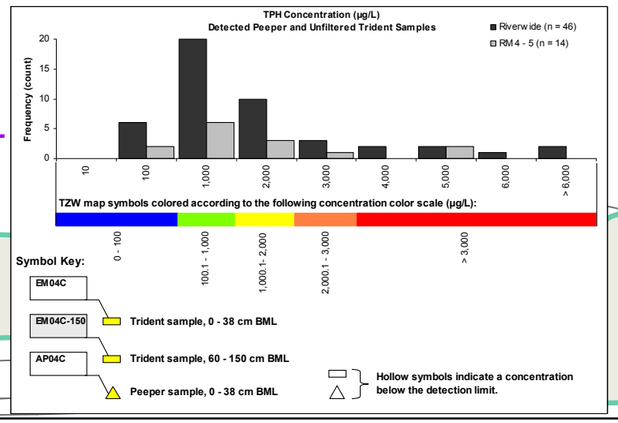
**KM10A**
TPH-DRH: 94 *U*
TPH-RRH: 54 *U*
TPH-GRH: 13 *U*

**KM11B**
TPH-DRH: 170 *U*
TPH-RRH: 77 *U*
TPH-GRH: 13 *U*

**R2KM01**
TPH-DRH: 1250 *JT*
TPH-RRH: 730 *JT*
TPH-GRH: 50 *JT*

**KM08A**
TPH-DRH: 210 *J*
TPH-RRH: 170 *U*
TPH-GRH: 14 *J*

Kinder Morgan Linnton




**AR02A**
TPH-DRH: 110 *U*
TPH-RRH: 170 *U*
TPH-GRH: 13 *JT*

**R2AR01**
TPH-DRH: 445 *JT*
TPH-RRH: 180 *JT*
TPH-GRH: 53 *JT*

**R2AR03**
TPH-DRH: 2000 *J*
TPH-RRH: 170 *U*
TPH-GRH: 2400

**EM03A**
TPH-DRH: 550 *J*
TPH-RRH: 320 *J*
TPH-GRH: 37 *JT*

**EM04C**
TPH-DRH: 230 *U*
TPH-RRH: 180 *J*
TPH-GRH: 20 *U*

**ARC03B**
TPH-DRH: 190 *J*
TPH-RRH: 82 *J*
TPH-GRH: NC*

**EM02C**
TPH-DRH: 700 *J*
TPH-RRH: 730 *J*
TPH-GRH: 170 *U*

**EM05A**
TPH-DRH: 1500 *J*
TPH-RRH: 570 *J*
TPH-GRH: 96 *U*

**R2AR04**
TPH-DRH: 180 *U*
TPH-RRH: 89 *U*
TPH-GRH: 92 *U*

**EM04C-150**
TPH-DRH: 1300 *J*
TPH-RRH: 270 *U*
TPH-GRH: 620 *J*

**AR01A**
TPH-DRH: 340 *J*
TPH-RRH: 400 *J*
TPH-GRH: 230 *J*

ARCO

ExxonMobil

**AR01A-150**
TPH-DRH: 590 *J*
TPH-RRH: 500 *J*
TPH-GRH: 600 *J*

**R2AR02**
TPH-DRH: 710 *J*
TPH-RRH: 320 *U*
TPH-GRH: 88 *U*

**EM01A**
TPH-DRH: 940 *J*
TPH-RRH: 220 *U*
TPH-GRH: 86 *U*

**EM03A-120**
TPH-DRH: 540 *J*
TPH-RRH: 180 *U*
TPH-GRH: 120 *U*

**EM06B**
TPH-DRH: 910 *J*
TPH-RRH: 270 *J*
TPH-GRH: 610 *J*

**AR04B**
TPH-DRH: 260 *U*
TPH-RRH: 130 *U*
TPH-GRH: 13 *U*

**R2AR02-90**
TPH-DRH: 710 *J*
TPH-RRH: 260 *U*
TPH-GRH: 340

**EM01A-150**
TPH-DRH: 3600 *J*
TPH-RRH: 440 *U*
TPH-GRH: 550 *J*

**EM02A**
TPH-DRH: 78 *U*
TPH-RRH: 76 *U*
TPH-GRH: 16 *JT*

**EM04A**
TPH-DRH: 530 *J*
TPH-RRH: 240 *J*
TPH-GRH: 41 *U*

FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

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**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

Qualifiers:
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U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

NC Not collected

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**Map D4.2-5a**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Total Petroleum Hydrocarbons (µg/L)
River Mile 04 to 05

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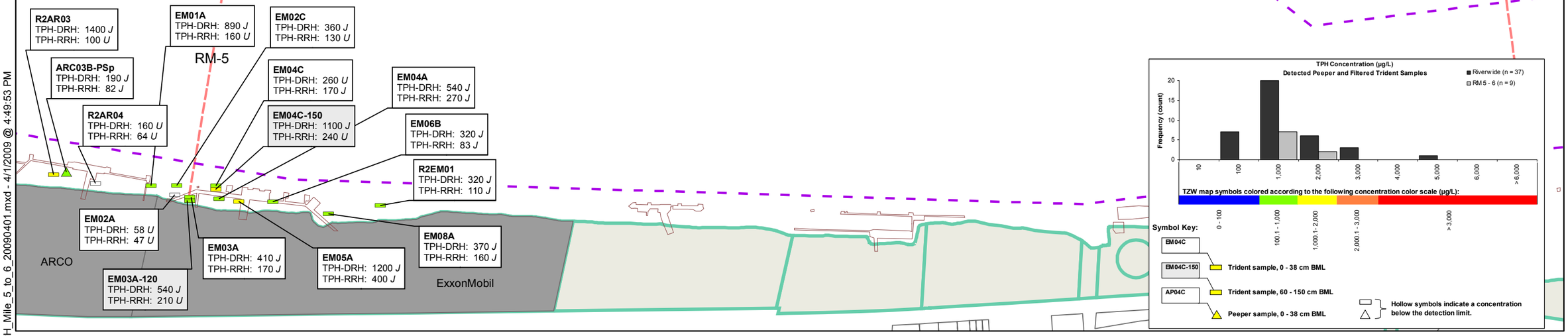
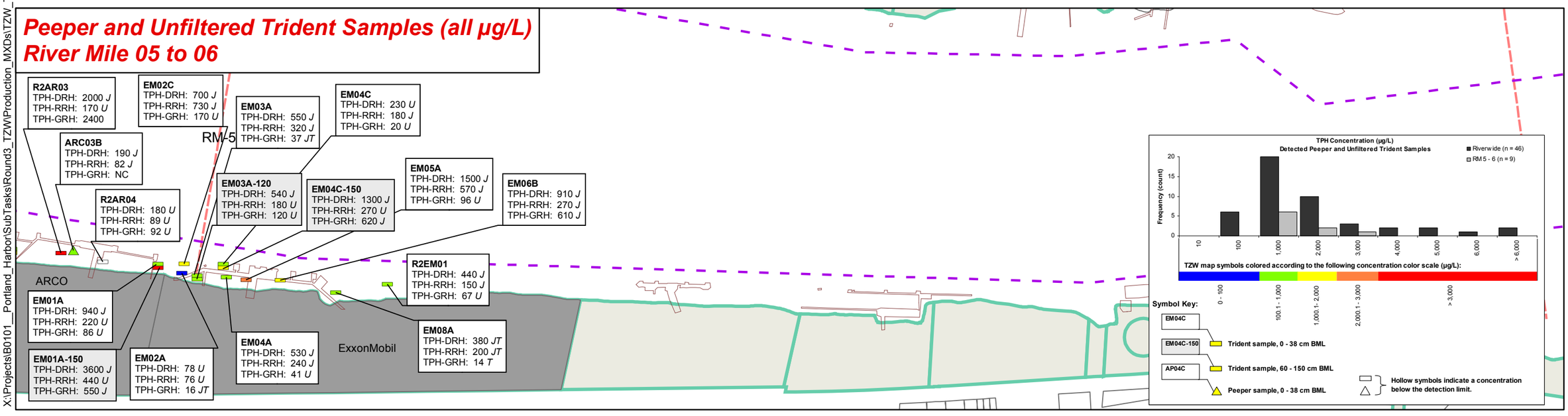
# Peeper and Filtered Trident Samples (all µg/L)
## River Mile 05 to 06




# Peeper and Unfiltered Trident Samples (all µg/L)
## River Mile 05 to 06




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

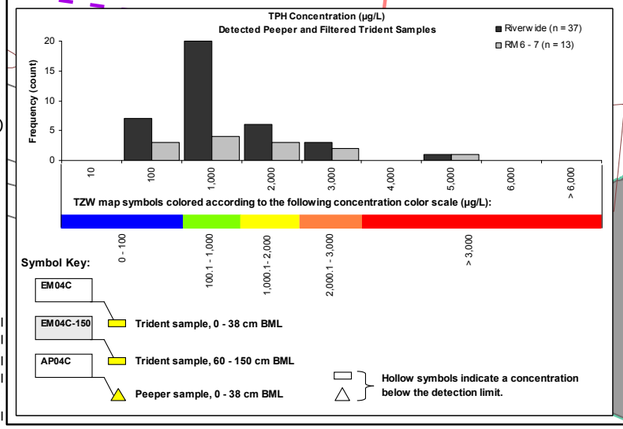
**PSt** Indicates sample collected during the GWPA Pilot Study by Trident sampler.
**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

Qualifiers:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

NC Not collected

**Map D4.2-5b**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Total Petroleum Hydrocarbons (µg/L)
River Mile 05 to 06

# Peeper and Filtered Trident Samples (all µg/L)
# River Mile 06 to 07




**GS01B**
TPH-DRH: 840 *J*
TPH-RRH: 70 *U*

**GS02A**
TPH-DRH: 3600 *J*
TPH-RRH: 500 *J*

**GS07D**
TPH-DRH: 320 *U*
TPH-RRH: 59 *U*

**GS08A**
TPH-DRH: 370
TPH-RRH: 240 *J*

**GS08D**
TPH-DRH: 700 *J*
TPH-RRH: 140 *J*

**SL02E**
TPH-DRH: 1000 *J*
TPH-RRH: 250 *U*

**SL01E**
TPH-DRH: 320 *U*
TPH-RRH: 57 *U*

**SL03F**
TPH-DRH: 330 *U*
TPH-RRH: 78 *U*

**SL04F**
TPH-DRH: 1300 *J*
TPH-RRH: 110 *U*

**SL03C**
TPH-DRH: 230 *U*
TPH-RRH: 100 *U*

**SL05A**
TPH-DRH: 190 *U*
TPH-RRH: 90 *U*

**SL04A**
TPH-DRH: 370 *J*
TPH-RRH: 120 *U*

**SL01A**
TPH-DRH: 1900 *J*
TPH-RRH: 430 *J*

**SL02C**
TPH-DRH: 120 *U*
TPH-RRH: 81 *U*

**SL03A**
TPH-DRH: 160 *U*
TPH-RRH: 57 *U*

**SL02A**
TPH-DRH: 120 *U*
TPH-RRH: 70 *U*

Gasco

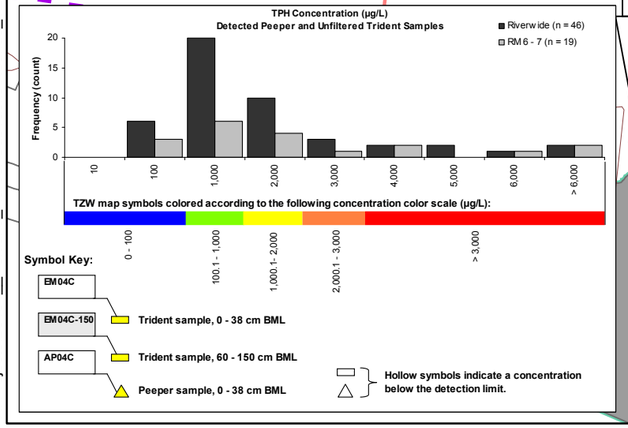
Siltronic

Rhone Poulenc
(not shown)

Arkema

RM-7

# Peeper, Unfiltered Trident, and GeoProbe Samples (all µg/L)
# River Mile 06 to 07




**GS01B**
TPH-DRH: 840 *J*
TPH-RRH: 70 *U*
TPH-GRH: 230 *JT*

**GS02A**
TPH-DRH: 3300 *J*
TPH-RRH: 810 *J*
TPH-GRH: 1900 *J*

**GS07D**
TPH-DRH: 320 *U*
TPH-RRH: 59 *U*
TPH-GRH: 53 *J*

**GS07B**
TPH-DRH: 6100 *J*
TPH-RRH: 1200 *J*
TPH-GRH: 4000 *J*

**GS08A**
TPH-DRH: 370 *JT*
TPH-RRH: 240 *JT*
TPH-GRH: 17 *UT*

**GS08D**
TPH-DRH: 920 *J*
TPH-RRH: 230 *J*
TPH-GRH: 740 *J*

**GS08D-150**
TPH-DRH: 2800 *J*
TPH-RRH: 700 *J*
TPH-GRH: 1700 *J*

**SL01E**
TPH-DRH: 320 *U*
TPH-RRH: 57 *U*
TPH-GRH: 1100 *J*

**SL02E**
TPH-DRH: 1000 *J*
TPH-RRH: 250 *U*
TPH-GRH: 860 *J*

**SL03F**
TPH-DRH: 330 *U*
TPH-RRH: 78 *U*
TPH-GRH: 660 *J*

**SL03F-120**
TPH-DRH: 240 *J*
TPH-RRH: 170 *J*
TPH-GRH: 33 *U*

**SL04F**
TPH-DRH: 1300 *J*
TPH-RRH: 110 *U*
TPH-GRH: 1050 *JT*

**SL03C**
TPH-DRH: 230 *U*
TPH-RRH: 100 *U*
TPH-GRH: 41 *J*

**SL05A**
TPH-DRH: 240 *J*
TPH-RRH: 110 *U*
TPH-GRH: 26 *U*

**SL04A**
TPH-DRH: 495 *JT*
TPH-RRH: 130 *JT*
TPH-GRH: 74 *U*

**SL04A-90**
TPH-DRH: 2100 *J*
TPH-RRH: 680 *J*
TPH-GRH: 370 *J*

**SL01A**
TPH-DRH: 2300 *J*
TPH-RRH: 500 *J*
TPH-GRH: 1000 *JT*

**SL02C**
TPH-DRH: 120 *U*
TPH-RRH: 81 *U*
TPH-GRH: 19 *J*

**SL02A**
TPH-DRH: 130 *U*
TPH-RRH: 81 *U*
TPH-GRH: 30 *U*

**SL03A**
TPH-DRH: 380 *J*
TPH-RRH: 91 *U*
TPH-GRH: 40 *U*

Gasco

Siltronic

Rhone Poulenc
(not shown)

Arkema

RM-7

FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

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**Map Features:**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**Map D4.2-5c**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Total Petroleum Hydrocarbons (µg/L)
River Mile 06 to 07

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# Peeper and Filtered Trident Samples (all µg/L)
# River Mile 07 to 08

RM-7

RM-8

Arkema

Willbridge

**W06A**
TPH-DRH: 26 *J*
TPH-RRH: 34 *U*

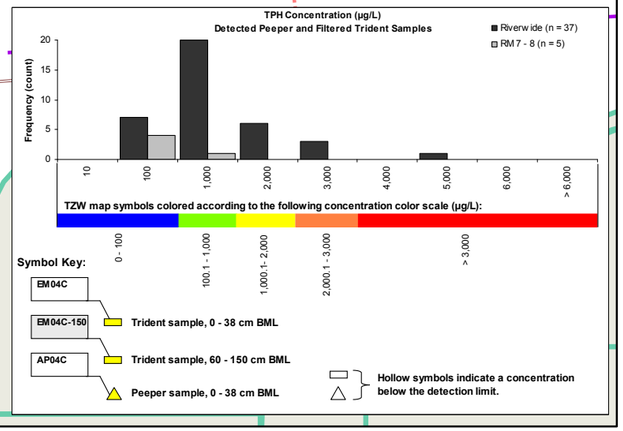
**W09A**
TPH-DRH: 37 *J*
TPH-RRH: 58 *U*

**W09C**
TPH-DRH: 150 *U*
TPH-RRH: 61 *J*

**W07C**
TPH-DRH: 37 *J*
TPH-RRH: 72 *U*

**W04C**
TPH-DRH: 110 *U*
TPH-RRH: 47 *U*

**W12A**
TPH-DRH: 290 *J*
TPH-RRH: 270 *U*




# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 07 to 08

RM-7

RM-8

Arkema

Willbridge

**W06A**
TPH-DRH: 22 *U*
TPH-RRH: 38 *U*
TPH-GRH: 13 *U*

**W09A**
TPH-DRH: 31 *U*
TPH-RRH: 49 *U*
TPH-GRH: 13 *U*

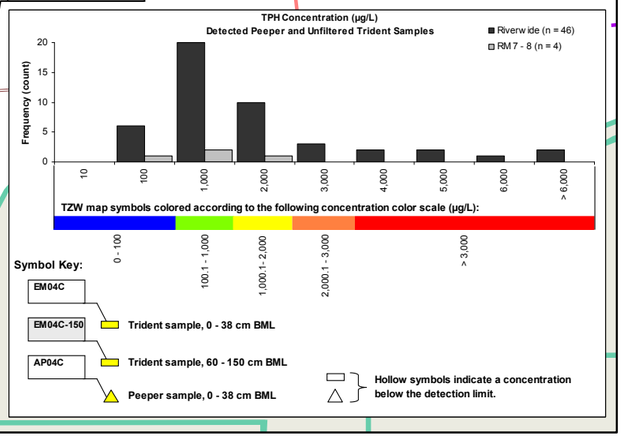
**W09C**
TPH-DRH: 150 *U*
TPH-RRH: 61 *J*
TPH-GRH: 13 *U*

**W07C**
TPH-DRH: 320 *J*
TPH-RRH: 300 *U*
TPH-GRH: 13 *U*

**R2W02**
TPH-DRH: 620 *J*
TPH-RRH: 410 *U*
TPH-GRH: 28 *J*

**W12A**
TPH-DRH: 500 *JT*
TPH-RRH: 540 *JT*
TPH-GRH: 16.5 *JT*

**W04C**
TPH-DRH: 110 *U*
TPH-RRH: 47 *U*
TPH-GRH: 13 *U*

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Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

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UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**Map D4.2-5d**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Total Petroleum Hydrocarbons (µg/L)
River Mile 07 to 08

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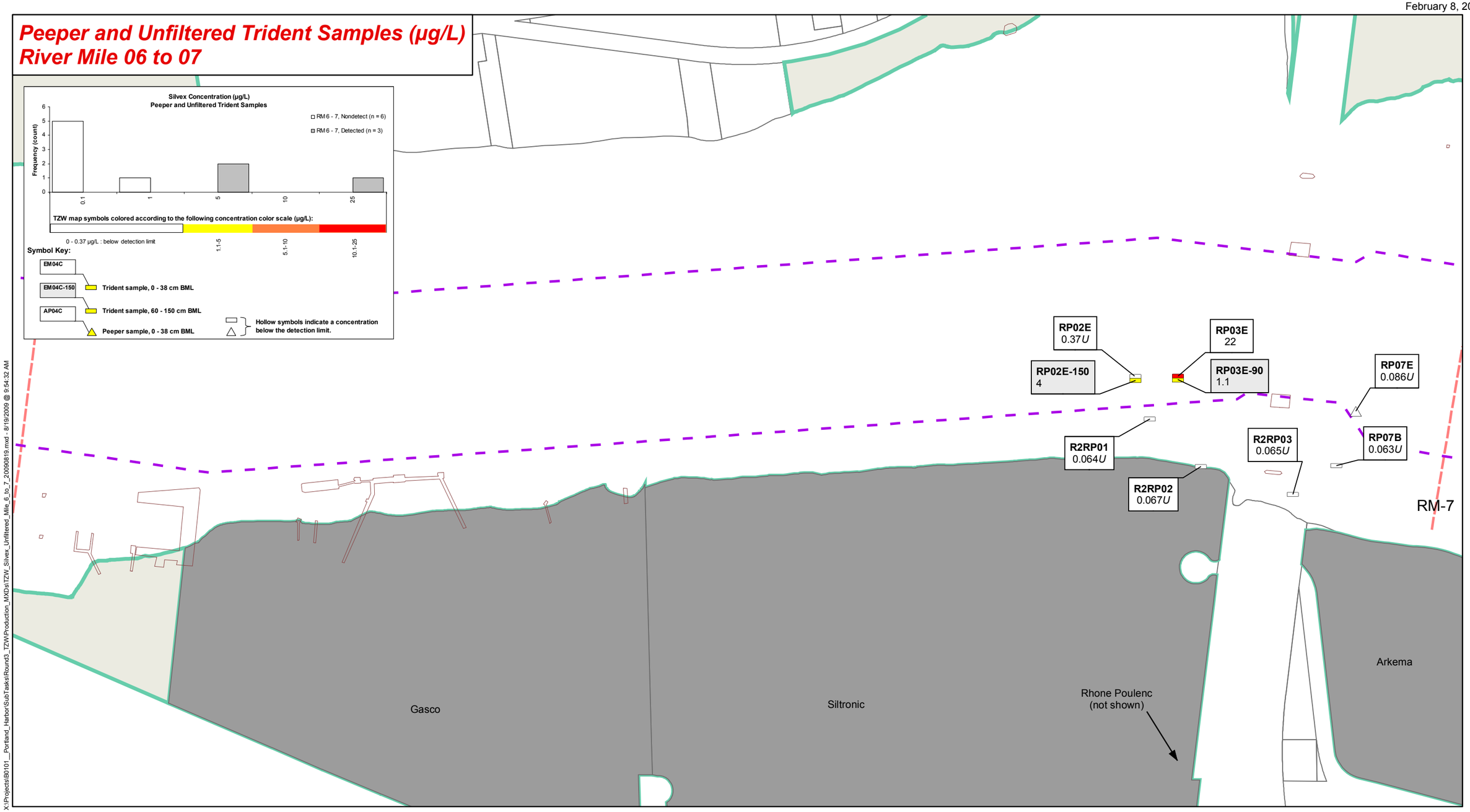
# Peeper and Unfiltered Trident Samples (µg/L)
# River Mile 06 to 07

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FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**PSt** Indicates sample collected during the GWPA Pilot Study by Trident sampler.
**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

Qualifiers:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

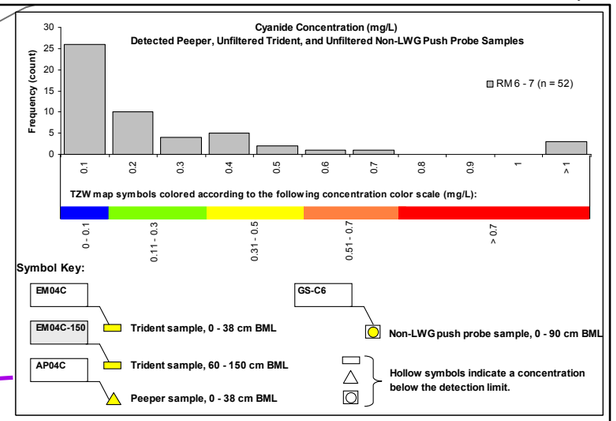
**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

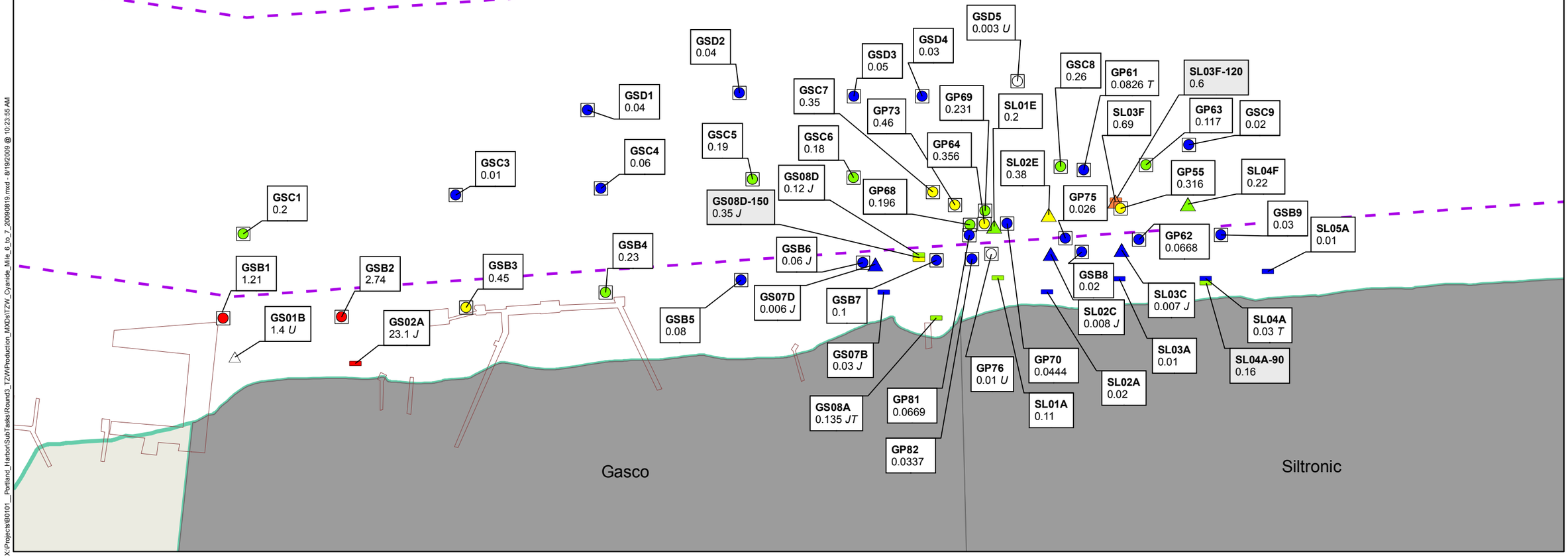
N

0 250 500 750 1,000 Feet

**Map D4.2-6**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Silvex (µg/L)
River Mile 06 to 07

# Peeper and Unfiltered Trident Samples (all mg/L)
# River Mile 06 to 07

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**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

0 100 200 300 400 Feet

FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**PSt** Indicates sample collected during the GWPA Pilot Study by Trident sampler.
**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

Qualifiers:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

**Map D4.2-7**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Cyanide (mg/L)
River Mile 06 to 07

# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 07 to 08

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**CP06C-PSp**
1 *U*

**CP07D**
95800

**CP08D-PSt**
10 *UJ*

**AP03D**
40 *U*

**CP06C-PSt**
10 *UJ*

**CP07D-150**
210000

**AP03D-150**
40 *U*

**R2AP02**
20000 *U*

**R2CP01**
1080 *T*

**CP08D-PSp**
1 *U*

**CP09D**
8 *U*

**AP02D**
189

**R2AP01**
0.4 *U*

**R2AP02-150**
40000 *U*

**CP10A-PSt**
10 *UJT*

**AP03A**
1060

**AP04C**
0.4 *U*

**CP06A**
105 *T*

**CP07B-PSt**
58200 *J*

**CP07B**
177000

**CP09A**
9460

**AP02A**
0.4 *UT*

**AP03A-150**
4000 *U*

**CP06A-150**
2890

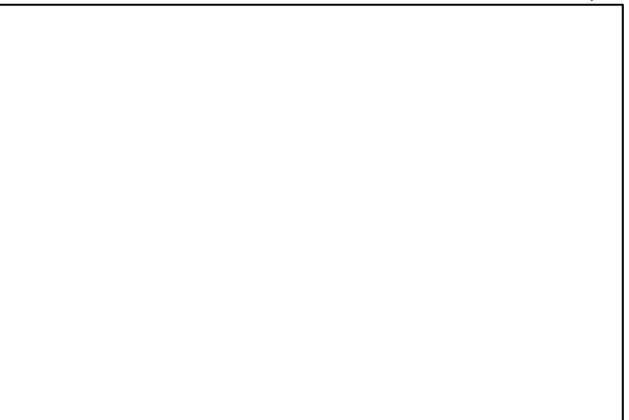
**CP07B-PS-60**
41600 *J*

**CP07B-150**
136000

**CP08B**
96100

**CP07A**
133000

Arkema




Map Features
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 100 200 300 400 Feet

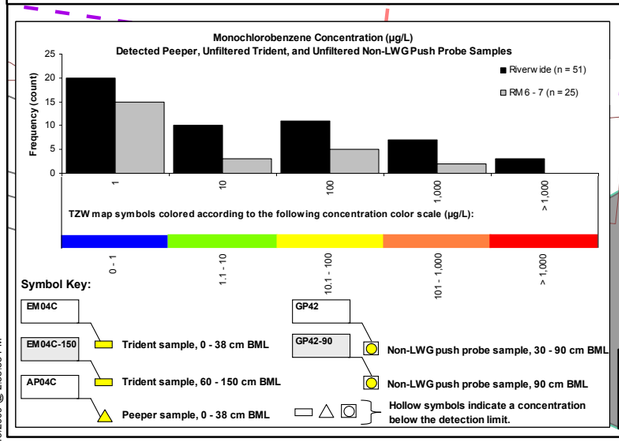
FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

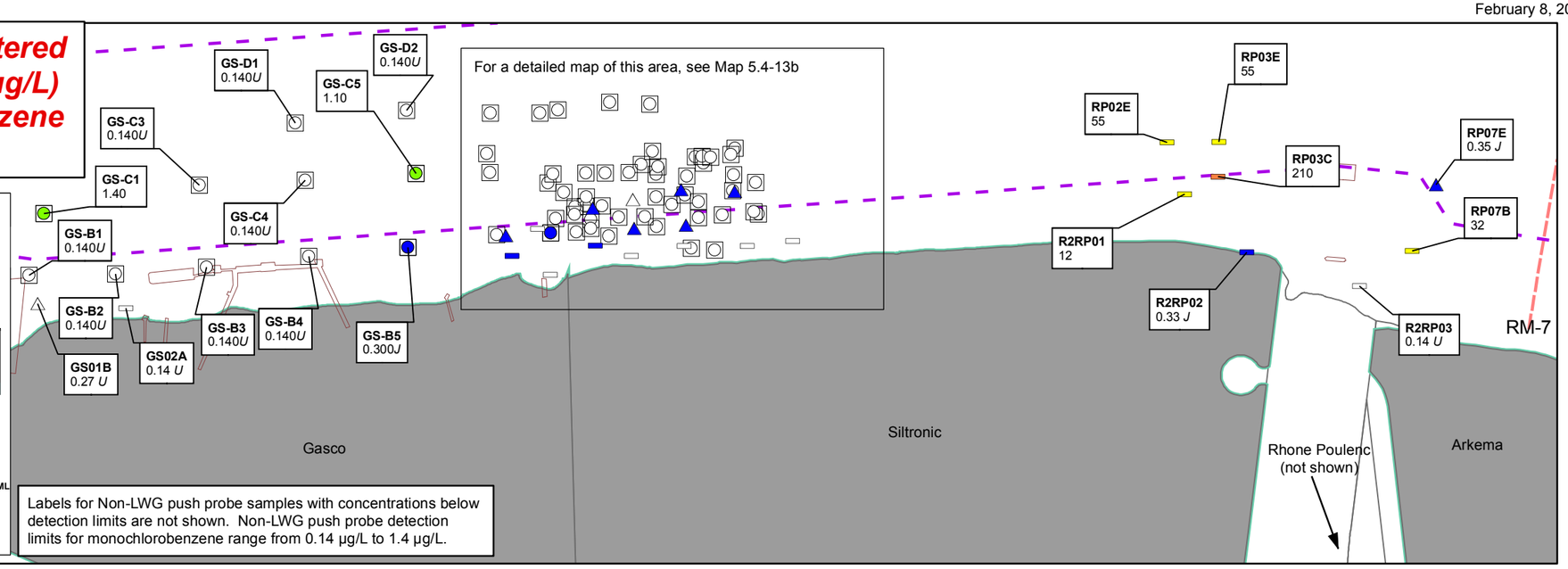
**PSt** Indicates sample collected during the GWPA Pilot Study by Trident sampler.
**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

Qualifiers:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

**Map D4.2-8**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Perchlorate (µg/L)
River Mile 07 to 08

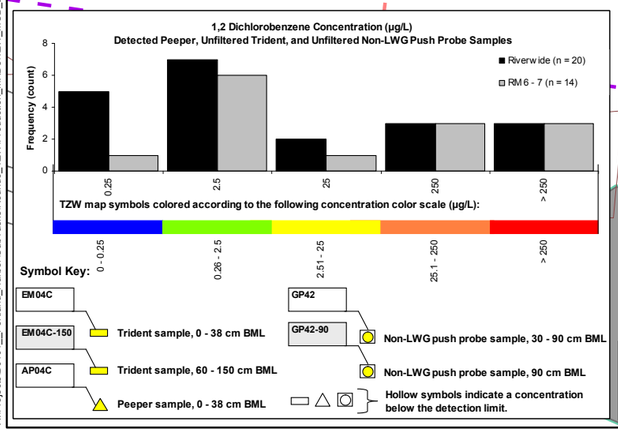
# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07 - Monochlorobenzene Shallow Samples

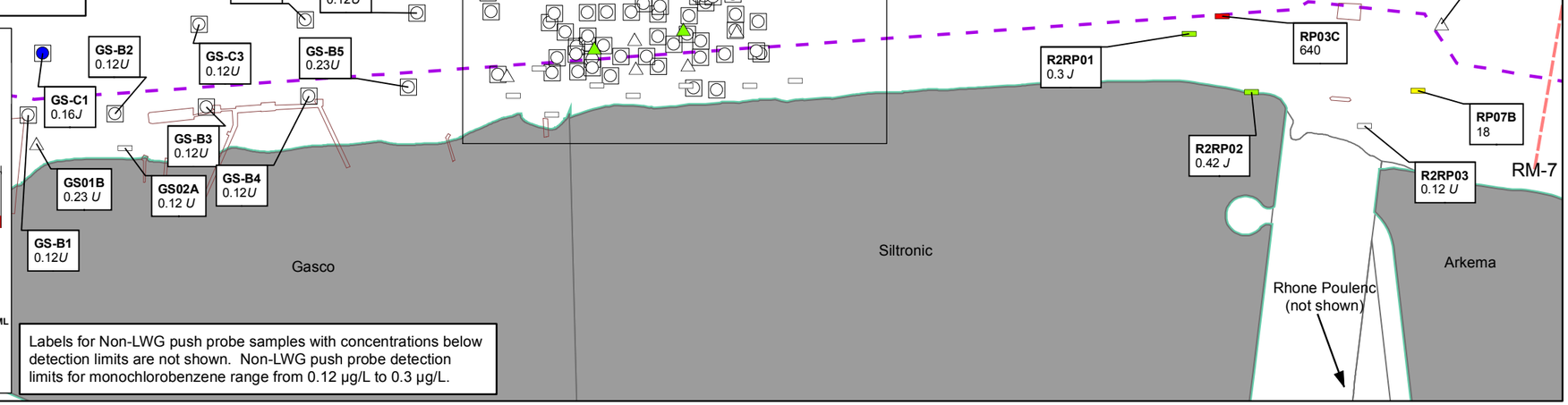



Labels for Non-LWG push probe samples with concentrations below detection limits are not shown. Non-LWG push probe detection limits for monochlorobenzene range from 0.14 µg/L to 1.4 µg/L.

# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07 - 1,2-Dichlorobenzene Shallow Samples




Labels for Non-LWG push probe samples with concentrations below detection limits are not shown. Non-LWG push probe detection limits for monochlorobenzene range from 0.12 µg/L to 0.3 µg/L.

FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

Qualifiers:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

Map Features
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**Map D4.2-9a**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Monochlorobenzene (µg/L) and 1,2-Dichlorobenzene (µg/L)
River Mile 06 to 07, Shallow Samples

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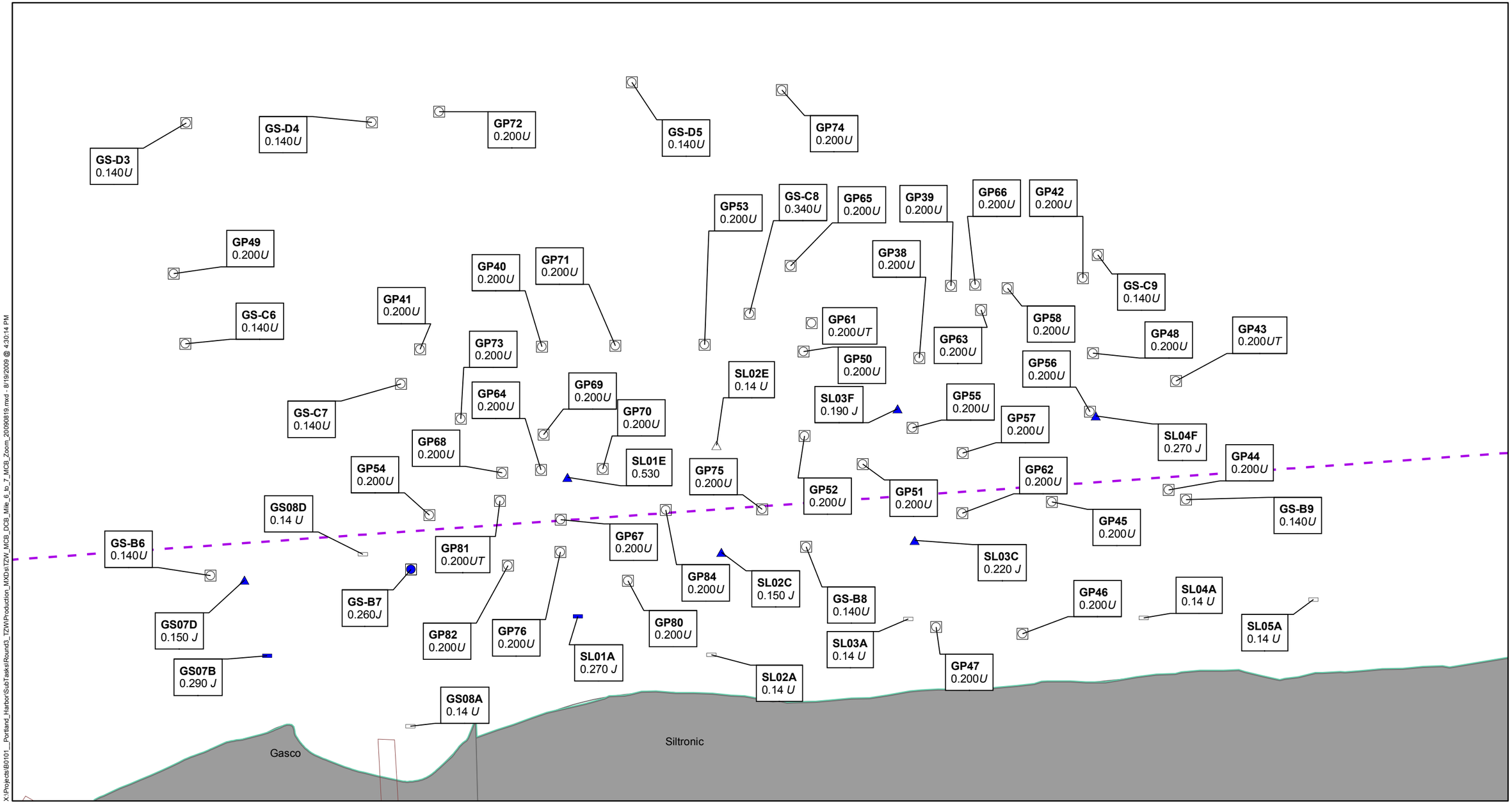


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FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

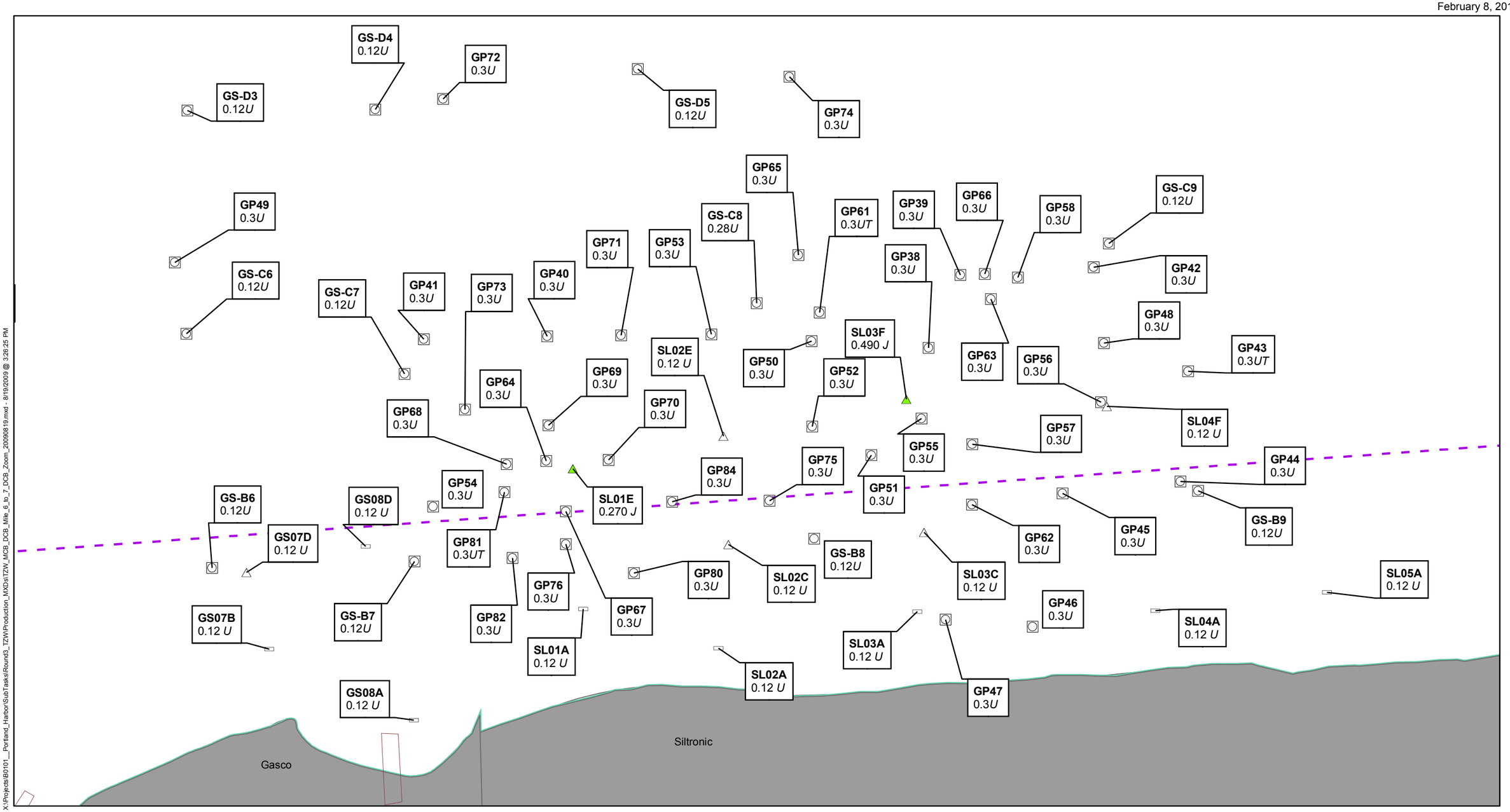
Qualifiers:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 310 620 930 1,240 Feet

**Map D4.2-9b**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Monochlorobenzene (µg/L)
River Mile 06 to 07, Shallow Zoom

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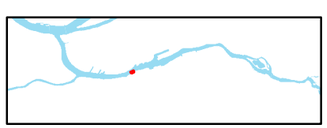
FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos



Qualifiers:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

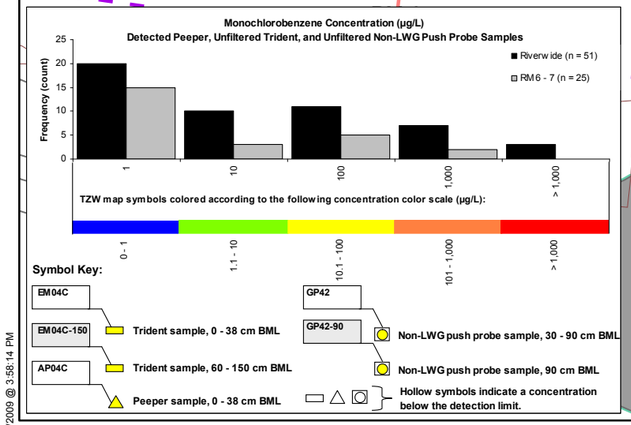
Map Features
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland Sites (2008)
- Waterfront Taxlots

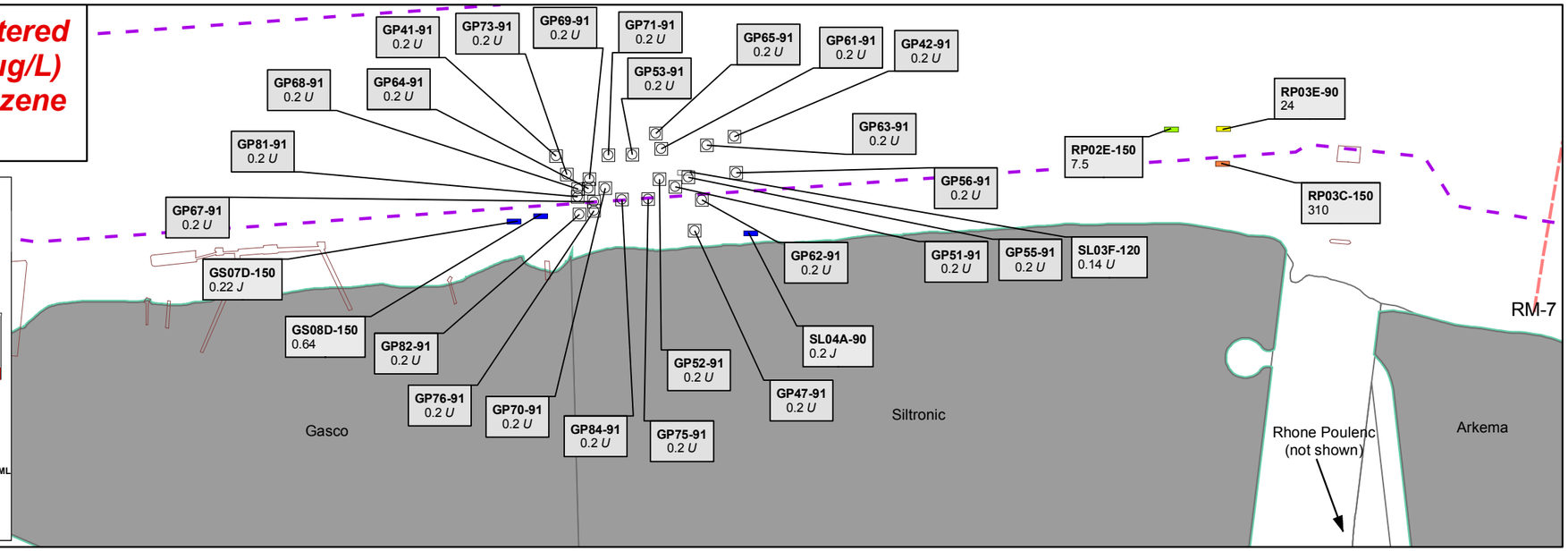
N

0 60 120 180 240 Feet

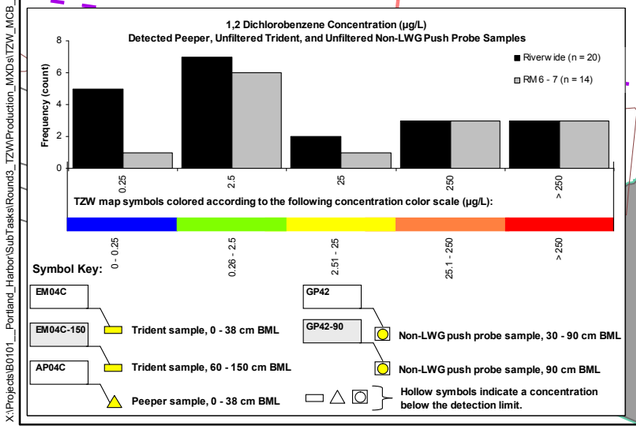
**Map D4.2-9c**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
1,2-Dichlorobenzene (µg/L)
River Mile 06 to 07, Shallow Zoom

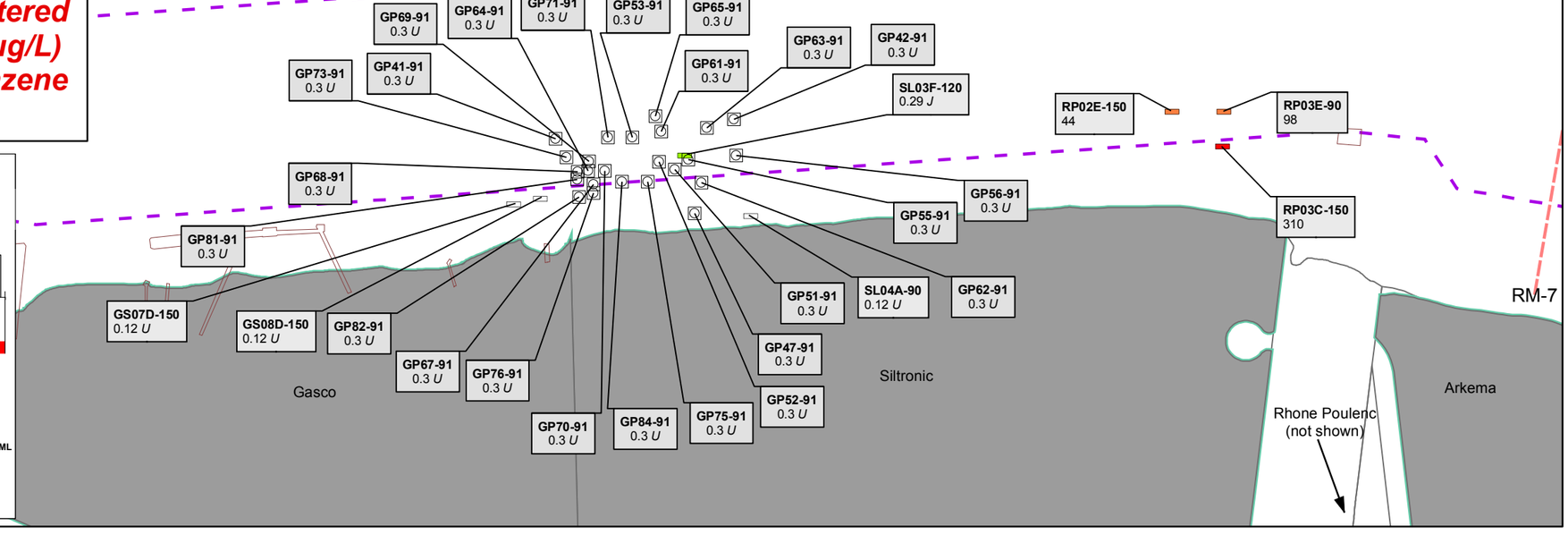
# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07 - Monochlorobenzene Deep Samples



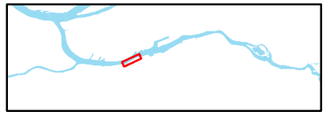




# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07 - 1,2-Dichlorobenzene Deep Samples




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos



Qualifiers:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

Map Features
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**Map D4.2-9d**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Monochlorobenzene (µg/L) and 1,2-Dichlorobenzene (µg/L)
River Mile 06 to 07, Deep Samples

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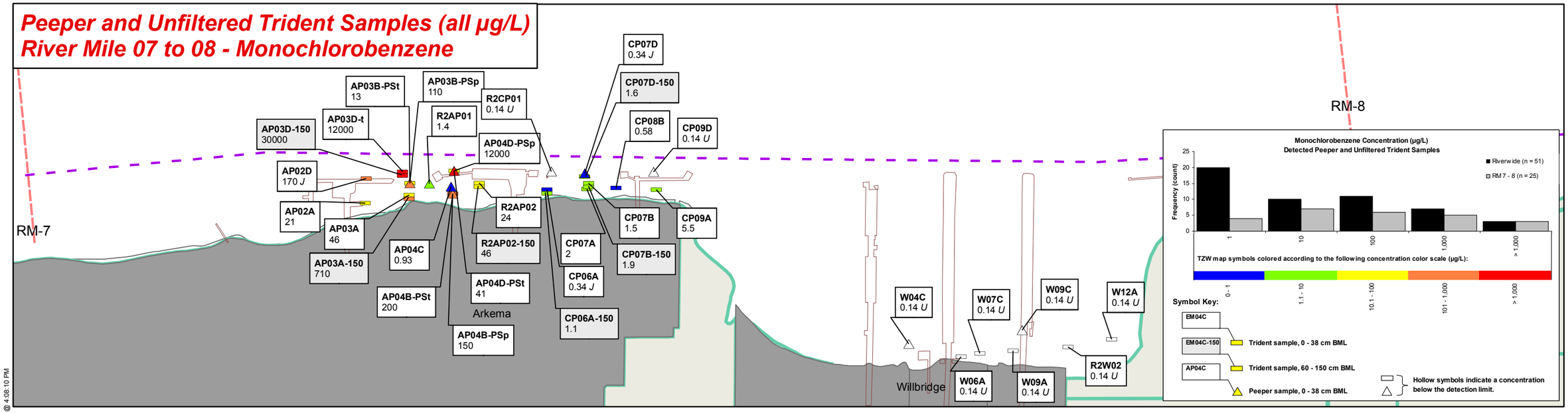
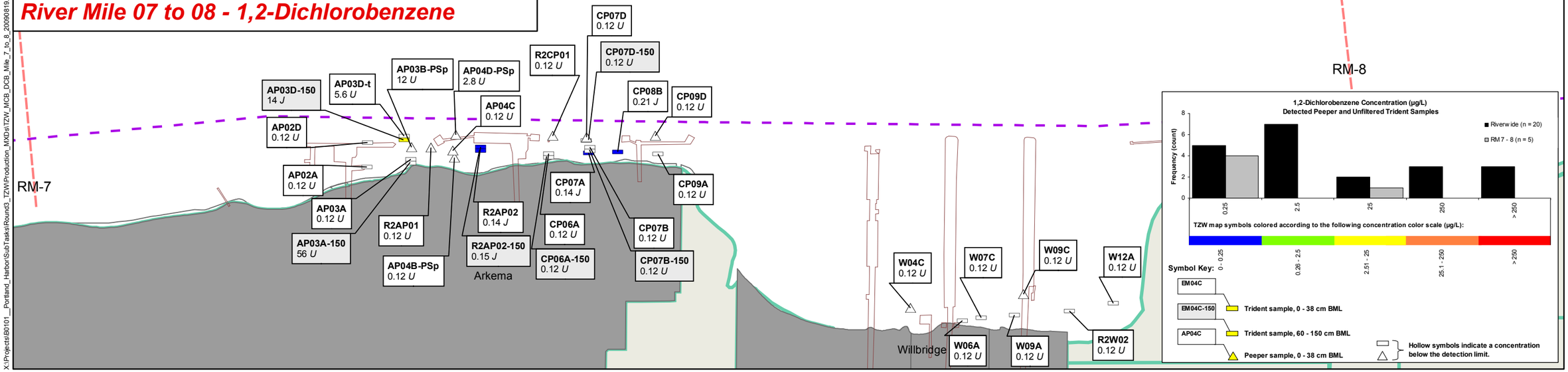
# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 07 to 08 - Monochlorobenzene




# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 07 to 08 - 1,2-Dichlorobenzene




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**PSt** Indicates sample collected during the GWPA Pilot Study by Trident sampler.
**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

Qualifiers:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

**Map D4.2-9e**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Monochlorobenzene (µg/L) and 1,2-Dichlorobenzene (µg/L)
River Mile 07 to 08

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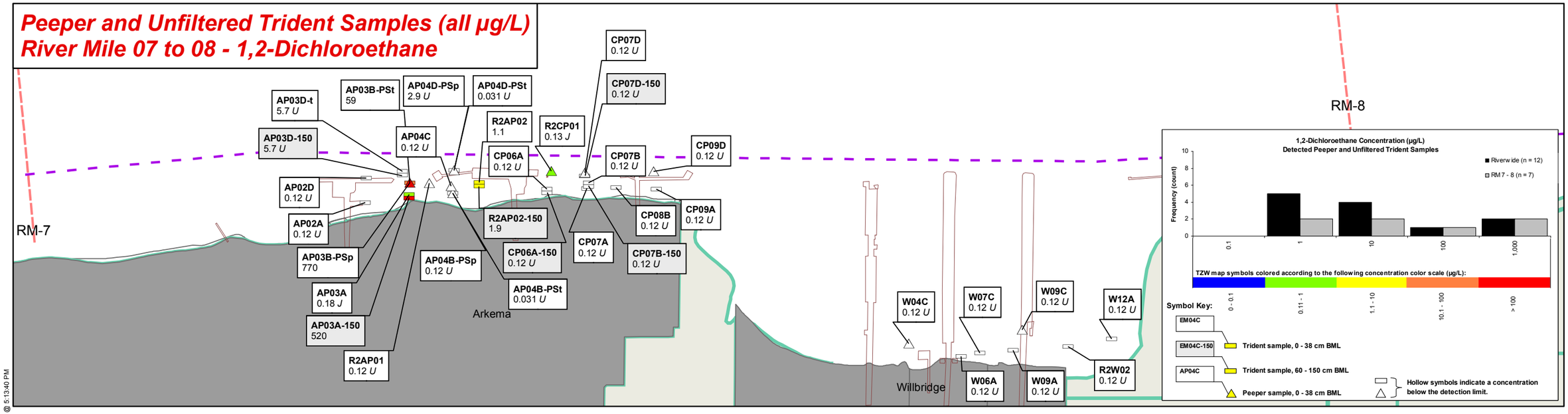
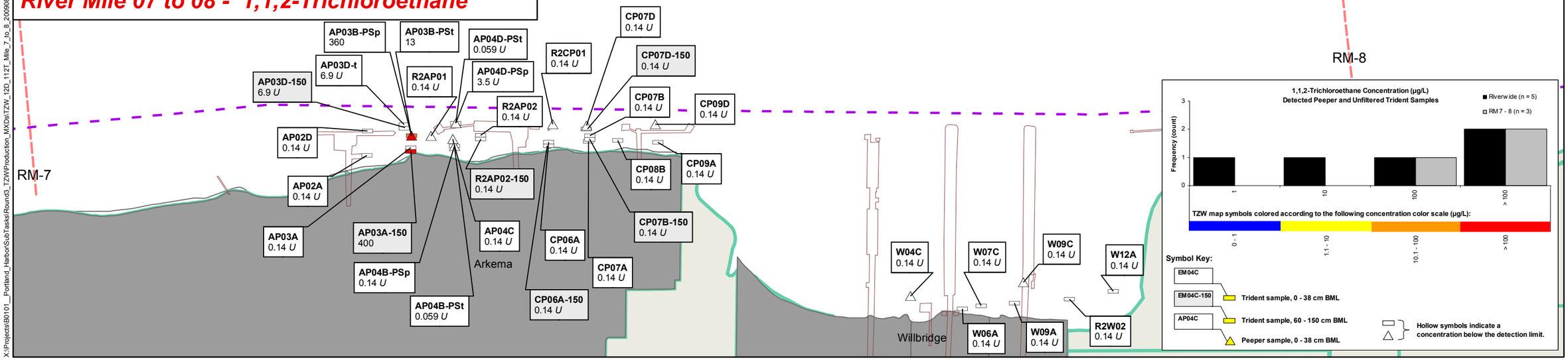
# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 07 to 08 - 1,2-Dichloroethane




# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 07 to 08 - 1,1,2-Trichloroethane

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FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

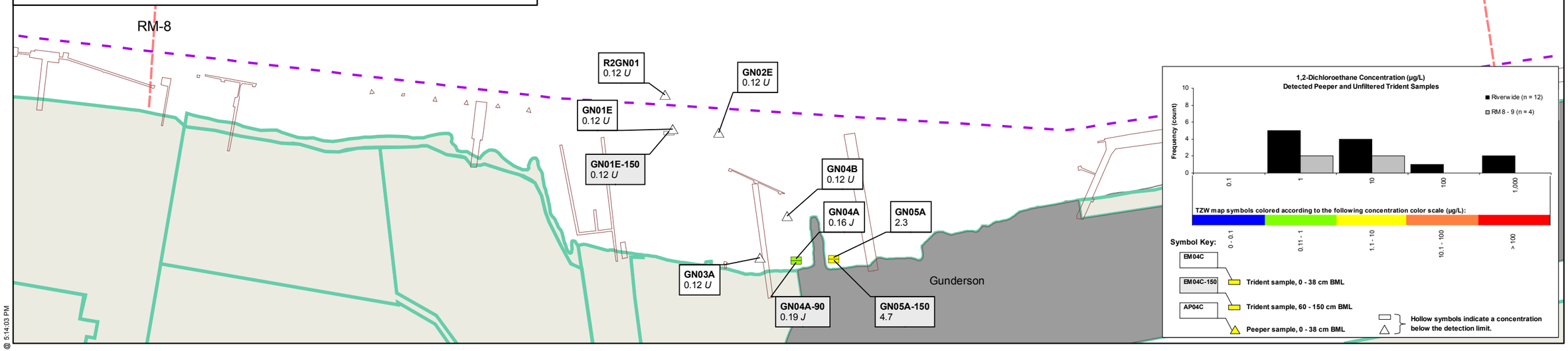
0 250 500 750 1,000 Feet

**PSt** Indicates sample collected during the GWPA Pilot Study by Trident sampler.
**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

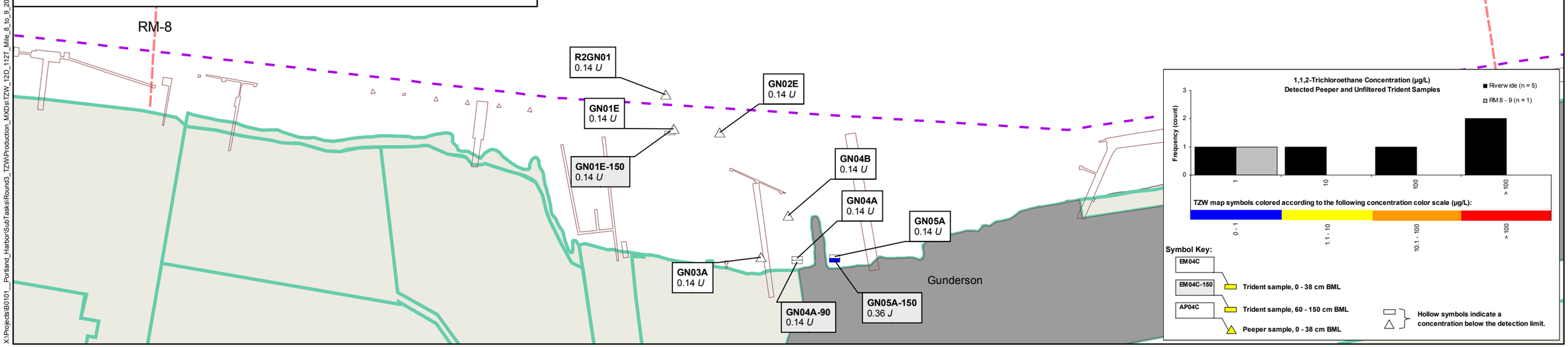
Qualifiers:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

**Map D4.2-10a**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
1,2-Dichloroethane (µg/L) and 1,1,2-Trichloroethane (µg/L)
River Mile 07 to 08

# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 08 to 09 - 1,2-Dichloroethane




# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 08 to 09 - 1,1,2-Trichloroethane

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FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

Tabular Results Notes:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

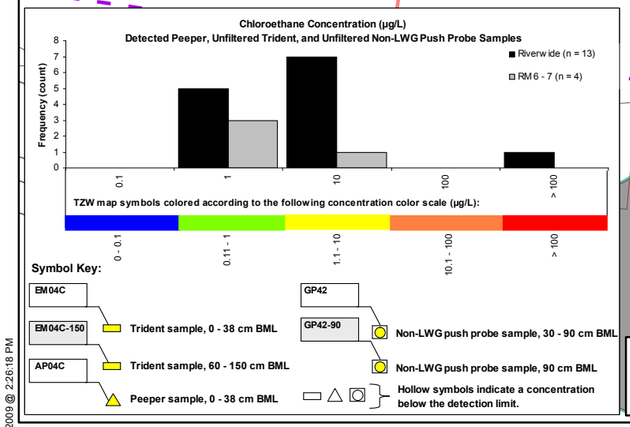
**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland Sites (2008)
- Waterfront Taxlots

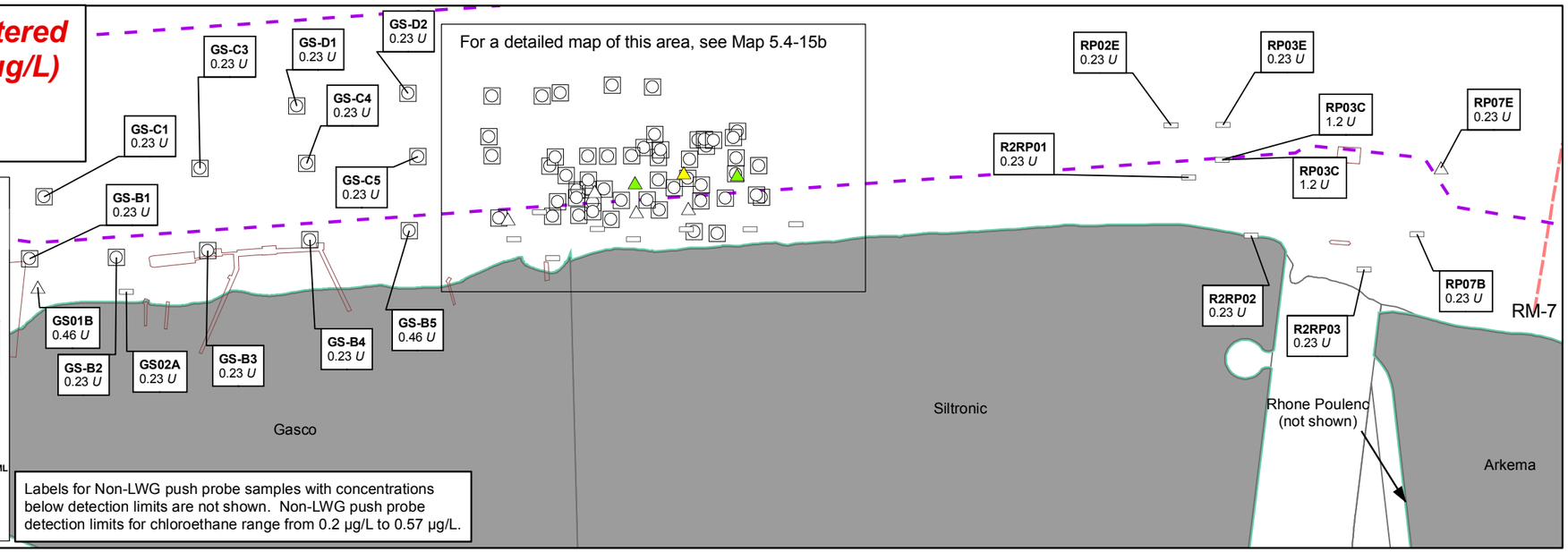
N

0 250 500 750 1,000 Feet

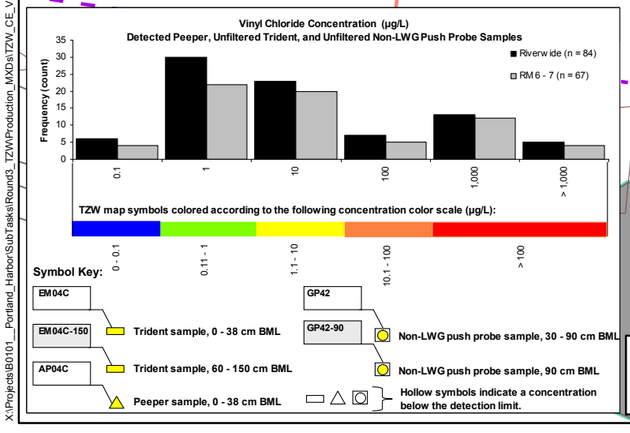
**Map D4.2-10b**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
1,2-Dichloroethane (µg/L) and 1,1,2-Trichloroethane (µg/L)
River Mile 08 to 09

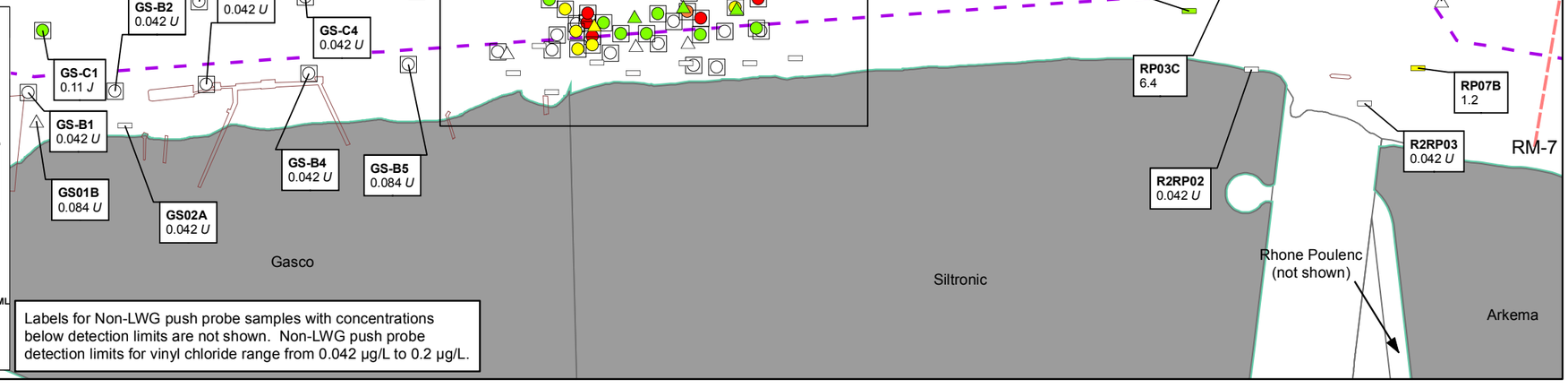
# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07 - Chloroethane Shallow Samples




# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07 - Vinyl Chloride Shallow Samples




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

Qualifiers:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

Map Features
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**Map D4.2-11a**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Chloroethane (µg/L) and Vinyl Chloride (µg/L)
River Mile 06 to 07, Shallow Samples

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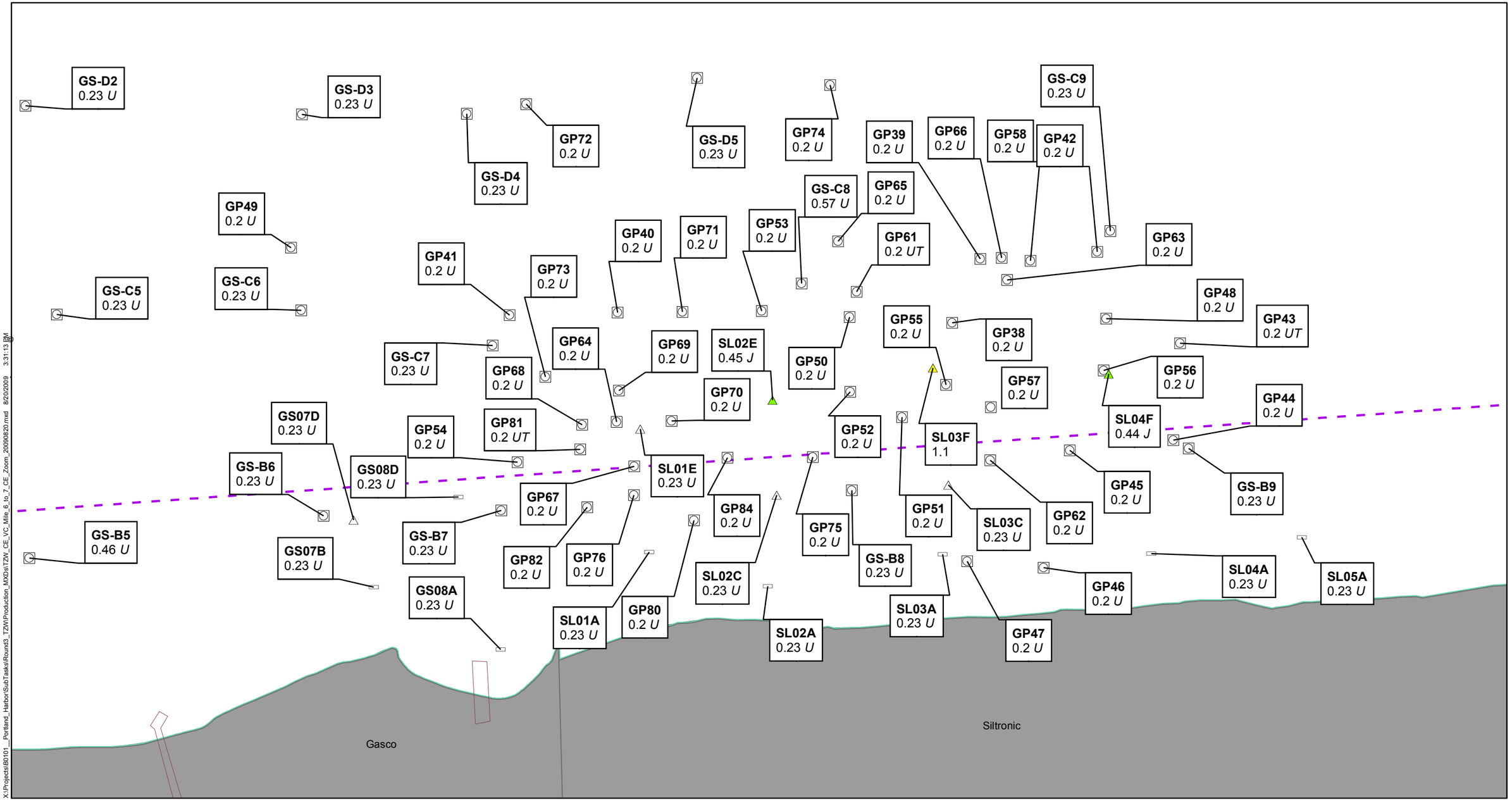


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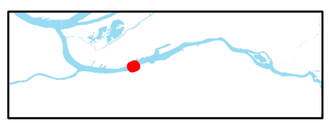
FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 80 160 240 320 Feet



**PSt** Indicates sample collected during the GWPA Pilot Study by Trident sampler.
**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

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**Map D4.2-11b**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Chloroethane (µg/L)
River Mile 06 to 07, Shallow Zoom

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GS-D3 0.042 *U*
GS-D4 0.042 *U*
GP72 0.2 *U*
GS-D5 0.042 *U*
GP74 0.43
GP49 0.2 *U*
GS-C6 0.042 *U*
GP41 0.2 *U*
GS-C7 0.12 *J*
GP73 1.22
GP40 0.2 *U*
GP71 0.2 *U*
GP69 540
GP68 0.2 *U*
GP65 1640
GS-C8 780
GP53 8.27
GP61 1.9 *T*
GP39 390
GP66 2.51
GP58 7.92
GS-C9 0.05 *J*
GP38 1090
GP63 114
GP42 7.92
GP50 0.2 *U*
GP52 0.48
SL03F 0.16 *J*
GP48 0.47
GP56 2.19
GP43 115 *T*
GP55 16
SL04F 0.32 *J*
SL01E 1.4
GP70 0.88
SL02E 0.21 *J*
GP54 0.2 *U*
GP81 1.57 *T*
GP57 139
GP44 0.79
GS07D 0.042 *U*
GS08D 0.042 *U*
GP84 0.65
GP75 0.59
GP51 0.2 *U*
GP45 0.2 *U*
GS-B9 0.042 *U*
GS-B6 0.042 *U*
GP64 625
GP76 1.69
GP62 0.99
GP80 0.2 *U*
SL02C 0.042 *U*
GS-B8 0.042 *U*
SL03C 0.042 *U*
SL04A 0.042 *U*
SL05A 0.042 *U*
GS07B 0.042 *U*
GS-B7 0.042 *U*
GP82 1.51
GP67 4300
GS08A 0.042 *U*
SL01A 0.042 *U*
SL02A 0.042 *U*
SL03A 0.042 *U*
GP47 0.2 *U*
GP46 0.2 *U*

Gasco
Siltronic

FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 90 180 270 360 Feet

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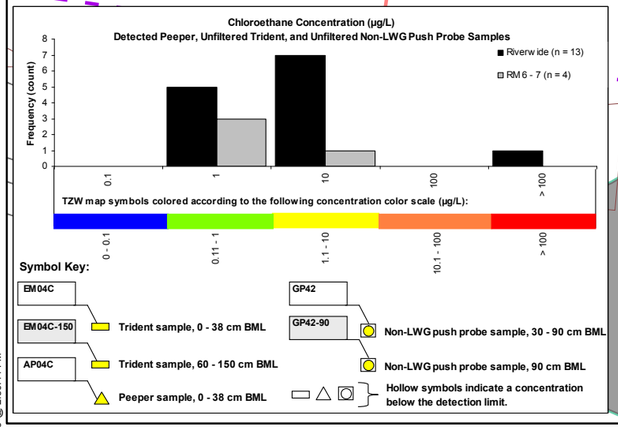
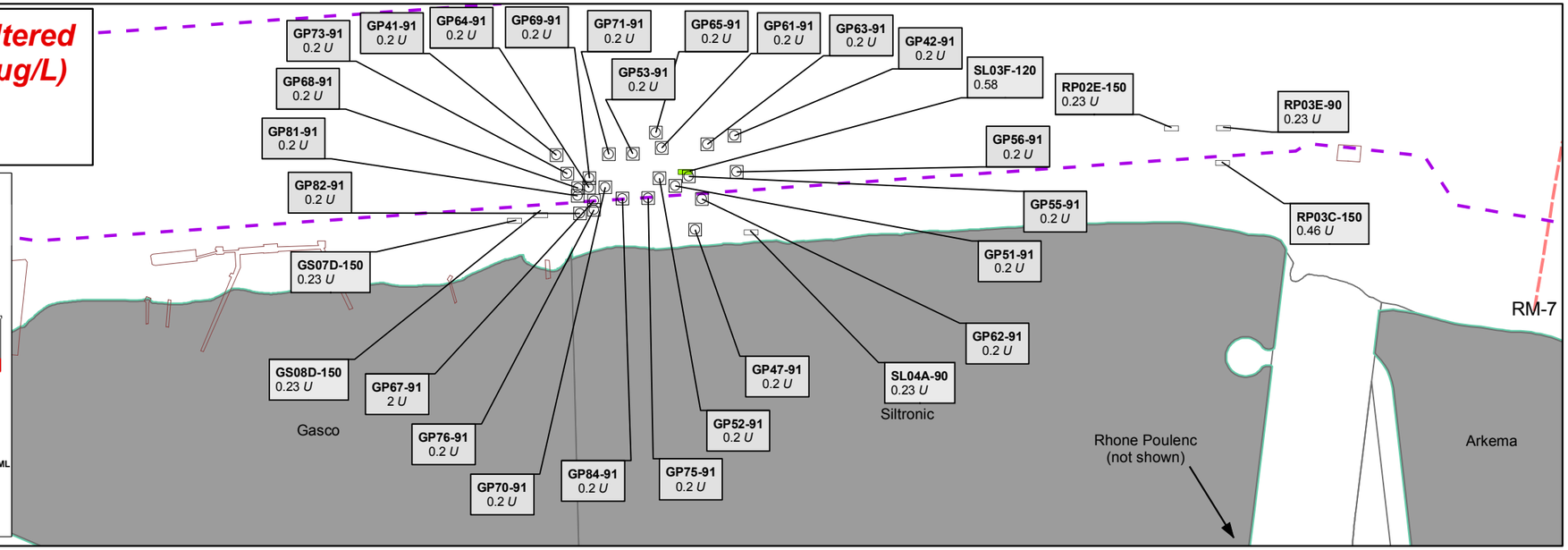
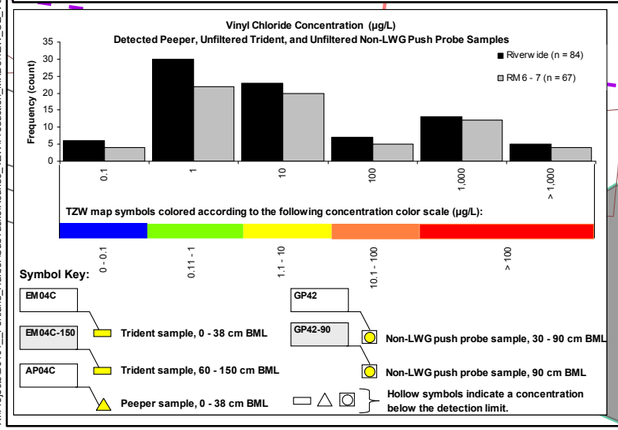
**Map D4.2-11c**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Vinyl Chloride (µg/L)
River Mile 06 to 07, Shallow Zoom

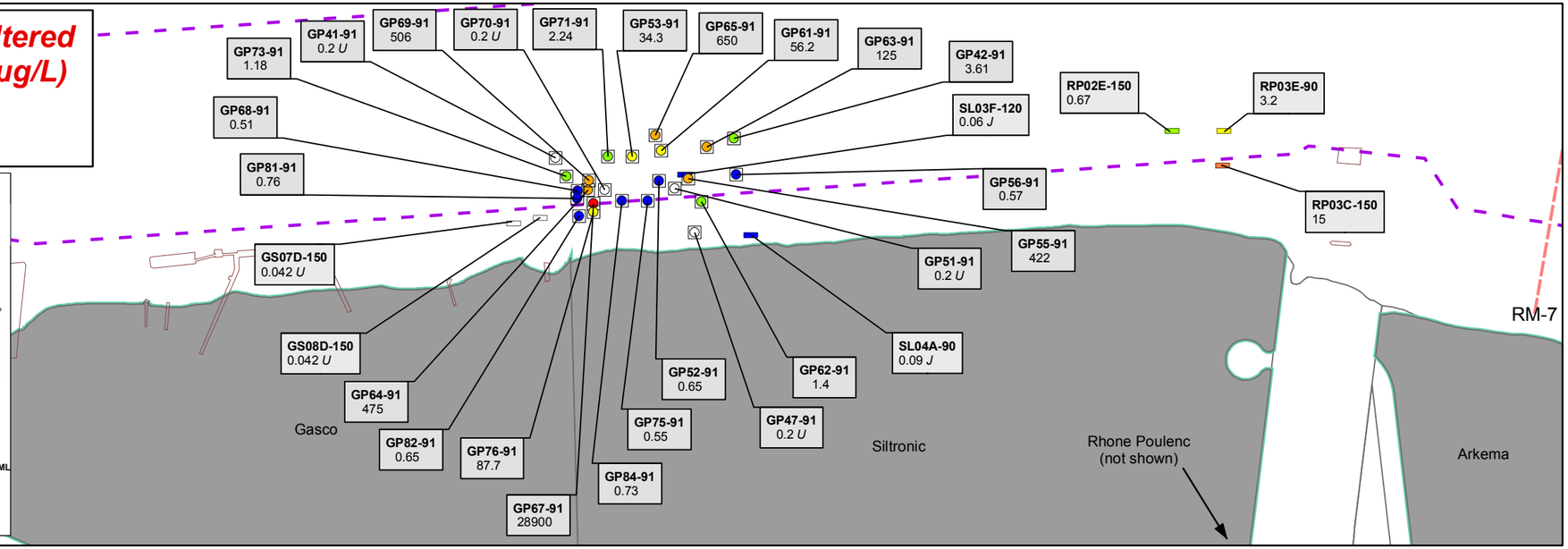
# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07 - Chloroethane Deep Samples




# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07 - Vinyl Chloride Deep Samples




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

Qualifiers:
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A Total value based on a limited number of analytes.

Map Features
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**Map D4.2-11d**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Chloroethane (µg/L) and Vinyl Chloride (µg/L)
River Mile 06 to 07, Deep Samples

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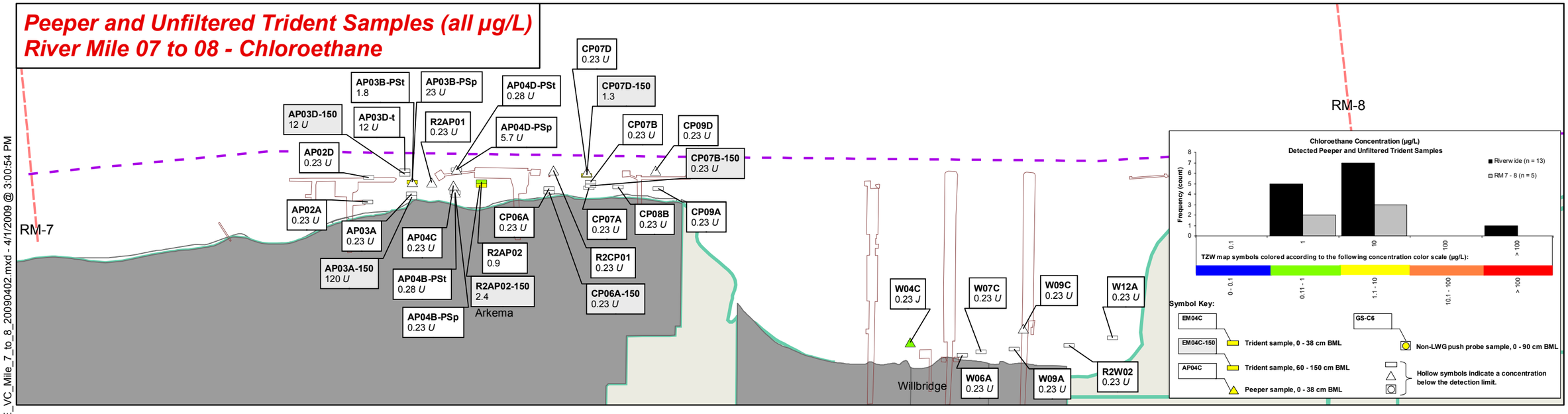
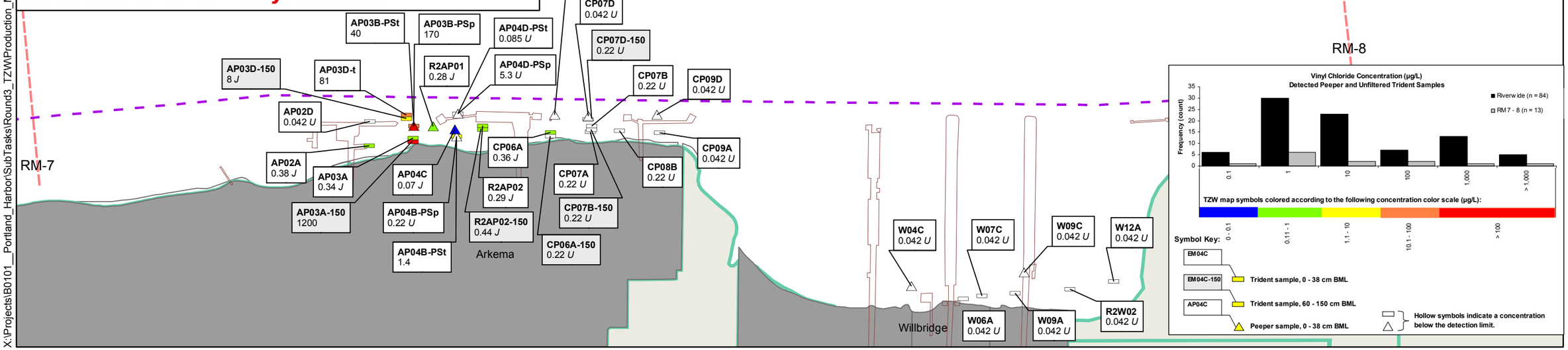
# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 07 to 08 - Chloroethane




# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 07 to 08 - Vinyl Chloride




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

0 250 500 750 1,000 Feet

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**Map D4.2-11e**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Chloroethane (µg/L) and Vinyl Chloride (µg/L)
River Mile 07 to 08

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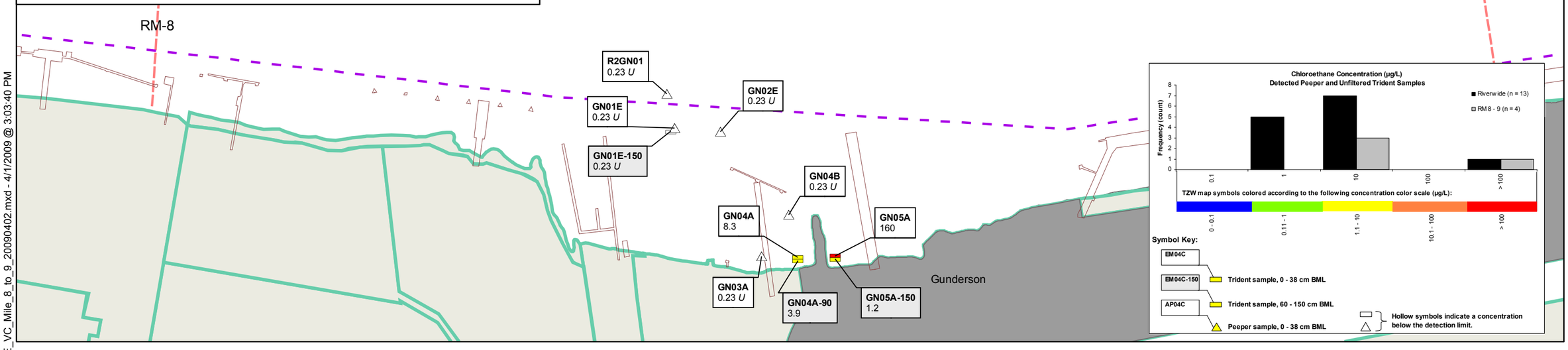
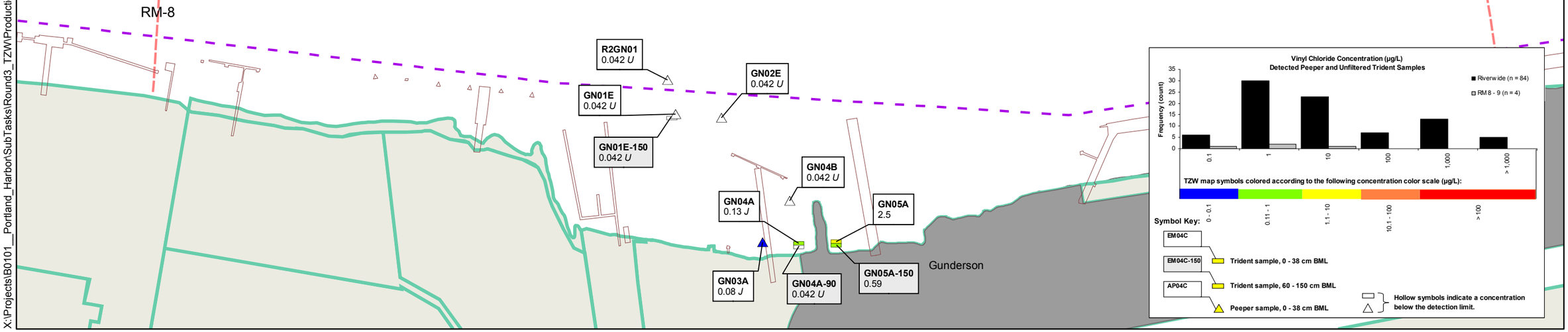
# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 08 to 09 - Chloroethane




# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 08 to 09 - Vinyl Chloride

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FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

0 250 500 750 1,000 Feet

Tabular Results Notes:
T Mathematically derived value.
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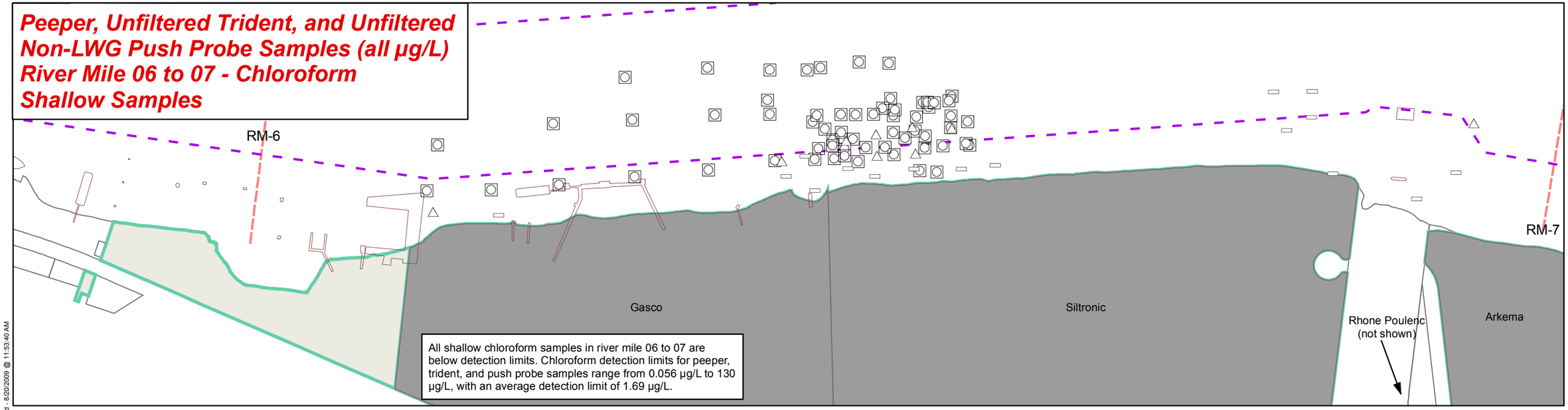
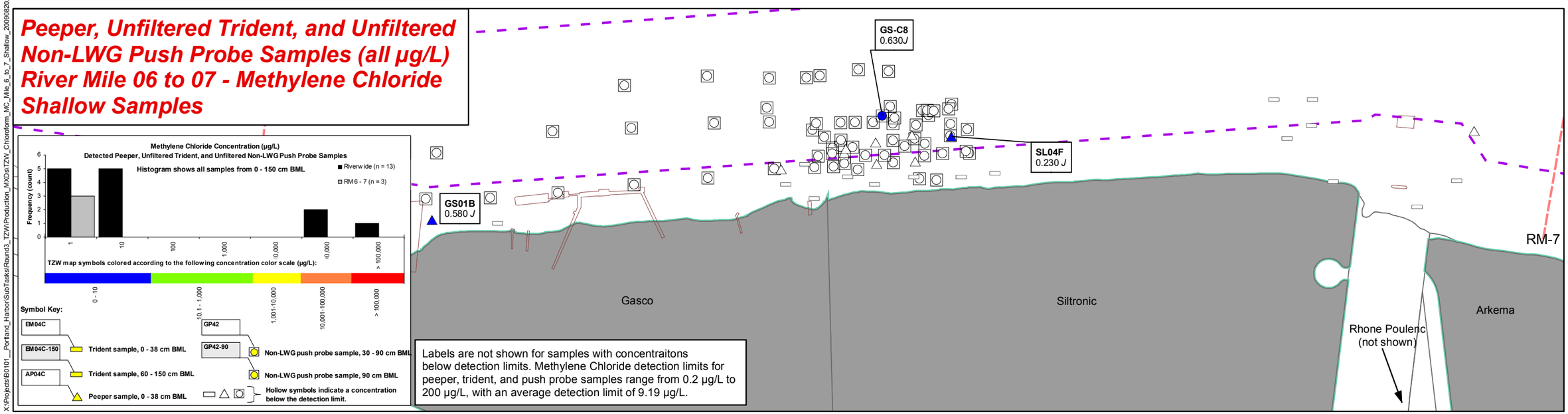
A Total value based on a limited number of analytes.

**Map D4.2-11f**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Chloroethane (µg/L) and Vinyl Chloride (µg/L)
River Mile 08 to 09

# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07 - Chloroform Shallow Samples




# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07 - Methylene Chloride Shallow Samples







FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

Qualifiers:
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UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

Map Features
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

0 250 500 750 1,000 Feet

**Map D4.2-12a**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Chloroform (µg/L) and Methylene Chloride (µg/L)
River Mile 06 to 07, Shallow Samples

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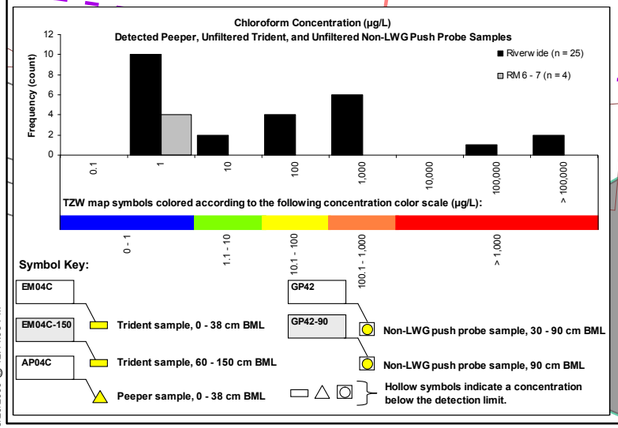
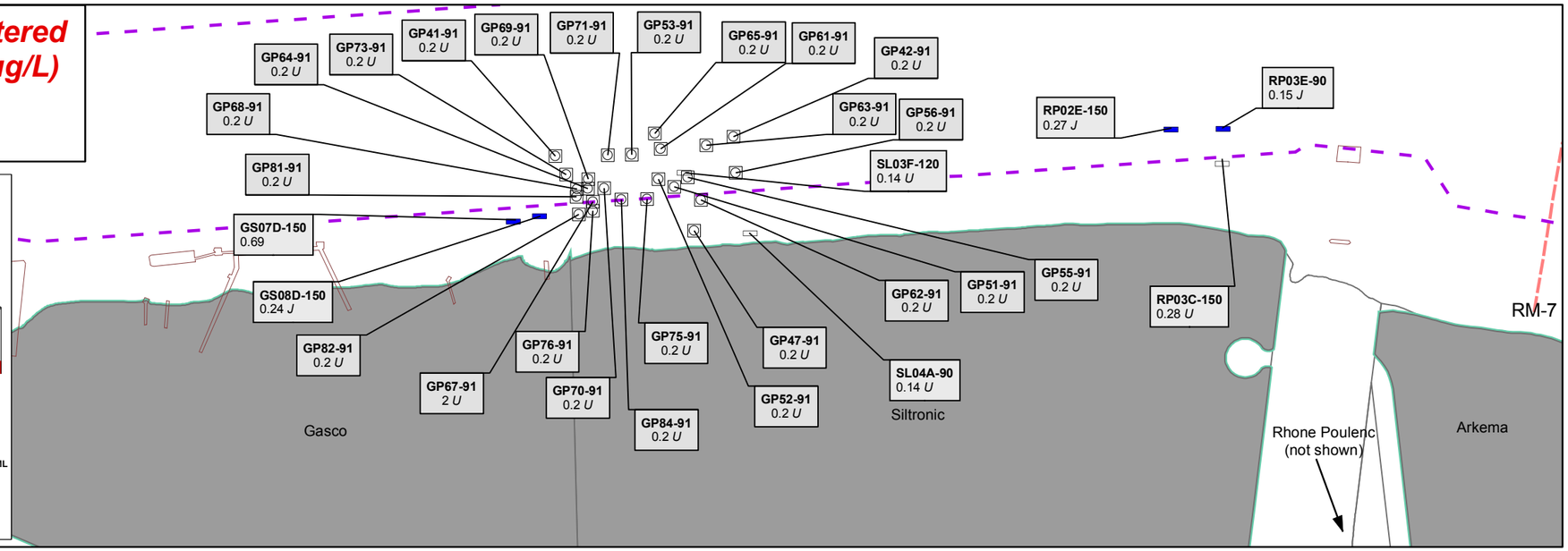
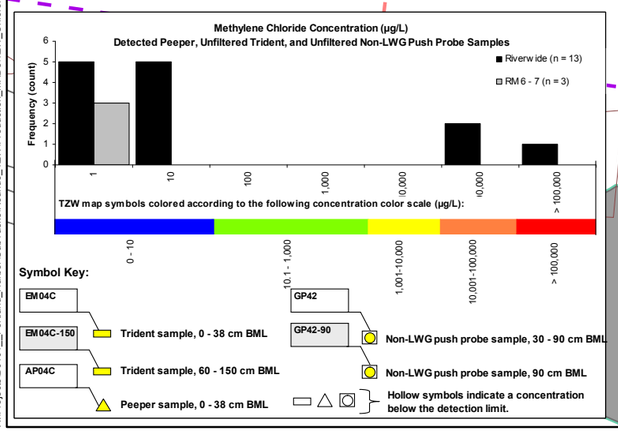
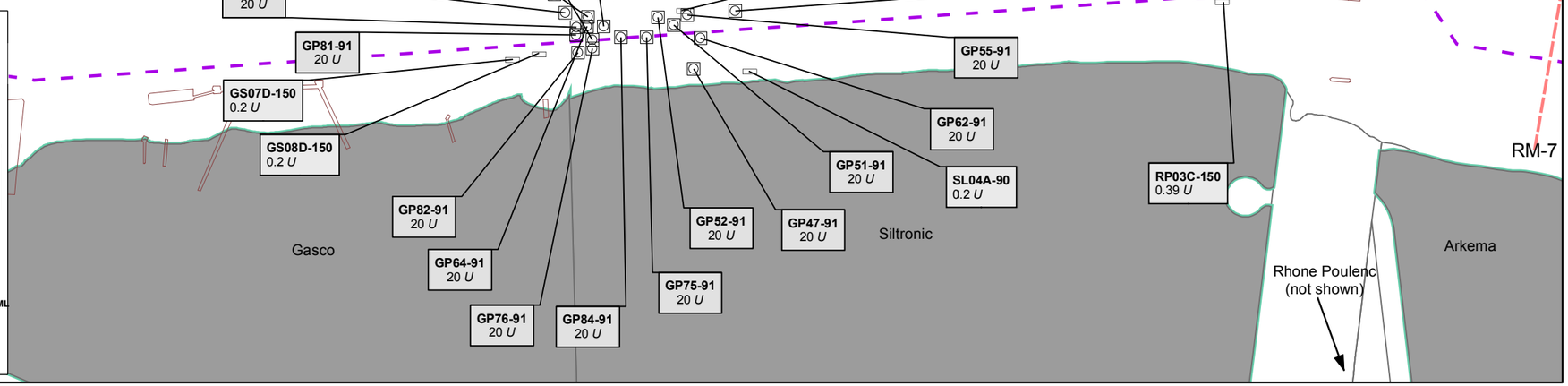
# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07 - Chloroform Deep Samples




# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07 - Methylene Chloride Deep Samples




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

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A Total value based on a limited number of analytes.

Map Features
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**Map D4.2-12b**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Chloroform (µg/L) and Methylene Chloride (µg/L)
River Mile 06 to 07, Deep Samples

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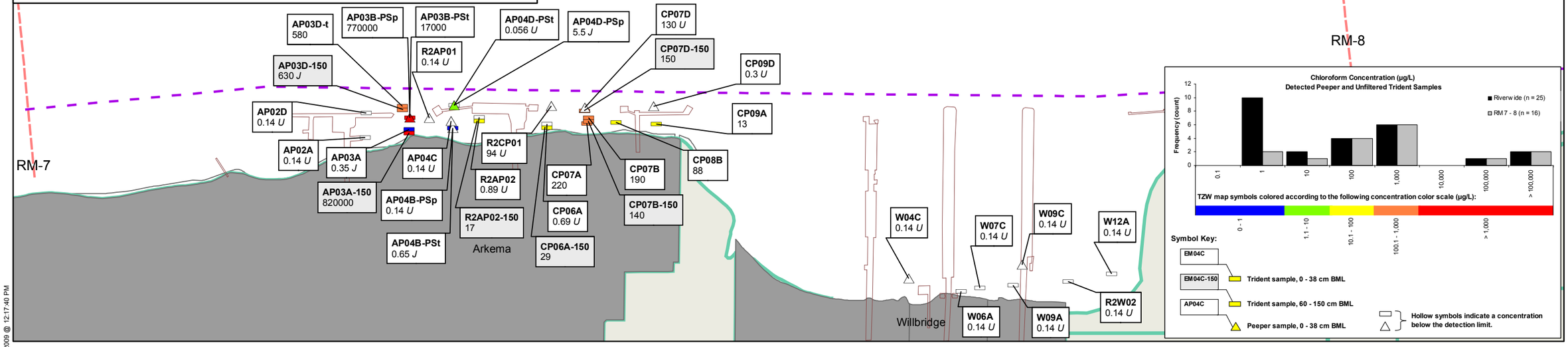
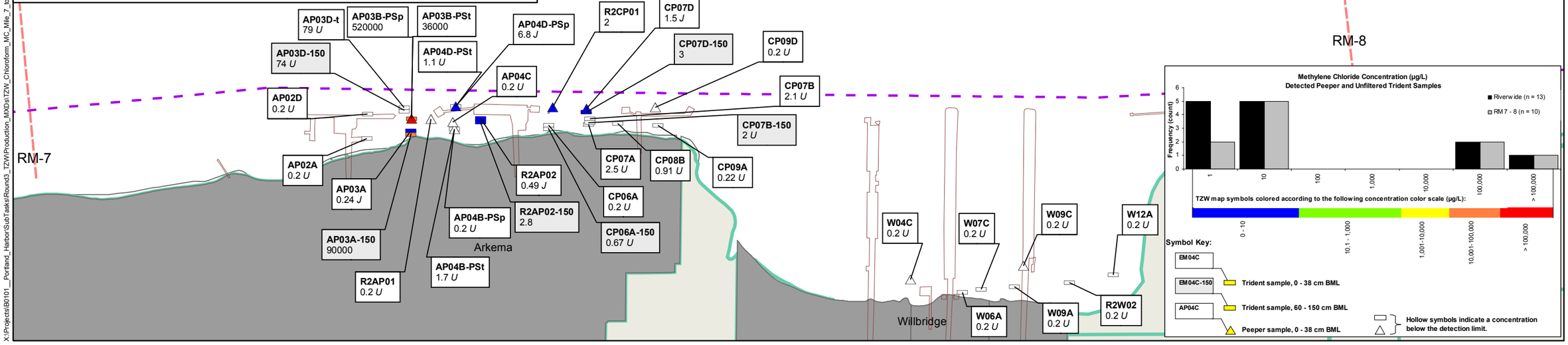
# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 07 to 08 - Chloroform




# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 07 to 08 - Methylene Chloride




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

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**Map D4.2-12c**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Chloroform (µg/L) and Methylene Chloride (µg/L)
River Mile 07 to 08

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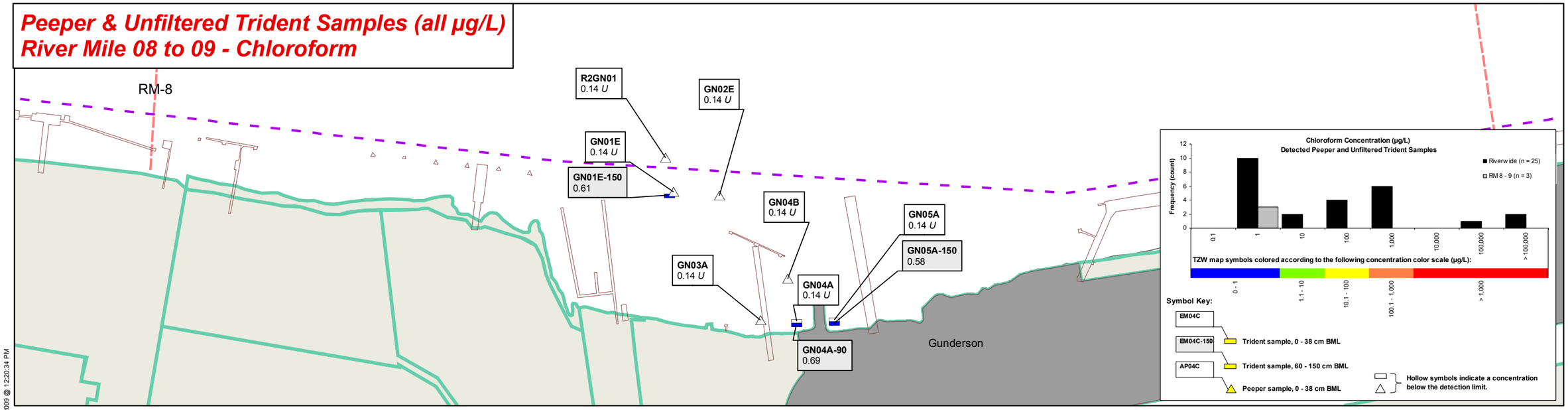
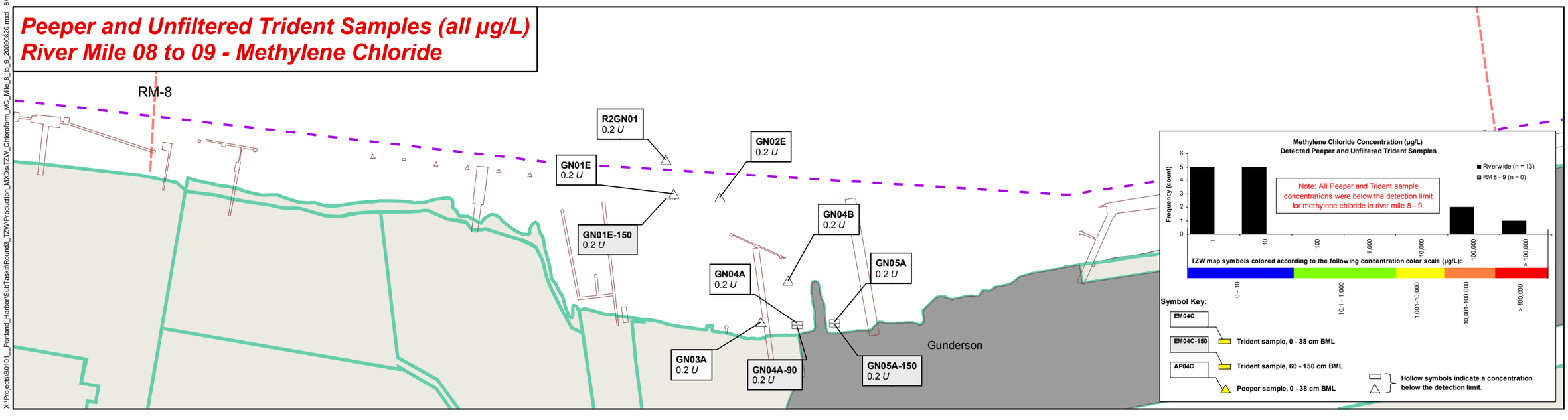
# Peeper & Unfiltered Trident Samples (all µg/L)
# River Mile 08 to 09 - Chloroform




# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 08 to 09 - Methylene Chloride

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FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

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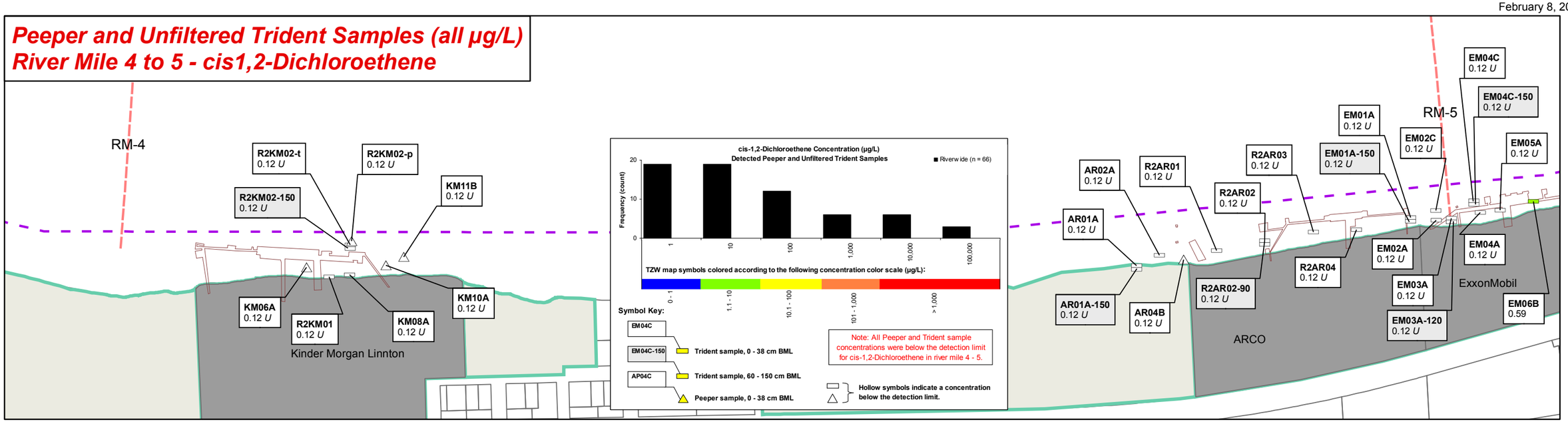
**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

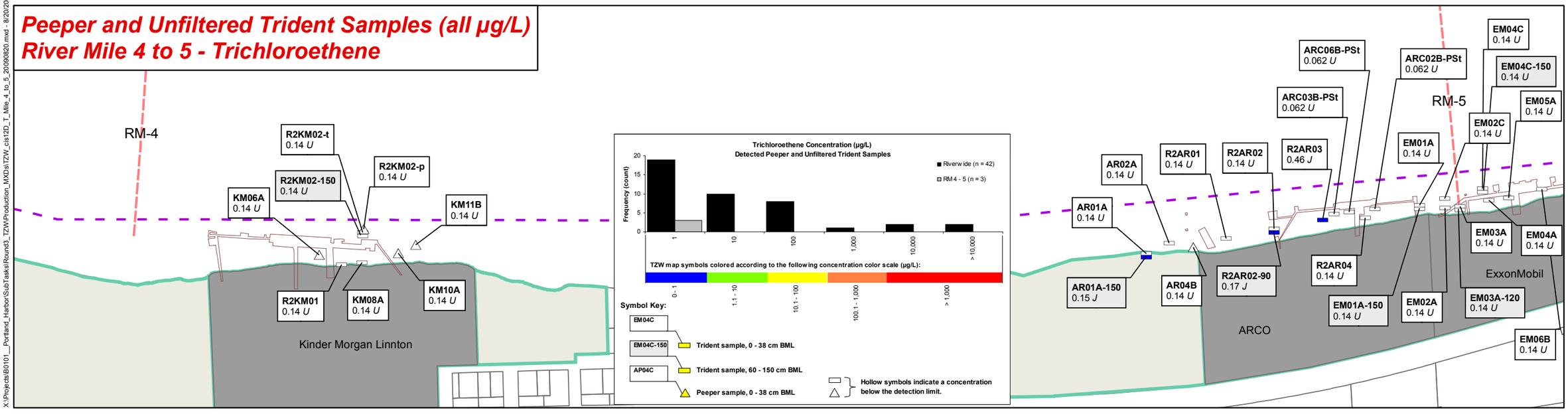
0 250 500 750 1,000 Feet

**Map D4.2-12d**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Chloroform (µg/L) and Methylene Chloride (µg/L)
River Mile 08 to 09

# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 4 to 5 - cis1,2-Dichloroethene




# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 4 to 5 - Trichloroethene




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

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**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

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A Total value based on a limited number of analytes.

Map Features
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland Sites ECSI (2008)
- Waterfront Taxlots

0 250 500 750 1,000 Feet

**Map D4.2-13a**
Portland Harbor RI/FS
Remedial Investigation Report
Concentrations in Transition Zone Water
cis1,2-Dichloroethene (µg/L) and Trichloroethene
River Mile 04 to 05

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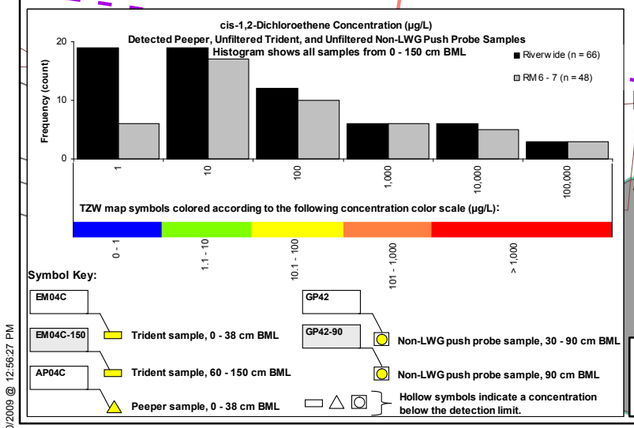
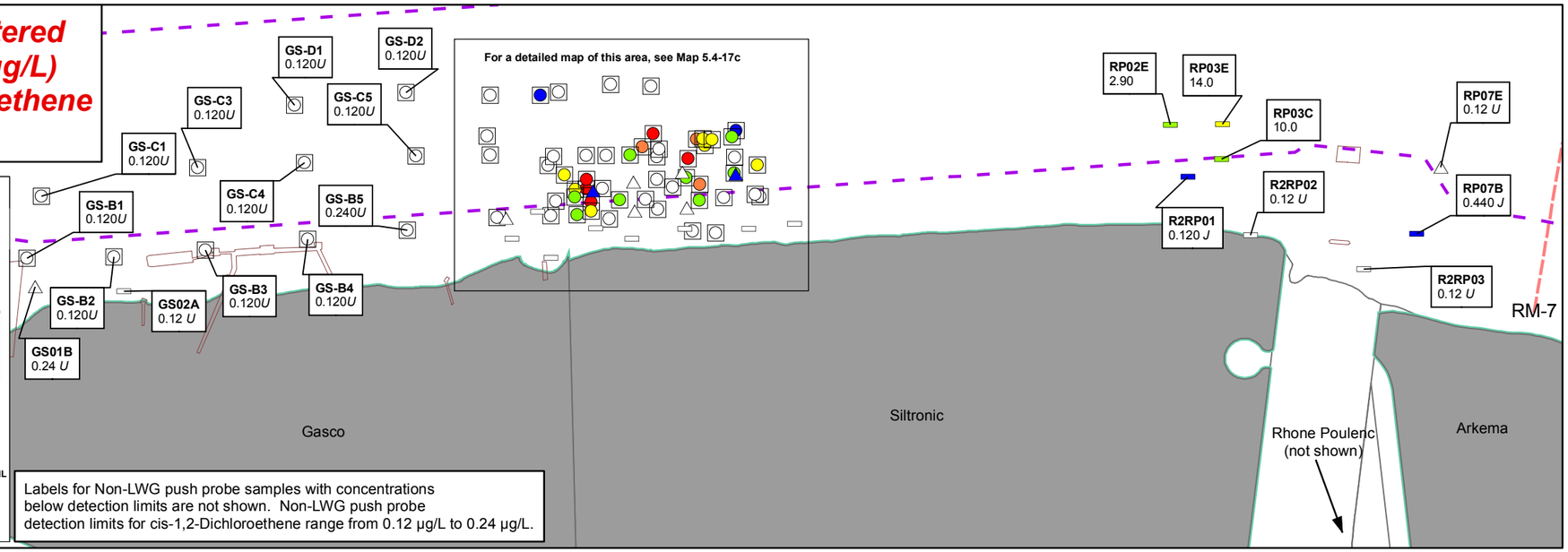
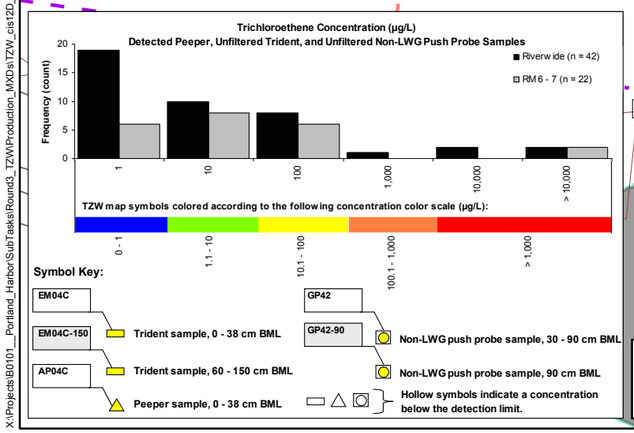
# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07 - cis-1,2-Dichloroethene Shallow Samples

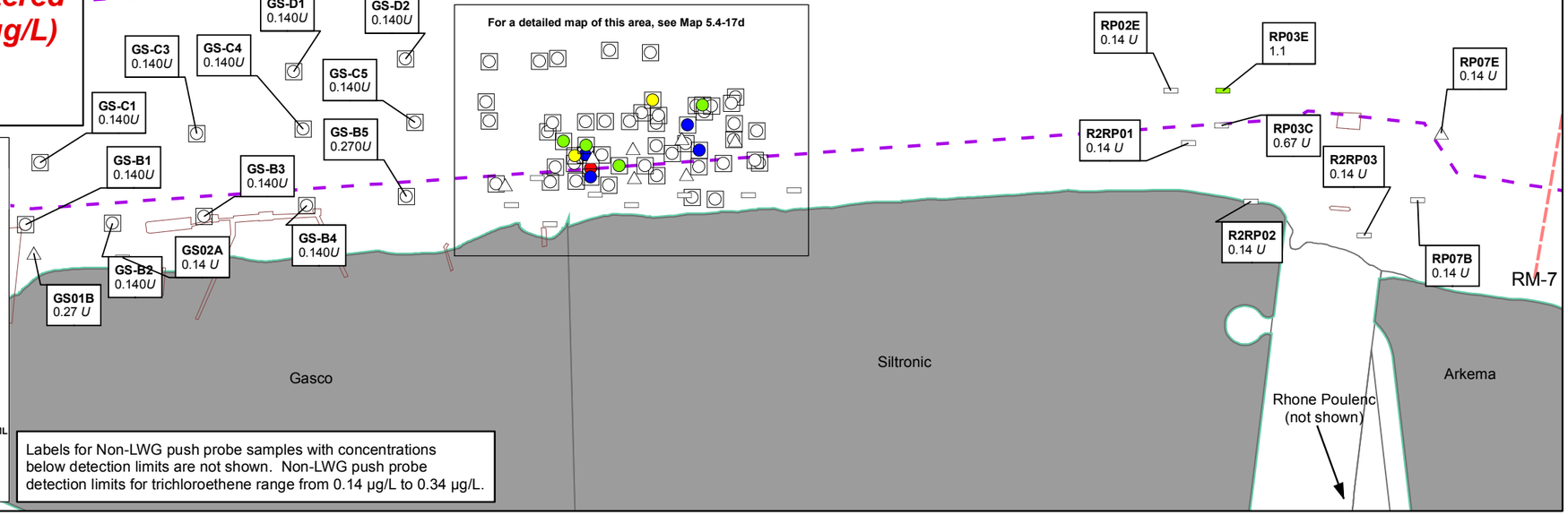



Labels for Non-LWG push probe samples with concentrations below detection limits are not shown. Non-LWG push probe detection limits for cis-1,2-Dichloroethene range from 0.12 µg/L to 0.24 µg/L.

# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07 - Trichloroethene Shallow Samples




Labels for Non-LWG push probe samples with concentrations below detection limits are not shown. Non-LWG push probe detection limits for trichloroethene range from 0.14 µg/L to 0.34 µg/L.

FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

Qualifiers:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

Map Features
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**Map D4.2-13b**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
cis-1,2-Dichloroethene (µg/L) and Trichloroethene (µg/L)
River Mile 06 to 07, Shallow Samples

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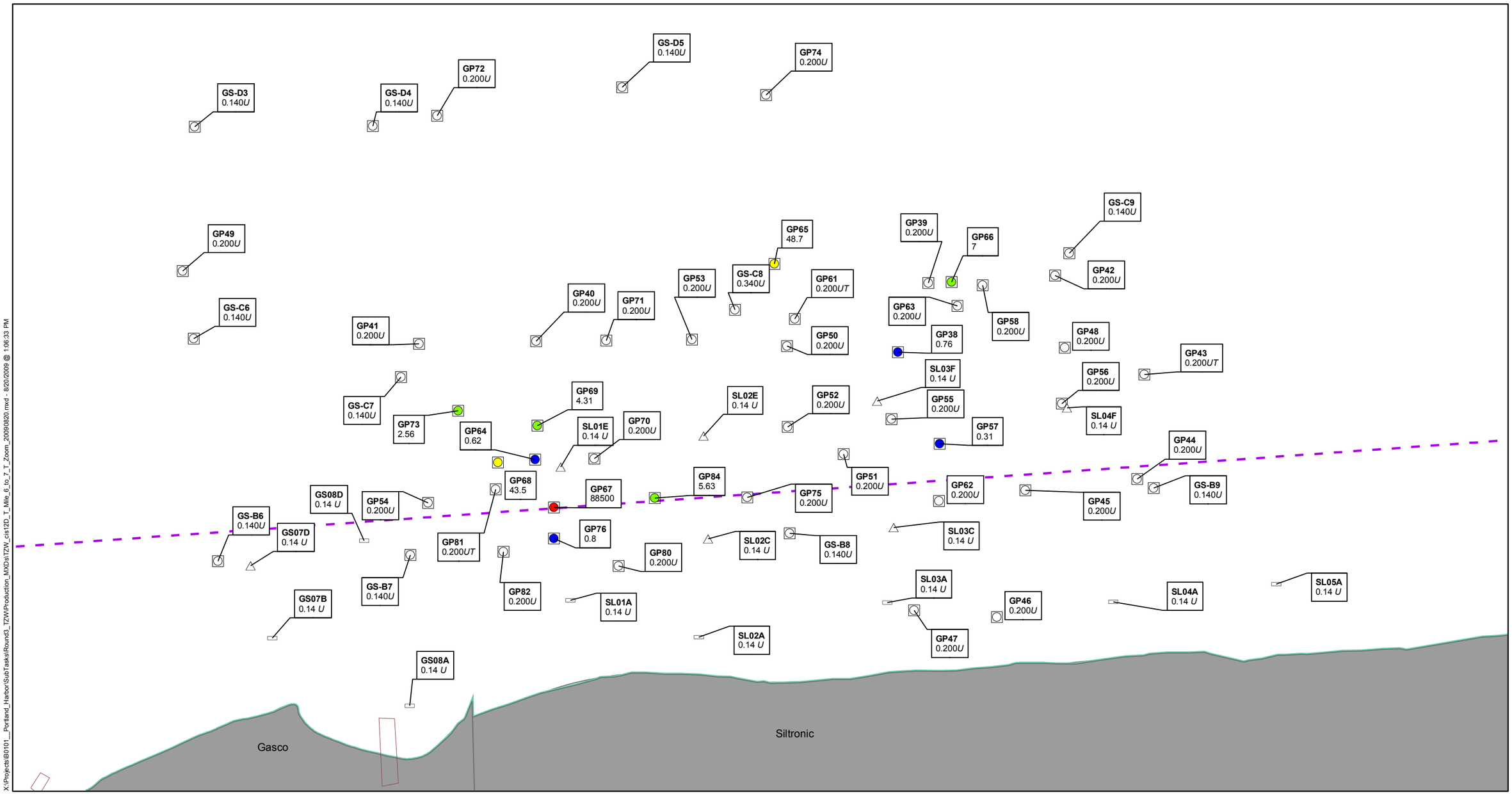


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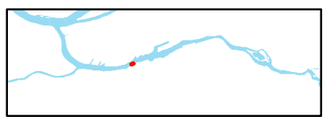
FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos



Qualifiers:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

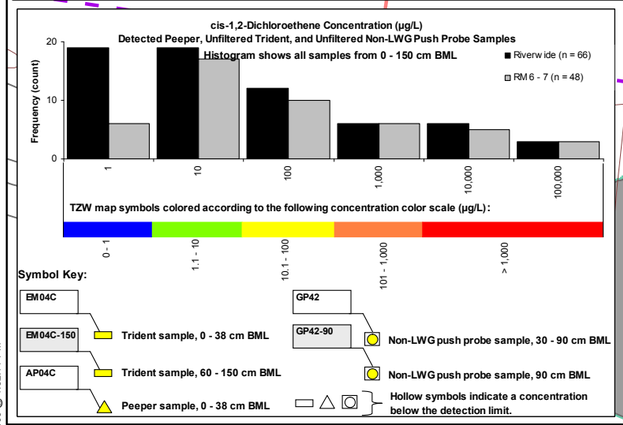
**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

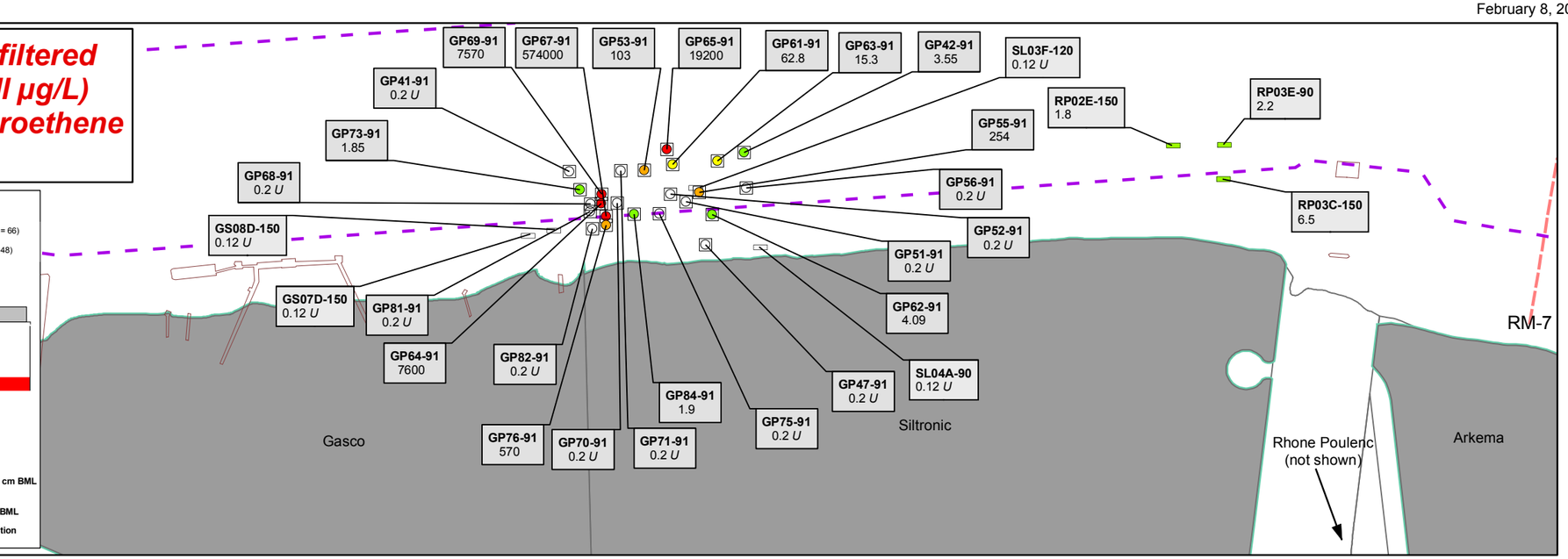
N

0 70 140 210 280 Feet

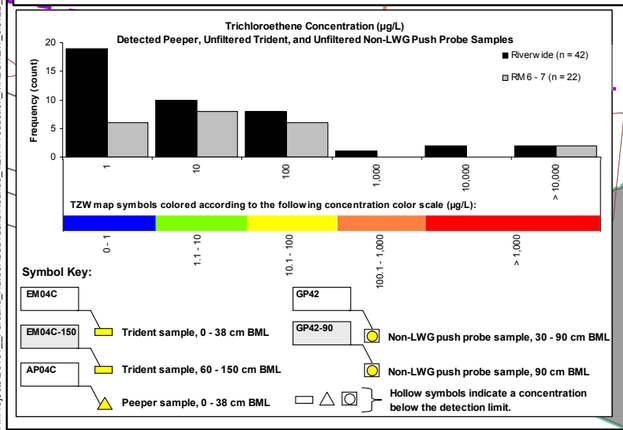
**Map D4.2-13c**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Trichloroethene (µg/L)
River Mile 06 to 07, Shallow Zoom

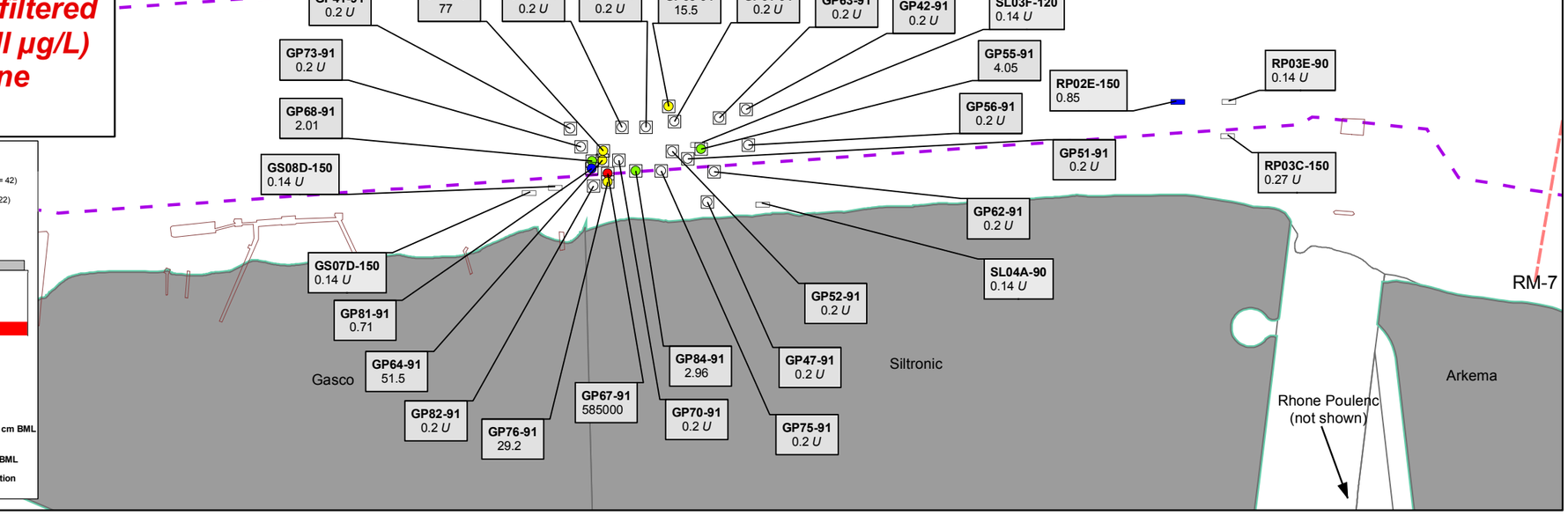
# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07 - cis-1,2-Dichloroethene Deep Samples



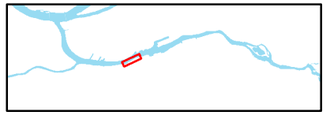




# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07 - Trichloroethene Deep Samples




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos



Qualifiers:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

Map Features
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**Map D4.2-13d**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
cis-1,2-Dichloroethene (µg/L) and Trichloroethene (µg/L)
River Mile 06 to 07, Deep Samples

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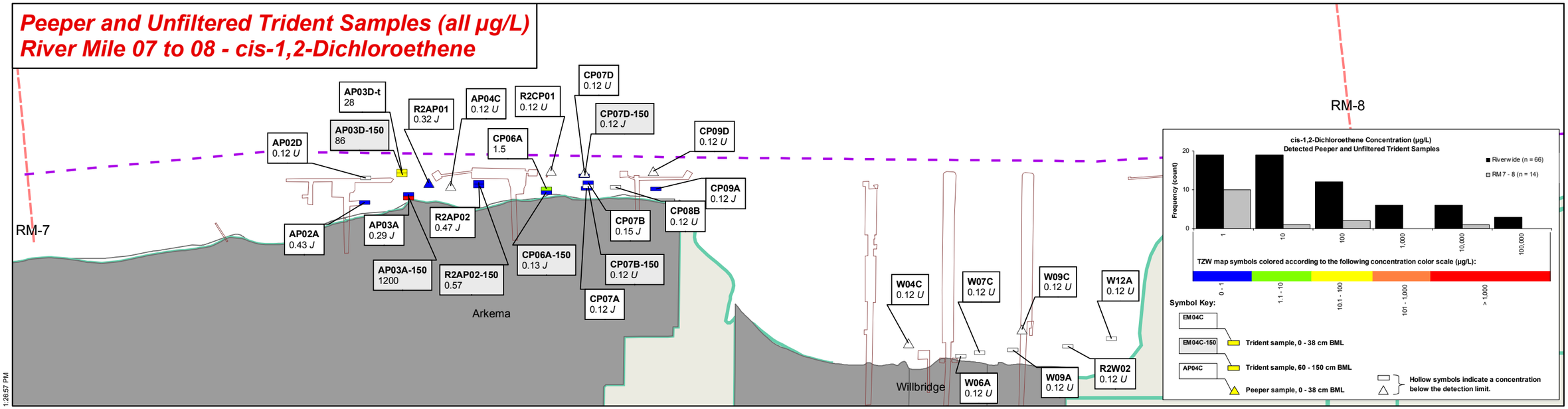
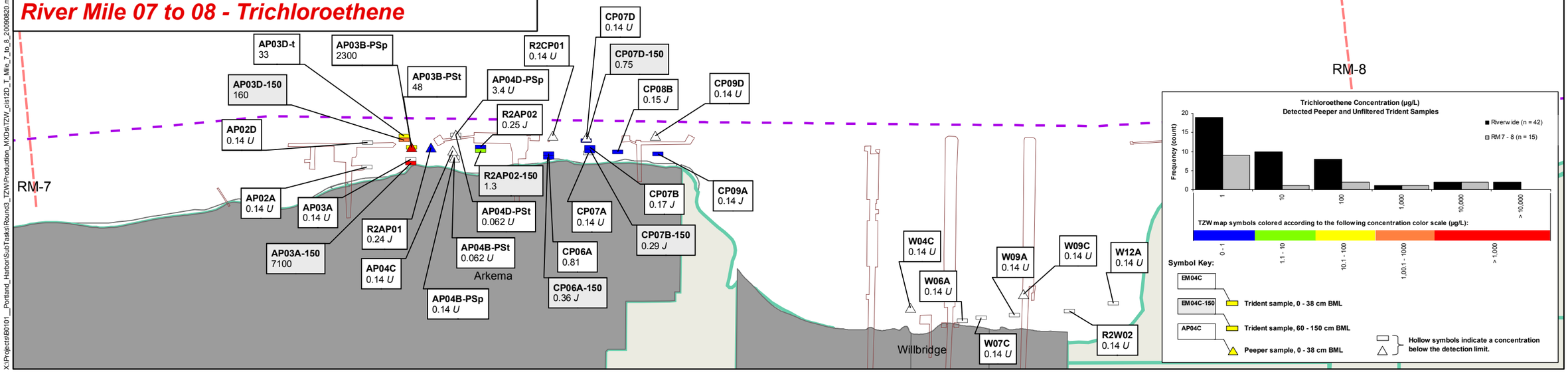
# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 07 to 08 - cis-1,2-Dichloroethene




# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 07 to 08 - Trichloroethene

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FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

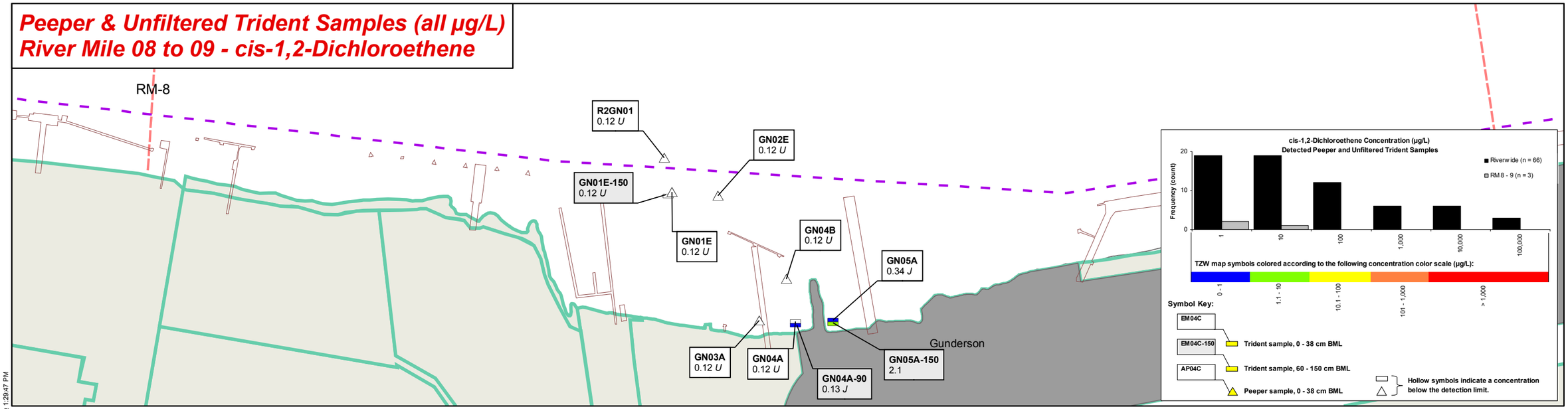
0 250 500 750 1,000 Feet

**PSt** Indicates sample collected during the GWPA Pilot Study by Trident sampler.
**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

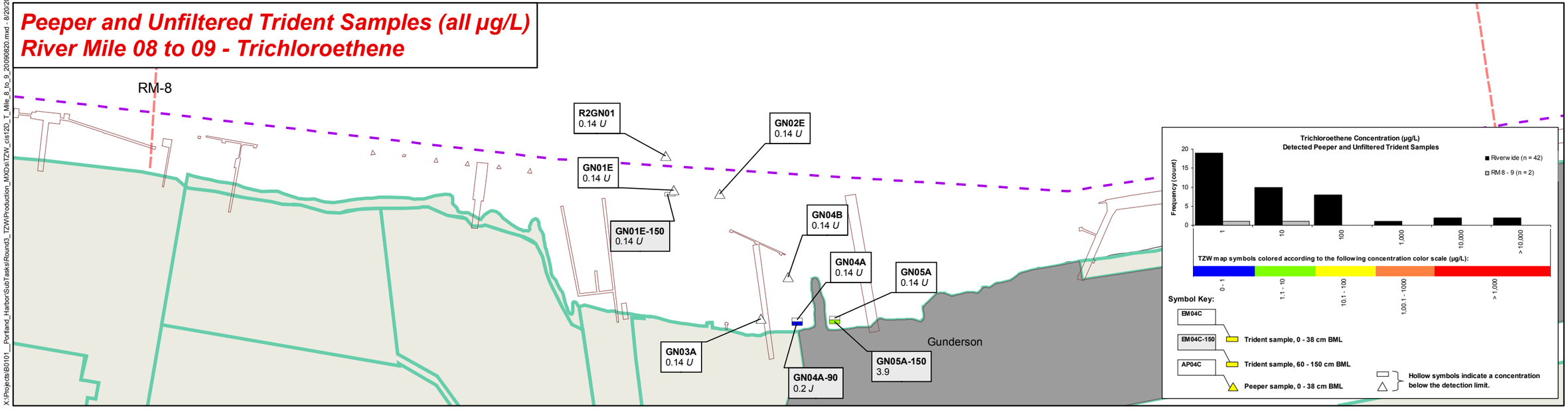
Qualifiers:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

**Map D4.2-13e**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
cis-1,2-Dichloroethene (µg/L) and Trichloroethene (µg/L)
River Mile 07 to 08

# Peeper & Unfiltered Trident Samples (all µg/L)
# River Mile 08 to 09 - cis-1,2-Dichloroethene




# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 08 to 09 - Trichloroethene

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FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

Qualifiers:
T Mathematically derived value.
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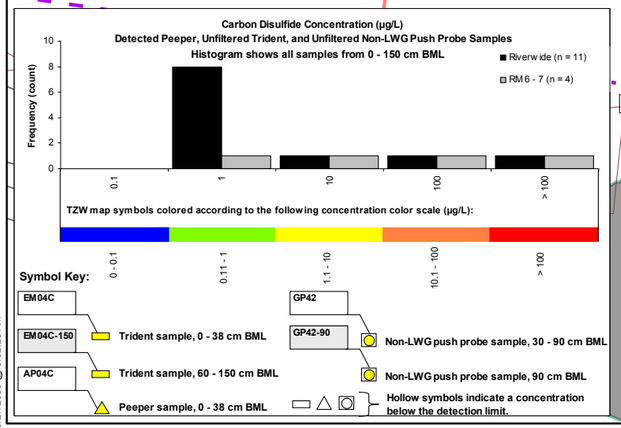
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

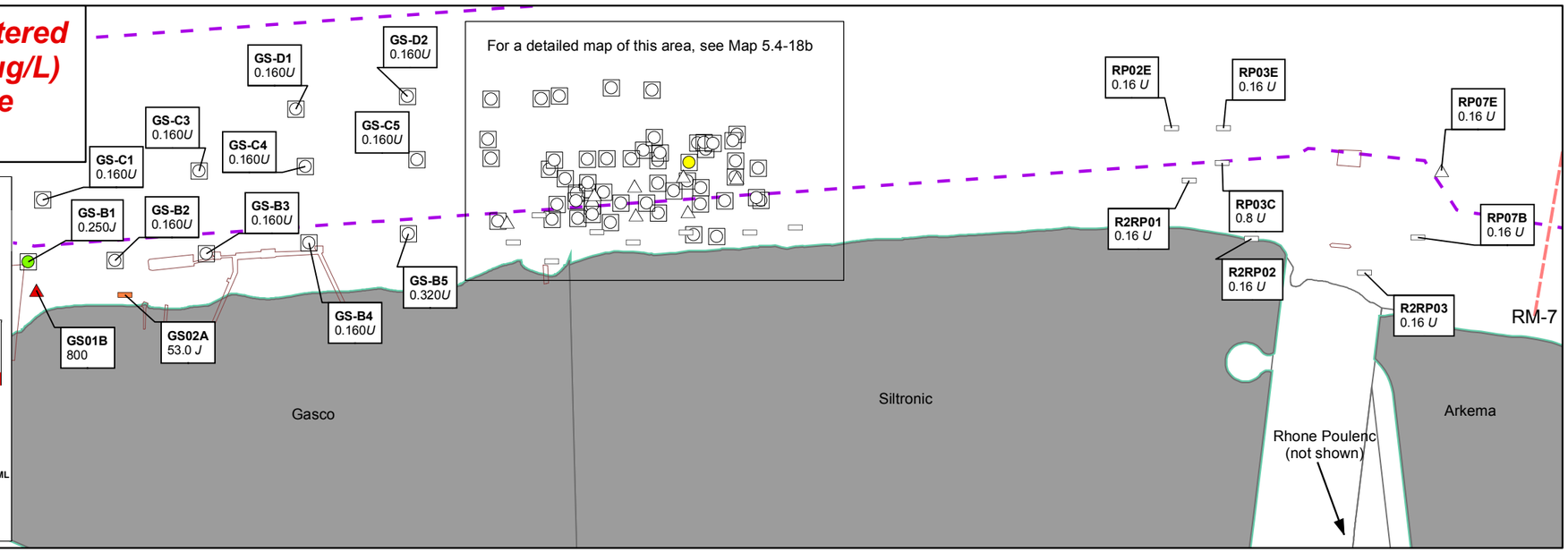
**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

0 250 500 750 1,000 Feet

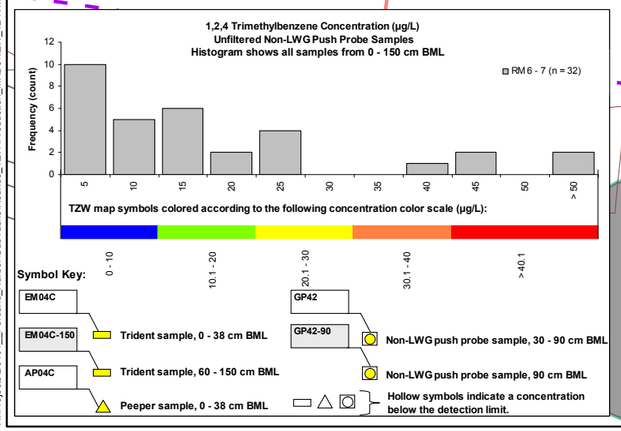
**Map D4.2-13f**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
cis-1,2-Dichloroethene (µg/L) and Trichloroethene (µg/L)
River Mile 08 to 09

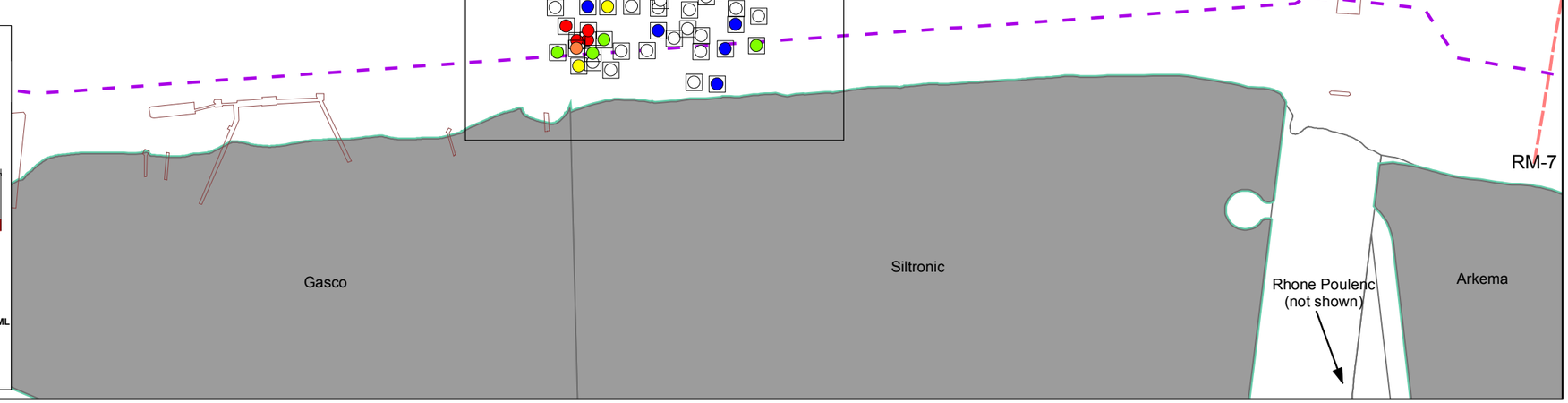
# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07 - Carbon Disulfide Shallow Samples




# Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07 - 1,2,4-Trimethylbenzene Shallow Samples




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

Qualifiers:
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U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

Map Features
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**Map D4.2-14a**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Carbon Disulfide (µg/L) and 1,2,4-Trimethylbenzene (µg/L)
River Mile 06 to 07, Shallow Samples

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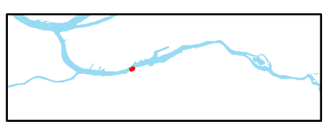
GS-D3 0.160U
GS-D4 0.160U
GP72 1.00U
GS-D5 0.160U
GP74 1.00U
GP49 1.00U
GS-C6 0.160U
GP41 1.00U
GP40 1.00U
GP71 1.00U
GP53 1.00U
GS-C8 0.400U
GP65 1.00U
GP61 1.00UT
GP50 1.00U
GP39 1.00U
GP66 1.00U
GP38 1.23
GP58 1.00U
GP63 1.00U
GS-C9 0.160U
GP42 1.00U
GP48 1.00U
GP43 1.00UT
GS-C7 0.160U
GP73 1.00U
GP69 1.00U
GP68 1.00U
GP64 1.00U
GP70 1.00U
SL02E 0.16 U
GP52 1.00U
SL03F 0.16 U
GP55 1.00U
GP56 1.00U
GP57 1.00U
SL04F 0.16 U
GP54 1.00U
SL01E 0.16 U
GP84 1.00U
GP75 1.00U
GP51 1.00U
GP44 1.00U
GS-B6 0.160U
GS08D 0.16 U
GP81 1.00UT
GP67 1.00U
GP62 1.00U
GP45 1.00U
GS-B9 0.160U
GS07D 0.16 U
GS-B7 0.160U
GP82 1.00U
GP76 1.00U
GP80 1.00U
SL02C 0.16 U
GS-B8 0.160U
SL03C 0.16 U
SL05A 0.16 U
SL04A 0.16 U
SL01A 0.16 U
SL03A 0.16 U
GP47 1.00U
GP46 1.00U
GS07B 0.16 U
SL02A 0.16 U
GS08A 0.16 U

Gasco
Siltronic

FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos



Qualifiers:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 75 150 225 300 Feet

**Map D4.2-14b**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Carbon Disulfide (µg/L)
River Mile 06 to 07, Shallow Zoom

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GP74 4.17
GP72 1U
GP65 1U
GP39 1U
GP66 1U
GP58 1U
GP42 1U
GP49 1U
GP61 1UT
GP48 1U
GP41 1U
GP40 2.83
GP71 21.8
GP53 1U
GP43 1UT
GP63 1U
GP50 1U
GP38 1U
GP73 63.1
GP52 1.49
GP56 1.3
GP69 44.3
GP57 1U
GP68 69.9
GP70 14.7
GP84 1U
GP75 1U
GP45 1.16
GP44 14.5
GP55 1U
GP54 12.3
GP51 1U
GP62 1U
GP81 35.2T
GP64 43.9
GP67 15.2
GP47 1U
GP80 1U
GP46 1.05
GP82 22.7
GP76 1U

Gasco
Siltronic

FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

Qualifiers:
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UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

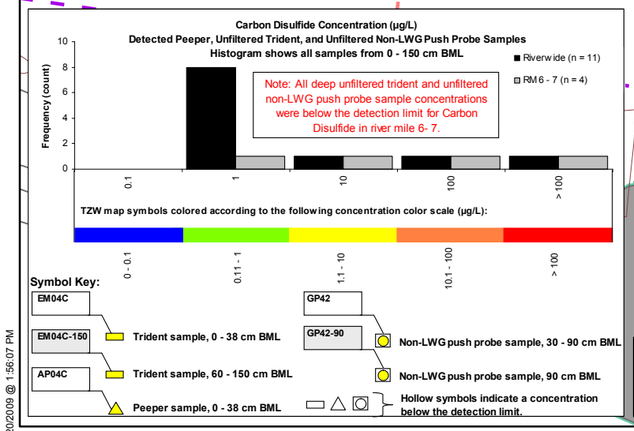
**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

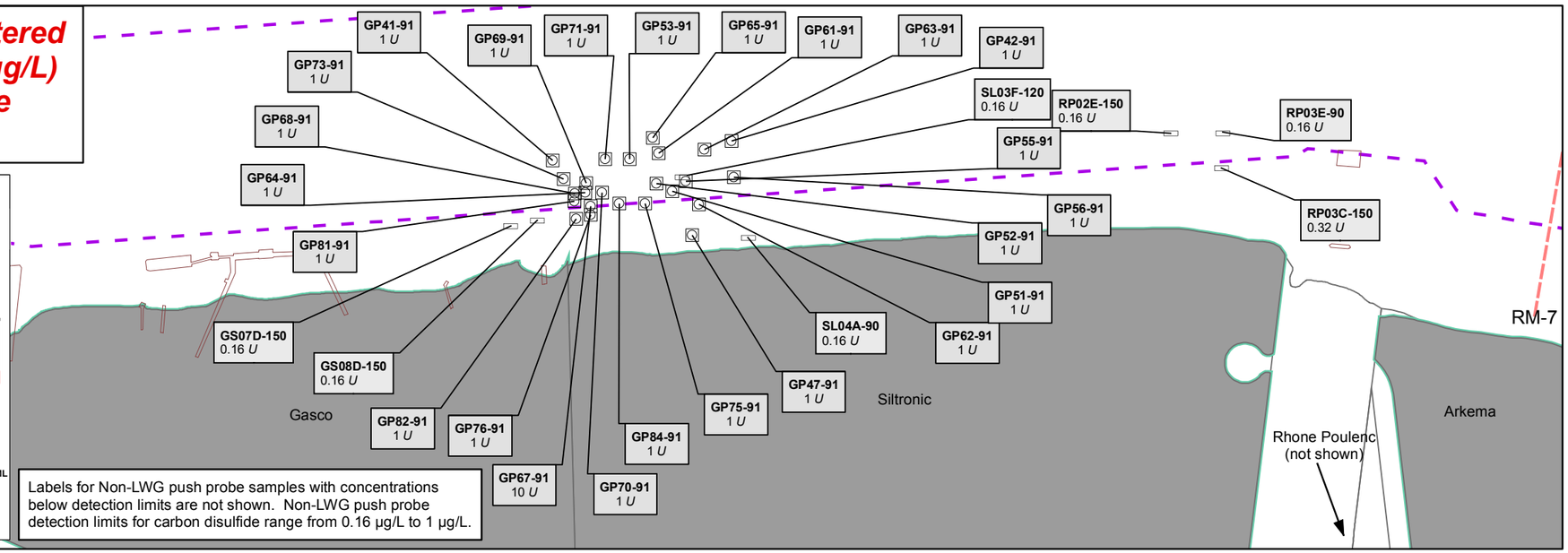
N

0 250 500 750 1,000 Feet

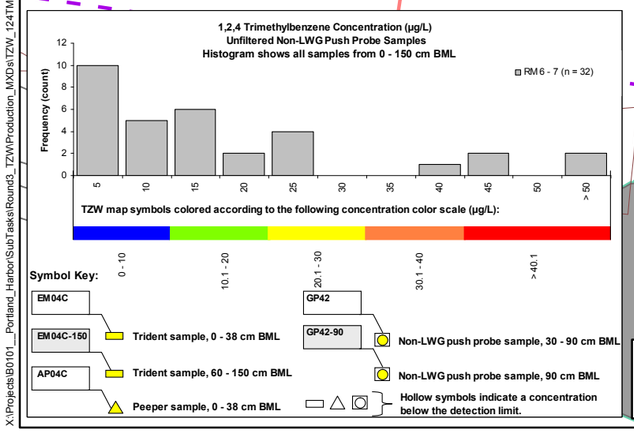
**Map D4.2-14c**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
1,2,4-Trimethylbenzene (µg/L)
River Mile 06 to 07, Shallow Zoom

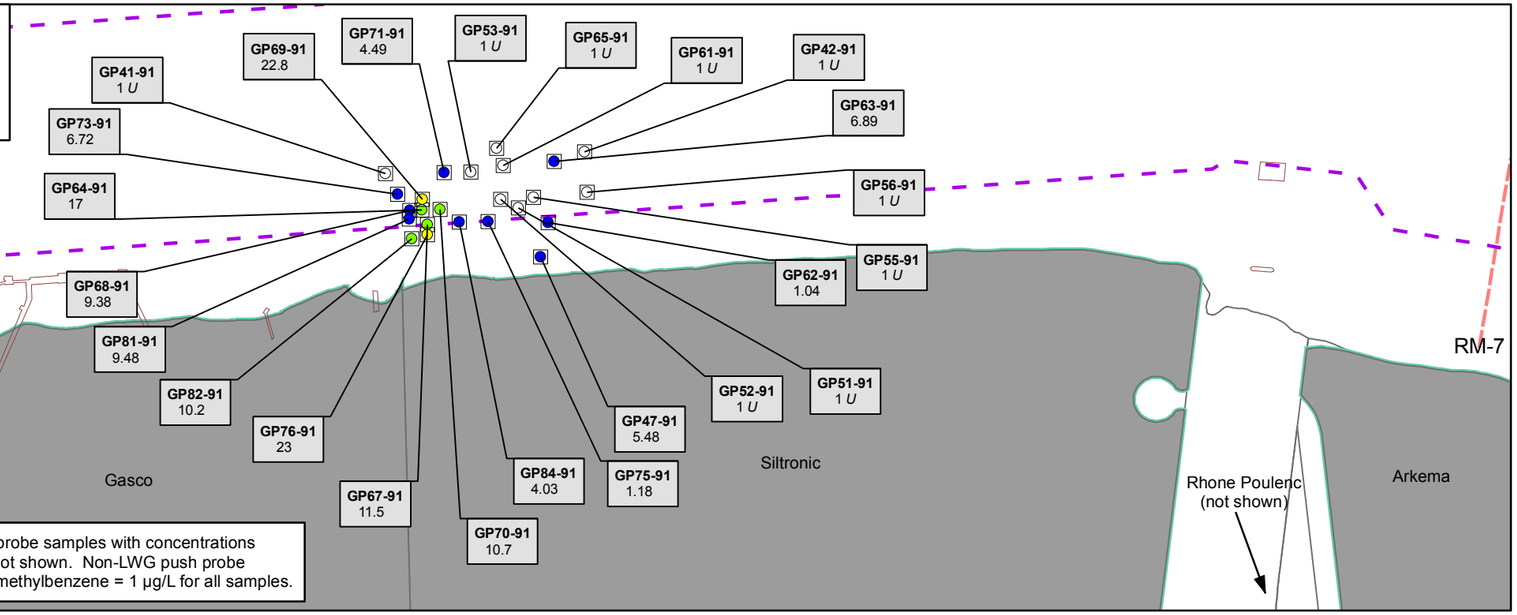
# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07 - Carbon Disulfide Deep Samples




# Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07 - 1,2,4-Trimethylbenzene Deep Samples




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

Qualifiers:
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UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

Map Features
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

0 250 500 750 1,000 Feet

**Map D4.2-14d**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Carbon Disulfide (µg/L) and 1,2,4-Trimethylbenzene (µg/L)
River Mile 06 to 07, Deep Samples

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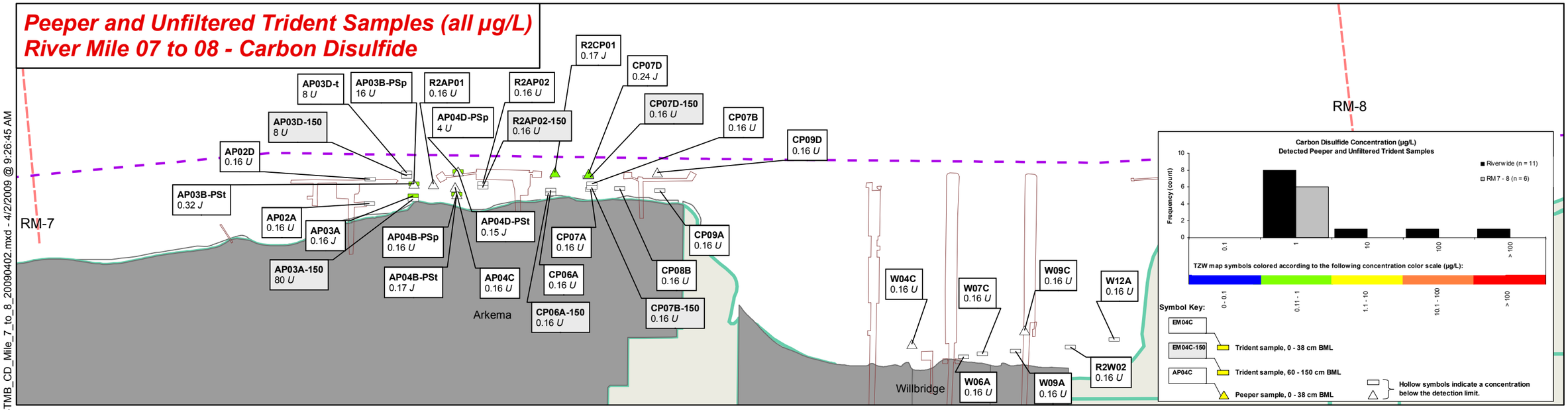
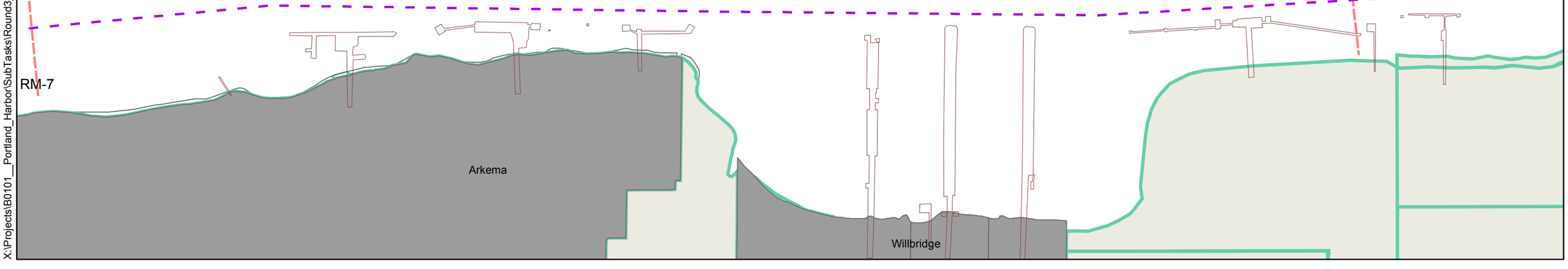
# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 07 to 08 - Carbon Disulfide




## NOTE: 1,2,4-Trimethylbenzene was not sampled in this River Mile

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FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**PSt** Indicates sample collected during the GWPA Pilot Study by Trident sampler.
**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

Qualifiers:
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U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

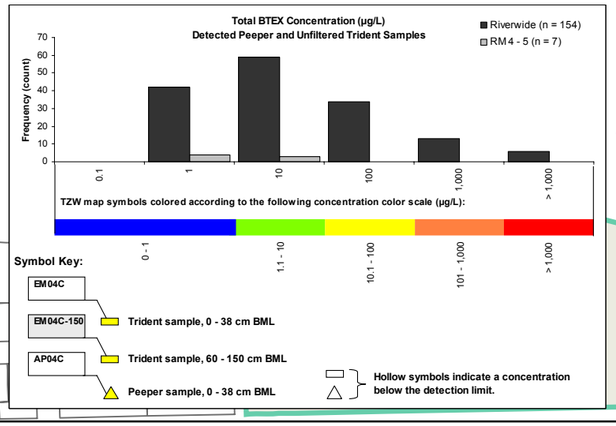
0 250 500 750 1,000 Feet

**Map D4.2-14e**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Carbon Disulfide (µg/L) and 1,2,4-Trimethylbenzene (µg/L)
River Mile 07 to 08

# Peeper and Unfiltered Trident Samples (all µg/L)
# River Mile 04 to 05

RM-4

R2KM02-t 0.23 *JT*
R2KM02-p 0.22 *UT*
R2KM02-150 0.26 *JT*
KM06A 0.22 *UT*
KM11B 0.22 *UT*
KM10A 0.22 *UT*
KM08A 0.22 *UT*
R2KM01 0.22 *UT*
Kinder Morgan Linnton




RM-5

ARC06B-PSp 0.22 *UT*
ARC06B-PSt 3.8 *UT*
R2AR04 0.22 *UT*
EM06B 0.83 *JT*
EM01A 0.38 *UT*
EM02C 0.24 *UT*
EM01A-150 0.14 *JT*
EM03A 0.22 *UT*
EM04C 0.27 *UT*
AR01A 0.23 *UT*
AR04B 1.46 *JT*
R2AR02 0.31 *UT*
R2AR03 0.42 *UT*
EM02A 0.25 *UT*
EM05A 0.58 *JT*
EM04C-150 1.31 *JT*
EM04A 0.27 *UT*
AR01A-150 0.15 *JT*
AR02A 0.39 *UT*
R2AR01 0.22 *UT*
R2AR02-90 0.32 *UT*
ARC02B-PSt 1.4 *UT*
ExxonMobil
ARCO
ARC02B-PSp 1.01 *JT*
EM03A-120 0.26 *UT*
ARC03B-PSt 2.3 *UT*
ARC03B-PSp 1.79 *JT*

# BTEX Constituent Distribution (Detected Samples Only)
# River Mile 04 to 05

RM-4

R2KM02
R2KM02-150
Kinder Morgan Linnton

RM-5

ARC02B-PSp
ARC03B-PSp
EM06B
EM05A
AR04B
AR01A-150
EM04C-150
EM01A-150
ExxonMobil
ARCO

Benzene
Toluene
Ethylbenzene
Total Xylenes

FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**PSt** Indicates sample collected during the GWPA Pilot Study by Trident sampler.
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Qualifiers:
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J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

Map Features
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**Map D4.2-15a**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Benzene, Toluene, Ethylbenzene, and Xylenes (µg/L)
River Mile 04 to 05

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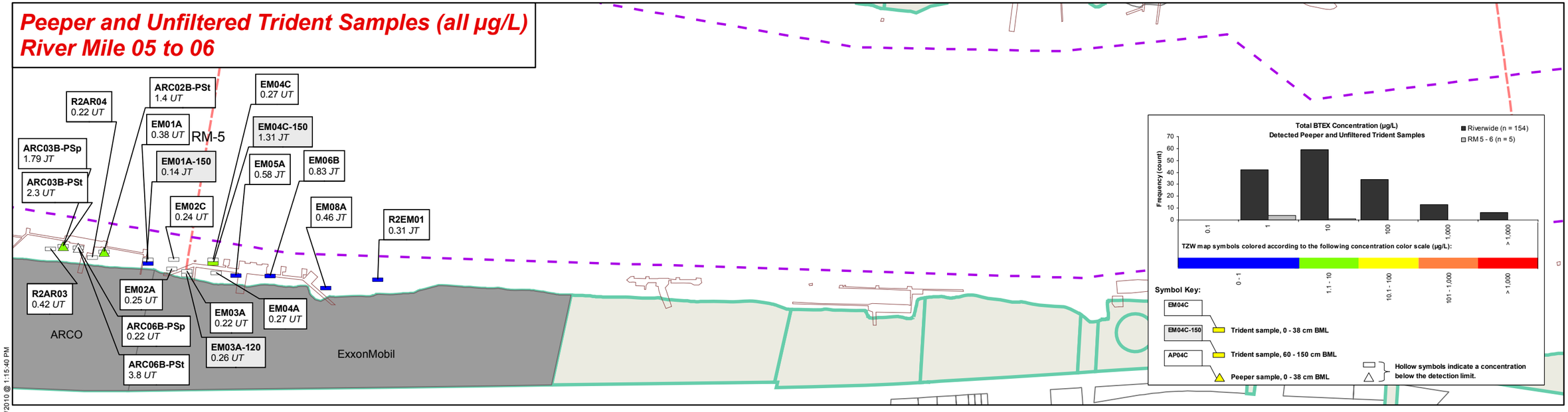
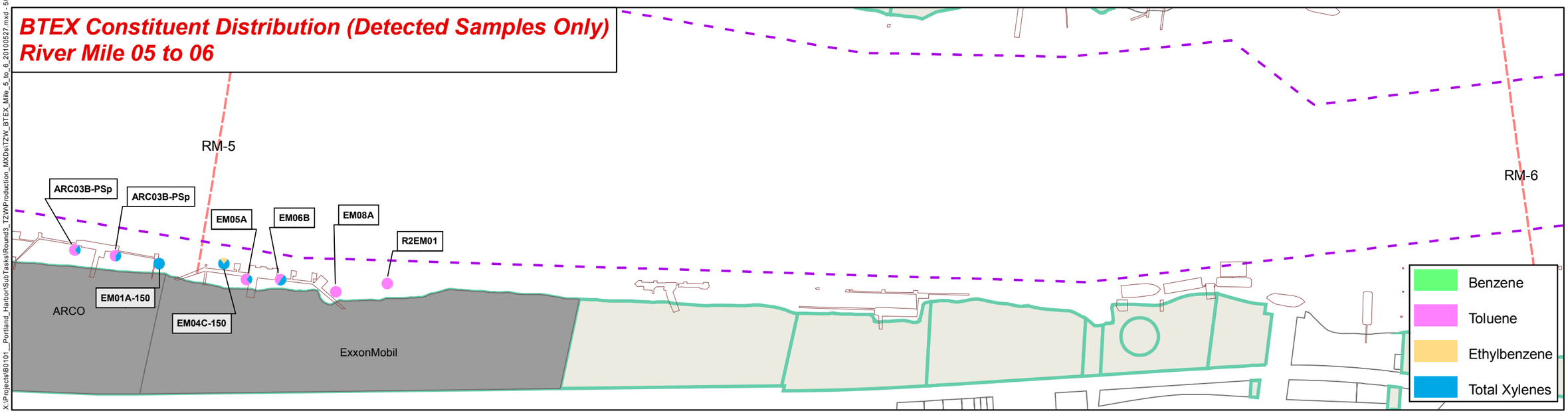
# Peeper and Unfiltered Trident Samples (all µg/L)
## River Mile 05 to 06




# BTEX Constituent Distribution (Detected Samples Only)
## River Mile 05 to 06

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FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**PSt** Indicates sample collected during the GWPA Pilot Study by Trident sampler.
**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

Qualifiers:
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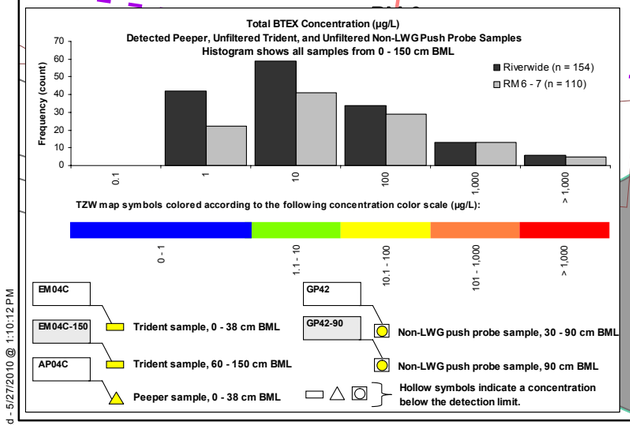
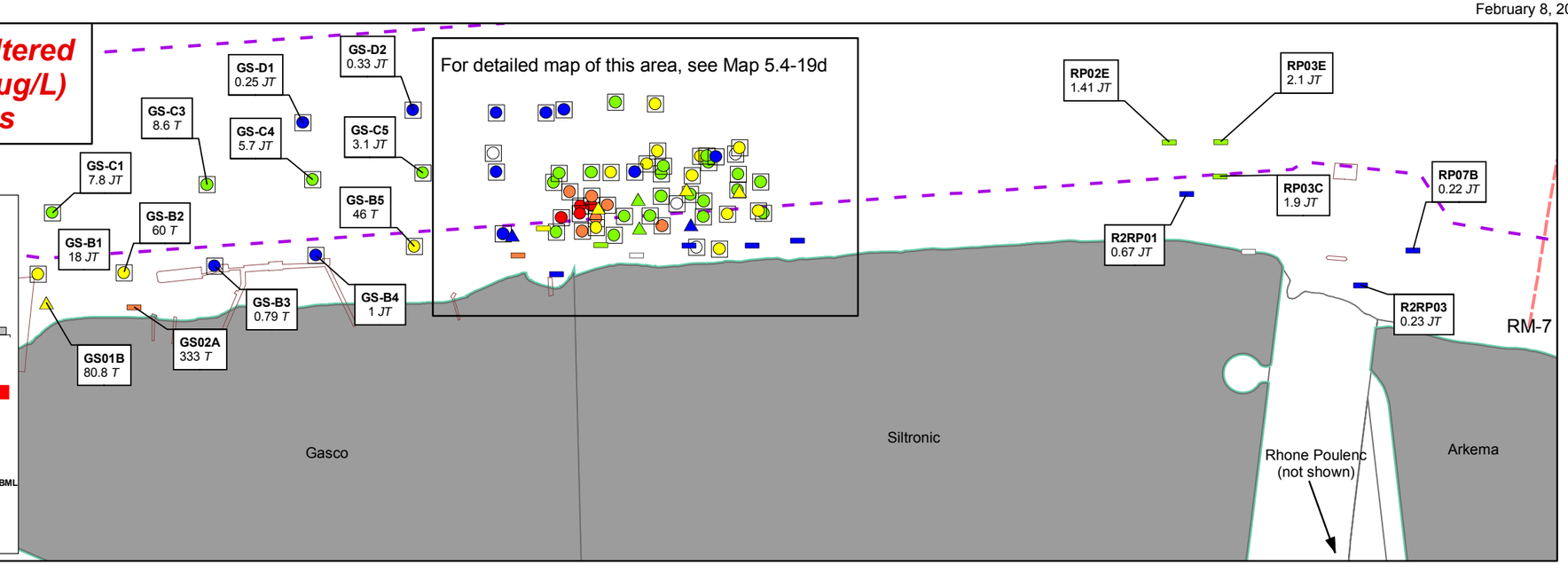
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

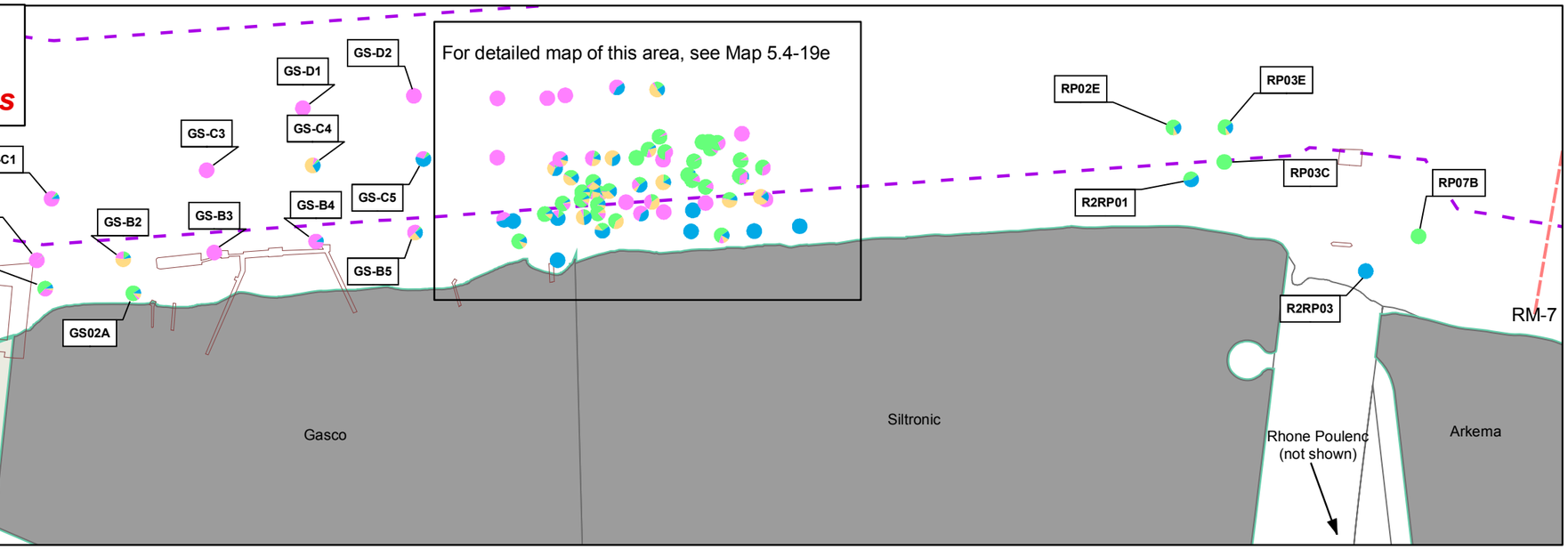
**Map D4.2-15b**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Benzene, Toluene, Ethylbenzene, and Xylenes (µg/L)
River Mile 05 to 06

# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07, Shallow Samples




# BTEX Constituent Distribution (Detected Samples Only) River Mile 06 to 07, Shallow Samples




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**PSt** Indicates sample collected during the GWPA Pilot Study by Trident sampler.
**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

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A Total value based on a limited number of analytes.

**Map D4.2-15c**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Benzene, Toluene, Ethylbenzene, and Xylenes (µg/L)
River Mile 06 to 07, Shallow Samples

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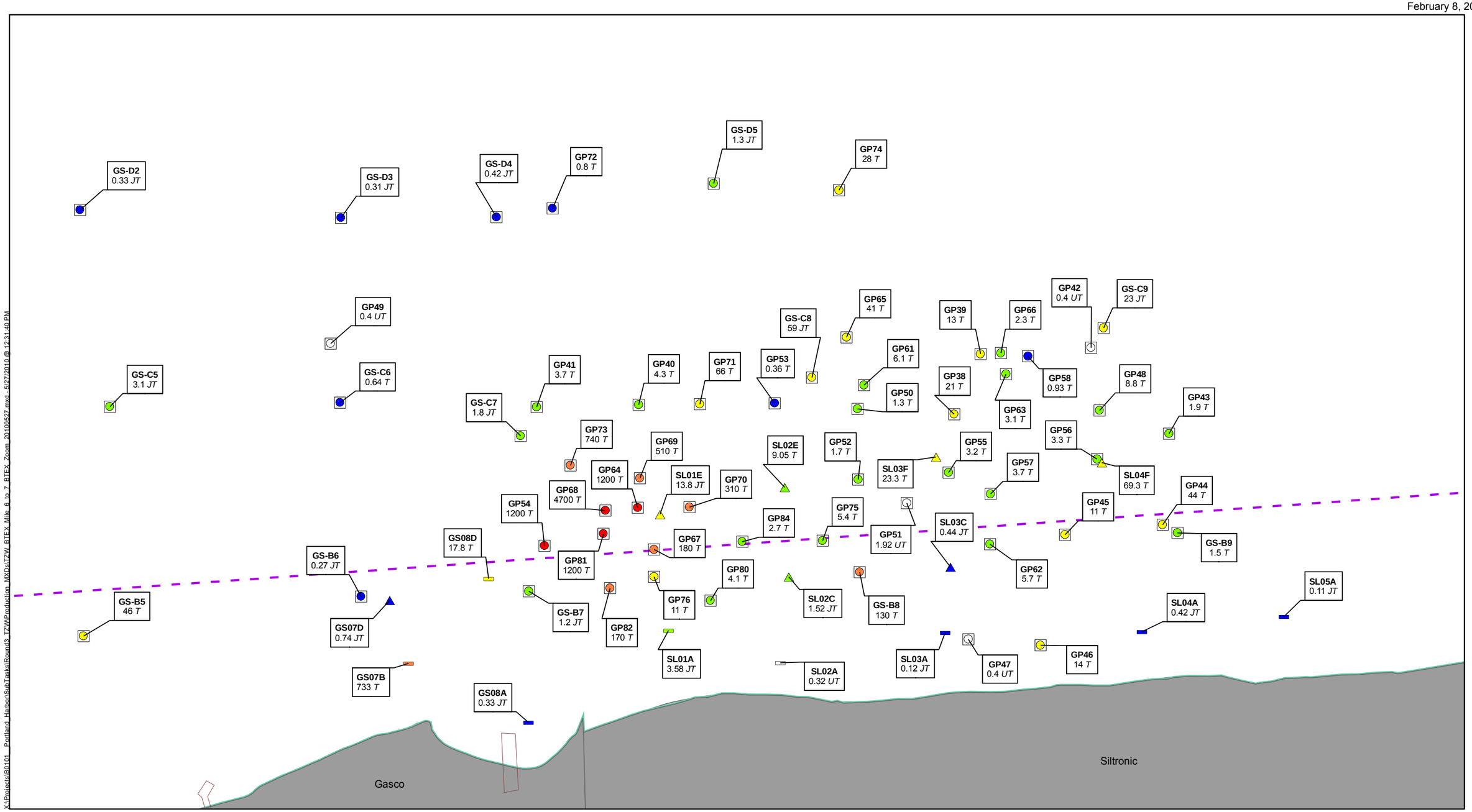


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FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**PSt** Indicates sample collected during the GWPA Pilot Study by Trident sampler.
**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

Qualifiers:
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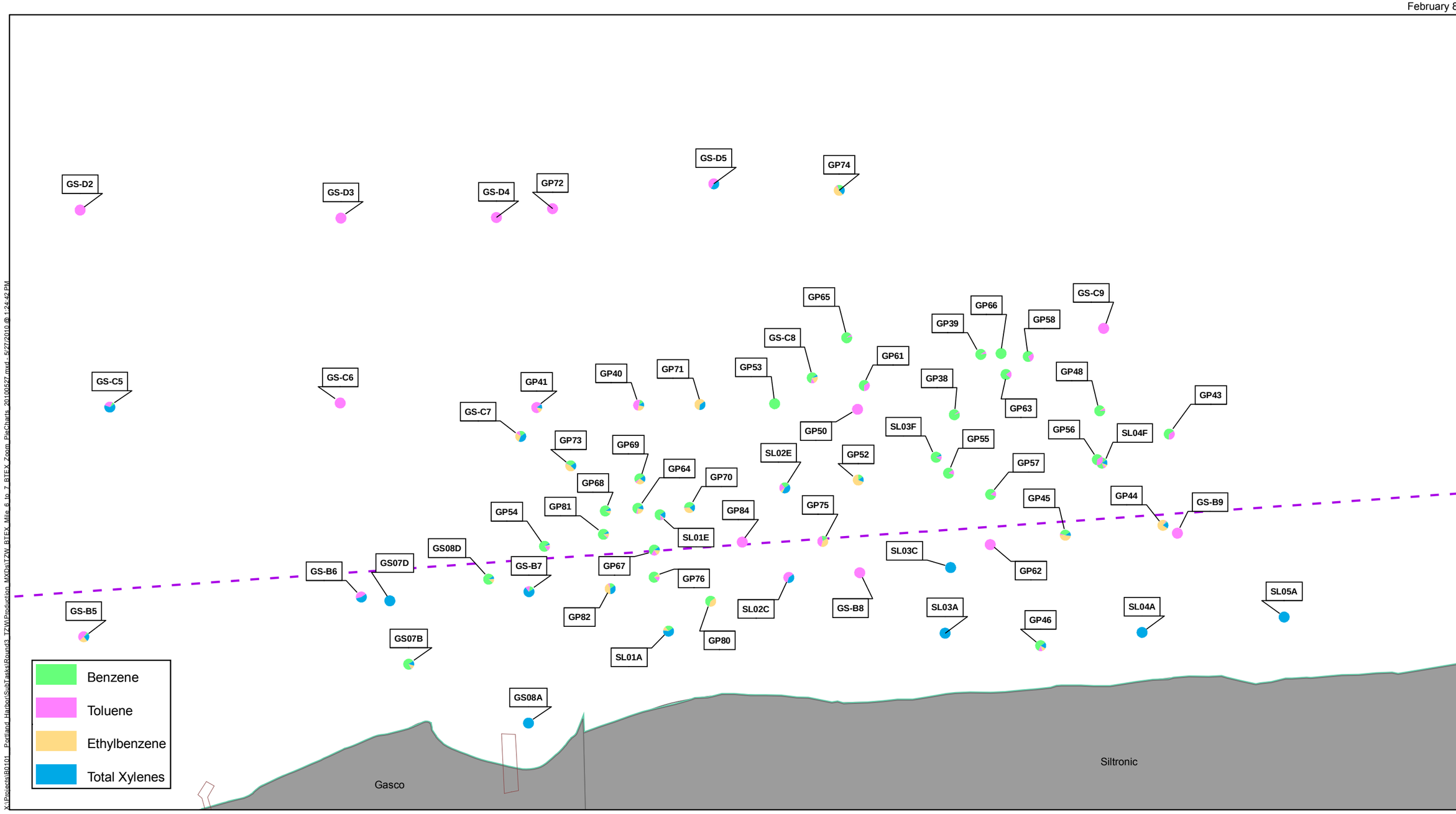
A Total value based on a limited number of analytes.

**Map D4.2-15d**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Benzene, Toluene, Ethylbenzene, and Xylenes (µg/L)
River Mile 06 to 07, Shallow Zoom

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FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

**Map Features**

- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 60 120 180 240 Feet

**PSt** Indicates sample collected during the GWPA Pilot Study by Trident sampler.
**PSp** Indicates sample collected during the GWPA Pilot Study by small-volume peeper.

Qualifiers:
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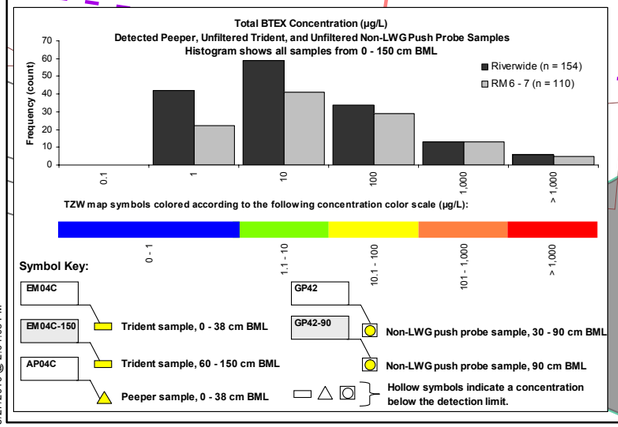
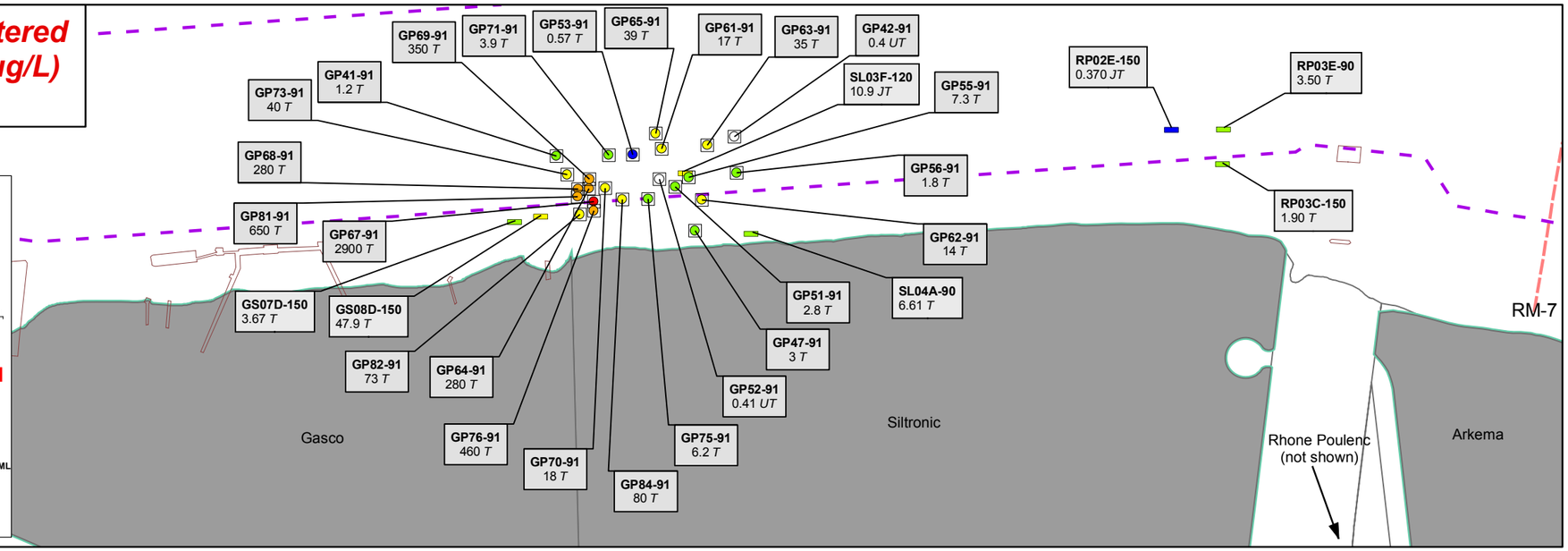
A Total value based on a limited number of analytes.

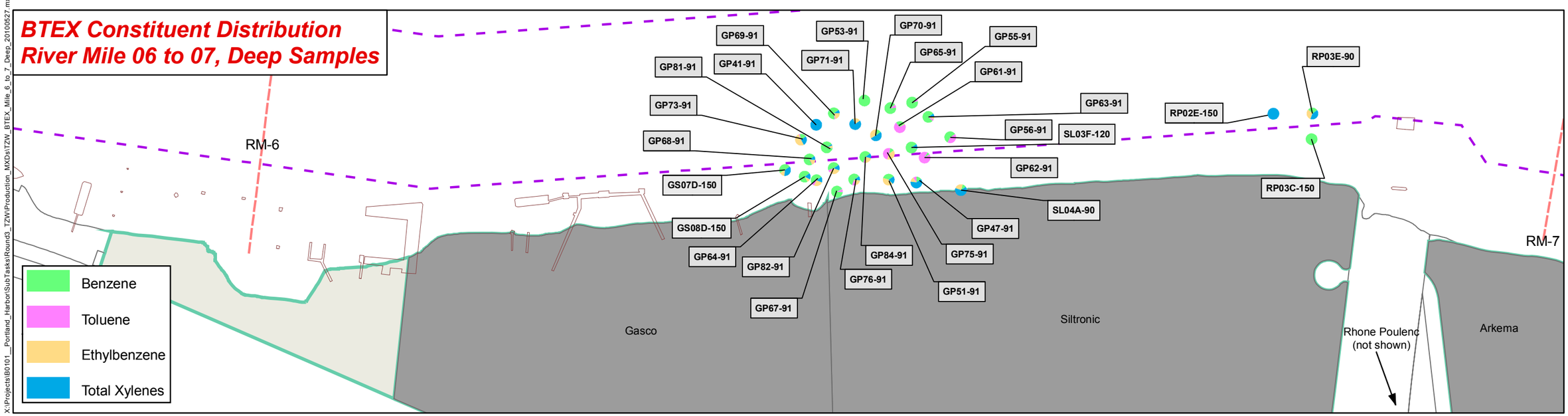
**Map D4.2-15e**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Benzene, Toluene, Ethylbenzene, and Xylenes (µg/L)
River Mile 06 to 07, Shallow Zoom Pie Charts

# Peeper, Unfiltered Trident, and Unfiltered Non-LWG Push Probe Samples (all µg/L) River Mile 06 to 07, Deep Samples




# BTEX Constituent Distribution River Mile 06 to 07, Deep Samples

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FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

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A Total value based on a limited number of analytes.

**Map Features**
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**Map D4.2-15f**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Benzene, Toluene, Ethylbenzene, and Xylenes (µg/L)
River Mile 06 to 07, Deep Samples

## Peeper and Unfiltered Trident Samples (all µg/L)
## River Mile 07 to 08

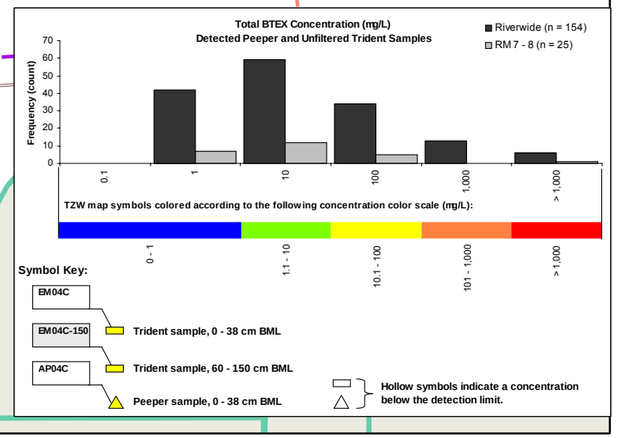
RM-7

RM-8

AP03D 11 *JT*
AP03D-150 11 *UT*
AP03B-PSp 59 *T*
AP03B-PSt 16.34 *JT*
AP04D-PSp 1600 *T*
AP04D-PSt 1.02 *JT*
R2CP01 1.2 *T*
CP07D 2.71 *JT*
CP07D-150 3.35 *JT*
CP07B 0.32 *JT*
CP09D 1.32 *JT*
CP09A 0.24 *UT*
CP08B 0.2 *JT*
AP02D 3.42 *JT*
AP02A 0.31 *JT*
AP03A 21.1 *T*
AP03A-150 65 *JT*
R2AP01 3.76 *JT*
AP04C 2.67 *JT*
AP04B-PSp 4.52 *JT*
AP04B-PSt 6.62 *JT*
R2AP02 3.55 *JT*
CP07A 0.54 *T*
CP06A 0.28 *UT*
CP06A-150 0.27 *UT*
R2AP02-150 8.27 *JT*
CP07B-150 0.22 *JT*
W04C 0.22 *UT*
W06A 0.56 *UT*
W07C 0.9 *UT*
W09C 0.8 *JT*
W09A 0.74 *UT*
W12A 0.76 *UT*
R2W02 0.12 *JT*

Arkema

Willbridge




## BTEX Constituent Distribution (Detected Samples Only)
## River Mile 07 to 08

RM-7

RM-8

CP07D
AP04D-PSt
AP03B-PSp
AP04D-PSp
CP07D-150
AP02D
AP03D
R2CP01
CP07B
CP09D
AP04C
AP03B-PSt
R2AP02
AP02A
R2AP01
R2AP02-150
CP07A
CP08B
AP04B-PSp
CP07B-150
AP03A
AP03A-150
AP04B-PSt
W09C
R2W02

Arkema

Willbridge

Benzene
Toluene
Ethylbenzene
Total Xylenes

FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

Tabular Results Notes:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
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A Total value based on a limited number of analytes.

Map Features
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland Sites (2008)
- Waterfront Taxlots

N

0 250 500 750 1,000 Feet

**Map D4.2-15g**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Benzene, Toluene, Ethylbenzene, and Xylenes (µg/L)
River Mile 07 to 08

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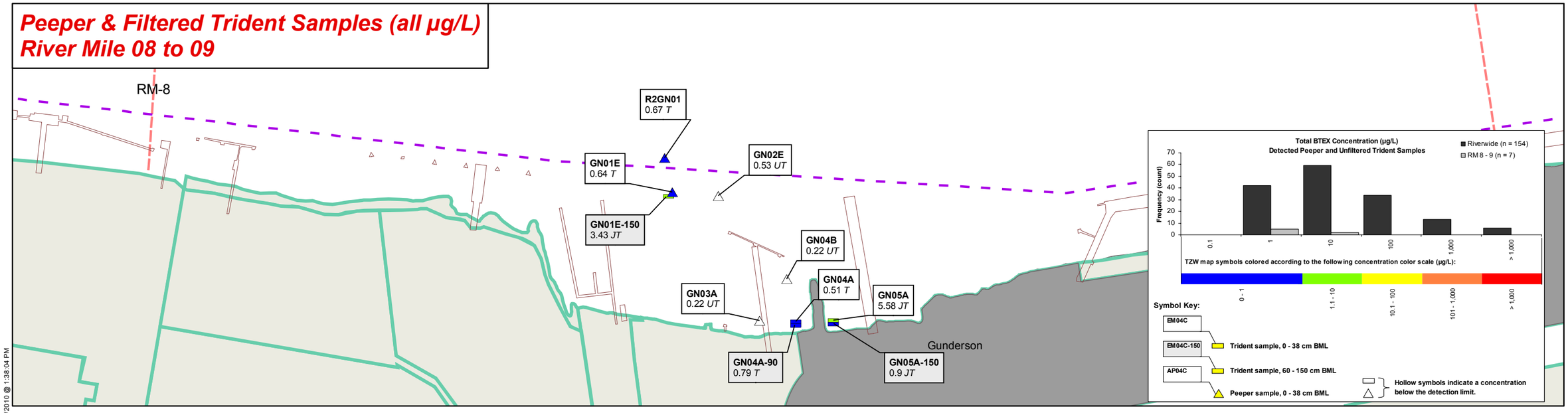
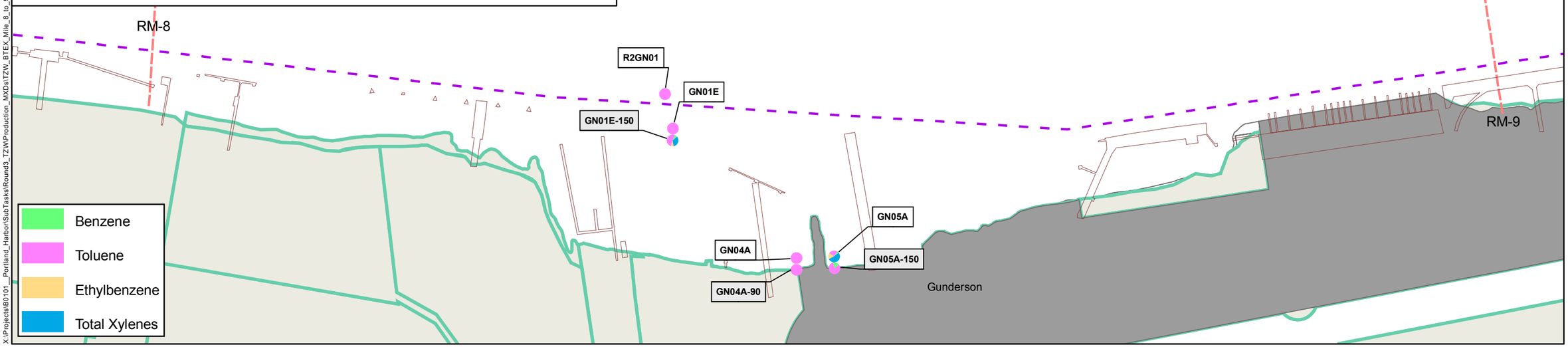
# Peeper & Filtered Trident Samples (all µg/L)
# River Mile 08 to 09




# BTEX Constituent Distribution (Detected Samples Only)
# River Mile 08 to 09




FEATURE SOURCES:
Property and Taxlot Boundaries: Metro RLIS
Channel & River miles: US Army Corps of Engineers.
Docks & In-water Structures: digitized from October 2001 0.33 ft. resolution color orthophotos

Tabular Results Notes:
T Mathematically derived value.
J The associated numerical value was approximated by the analytical laboratory.
U The analyte was not detected above the reported sample quantitation limit.
UJ The analyte was not detected above the reported sample quantitation limit; however, the reported quantitation limit was approximated by the analytical laboratory.
A Total value based on a limited number of analytes.

Map Features
- Docks and Structures
- Navigation Channel
- River Miles
- GWPA Study Site
- Upland ECSI Sites (2008)
- Waterfront Taxlots

0 250 500 750 1,000 Feet

**Map D4.2-15h**
Portland Harbor RI/FS
Remedial Investigation Report
Transition Zone Water Chemistry
Benzene, Toluene, Ethylbenzene, and Xylenes (µg/L)
River Mile 08 to 09

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PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D4.3
# CONTAMINANTS IN TRANSITION ZONE WATER AND SEEPS—FIGURES

**FINAL**

February 8, 2016

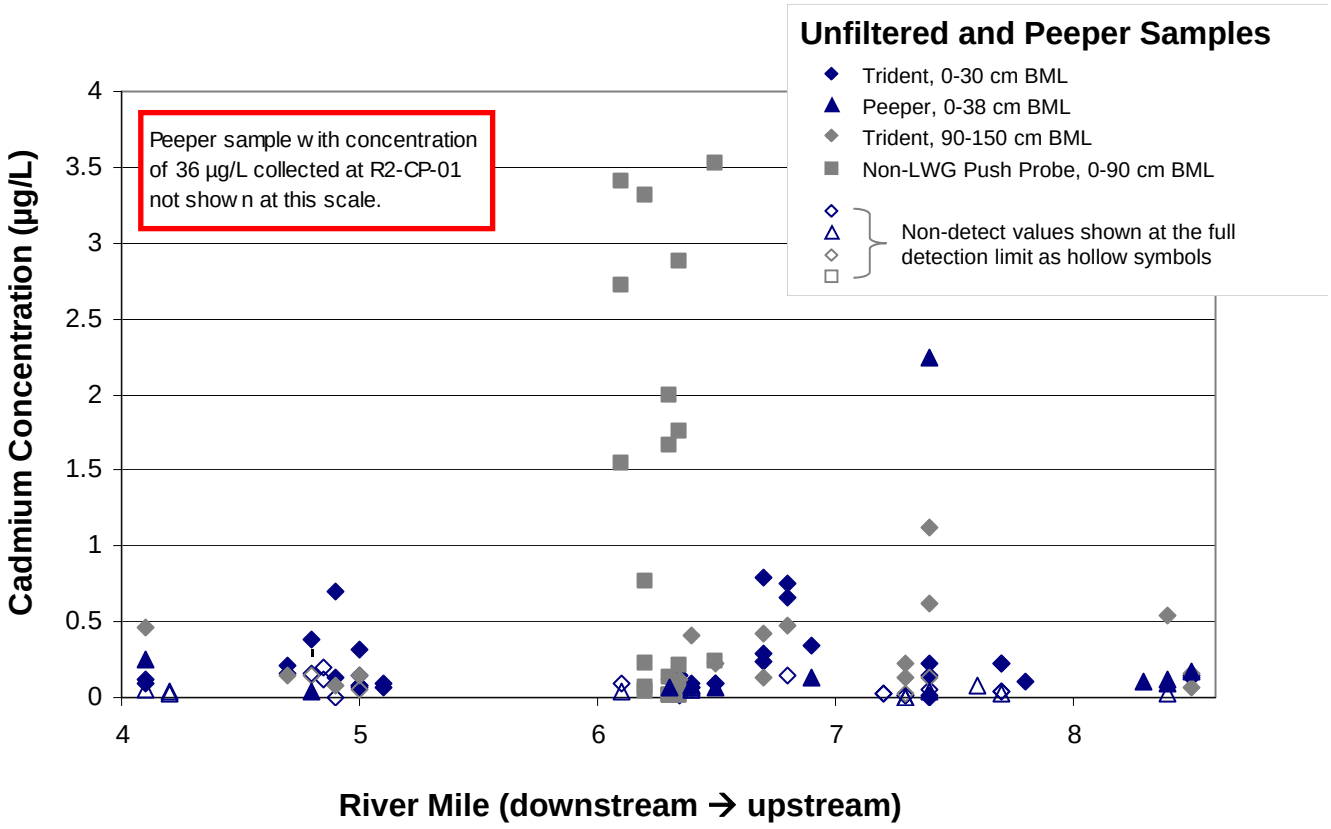
# LIST OF FIGURES

Figure D4.3-1. Scatter Plots of Cadmium Concentrations in Transition Zone Water, Filtered and Unfiltered Peeper Samples

Figure D4.3-2. Scatter Plots of Lead Concentrations in Transition Zone Water, Filtered and Unfiltered Peeper Samples

Figure D4.3-3. Scatter Plots of Nickel Concentrations in Transition Zone Water, Filtered and Unfiltered Peeper Samples

Figure D4.3-4. Scatter Plots of Manganese Concentrations in Transition Zone Water, Filtered and Unfiltered Peeper Samples



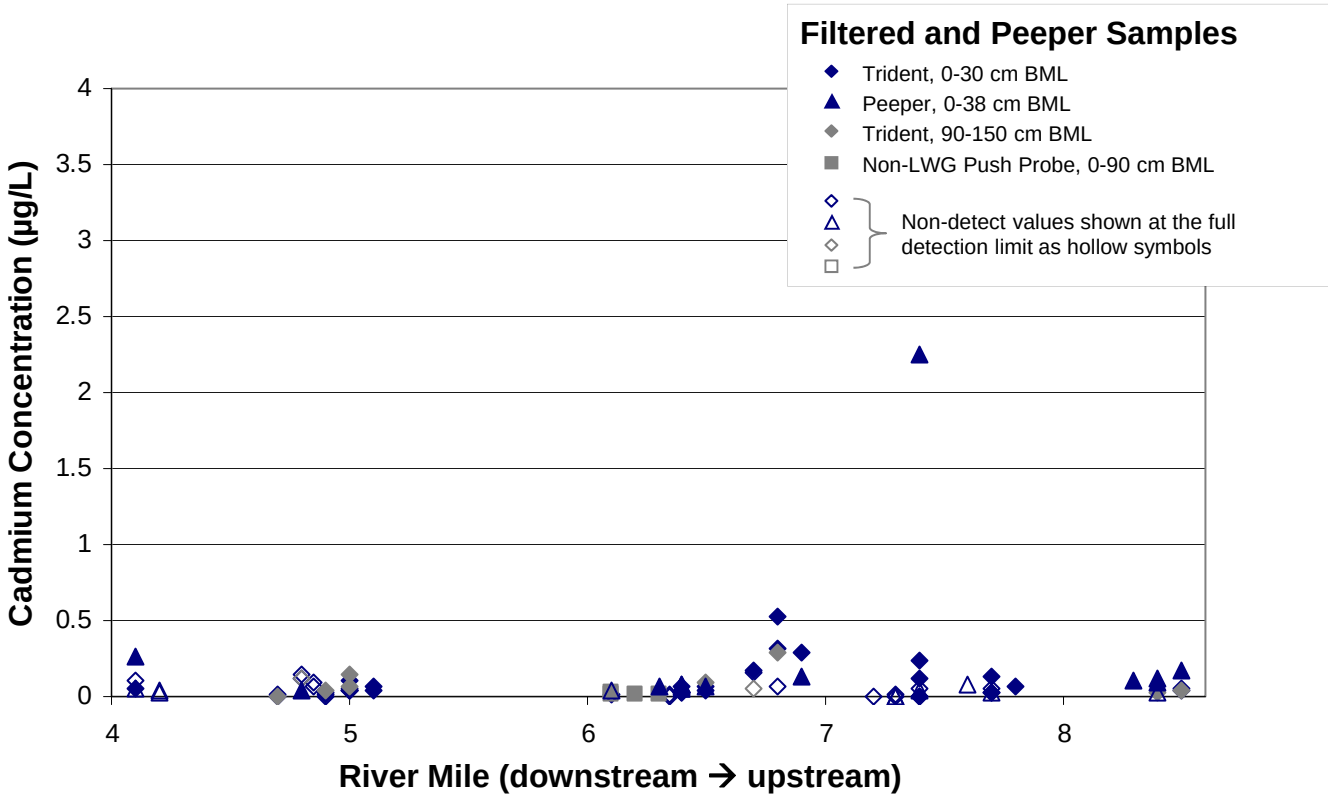




**Figure D4.3-1**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plots of Cadmium Concentrations in Transition Zone Water,
Filtered and Unfiltered Peeper Samples

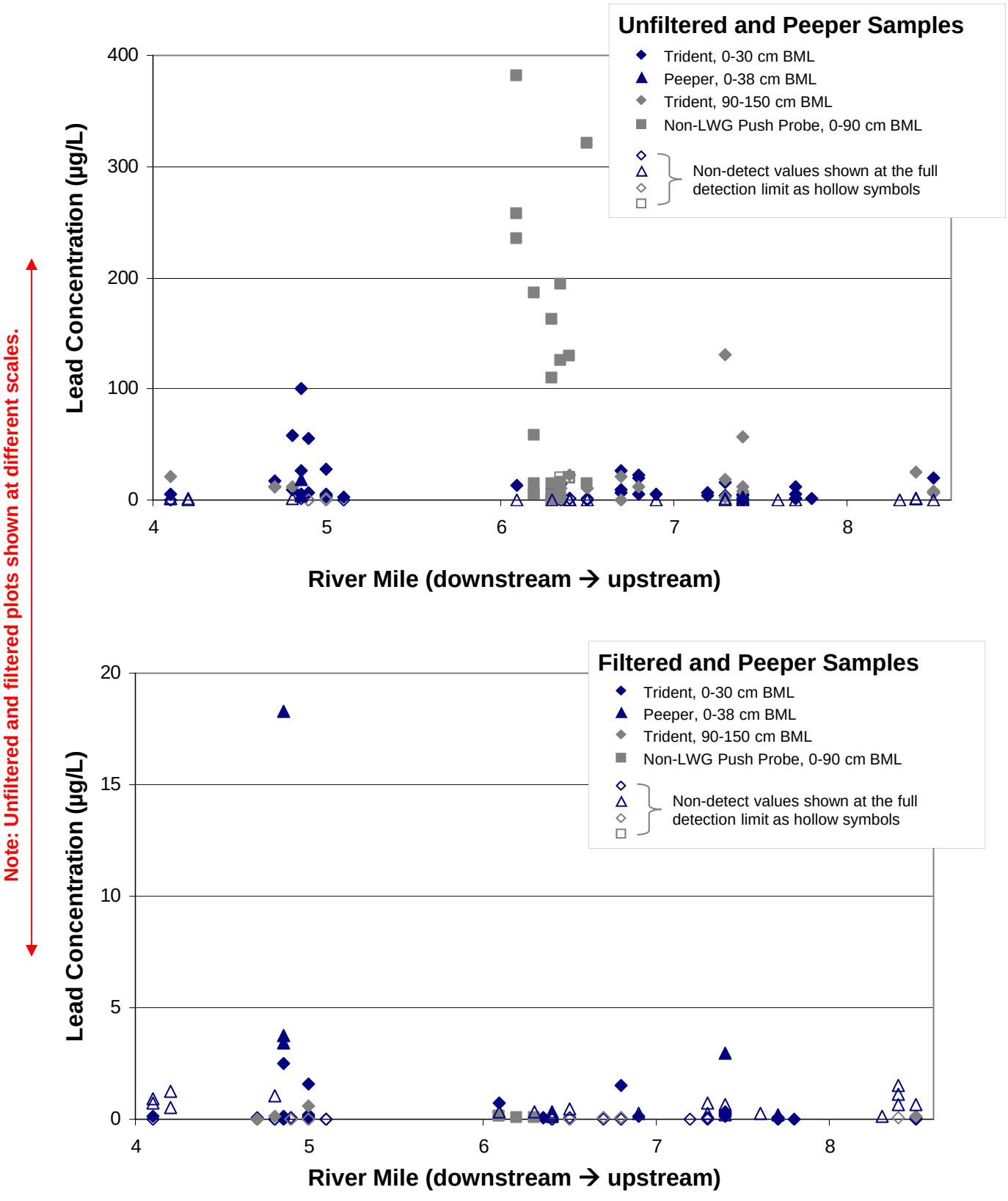
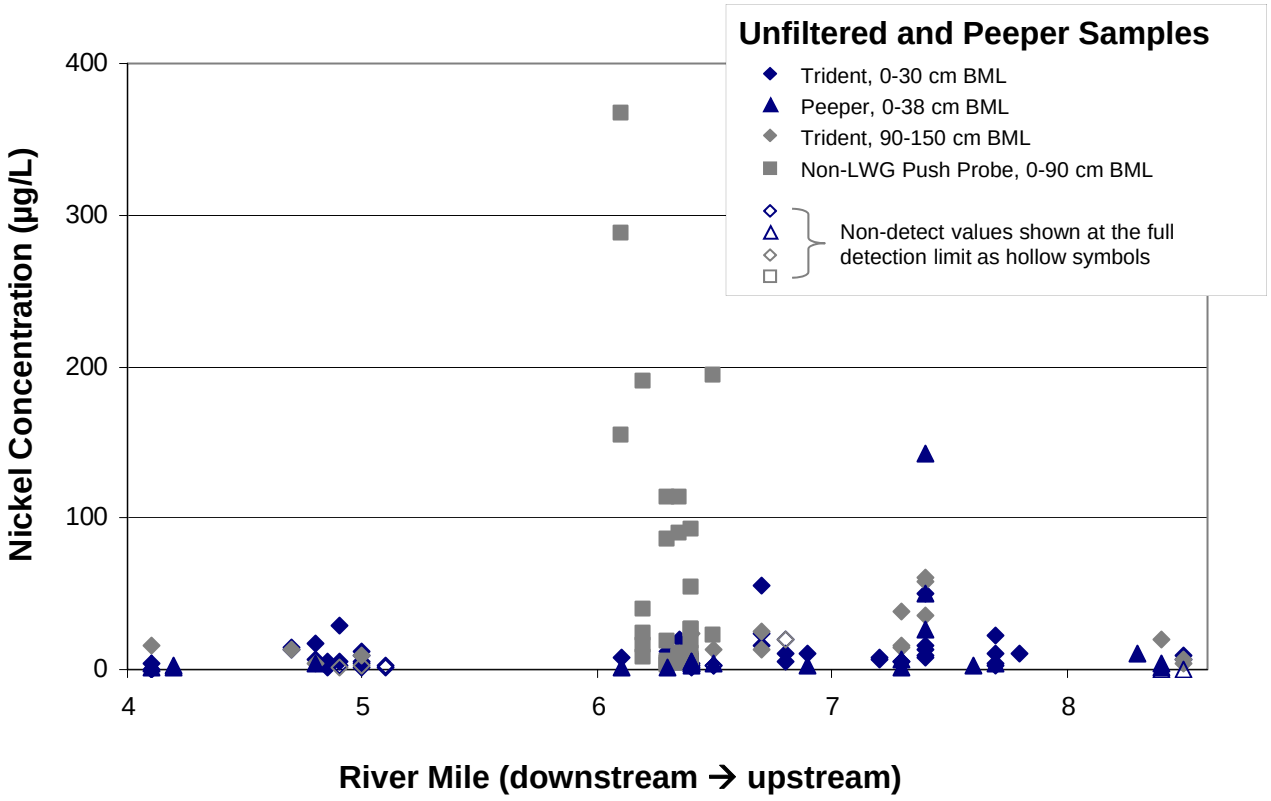



**Figure D4.3-2**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plots of Lead Concentrations in Transition Zone Water,
Filtered and Unfiltered Peeper Samples



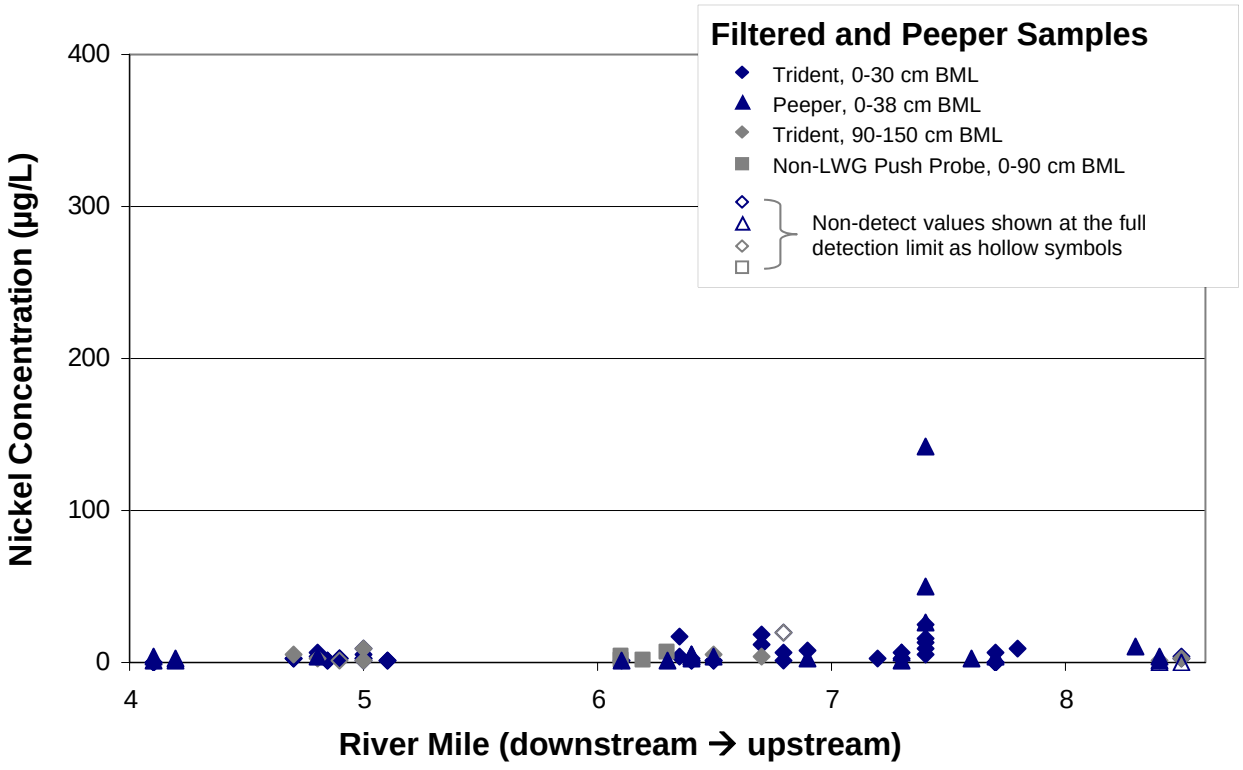




**Figure D4-3-3**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plots of Nickel Concentrations in Transition Zone Water,
Filtered and Unfiltered Peeper Samples

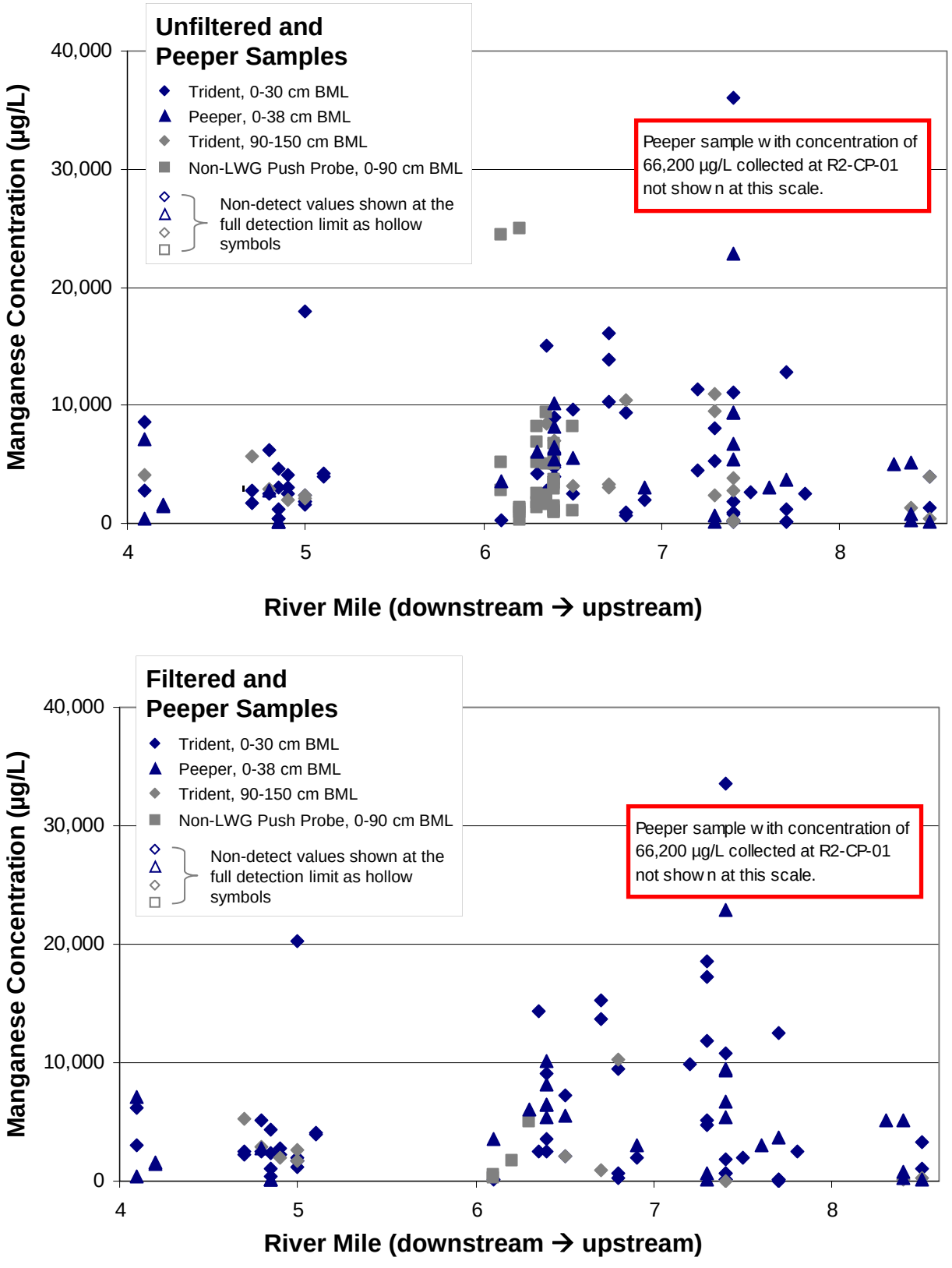



**Figure D4.3-4**
Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plots of Manganese Concentrations in Transition Zone Water,
Filtered and Unfiltered Peeper Samples

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D4.4
# PATTERNS AND TRENDS OF DDx, PAHs, and TPH IN TRANSITION ZONE WATER

**FINAL**

February 8, 2016

# TABLE OF CONTENTS

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# APPENDIX D4.4 PATTERNS AND TRENDS OF DDX, PAHS, AND TPH IN TRANSITION ZONE WATER

## D4.4.1 Introduction

This appendix provides additional details on the nature of three grouped contaminants, DDx, polycyclic aromatic hydrocarbons (PAHs), and total petroleum hydrocarbons (TPH) analyzed in TZW, by examining the patterns in the constituent contaminants that make up these compound groups. As mentioned in Section 5.5, polychlorinated biphenyls were not analyzed in TZW, and only two TZW sampling locations were analyzed for polychlorinated dibenzo-p-dioxins/furans; these chemicals are not included in this TZW nature and extent discussion.

Stacked bar charts, designed to reveal potential distinctive patterns in the relative abundance of grouped chemical components (e.g., homologs, isomers), are one tool used to examine the nature of contaminants in this appendix. Stacked bar charts of DDx, total PAHs, and TPH present, for each individual TZW sample, the fractional contribution of each individual constituent of the total concentration (detected sums only). The total sum concentration is also denoted on the figure with a black line (scale on the right-hand y-axis). Station location labels are provided on the x-axis, along with discharge conditions. Samples are organized along the x-axis according to descending river mile order, grouped by understanding of groundwater discharge areas as discussed in detail in Appendix C2 of the RI report. Where available, peeper ("PR"), filtered and unfiltered Trident ("TR"), and Geoprobe ("GP") data are shown for each sample location. Sample IDs for filtered results ("-f" in the sample ID) are indicated by highlighting. Deeper Trident samples are denoted by "-90", "-120", or "-150" in the sample ID, referring to depth below mudline (bml) in centimeters. Further, field duplicate samples on these figures are denoted by "dup" in the sample ID.

Also note that the TZW data set was generated for the purposes of assessing TZW offshore of upland groundwater plumes with likely or known complete pathways to the river; therefore, the data set does not cover all areas where TZW may be affected by unknown plumes or TZW quality impacted by contaminated sediments. Specifically, the data set is focused on the offshore area of nine sites, identified as high-priority, upland groundwater sites due to a confirmed or reasonable likelihood for discharge of upland groundwater contaminants of interest to Portland Harbor.

Groundwater seep data are limited and do not allow for definitive conclusions, so are not evaluated here. Only one seep, Outfall 22B (at the Rhone Poulenc site), is relevant for use in the baseline human health risk assessment. At this location, groundwater infiltrates into the outfall pipe, which subsequently discharges to a beach. The beach where Outfall 22B discharges was identified as a potential transient use area, so exposure to the groundwater seep in that beach by transients is considered a potentially complete pathway. For most analytes evaluated, Outfall 22B concentrations were near or below detection limits and were well below nearby upland groundwater and TZW concentrations.

### D4.4.2 Patterns and Trends of DDx in TZW

DDx was measured in TZW at ten locations offshore of the former Acid Plant area of the Arkema site, as well as at one location offshore of the adjacent Rhone Poulenc site. Evaluation of the patterns and trends for DDx is limited due to low sample size and detection frequencies; however, development of basic conclusions regarding chemical composition and the influence of filtration and sample depth is possible, as presented in the following paragraphs.

As shown on the histograms on Map 5.5-1, the observed ranges of DDx concentrations are generally higher in unfiltered samples as compared to the observed range for filtered and peeper samples. This tendency observed in the histogram ranges is upheld in a point-by-point assessment of the seven collocated filtered and unfiltered Trident pairs, where unfiltered sample concentrations are over 90 percent greater than filtered samples in four pairs collected offshore of the Arkema Acid Plant area. Higher sample concentrations in unfiltered samples as compared to filtered samples is expected for these highly hydrophobic chemicals, indicating the presence of DDx sorbed to solids larger than the filter diameter (>0.45 µm) in the unfiltered Trident samples. These results indicate that the unfiltered samples in the former Acid Plant area are likely affected by intake of sediment in the unfiltered sampling process. Further, the highest filtered sample result is observed offshore of the Rhone Poulenc site, whereas the collocated unfiltered result offshore of the Rhone Poulenc site (0.21 J µg/L) is well below the average (1.78 µg/L) of all measured unfiltered concentrations; this result suggests that uptake of solids did not influence the unfiltered concentrations measured at RP-03-C.

Comparison of DDx concentrations in unfiltered samples at the three sample locations (RP-03-C, AP-03-A, R2-AP-02) where both shallow (0 to 38 cm bml) and deep (90 to 150 cm bml) TZW samples were collected shows that the deeper samples consistently have higher concentrations than the shallow samples at AP-03-A and R2-AP-02. However, at RP-03-C, the deeper sample is generally comparable to the corresponding shallow samples in both filtered and unfiltered data sets.

Figure D4.4-1 presents bar charts showing percent composition of the six DDx congeners in the 15 samples with a detected DDx result. The chart only presents samples where all six DDx congeners were analyzed.[1] Samples are organized along the x-axis in groups referring to groundwater discharge zones. On these figures, sample IDs indicate sample location, sample method, sample depth, and field duplicates, as described above. Evaluation of the stacked bar chart in Figure D4.4-1 yields the following observations:

[1] The 2004 Pilot Study samples were analyzed for 4,4'-DDx congeners only, and are therefore not shown on the stacked bar chart in Figure D4.4-1.

- The two duplicate sample pairs (AP-03-A-TR-f and AP-03-A-TR-f-dup; AP-03-A-TR-uf and AP-03-A-TR-uf-dup) show good reproducibility in composition trending.
- Two of the shallow and deep sample pairs show similar compositions at both depths. The shallow and deep pair collected at R2-AP-02-TR-uf has an extreme concentration difference and shows different composition between the shallow and deep result.
- The bar chart trends further support the overall observed trends noted above in discussions of spatial distribution and filtration effects. The highest DDx concentrations (concentration indicated by the black line corresponding to the right y-axis) are mainly associated with unfiltered samples (filtered sample IDs are highlighted). These total concentration peaks (designated by the black line) correspond to DDx compositions dominated by 4,4´-DDT plus 4,4´-DDD.

In summary, for the limited data set available, the highest DDx concentrations were observed in unfiltered deep (90 to 150 cm bml) samples collected offshore of the former Acid Plant area. Filtration greatly reduced DDx concentrations measured offshore of the Acid Plant, indicating that DDx is present on solids. The highest filtered sample result is observed offshore of the Rhone Poulenc site. Filtration did not significantly reduce DDx concentrations measured at the single Rhone Poulenc sample location, and the unfiltered results offshore of the Rhone Poulenc site are below the average of unfiltered concentrations observed offshore of the former Acid Plant site. Further, offshore of the former Acid Plant area, TZW concentrations are generally greater at depth (90 to 150 cm bml) as compared those in shallow TZW (0 to 38 cm bml).

### D4.4.3 Patterns and Trends of PAHs in TZW

PAHs were sampled at six of the TZW sites (Kinder Morgan, ARCO, ExxonMobil, Gasco, Siltronic, and Willbridge Terminal). As shown on the river-mile-specific portions of the histograms of Maps 5.5-2a–e, the observed ranges of unfiltered total PAH concentrations for each river mile sampled are higher than filtered and peeper-sampled concentrations. This trend is upheld in a point-by-point assessment of the 34 collocated filtered and unfiltered Trident pairs for total PAHs. Looking at the filtered and unfiltered Trident pairs, filtration decreased the average total PAH concentration by 24 percent, with a maximum decrease of up to 99 percent (AR-02-B). Note that the apparent large decrease in the total PAHs concentration range with filtration seen on the harbor-wide portion of the histograms is largely attributable to the lack of filtered PAH samples from the non-LWG investigations offshore of the Siltronic and Gasco sites. The Siltronic and Gasco unfiltered results account for most of the >1,000 µg/L values.

The hydrophobicity of individual PAHs can be seen in the data set by examining the effects of filtration. As shown on inset histograms on Maps D4.2-2a–d and D4.2-4a–d, the large, hydrophobic carcinogenic polycyclic aromatic hydrocarbons (cPAHs) and benzo(a)pyrene (BaP) show extreme differences between filtered and unfiltered results (with an average of over 95 percent decrease in a paired sample comparison for both

cPAHs and BaP), suggesting that these chemicals are present on solids >0.45 µm in diameter in unfiltered TZW samples. In contrast, the smaller, less hydrophobic individual PAHs have a lesser tendency to bind to sediment and would be expected to be less affected by filtration, contributing the lower net effect of filtration on total PAHs concentrations. This filtration effect on total PAHs is therefore a function of the composition of each sample.

Comparison of total PAHs concentrations in the seven collocated deep and shallow (0 to 38 cm bml) TZW samples shows that the unfiltered deep samples consistently exhibit higher concentrations than the corresponding shallow samples. In some cases, the unfiltered, deep sample concentrations are up to 2 orders of magnitude greater than the collocated shallow samples. The three filtered deep/shallow sample pair results, however, show no clear relative trend. As with total PAHs, analysis of collocated deep/shallow sample pair results shows that unfiltered concentrations of high-molecular-weight polycyclic aromatic hydrocarbons (HPAHs), cPAHs, and BaP are generally much higher in deep samples. For naphthalene, 17 collocated deep (90 to 150 cm bml) and shallow (0 to 38 cm bml) Trident samples and 24 collocated deep (91 cm bml) and shallow (31 cm bml) Geoprobe samples were collected. In general, for the high (>1,000 µg/L) concentration samples collected from RM 6 to 7, shallow samples showed somewhat higher concentrations than collocated deep samples. For other parts of the study area, no clear trends with depth were observed for naphthalene.

Stacked bar charts showing percent composition of detected total PAHs sums are shown on Figures D4.4-2a–f. The charts present total PAHs concentration (indicated by the black line corresponding to the right y-axis), as well as the fraction of the total contributed by each of the 17 PAHs. Charts are presented for each relevant TZW study site, with samples organized along the x-axis in groups referring to groundwater discharge zones.

There are a several patterns apparent in these stacked bar charts. First, duplicate sample pairs show good reproducibility in composition trending. Second, the shallow and deep pairs frequently show variable compositions, particularly in cases where the deeper concentration is greater than the shallow concentration (e.g., EM04C-TR-uf-150, which has an extreme concentration difference between the shallow and deep result). This may reflect weathering in the biologically active zone and/or differences in PAH composition in sediment with depth. Next, a distinct chemical composition is generally present at sample locations with very high total PAHs concentrations. Acenaphthene is the dominant component of total PAHs sums in most samples; however, at sample locations with total PAHs greater than ~1,000 µg/L, naphthalene concentrations clearly dominate the composition. This result is interesting to evaluation of TZW because naphthalene is the most mobile chemical of the PAHs. This composition pattern is apparent in the bar charts for TZW data offshore of the Gasco and Siltronic sites (Figures D4.4-2d-e). Composition trends with concentration and location are less apparent at the other TZW study sites, where total PAHs concentrations cover a much lower concentration range.

In summary, of the sites sampled, total PAHs concentrations were found to be highest offshore of the Gasco and Siltronic sites. Total HPAHs, total cPAHs, and BaP results showed similar distribution and filtration patterns. Because low-molecular-weight polycyclic aromatic hydrocarbons (LPAHs) tend to compose the majority of the total PAHs concentrations, LPAH and naphthalene results generally followed the distribution patterns apparent for total PAHs. Filtration was observed to decrease the total PAHs concentration slightly, with greater effects on the more hydrophobic PAHs, as expected. For total PAHs, total HPAHs, total cPAHs, and BaP, the unfiltered deeper (90 to 150 cm bml) Trident samples consistently showed higher concentrations than corresponding unfiltered shallow (0 to 38 cm bml) samples. Review of the fractional composition of the 17 individual chemicals that compose total PAHs shows a clear pattern of high naphthalene concentrations associated with high total PAHs concentrations offshore of the Gasco and Siltronic sites. For these high-concentration naphthalene locations, shallow (31 cm bml) Geoprobe samples generally had slightly higher concentrations than the collocated deeper (91 cm bml) samples.

### D4.4.4 Patterns and Trends of TPH in TZW

TPH was sampled at six of the TZW sites (Kinder Morgan, ARCO, ExxonMobil, Gasco, Siltronic, and Willbridge Terminal). The highest concentrations of TPH in TZW were observed offshore of the Gasco and Siltronic sites, with the highest individual result measured offshore of the Gasco site. As shown on the histograms of the TPH map series, the distribution of unfiltered samples covers a larger and higher concentration range than the distribution of filtered samples; however, it should be noted that filtered TPH values do not include gasoline-range hydrocarbons (total petroleum hydrocarbons [gasoline]) (per sampling protocols for volatile organic compounds [VOCs], filtered samples of TPH [gasoline] were not collected). Focusing on diesel-range hydrocarbons—TPH (diesel)—and residual-range hydrocarbons—TPH (residual) (Table D4.1-1), it is clear, however, that filtration consistently decreases the concentration of these components. Further interpretation of this apparent effect of filtration is complicated by the expected variability in TPH composition (and corresponding hydrophobicity) from site to site (and likely sample to sample). TPH, as analyzed for the Round 2 investigation, is simply the measure of all hydrocarbons and non-hydrocarbons that can be quantified in the carbon range from *n*-$C_6$ to *n*-$C_{38}$, with no distinction/identification of specific component chemicals.

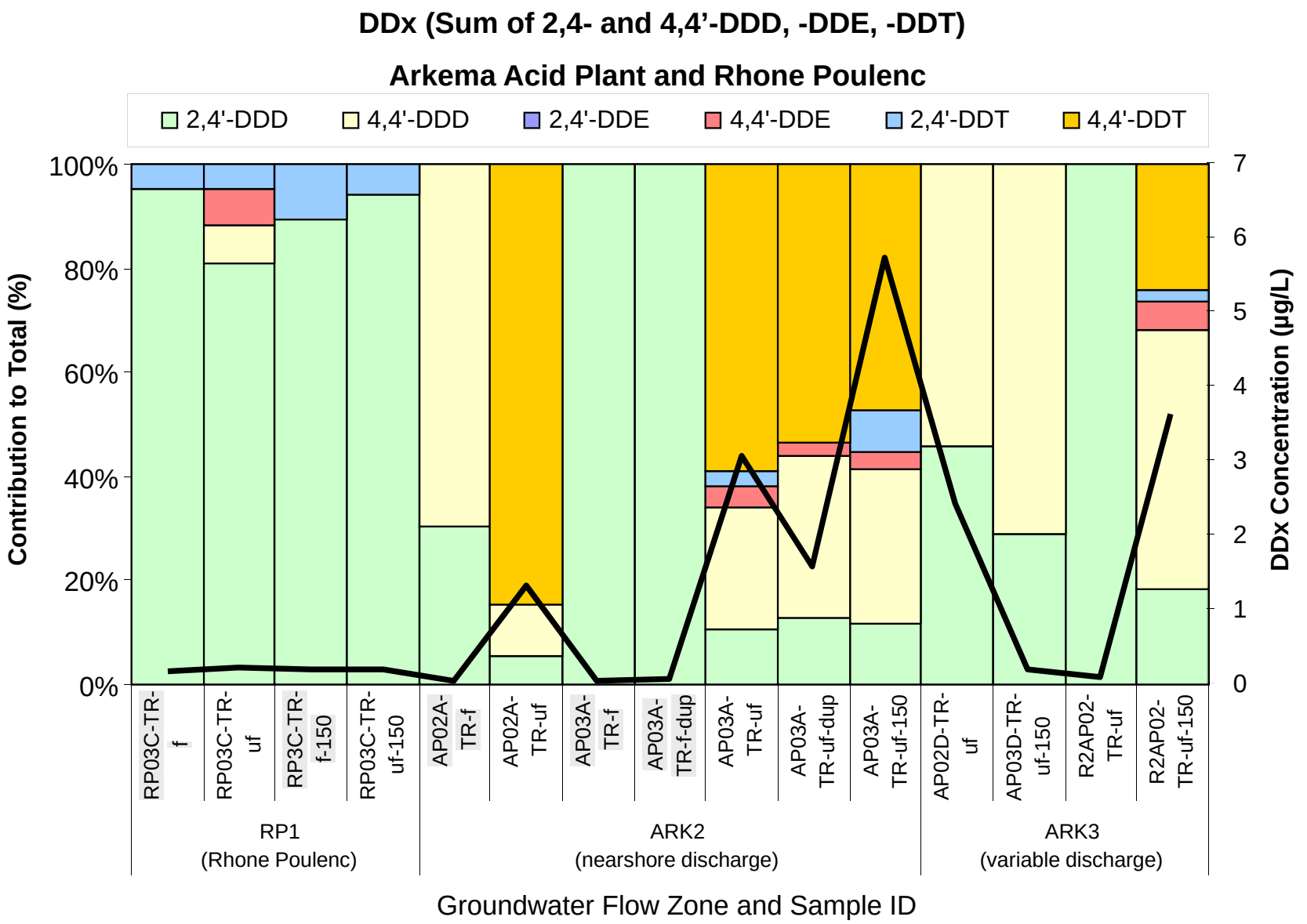
Comparison of TPH concentrations in the eight deep sample locations (90 to 150 cm bml) with the corresponding shallow results (0 to 38 cm bml) shows deep unfiltered results to be generally greater than shallow unfiltered results. Filtered deep results, however, show no clear trend.

To support consideration of patterns in the fractional composition of TPH, stacked bar charts are presented in Figures D4.4-3a–f, with one figure for each relevant TZW study site. Each figure presents results grouped by interpreted groundwater discharge zones. These figures present both filtered and unfiltered results, with filtered sample IDs highlighted. As noted above, the filtered results for TPH do not contain TPH (gasoline)

fractions. A general review of these figures reveals that, with few exceptions, duplicate results (indicated by "dup" in the sample ID) show similar composition and total concentration to the original sample.

Looking at the bar chart results site-by-site, there are few notable patterns in these plots relative to the interpreted zoning of groundwater discharge. Offshore of the Siltronic site, the "offshore discharge zone," where there is a complete pathway for groundwater discharge of select VOCs (discussed in Appendix C2), shows a fairly clear TPH composition shift toward TPH (gasoline), as compared to the samples from the other Siltronic zones. (Note again that the highlighted filtered samples do not contain TPH [gasoline] in the TPH composition presented.) Similar increases in TPH (gasoline) fractional composition of TPH can be seen in samples offshore of the Gasco, ARCO, and ExxonMobil sites; however, dominance of the TPH concentration in these unfiltered samples offshore of these sites is also generally accompanied by a sharp decrease in TPH concentration, making the pattern more difficult to interpret (possibly more reflective of the lack of TPH [diesel] and TPH [residual] than any increase in TPH [gasoline]). Further, these concentration ranges are close to detection limits, and the TPH (gasoline) results typically have lower detection limits (the average gasoline-range detection limit was 0.06 mg/L compared to 0.14 and 0.16 mg/L for TPH [residual] and TPH [diesel] samples).

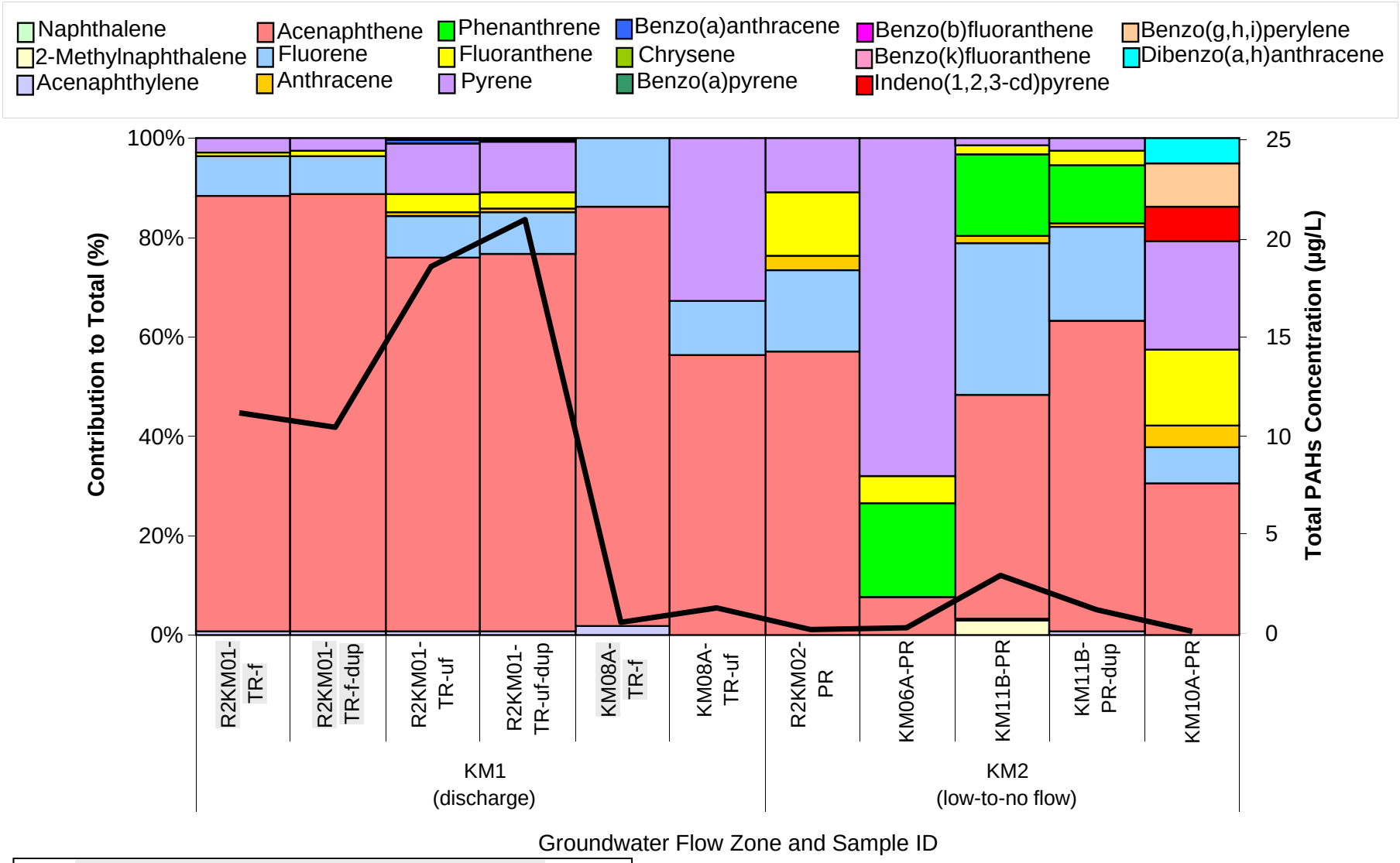
In summary, the general nature of the analyte TPH (unknown mixture of anthropogenic and natural hydrocarbons and non-hydrocarbons that can be quantified in the carbon range from *n*-$C_6$ to *n*-$C_{38}$) significantly confounds detailed, source-related interpretation of results. Overall, filtration was observed to decreases the TPH (diesel) and TPH (residual) fractions. Review of the fractional components (diesel, residual, and gasoline) showed a composition shift toward TPH (gasoline) in the offshore discharge zone at the Siltronic site; however, patterns elsewhere were generally weak and more difficult to interpret when TPH concentration changes were also considered.




Note: Highlighted sample IDs indicate filtered Trident samples.
The black line shows total concentration of the indicator chemical.

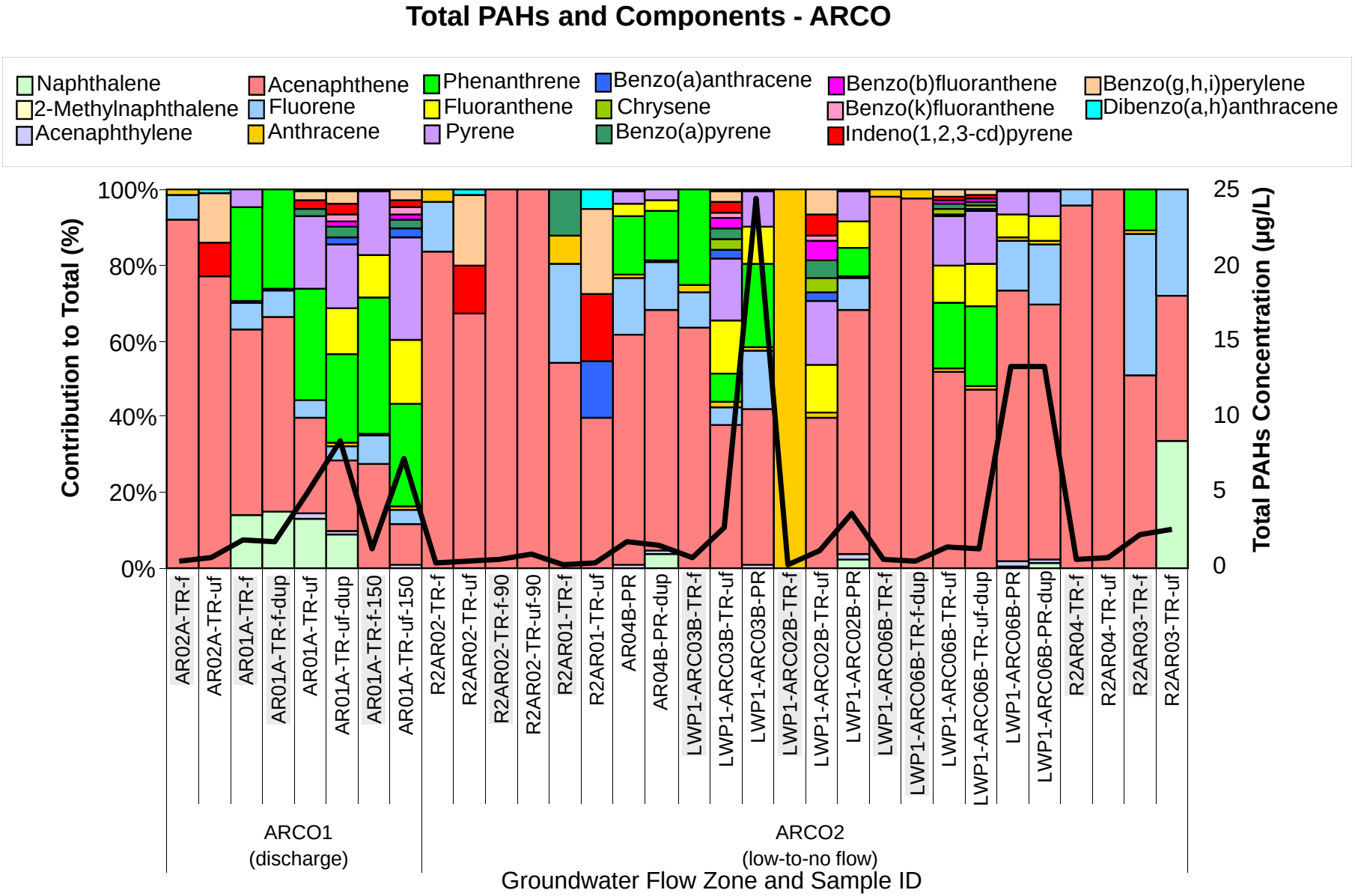
**Figure D4.4-1**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Charts of DDx Patterns in
Transition Zone Water (RM 6.8–7.8)

# Total PAHs and Components – Kinder Morgan



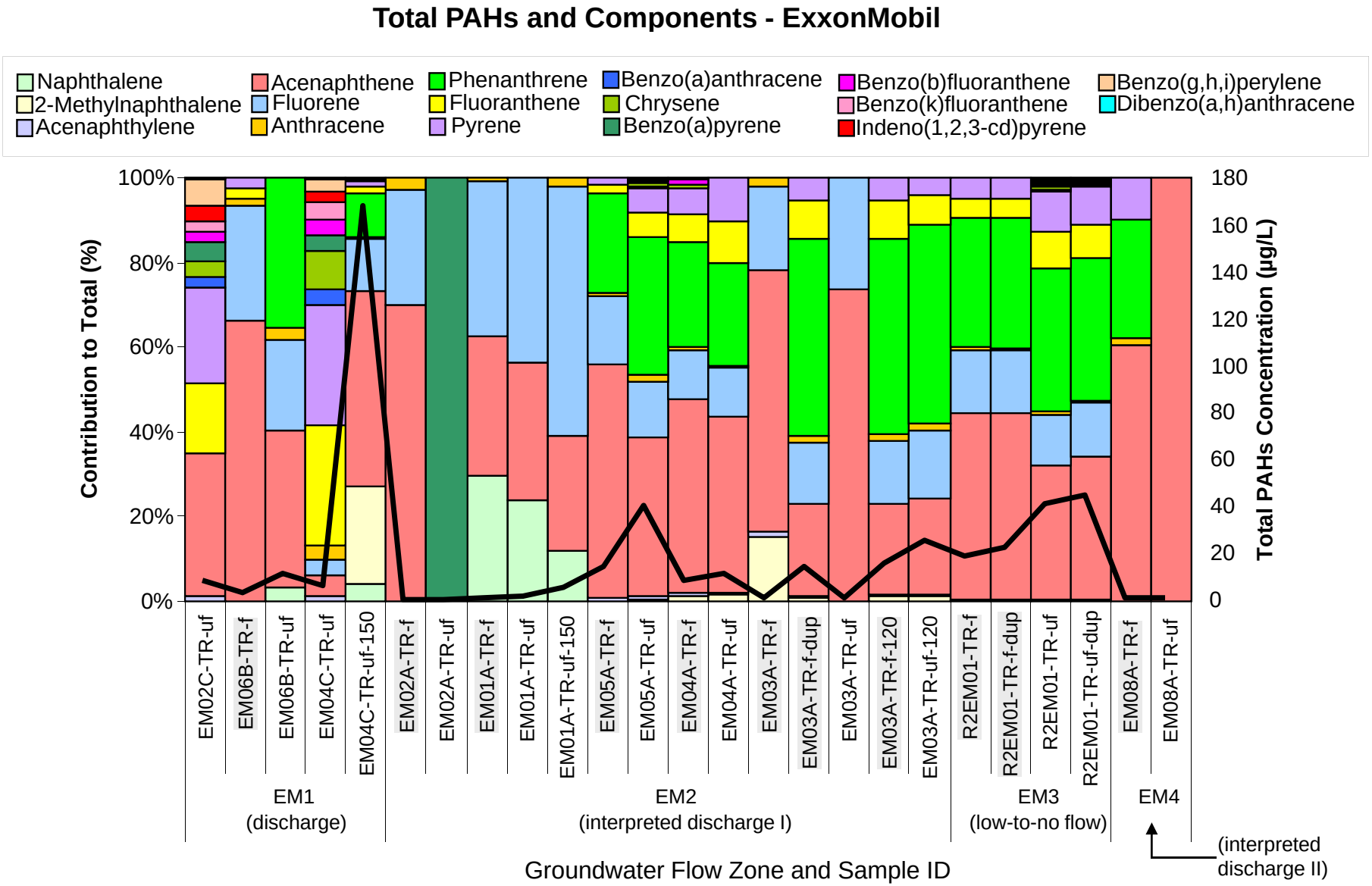

Note: Highlighted sample IDs indicate filtered Trident samples.
The black line shows total concentration of the indicator chemical.

**Figure D4.4-2a**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of Total PAHs Patterns in
Transition Zone Water (RM 4–8)




Note: Highlighted sample IDs indicate filtered Trident samples.
The black line shows total concentration of the indicator chemical.

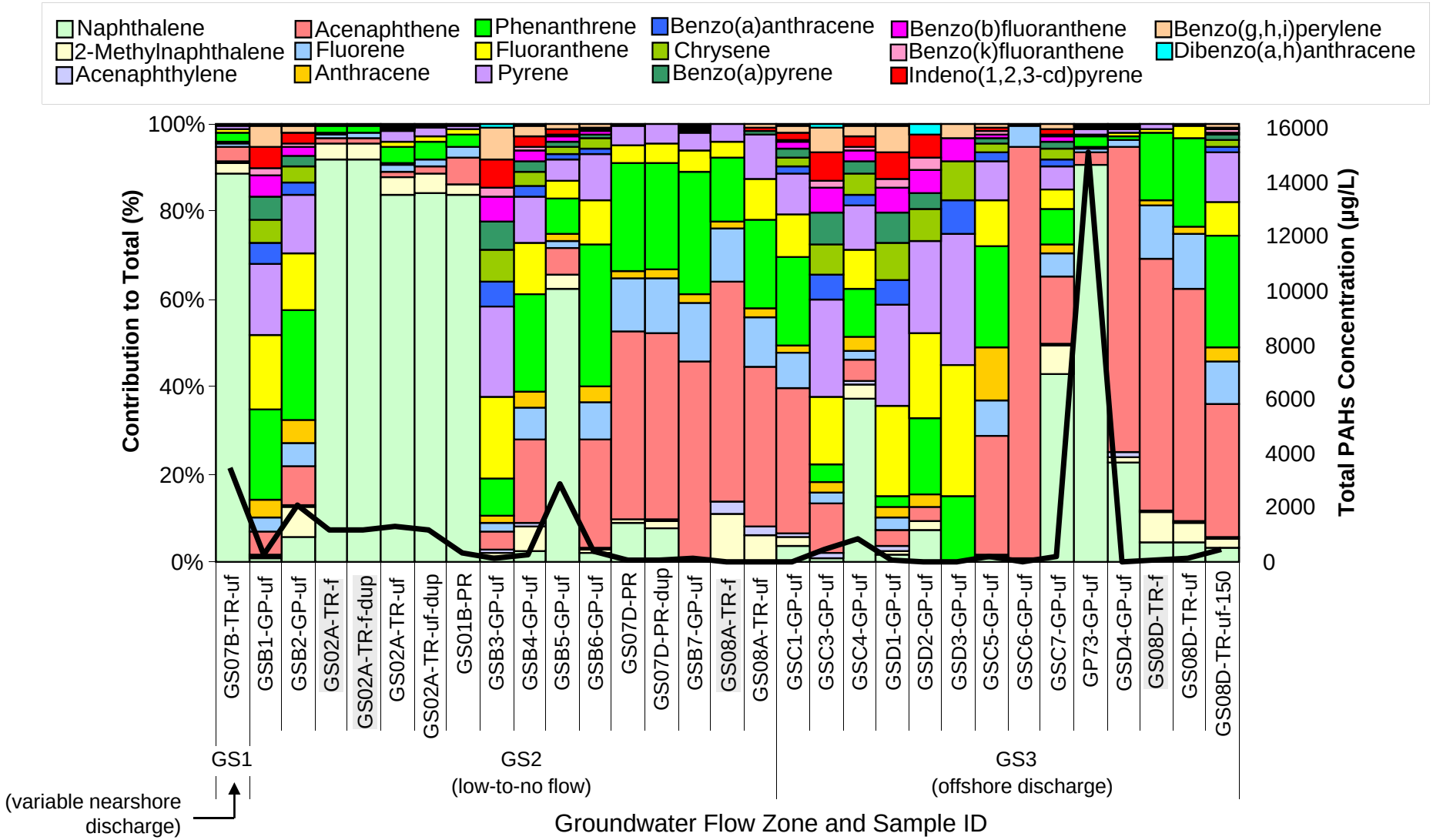
**Figure D4.4-2b**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of Total PAHs Patterns in
Transition Zone Water (RM 4–8)




Note: Highlighted sample IDs indicate filtered Trident samples.
The black line shows total concentration of the indicator chemical.

**Figure D4.4-2c**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of Total PAHs Patterns in
Transition Zone Water (RM 4–8)

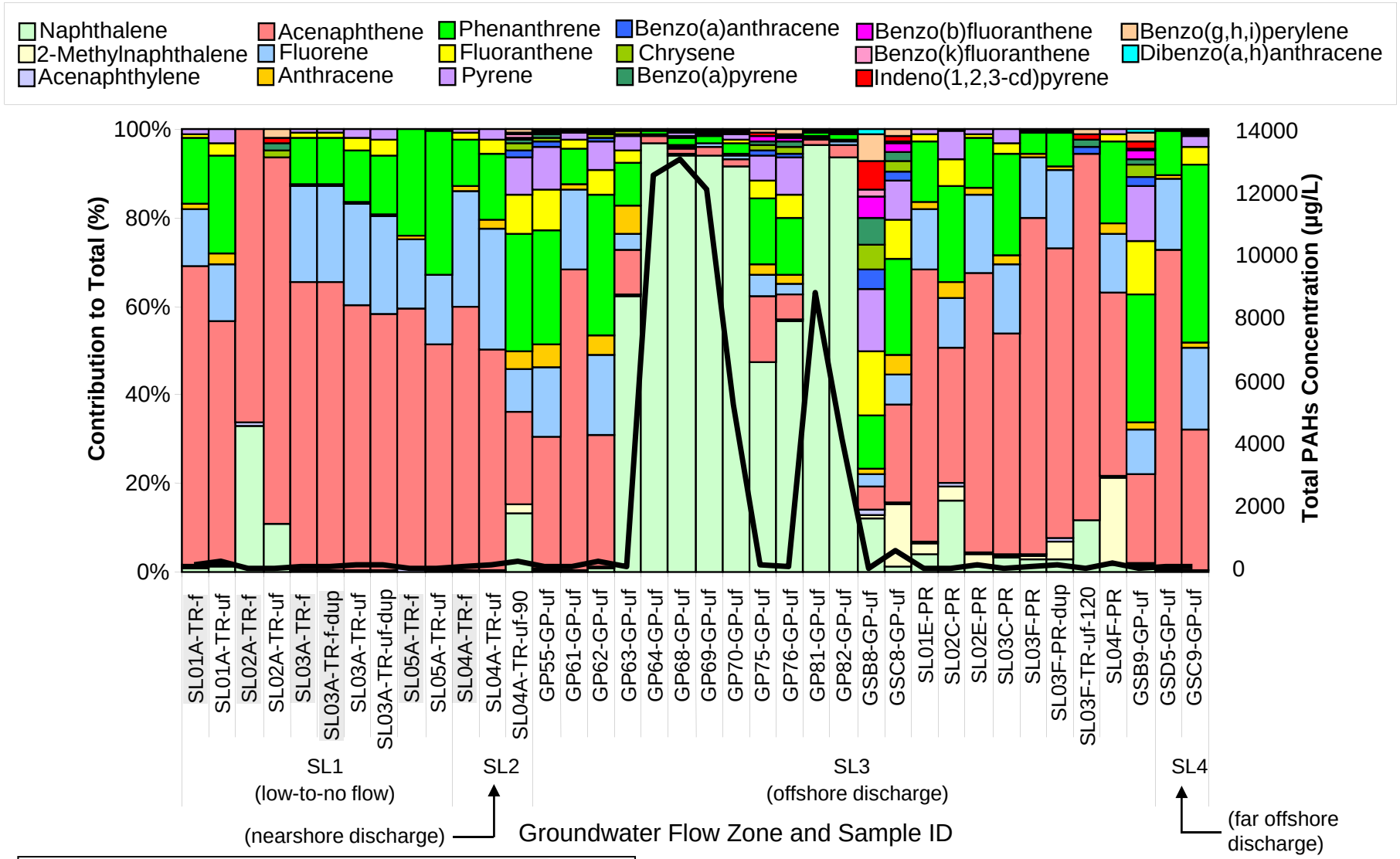
# Total PAHs and Components - Gasco




Note: Highlighted sample IDs indicate filtered Trident samples.
The black line shows total concentration of the indicator chemical.

**Figure D4.4-2d**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of Total PAHs Patterns in
Transition Zone Water (RM 4–8)

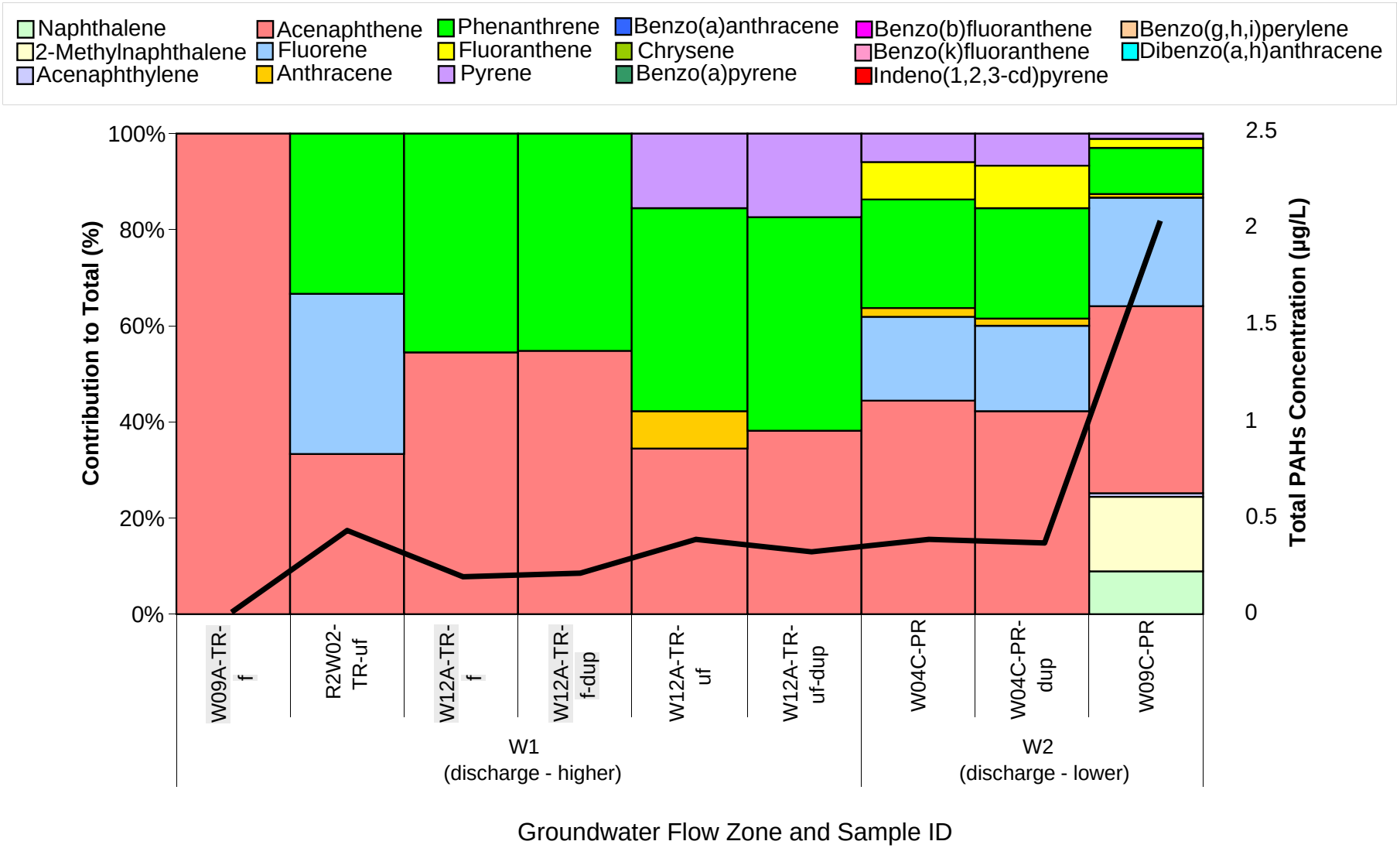
## Total PAHs and Components - Siltronic




Note: Highlighted sample IDs indicate filtered Trident samples.
The black line shows total concentration of the indicator chemical.

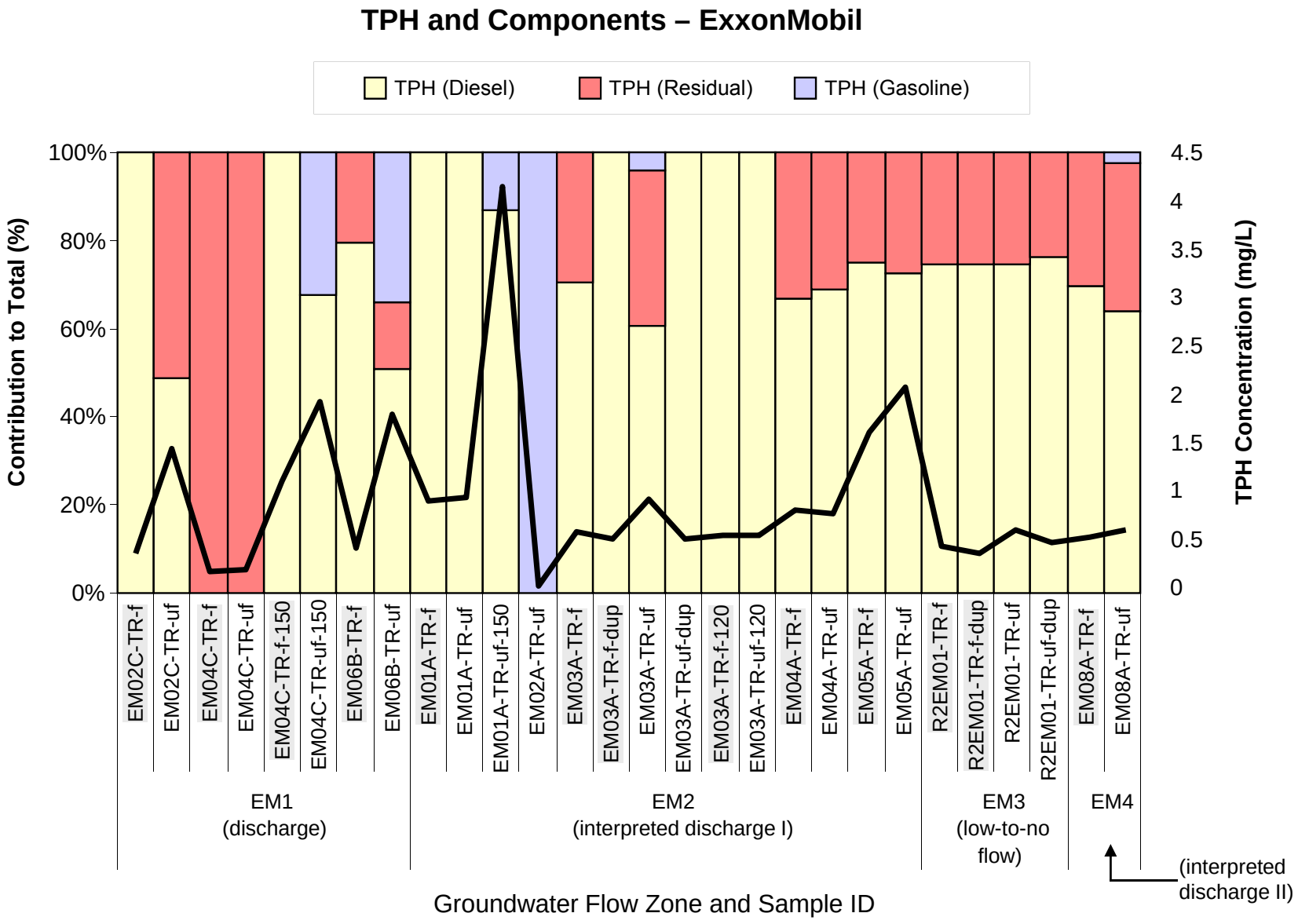
**Figure D4.4-2e**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of Total PAHs Patterns in
Transition Zone Water (RM 4–8)

# Total PAHs and Components - Willbridge



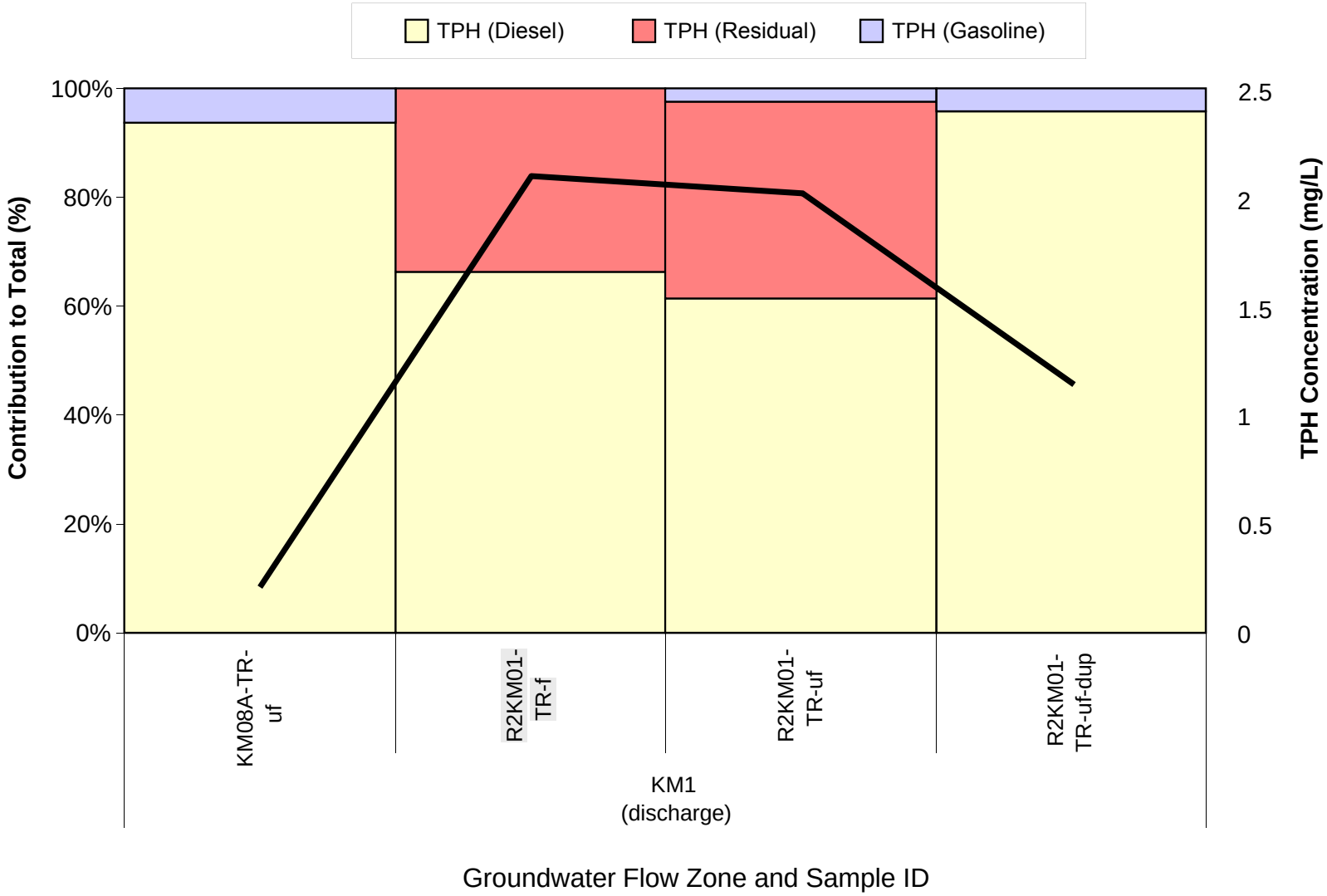

Note: Highlighted sample IDs indicate filtered Trident samples.
The black line shows total concentration of the indicator chemical.

**Figure D4.4-2f**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of Total PAHs Patterns in
Transition Zone Water (RM 4–8)



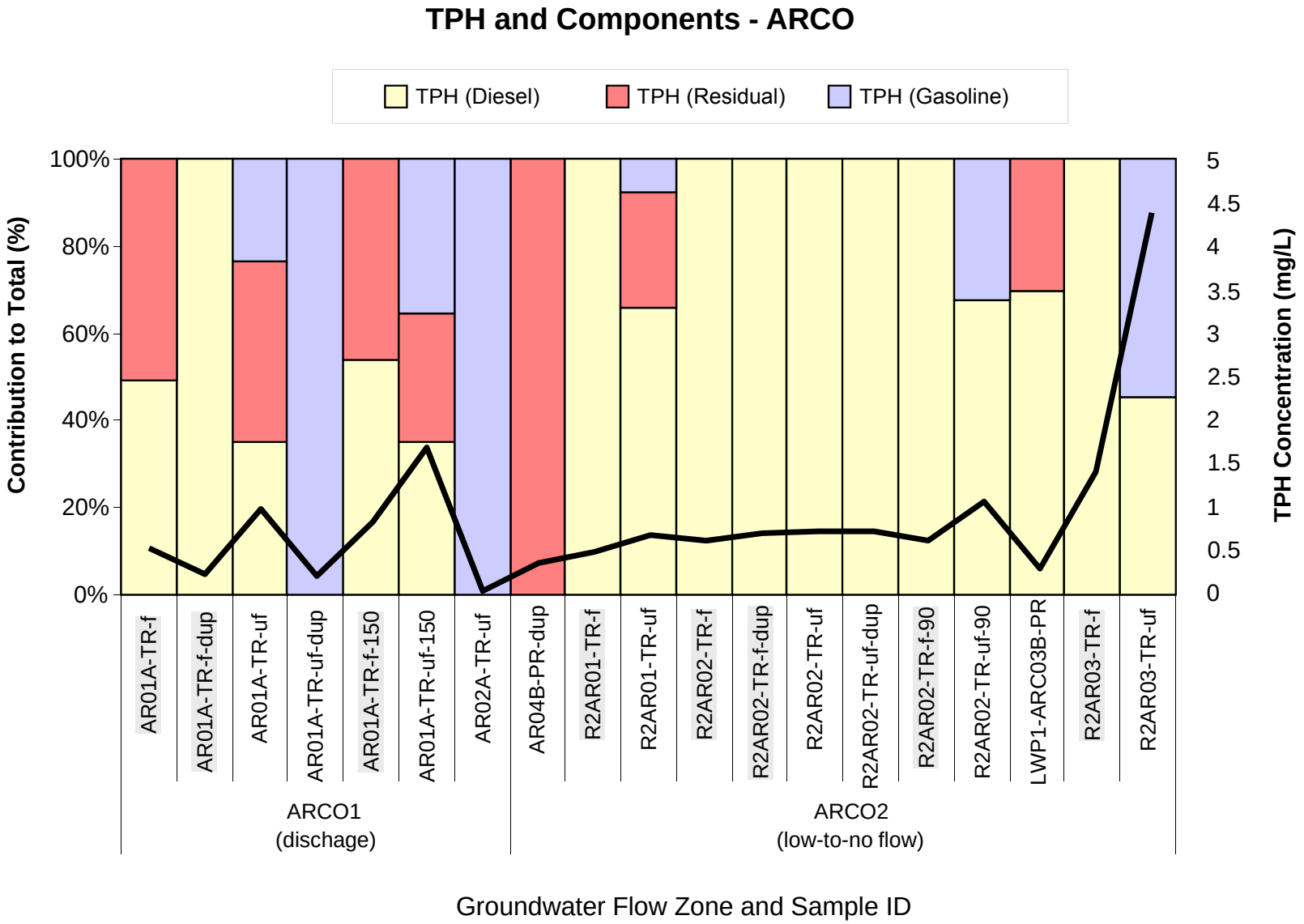

Note: Highlighted sample IDs indicate filtered Trident samples.
The black line shows total concentration of the indicator chemical.

**Figure D4.4-3a**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of Total Petroleum Hydrocarbons Patterns in
Transition Zone Water (RM 4–8)



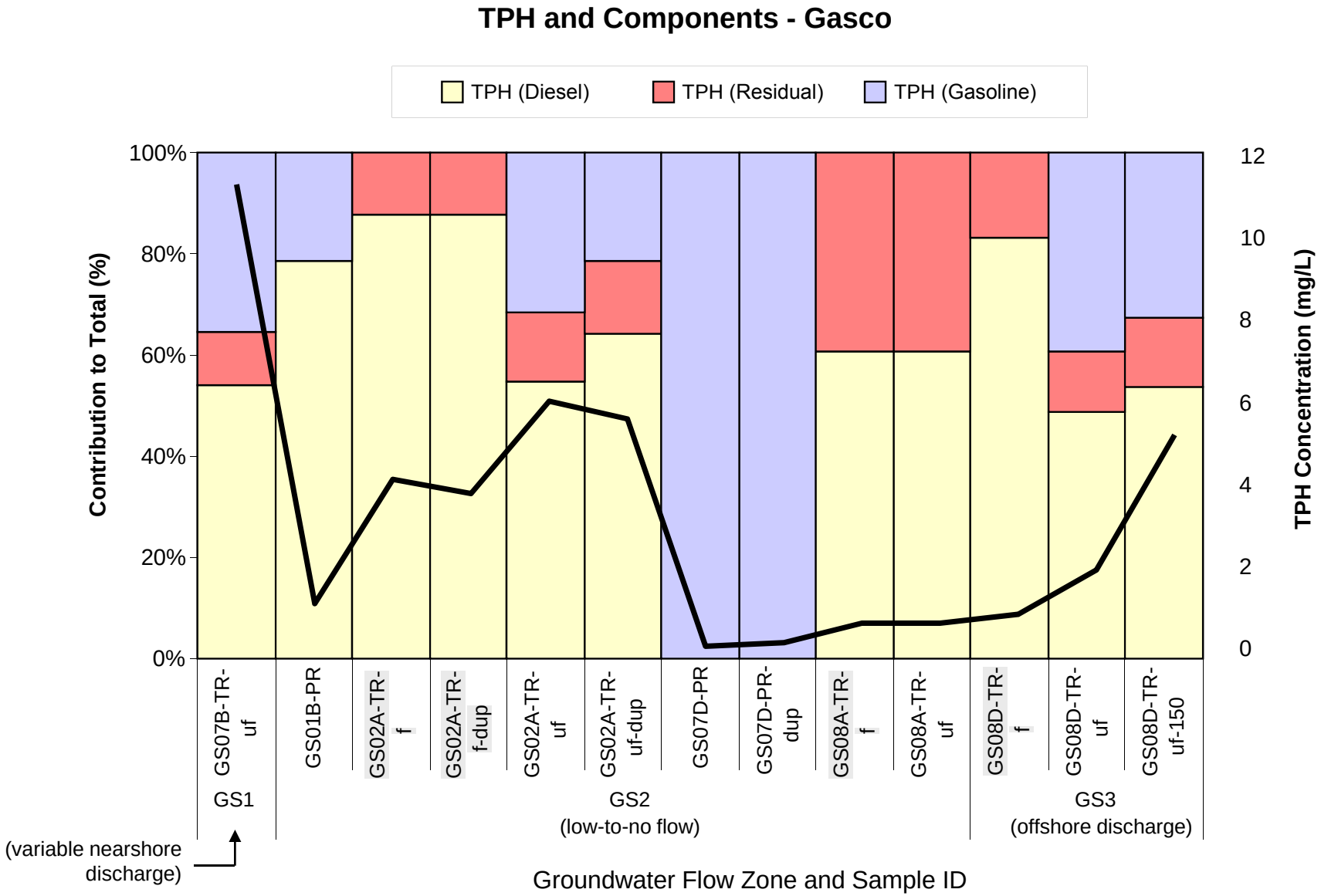

Note: Highlighted sample IDs indicate filtered Trident samples.
The black line shows total concentration of the indicator chemical.

**Figure D4.4-3b**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of Total Petroleum Hydrocarbons Patterns in
Transition Zone Water (RM 4–8)



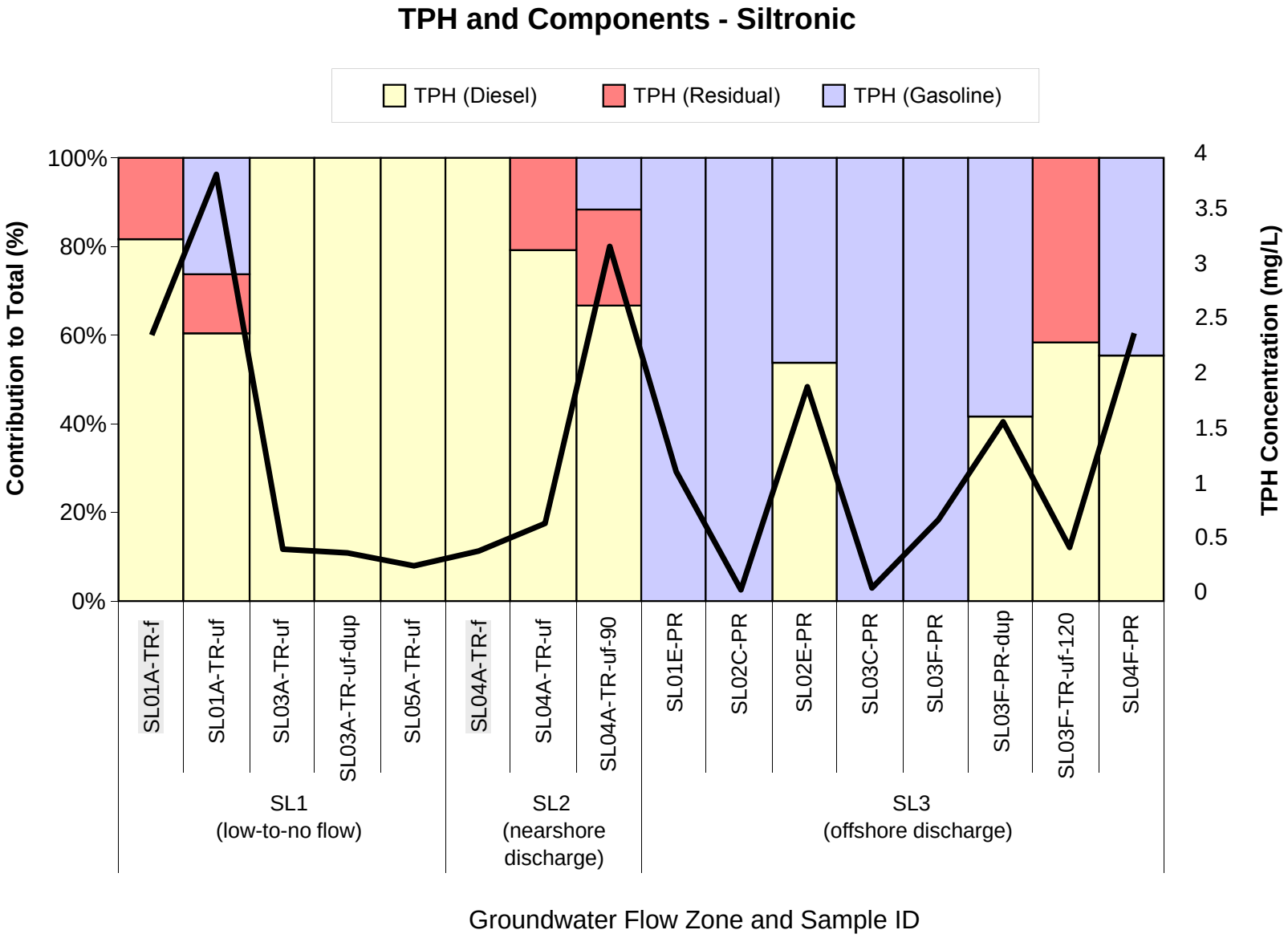

Note: Highlighted sample IDs indicate filtered Trident samples.
The black line shows total concentration of the indicator chemical.

**Figure D4.4-3c**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of Total Petroleum Hydrocarbons Patterns in
Transition Zone Water (RM 4–8)



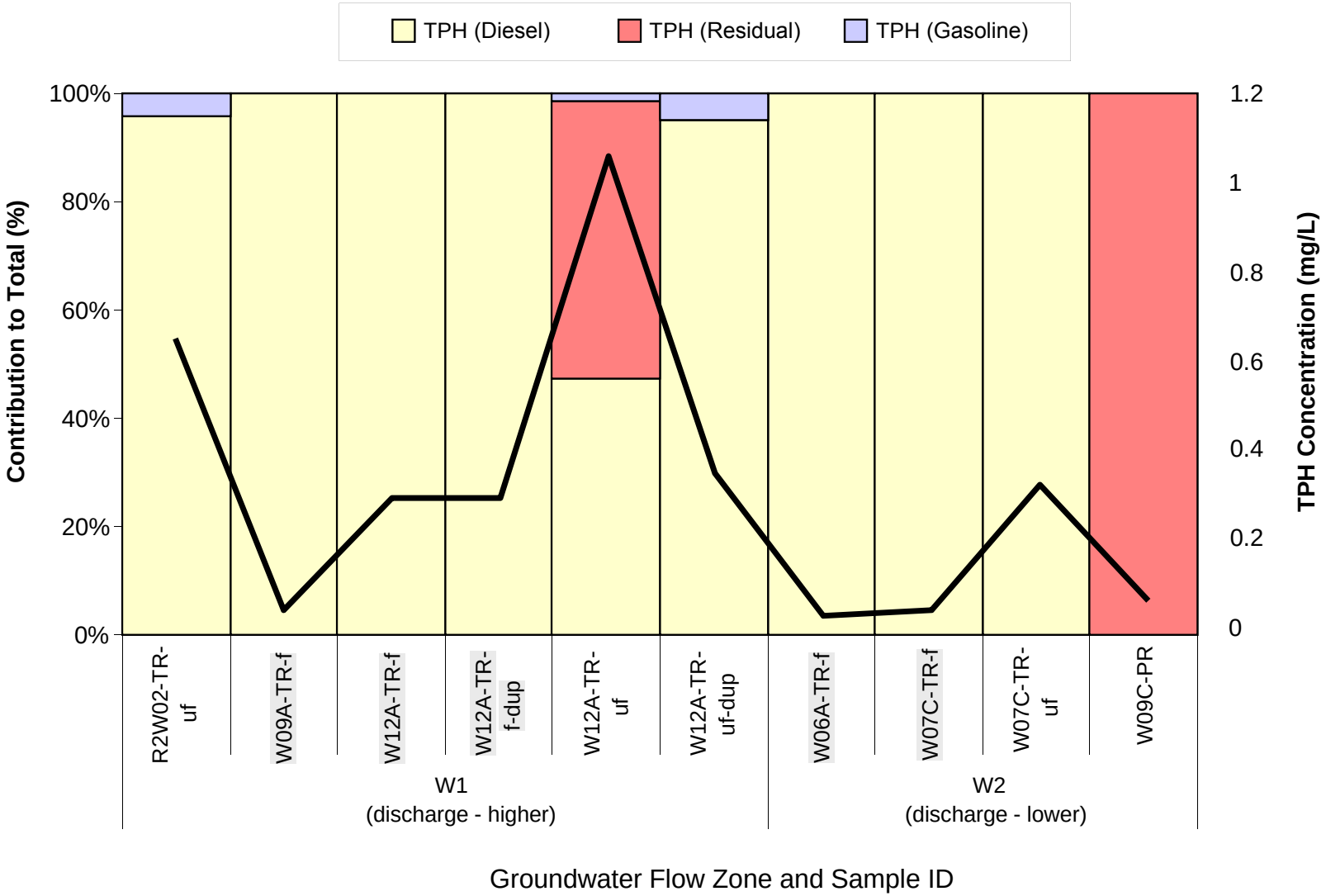

Note: Highlighted sample IDs indicate filtered Trident samples.
The black line shows total concentration of the indicator chemical.

**Figure D4.4-3d**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of Total Petroleum Hydrocarbons Patterns in
Transition Zone Water (RM 4–8)




Note: Highlighted sample IDs indicate filtered Trident samples.
The black line shows total concentration of the indicator chemical.

**Figure D4.4-3e**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of Total Petroleum Hydrocarbons Patterns in
Transition Zone Water (RM 4–8)




Note: Highlighted sample IDs indicate filtered Trident samples.
The black line shows total concentration of the indicator chemical.

**Figure D4.4-3f**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of Total Petroleum Hydrocarbons Patterns in
Transition Zone Water (RM 4–8)

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D5
# BIOTA

**FINAL**

February 8, 2016

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D5.1
# CONTAMINANT SUMMARY STATISTICS IN BIOTA—TABLES

**FINAL**

February 8, 2016

# LIST OF TABLES

Table D5.1-1. Summary Statistics for Other Contaminants in Fish Tissue, Study Area (RM 1.9–11.8)

Table D5.1-2. Summary Statistics for Other Contaminants in Invertebrate Tissue, Study Area (RM 1.9–11.8)

Table D5.1-3. Summary Statistics for Other Contaminants in Fish Tissue, Downtown Reach (RM 11.8–15.3) and Upriver Reach (RM 15.3-28.4)

Table D5.1-4. Summary Statistics for Other Contaminants in Invertebrate Tissue, Downtown Reach (RM 11.8–15.3) and Upriver Reach (RM 15.3-28.4)

Table D5.1-5. Summary Statistics for Other Contaminants in Fish Tissue, Downstream Reach (RM 0–1.9 and Multnomah Channel)

Table D5.1-6. Summary Statistics for Other Contaminants in Invertebrate Tissue, Downstream Reach (RM 0–1.9 and Multnomah Channel)

Table D5.1-1. Summary Statistics for Other Contaminants in Fish Tissue, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| ***Black crappie (fillet without skin)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Mercury | mg/kg-wet | 4 | 4 | 100 | 0.067 | 0.101 | FZ0609 | 0.086 | 0.088 | 0.0994 | 0.067 | 0.101 | FZ0609 | 0.086 | 0.088 | 0.0994 |
| ***Black crappie (fillet)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 4 | 2 | 50 | 0.001 J | 0.001 J | FZ0306; FZ0609 | 0.001 | 0.001 J | 0.001 J | 0.001 U | 0.001 U | FZ0306; FZ0609 | 0.00075 | 0.00075 J | 0.001 J |
| Lead | mg/kg-wet | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.001 U | 0.005 U | FZ0306 | 0.00113 | 0.00075 U | 0.00228 U |
| Nickel | mg/kg-wet | 4 | 2 | 50 | 0.057 | 0.064 | FZ0306 | 0.0605 | 0.0605 | 0.0637 | 0.001 U | 0.064 | FZ0306 | 0.0305 | 0.0288 | 0.063 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | FZ0306; FZ0609 | 0.5 | 0.5 U | 0.5 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | FZ0306; FZ0609 | 0.5 | 0.5 U | 0.5 U |
| ***Black crappie (whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 4 | 4 | 100 | 0.003 J | 0.006 J | FZ0609 | 0.00388 | 0.00325 J | 0.00563 J | 0.003 J | 0.006 J | FZ0609 | 0.00388 | 0.00325 J | 0.00563 J |
| Lead | mg/kg-wet | 4 | 1 | 25 | 0.0185 JT | 0.0185 JT | FZ0306 | 0.0185 | 0.0185 JT | 0.0185 JT | 0.004 UJ | 0.0185 JT | FZ0306 | 0.00663 | 0.003 UJ | 0.0163 J |
| Mercury | mg/kg-wet | 4 | 4 | 100 | 0.033 | 0.044 | FZ0609 | 0.0394 | 0.0403 | 0.044 | 0.033 | 0.044 | FZ0609 | 0.0394 | 0.0403 | 0.044 |
| Nickel | mg/kg-wet | 4 | 4 | 100 | 0.33 JT | 0.357 J | FZ0609 | 0.343 | 0.343 J | 0.356 J | 0.33 JT | 0.357 J | FZ0609 | 0.343 | 0.343 J | 0.356 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 4 | 4 | 100 | 1.67 JT | 3.22 T | FZ0609 | 2.16 | 1.88 | 3.05 | 1.67 JT | 3.22 T | FZ0609 | 2.16 | 1.88 | 3.05 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1.6 U | FZ0306 | 0.638 | 0.625 U | 0.793 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 4 | 2 | 50 | 5.7 NT | 8.1 N | FZ0609 | 6.9 | 6.9 | 7.98 | 1 U | 8.1 N | FZ0609 | 3.71 | 3.13 | 7.74 |
| ***Brown bullhead (fillet without skin)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 6 | 5 | 83 | 0.001 J | 0.001 J | FZ0306; FZ0609 | 0.001 | 0.001 J | 0.001 J | 0.001 J | 0.008 U | FZ0609 | 0.0015 | 0.001 J | 0.00325 J |
| Lead | mg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.002 U | 0.008 U | FZ0609 | 0.00183 | 0.00125 U | 0.00363 U |
| Mercury | mg/kg-wet | 6 | 6 | 100 | 0.035 | 0.094 | FZ0609 | 0.0608 | 0.059 | 0.089 | 0.035 | 0.094 | FZ0609 | 0.0608 | 0.059 | 0.089 |
| Nickel | mg/kg-wet | 6 | 6 | 100 | 0.003 J | 0.055 | FZ0306 | 0.0205 | 0.014 J | 0.0485 J | 0.003 J | 0.055 | FZ0306 | 0.0205 | 0.014 J | 0.0485 J |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 9.6 UT | FZ0609 | 1.47 | 0.5 U | 4.1 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 33 UT | 80 UT | FZ0306 | 24.1 | 16.5 U | 39.6 U |
| Naphthalene | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 33 UT | 73 UT | FZ0306 | 25.7 | 24.8 U | 36.1 U |
| Phenanthrene | µg/kg-wet | 6 | 2 | 33 | 110 JT | 140 T | FZ0306 | 125 | 125 J | 139 J | 33 UT | 140 T | FZ0306 | 57.9 | 32.3 U | 133 J |
| Total cPAHs | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 33 UT | 80 UT | FZ0306 | 24.1 | 16.5 U | 39.6 U |
| Total HPAHs | µg/kg-wet | 6 | 1 | 17 | 110 T | 110 T | FZ0306 | 110 | 110 T | 110 T | 33 UT | 110 UT | FZ0306 | 43.8 | 32.3 U | 96.3 |
| Total LPAHs | µg/kg-wet | 6 | 2 | 33 | 110 JT | 140 T | FZ0306 | 125 | 125 J | 139 J | 33 UT | 140 T | FZ0306 | 60.7 | 40.5 U | 133 J |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 330 U | 330 U | FZ0306; FZ0609 | 165 | 165 U | 165 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 UT | 6.4 UT | FZ0609 | 1.2 | 0.5 U | 2.9 U |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 170 UT | 190 UT | FZ0306 | 86.7 | 85 U | 92.5 U |
| ***Brown bullhead (whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 6 | 6 | 100 | 0.008 J | 0.014 | FZ0306 | 0.0116 | 0.0125 J | 0.014 | 0.008 J | 0.014 | FZ0306 | 0.0116 | 0.0125 J | 0.014 |
| Lead | mg/kg-wet | 6 | 5 | 83 | 0.023 | 0.0435 T | FZ0609 | 0.0289 | 0.026 | 0.04 | 0.014 U | 0.0435 T | FZ0609 | 0.0253 | 0.026 | 0.0391 |
| Mercury | mg/kg-wet | 6 | 6 | 100 | 0.025 T | 0.054 | FZ0306 | 0.0367 | 0.033 | 0.052 | 0.025 T | 0.054 | FZ0306 | 0.0367 | 0.033 | 0.052 |
| Nickel | mg/kg-wet | 6 | 5 | 83 | 0.213 J | 0.321 J | FZ0306 | 0.264 | 0.261 J | 0.315 J | 0.213 J | 0.328 UJT | FZ0609 | 0.248 | 0.249 J | 0.313 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 6 | 6 | 100 | 1.6 T | 6.04 T | FZ0609 | 3.47 | 2.91 | 5.76 | 1.6 T | 6.04 T | FZ0609 | 3.47 | 2.91 | 5.76 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 6 | 3 | 50 | 1.4 N | 1.9 N | FZ0609 | 1.6 | 1.5 N | 1.86 | 1 U | 9.6 UT | FZ0609 | 2.02 | 1.7 | 4.1 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 33 UT | 33 UT | FZ0306; FZ0609 | 16.5 | 16.5 U | 16.5 U |
| Naphthalene | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 33 UT | 33 UT | FZ0306; FZ0609 | 16.5 | 16.5 U | 16.5 U |
| Phenanthrene | µg/kg-wet | 6 | 1 | 17 | 60 T | 60 T | FZ0306 | 60 | 60 T | 60 T | 33 UT | 60 T | FZ0306 | 23.8 | 16.5 U | 49.1 |
| Total cPAHs | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 33 UT | 33 UT | FZ0306; FZ0609 | 16.5 | 16.5 U | 16.5 U |
| Total HPAHs | µg/kg-wet | 6 | 1 | 17 | 40 T | 40 T | FZ0306 | 40 | 40 T | 40 T | 33 UT | 49 UT | FZ0609 | 22.8 | 19.8 U | 36.1 |

Table D5.1-1. Summary Statistics for Other Contaminants in Fish Tissue, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| Total LPAHs | µg/kg-wet | 6 | 1 | 17 | 60 T | 60 T | FZ0306 | 60 | 60 T | 60 T | 33 UT | 60 T | FZ0306 | 23.8 | 16.5 U | 49.1 |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 330 U | 330 U | FZ0306; FZ0609 | 165 | 165 U | 165 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 UT | 33 UT | FZ0306; FZ0609 | 9.2 | 9.85 U | 16.5 U |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 160 UT | 190 UT | FZ0609 | 86.7 | 85 U | 93.8 U |
| ***Carp (fillet without skin)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Mercury | mg/kg-wet | 6 | 6 | 100 | 0.074 | 0.191 T | FZ0306 | 0.127 | 0.115 | 0.19 | 0.074 | 0.191 T | FZ0306 | 0.127 | 0.115 | 0.19 |
| ***Carp (fillet)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 12 | 9 | 75 | 0.002 J | 0.009 J | FZ0609 | 0.00444 | 0.004 J | 0.0082 J | 0.002 J | 0.009 J | FZ0609 | 0.00371 | 0.0035 J | 0.0079 J |
| Lead | mg/kg-wet | 12 | 8 | 67 | 0.012 | 0.356 | CP0812 | 0.0867 | 0.0543 | 0.258 | 0.004 U | 0.356 | CP0812 | 0.0586 | 0.0405 | 0.203 |
| Mercury | mg/kg-wet | 6 | 6 | 100 | 0.0411 | 0.0731 | CP0408 | 0.0581 | 0.0565 | 0.0728 | 0.0411 | 0.0731 | CP0408 | 0.0581 | 0.0565 | 0.0728 |
| Nickel | mg/kg-wet | 12 | 11 | 92 | 0.012 J | 0.396 | CP0408 | 0.0742 | 0.04 J | 0.242 | 0.002 U | 0.396 | CP0408 | 0.0681 | 0.039 J | 0.226 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 6 | 6 | 100 | 0.386 T | 8.02 T | CP0408 | 2.14 | 0.735 | 6.63 | 0.386 T | 8.02 T | CP0408 | 2.14 | 0.735 | 6.63 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 12 | 6 | 50 | 0.0196 JT | 0.0356 J | CP0408 | 0.0261 | 0.0256 J | 0.0336 J | 0.0196 JT | 9.6 UT | FZ0609 | 1.48 | 1.02 J | 4.8 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.081 U | 0.081 U | CP0408; CP0812 | 0.0405 | 0.0405 U | 0.0405 U |
| Naphthalene | µg/kg-wet | 6 | 3 | 50 | 3.1 | 6.8 | CP0408 | 5.5 | 6.6 | 6.78 | 1.8 U | 6.8 | CP0408 | 3.24 | 2.08 | 6.75 |
| Phenanthrene | µg/kg-wet | 6 | 3 | 50 | 6.8 | 13 | CP0408 | 10.6 | 12 | 12.9 | 1.7 U | 13 | CP0408 | 5.84 | 4.1 | 12.8 |
| Total cPAHs | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.081 UT | 0.081 UT | CP0408; CP0812 | 0.0405 | 0.0405 U | 0.0405 U |
| Total HPAHs | µg/kg-wet | 6 | 6 | 100 | 0.64 T | 9.2 T | CP0408 | 4.16 | 2.65 | 9.08 | 0.64 T | 9.2 T | CP0408 | 4.16 | 2.65 | 9.08 |
| Total LPAHs | µg/kg-wet | 6 | 6 | 100 | 11 T | 130 T | CP0408 | 48.2 | 27 | 118 | 11 T | 130 T | CP0408 | 48.2 | 27 | 118 |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.3 U | 7.3 U | CP0408; CP0812 | 3.65 | 3.65 U | 3.65 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 12 | 8 | 67 | 1.91 T | 140 T | FZ0609 | 19.9 | 2.29 | 92.5 | 1.91 T | 140 T | FZ0609 | 14 | 2.29 | 65.3 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 30 U | 30 U | CP0408; CP0812 | 15 | 15 U | 15 U |
| ***Carp (body without fillet)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 6 | 6 | 100 | 0.0485 T | 0.111 | CP0812 | 0.0736 | 0.071 | 0.106 | 0.0485 T | 0.111 | CP0812 | 0.0736 | 0.071 | 0.106 |
| Lead | mg/kg-wet | 6 | 6 | 100 | 0.0954 | 1.38 | CP0812 | 0.38 | 0.202 | 1.1 | 0.0954 | 1.38 | CP0812 | 0.38 | 0.202 | 1.1 |
| Mercury | mg/kg-wet | 6 | 6 | 100 | 0.0248 | 0.0508 | CP0812 | 0.0413 | 0.0459 | 0.0504 | 0.0248 | 0.0508 | CP0812 | 0.0413 | 0.0459 | 0.0504 |
| Nickel | mg/kg-wet | 6 | 6 | 100 | 0.368 | 0.697 T | CP0408 | 0.555 | 0.605 | 0.684 | 0.368 | 0.697 T | CP0408 | 0.555 | 0.605 | 0.684 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 6 | 6 | 100 | 0.655 T | 12.8 T | CP0408 | 4.25 | 2.92 | 10.9 | 0.655 T | 12.8 T | CP0408 | 4.25 | 2.92 | 10.9 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 6 | 6 | 100 | 0.035 J | 0.0499 J | CP0408 | 0.0405 | 0.0393 J | 0.0477 J | 0.035 J | 0.0499 J | CP0408 | 0.0405 | 0.0393 J | 0.0477 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 6 | 1 | 17 | 0.78 JT | 0.78 JT | CP0812 | 0.78 | 0.78 JT | 0.78 JT | 0.081 U | 3.3 U | CP0408 | 0.579 | 0.405 U | 1.43 J |
| Naphthalene | µg/kg-wet | 6 | 1 | 17 | 23 T | 23 T | CP0812 | 23 | 23 T | 23 T | 2 U | 23 T | CP0812 | 7.28 | 5.25 U | 19.3 |
| Phenanthrene | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.6 U | 33 U | CP0408 | 8.02 | 7.03 U | 16 U |
| Total cPAHs | µg/kg-wet | 6 | 1 | 17 | 4.1 JT | 4.1 JT | CP0812 | 4.1 | 4.1 JT | 4.1 JT | 0.081 UT | 4.1 JT | CP0812 | 1.13 | 0.405 U | 3.49 J |
| Total HPAHs | µg/kg-wet | 6 | 2 | 33 | 4.9 JT | 31 JT | CP0408 | 18 | 18 J | 29.7 J | 0.098 UT | 31 JT | CP0408 | 8.01 | 4.9 J | 25 J |
| Total LPAHs | µg/kg-wet | 6 | 6 | 100 | 10 JT | 170 T | CP0408 | 65.2 | 49 J | 152 J | 10 JT | 170 T | CP0408 | 65.2 | 49 J | 152 J |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.3 UJ | 7.3 UJ | CP0408; CP0812 | 3.65 | 3.65 U | 3.65 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 6 | 6 | 100 | 3.11 | 4.74 | CP0408 | 3.71 | 3.6 | 4.49 | 3.11 | 4.74 | CP0408 | 3.71 | 3.6 | 4.49 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 30 U | 30 U | CP0408; CP0812 | 15 | 15 U | 15 U |
| ***Carp (whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 6 | 6 | 100 | 0.048 | 0.108 | FZ0306 | 0.0688 | 0.0645 | 0.0986 | 0.048 | 0.108 | FZ0306 | 0.0688 | 0.0645 | 0.0986 |
| Lead | mg/kg-wet | 6 | 6 | 100 | 0.121 J | 0.202 J | FZ0609 | 0.151 | 0.141 J | 0.194 J | 0.121 J | 0.202 J | FZ0609 | 0.151 | 0.141 J | 0.194 J |
| Mercury | mg/kg-wet | 7 | 7 | 100 | 0.029 | 0.047 T | FZ0609 | 0.0405 | 0.042 | 0.0463 | 0.029 | 0.047 T | FZ0609 | 0.0405 | 0.042 | 0.0463 |

Table D5.1-1. Summary Statistics for Other Contaminants in Fish Tissue, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| Nickel | mg/kg-wet | 6 | 6 | 100 | 0.401 JT | 1.37 J | FZ0306 | 0.745 | 0.66 J | 1.24 J | 0.401 JT | 1.37 J | FZ0306 | 0.745 | 0.66 J | 1.24 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 6 | 6 | 100 | 3.36 T | 16.2 T | FZ0306 | 6.86 | 5.38 | 13.8 | 3.36 T | 16.2 T | FZ0306 | 6.86 | 5.38 | 13.8 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 9.6 UT | FZ0306; FZ0609 | 2.96 | 3.4 U | 4.8 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 31 UT | 33 UT | FZ0306; FZ0609 | 16.1 | 16 U | 16.5 U |
| Naphthalene | µg/kg-wet | 6 | 2 | 33 | 46 T | 56 JT | FZ0609 | 51 | 51 J | 55.5 J | 32 UT | 56 JT | FZ0609 | 27.8 | 16.3 U | 53.5 J |
| Phenanthrene | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 31 UT | 33 UT | FZ0306; FZ0609 | 16.1 | 16 U | 16.5 U |
| Total cPAHs | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 31 UT | 33 UT | FZ0306; FZ0609 | 16.1 | 16 U | 16.5 U |
| Total HPAHs | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 31 UT | 33 UT | FZ0306; FZ0609 | 16.1 | 16 U | 16.5 U |
| Total LPAHs | µg/kg-wet | 6 | 2 | 33 | 111 T | 222 JT | FZ0609 | 167 | 167 J | 216 J | 32 UT | 222 JT | FZ0609 | 66.3 | 16.3 U | 194 J |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 620 U | 660 U | FZ0306 | 322 | 323 U | 329 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4 UT | 32 UT | FZ0306 | 5.13 | 3.2 U | 12.8 U |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 160 UT | 160 UT | FZ0306; FZ0609 | 80 | 80 U | 80 U |
| ***Chinook (stomach contents)*** | | | | | | | | | | | | | | | | |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 5 | 5 | 100 | 0.0889 T | 1.85 T | T02 | 1.08 | 1.3 T | 1.8 | 0.0889 T | 1.85 T | T02 | 1.08 | 1.3 T | 1.8 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 5 | 1 | 20 | 0.128 J | 0.128 J | T02 | 0.128 | 0.128 J | 0.128 J | 0.0194 U | 0.128 J | T02 | 0.0412 | 0.0218 U | 0.109 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 5 | 2 | 40 | 2.26 J | 20.7 | T02 | 11.5 | 11.5 J | 19.8 J | 1.63 U | 20.7 | T02 | 5.67 | 2.26 J | 17.1 |
| Naphthalene | µg/kg-wet | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 27.3 U | 38.8 UJ | T02 | 17.1 | 18.8 U | 19.3 UJ |
| Phenanthrene | µg/kg-wet | 5 | 5 | 100 | 33.9 | 862 | T02 | 220 | 53.8 | 710 | 33.9 | 862 | T02 | 220 | 53.8 | 710 |
| Total cPAHs | µg/kg-wet | 5 | 5 | 100 | 14 JT | 270 JT | T02 | 94.8 | 65 JT | 232 J | 14 JT | 270 JT | T02 | 94.8 | 65 JT | 232 J |
| Total HPAHs | µg/kg-wet | 5 | 5 | 100 | 49.9 JT | 1050 JT | T02 | 338 | 200 JT | 892 J | 49.9 JT | 1050 JT | T02 | 338 | 200 JT | 892 J |
| Total LPAHs | µg/kg-wet | 5 | 5 | 100 | 45.7 JT | 1410 JT | T02 | 347 | 72.3 JT | 1160 J | 45.7 JT | 1410 JT | T02 | 347 | 72.3 JT | 1160 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 5 | 5 | 100 | 0.469 | 1.66 | T02 | 0.932 | 0.849 | 1.54 | 0.469 | 1.66 | T02 | 0.932 | 0.849 | 1.54 |
| ***Chinook (whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 15 | 15 | 100 | 0.00965 | 0.027 | 02R102 | 0.0145 | 0.0125 | 0.0249 | 0.00965 | 0.027 | 02R102 | 0.0145 | 0.0125 | 0.0249 |
| Lead | mg/kg-wet | 15 | 3 | 20 | 0.01 J | 0.015 J | 02R102 | 0.013 | 0.014 J | 0.0149 J | 0.006 UJ | 0.0741 U | T02 | 0.0141 | 0.0131 U | 0.0308 U |
| Mercury | mg/kg-wet | 15 | 15 | 100 | 0.0101 J | 0.02 | 02R102 | 0.0139 | 0.0124 | 0.0193 | 0.0101 J | 0.02 | 02R102 | 0.0139 | 0.0124 | 0.0193 |
| Nickel | mg/kg-wet | 15 | 15 | 100 | 0.202 | 0.492 J | 02R102 | 0.294 | 0.283 | 0.455 J | 0.202 | 0.492 J | 02R102 | 0.294 | 0.283 | 0.455 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 9 | 9 | 100 | 1.23 T | 3.75 T | T02 | 1.97 | 1.73 T | 3.15 | 1.23 T | 3.75 T | T02 | 1.97 | 1.73 T | 3.15 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.18 U | 1.1 U | T01; T02; T03 | 0.346 | 0.5 U | 0.55 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 33 UT | 02R113; 03R118; 04R126 | 6.51 | 0.065 U | 16.5 U |
| Naphthalene | µg/kg-wet | 15 | 8 | 53 | 3.8 | 33 T | 02R113 | 8.41 | 5.05 | 23.8 | 2.9 U | 33 UT | 02R113; 03R118; 04R126 | 10.1 | 5.8 | 21.5 |
| Phenanthrene | µg/kg-wet | 15 | 9 | 60 | 0.88 | 1.9 | T01 | 1.36 | 1.4 | 1.86 | 0.88 | 33 UT | 02R113; 03R118; 04R126 | 7.29 | 1.8 | 16.5 U |
| Total cPAHs | µg/kg-wet | 15 | 8 | 53 | 0.15 JT | 1.6 JT | T01 | 0.613 | 0.385 J | 1.43 J | 0.15 JT | 33 UT | 02R113; 03R118; 04R126 | 6.8 | 1.1 JT | 16.5 U |
| Total HPAHs | µg/kg-wet | 15 | 8 | 53 | 0.93 JT | 3.8 JT | T01 | 2.03 | 1.72 J | 3.5 J | 0.37 UT | 33 UT | 02R113; 03R118; 04R126 | 7.56 | 2.94 JT | 16.5 U |
| Total LPAHs | µg/kg-wet | 15 | 10 | 67 | 8.38 JT | 33 T | 02R113 | 14.6 | 12.5 J | 25.8 J | 8.38 JT | 41 UT | 02R102 | 15.7 | 16 UT | 24.3 |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 11 | 4 | 36 | 160 J | 220 | T01 | 190 | 190 | 216 | 160 J | 3700 U | 04R126 | 662 | 190 | 1830 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 15 | 9 | 60 | 0.62 J | 1.2 | T02 | 0.851 | 0.83 J | 1.12 J | 0.62 J | 33 UT | 04R126 | 3.38 | 0.83 J | 15.8 U |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 11 | 1 | 9 | 400 J | 400 J | T01 | 400 | 400 J | 400 J | 60 U | 420 U | T03 | 120 | 80 UT | 305 J |
| ***Lamprey Ammocoetes and Macropthalmia*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 4 | 4 | 100 | 0.002 J | 0.005 | LTAC2 | 0.003 | 0.0025 J | 0.0047 J | 0.002 J | 0.005 | LTAC2 | 0.003 | 0.0025 J | 0.0047 J |
| Lead | mg/kg-wet | 4 | 4 | 100 | 0.0331 | 0.153 | LTAC2 | 0.0823 | 0.0715 | 0.144 | 0.0331 | 0.153 | LTAC2 | 0.0823 | 0.0715 | 0.144 |
| Mercury | mg/kg-wet | 2 | 2 | 100 | 0.217 | 0.355 | LTAC2 | 0.286 | 0.286 | 0.348 | 0.217 | 0.355 | LTAC2 | 0.286 | 0.286 | 0.348 |
| Nickel | mg/kg-wet | 4 | 4 | 100 | 0.129 | 0.292 | LTAC2 | 0.21 | 0.209 | 0.284 | 0.129 | 0.292 | LTAC2 | 0.21 | 0.209 | 0.284 |

Table D5.1-1. Summary Statistics for Other Contaminants in Fish Tissue, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 6 | 6 | 100 | 1.01 T | 3.68 T | LTAC2 | 2.18 | 1.89 | 3.64 | 1.01 T | 3.68 T | LTAC2 | 2.18 | 1.89 | 3.64 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 6 | 4 | 67 | 0.0181 J | 0.0696 J | LTA3M2 | 0.0495 | 0.0552 J | 0.0688 J | 0.0181 J | 0.0696 J | LTA3M2 | 0.0372 | 0.0321 J | 0.0683 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 3 | 1 | 33 | 0.47 J | 0.47 J | LTAC2 | 0.47 | 0.47 J | 0.47 J | 0.22 U | 0.47 J | LTAC2 | 0.23 | 0.11 U | 0.434 J |
| Naphthalene | µg/kg-wet | 3 | 3 | 100 | 2.6 | 3.7 | LTAC2 | 3.17 | 3.2 | 3.65 | 2.6 | 3.7 | LTAC2 | 3.17 | 3.2 | 3.65 |
| Phenanthrene | µg/kg-wet | 3 | 3 | 100 | 14 | 96 | LTMC1 | 51 | 43 | 90.7 | 14 | 96 | LTMC1 | 51 | 43 | 90.7 |
| Total cPAHs | µg/kg-wet | 3 | 3 | 100 | 0.24 JT | 1.9 JT | LTAC2 | 0.96 | 0.74 JT | 1.78 J | 0.24 JT | 1.9 JT | LTAC2 | 0.96 | 0.74 JT | 1.78 J |
| Total HPAHs | µg/kg-wet | 3 | 3 | 100 | 7.8 JT | 160 JT | LTAC2 | 74.6 | 56 JT | 150 J | 7.8 JT | 160 JT | LTAC2 | 74.6 | 56 JT | 150 J |
| Total LPAHs | µg/kg-wet | 3 | 3 | 100 | 40 T | 190 JT | LTMC1 | 117 | 120 T | 183 J | 40 T | 190 JT | LTMC1 | 117 | 120 T | 183 J |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.3 U | 7.3 U | LTAC2 | 3.65 | 3.65 U | 3.65 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 6 | 6 | 100 | 1.25 | 4.62 | LTA3M2 | 2.84 | 2.82 | 4.48 | 1.25 | 4.62 | LTA3M2 | 2.84 | 2.82 | 4.48 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 30 U | 30 U | LTAC2 | 15 | 15 U | 15 U |
| ***Largescale sucker (whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 6 | 6 | 100 | 0.015 J | 0.0325 JT | 08R010 | 0.0206 | 0.0185 J | 0.0301 J | 0.015 J | 0.0325 JT | 08R010 | 0.0206 | 0.0185 J | 0.0301 J |
| Lead | mg/kg-wet | 6 | 6 | 100 | 0.064 | 0.191 T | 08R010 | 0.122 | 0.114 | 0.187 | 0.064 | 0.191 T | 08R010 | 0.122 | 0.114 | 0.187 |
| Mercury | mg/kg-wet | 6 | 6 | 100 | 0.045 | 0.085 | 07R009 | 0.0677 | 0.0725 | 0.0835 | 0.045 | 0.085 | 07R009 | 0.0677 | 0.0725 | 0.0835 |
| Nickel | mg/kg-wet | 6 | 6 | 100 | 0.29 | 0.81 | 09R006 | 0.463 | 0.395 | 0.749 | 0.29 | 0.81 | 09R006 | 0.463 | 0.395 | 0.749 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 6 | 1 | 17 | 4.5 NJ | 4.5 NJ | 03R014 | 4.5 | 4.5 NJ | 4.5 NJ | 3.5 U | 9.6 UT | 07R009 | 2.84 | 2 U | 4.73 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 26 UT | 33 UT | 03R014 | 14.4 | 14 U | 16.4 U |
| Naphthalene | µg/kg-wet | 6 | 1 | 17 | 54 T | 54 T | 07R009 | 54 | 54 T | 54 T | 26 UT | 54 T | 07R009 | 21.3 | 15.5 U | 44.6 |
| Phenanthrene | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 26 UT | 33 UT | 03R014 | 14.4 | 14 U | 16.4 U |
| Total cPAHs | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 26 UT | 33 UT | 03R014 | 14.4 | 14 U | 16.4 U |
| Total HPAHs | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 26 UT | 33 UT | 03R014 | 14.4 | 14 U | 16.4 U |
| Total LPAHs | µg/kg-wet | 6 | 2 | 33 | 42 JT | 147 JT | 07R009 | 94.5 | 94.5 J | 142 J | 26 UT | 147 JT | 07R009 | 41.1 | 15.8 U | 121 J |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 260 U | 330 U | 03R014 | 144 | 140 U | 164 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4 UT | 32 UT | 05R006 | 4.53 | 2 U | 12.8 U |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 130 UT | 170 UT | 03R014 | 72.5 | 70 U | 83.8 U |
| ***Northern pikeminnow (whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 6 | 6 | 100 | 0.007 J | 0.012 J | 05R006 | 0.00975 | 0.01 J | 0.0119 J | 0.007 J | 0.012 J | 05R006 | 0.00975 | 0.01 J | 0.0119 J |
| Lead | mg/kg-wet | 6 | 4 | 67 | 0.008 | 0.016 | 07R009 | 0.0118 | 0.0115 | 0.0157 | 0.005 UT | 0.016 | 07R009 | 0.00883 | 0.0085 | 0.0155 |
| Mercury | mg/kg-wet | 6 | 6 | 100 | 0.146 T | 0.494 | 07R009 | 0.28 | 0.25 | 0.468 | 0.146 T | 0.494 | 07R009 | 0.28 | 0.25 | 0.468 |
| Nickel | mg/kg-wet | 6 | 6 | 100 | 0.119 J | 0.461 J | 07R009 | 0.259 | 0.246 J | 0.422 J | 0.119 J | 0.461 J | 07R009 | 0.259 | 0.246 J | 0.422 J |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4 UT | 9.8 U | 08R010 | 3.88 | 4.8 U | 4.88 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4 UT | 9.8 U | 08R010 | 3.08 | 3.2 U | 4.48 U |
| ***Peamouth (whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 4 | 4 | 100 | 0.021 | 0.053 | 09R006 | 0.032 | 0.027 | 0.0493 | 0.021 | 0.053 | 09R006 | 0.032 | 0.027 | 0.0493 |
| Lead | mg/kg-wet | 4 | 4 | 100 | 0.031 | 10.6 | 03R014 | 2.7 | 0.079 | 9.03 | 0.031 | 10.6 | 03R014 | 2.7 | 0.079 | 9.03 |
| Mercury | mg/kg-wet | 4 | 4 | 100 | 0.031 | 0.054 | 09R006 | 0.0383 | 0.034 | 0.0512 | 0.031 | 0.054 | 09R006 | 0.0383 | 0.034 | 0.0512 |
| Nickel | mg/kg-wet | 4 | 4 | 100 | 0.27 J | 0.482 J | 03R014 | 0.386 | 0.397 J | 0.477 J | 0.27 J | 0.482 J | 03R014 | 0.386 | 0.397 J | 0.477 J |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 UT | 3.3 UT | 03R014 | 1.05 | 1.03 U | 1.57 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 4 | 3 | 75 | 5.7 NT | 7.3 NT | 03R014 | 6.23 | 5.7 NT | 7.14 | 3.8 UT | 7.3 NT | 03R014 | 5.15 | 5.7 | 7.06 |
| ***Sculpin (whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 38 | 38 | 100 | 0.003 J | 0.022 | 02R015 | 0.00792 | 0.0065 J | 0.019 | 0.003 J | 0.022 | 02R015 | 0.00792 | 0.0065 J | 0.019 |

Table D5.1-1. Summary Statistics for Other Contaminants in Fish Tissue, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| Lead | mg/kg-wet | 38 | 37 | 97 | 0.0149 J | 0.96 J | 04R002 | 0.112 | 0.059 | 0.313 J | 0.0149 J | 0.96 J | 04R002 | 0.114 | 0.0595 | 0.299 J |
| Mercury | mg/kg-wet | 39 | 39 | 100 | 0.025 | 0.127 T | SP07E | 0.0498 | 0.042 | 0.0885 | 0.025 | 0.127 T | SP07E | 0.0498 | 0.042 | 0.0885 |
| Nickel | mg/kg-wet | 38 | 32 | 84 | 0.16 | 1.01 | SP04W | 0.334 | 0.312 | 0.63 | 0.08 U | 1.01 | SP04W | 0.29 | 0.283 | 0.529 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 21 | 21 | 100 | 0.254 T | 24.1 T | 02R001 | 3.97 | 1.48 T | 8.6 T | 0.254 T | 24.1 T | 02R001 | 3.97 | 1.48 T | 8.6 T |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 38 | 18 | 47 | 0.0146 J | 3.1 NJ | 03R004 | 1.18 | 1.25 J | 2.76 J | 0.0113 U | 9.6 U | 05R001; 06R002; 09R002 | 1.49 | 1.4 J | 4.8 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 38 | 1 | 3 | 1.2 J | 1.2 J | SP08E | 1.2 | 1.2 J | 1.2 J | 0.081 U | 33 UT | 02R015; 03R004; 06R002 | 10.5 | 14.5 U | 16.5 U |
| Naphthalene | µg/kg-wet | 38 | 13 | 34 | 1.6 | 250 | SP06W | 24.5 | 2.4 | 125 | 1.6 | 250 | SP06W | 18.4 | 14.8 U | 20.3 |
| Phenanthrene | µg/kg-wet | 38 | 12 | 32 | 0.93 | 33 | SP06W | 7.94 | 4.5 | 23.1 | 0.93 | 33 UT | 02R015; 03R004; 06R002; SP06W | 12.9 | 15 U | 16.5 U |
| Total cPAHs | µg/kg-wet | 38 | 5 | 13 | 1.2 JT | 9.8 T | SP06W | 3.18 | 1.6 T | 8.2 | 0.081 UT | 33 UT | 02R015; 03R004; 06R002 | 10.8 | 14.5 U | 16.5 U |
| Total HPAHs | µg/kg-wet | 38 | 12 | 32 | 0.62 T | 38 T | SP06W | 6.73 | 4.85 | 20.7 | 0.62 T | 38 T | SP06W | 12.6 | 15 U | 16.5 U |
| Total LPAHs | µg/kg-wet | 38 | 22 | 58 | 7.2 JT | 510 T | SP06W | 54.9 | 31.5 J | 128 J | 7.2 JT | 510 T | SP06W | 39.5 | 19 | 62.3 |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 38 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.3 U | 330 UJ | 02R015; 03R004; 04R004; 06R002; 08R003 | 107 | 150 U | 165 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 38 | 12 | 32 | 1.09 | 1.8 | SP11E | 1.49 | 1.51 | 1.78 | 1.09 | 33 UT | 03R004 | 6.57 | 2.6 U | 16 U |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 38 | 0 | 0 | -- | -- | -- | -- | -- | -- | 30 U | 170 UT | 03R004; 06R002 | 56.8 | 70 U | 80.8 U |
| ***Smallmouth bass (fillet without skin)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Mercury | mg/kg-wet | 5 | 5 | 100 | 0.071 | 0.129 T | 03R014 | 0.0946 | 0.087 | 0.126 | 0.071 | 0.129 T | 03R014 | 0.0946 | 0.087 | 0.126 |
| ***Smallmouth bass (fillet)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 23 | 2 | 9 | 0.001 J | 0.001 J | 06R024; 08R032 | 0.001 | 0.001 J | 0.001 J | 0.001 U | 0.003 U | SB011E; SB03E; SB07W | 0.001 | 0.001 U | 0.0015 U |
| Lead | mg/kg-wet | 23 | 19 | 83 | 0.007 | 0.518 | SB03E | 0.0471 | 0.013 | 0.102 | 0.002 U | 0.518 | SB03E | 0.0392 | 0.011 | 0.055 |
| Mercury | mg/kg-wet | 18 | 18 | 100 | 0.0591 J | 0.349 J | SB09W | 0.171 | 0.174 J | 0.261 J | 0.0591 J | 0.349 J | SB09W | 0.171 | 0.174 J | 0.261 J |
| Nickel | mg/kg-wet | 23 | 23 | 100 | 0.004 J | 0.224 | 05R006 | 0.0596 | 0.05 J | 0.131 J | 0.004 J | 0.224 | 05R006 | 0.0596 | 0.05 J | 0.131 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 18 | 18 | 100 | 0.0672 T | 1.04 T | SB09W | 0.315 | 0.152 J | 0.931 | 0.0672 T | 1.04 T | SB09W | 0.315 | 0.152 J | 0.931 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 23 | 7 | 30 | 0.003 J | 0.011 JT | SB010E | 0.00614 | 0.005 J | 0.0104 J | 0.003 J | 1 U | 03R014; 05R006; 06R024; 08R032; 09R006 | 0.113 | 0.0045 U | 0.5 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 18 | 5 | 28 | 0.091 J | 2.5 | SB08W | 1.1 | 0.48 | 2.44 | 0.081 U | 2.5 | SB08W | 0.335 | 0.0405 U | 2.25 |
| Naphthalene | µg/kg-wet | 18 | 18 | 100 | 0.52 J | 11 | SB08W | 1.66 | 0.81 J | 4.11 | 0.52 J | 11 | SB08W | 1.66 | 0.81 J | 4.11 |
| Phenanthrene | µg/kg-wet | 18 | 8 | 44 | 2.7 | 22 | SB08W | 7.56 | 4.8 | 18.5 | 0.36 U | 22 | SB08W | 3.77 | 1.15 U | 13.5 |
| Total cPAHs | µg/kg-wet | 18 | 9 | 50 | 0.17 JT | 13 JT | SB08W | 4.45 | 3.1 JT | 12.2 J | 0.081 UT | 13 JT | SB08W | 2.24 | 0.105 J | 11.3 J |
| Total HPAHs | µg/kg-wet | 18 | 11 | 61 | 0.92 JT | 40 JT | SB08W | 10.2 | 2.9 JT | 34.5 J | 0.42 UT | 40 JT | SB08W | 6.34 | 1.5 | 30.7 J |
| Total LPAHs | µg/kg-wet | 18 | 18 | 100 | 0.58 JT | 43 T | SB08W | 7.84 | 2.85 J | 24.3 | 0.58 JT | 43 T | SB08W | 7.84 | 2.85 J | 24.3 |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.3 U | 7.3 U | SB010E; SB010W; SB011E; SB011W; SB02E; SB03E; SB03W; SB04E; SB04W; SB05W; SB06E; SB06W; SB07E; SB07W; SB08E; SB08W; SB09E; SB09W | 3.65 | 3.65 U | 3.65 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 23 | 18 | 78 | 0.24 J | 0.876 | SB07W | 0.389 | 0.346 J | 0.575 | 0.24 J | 1.3 U | 03R014 | 0.42 | 0.371 J | 0.637 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 30 U | 30 U | SB010E; SB010W; SB011E; SB011W; SB02E; SB03E; SB03W; SB04E; SB04W; SB05W; SB06E; SB06W; SB07E; SB07W; SB08E; SB08W; SB09E; SB09W | 15 | 15 U | 15 U |

Table D5.1-1. Summary Statistics for Other Contaminants in Fish Tissue, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| ***Smallmouth bass (body without fillet)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 18 | 16 | 89 | 0.003 J | 0.283 | SB010E | 0.0242 | 0.0055 J | 0.0835 | 0.003 U | 0.283 | SB010E | 0.0217 | 0.005 J | 0.0569 |
| Lead | mg/kg-wet | 18 | 10 | 56 | 0.023 | 1640 JT | SB010E | 165 | 0.1 | 906 J | 0.013 U | 1640 JT | SB010E | 91.8 | 0.0273 | 254 J |
| Mercury | mg/kg-wet | 18 | 18 | 100 | 0.0453 | 0.116 | SB07E | 0.0757 | 0.0724 | 0.106 | 0.0453 | 0.116 | SB07E | 0.0757 | 0.0724 | 0.106 |
| Nickel | mg/kg-wet | 18 | 10 | 56 | 0.104 JT | 0.25 | SB010E | 0.201 | 0.209 | 0.241 | 0.09 U | 0.25 | SB010E | 0.134 | 0.143 J | 0.233 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 18 | 18 | 100 | 0.674 T | 30 T | SB02E | 5.92 | 4.82 | 14.8 | 0.674 T | 30 T | SB02E | 5.92 | 4.82 | 14.8 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 18 | 10 | 56 | 0.0252 J | 0.0452 JT | SB06E | 0.0337 | 0.0339 J | 0.0446 J | 0.0252 J | 0.0452 JT | SB06E | 0.0261 | 0.0256 J | 0.044 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.33 U | 3.3 U | SB09E | 0.301 | 0.165 U | 0.592 U |
| Naphthalene | µg/kg-wet | 18 | 11 | 61 | 1.7 J | 27 | SB06W | 5.37 | 2.3 J | 18.5 | 1.6 U | 27 | SB06W | 4.19 | 2 U | 12.5 |
| Phenanthrene | µg/kg-wet | 18 | 17 | 94 | 4.6 | 65 | SB06W | 19.9 | 12 | 47.4 | 4.6 | 65 | SB06W | 19.2 | 11.5 | 46.3 |
| Total cPAHs | µg/kg-wet | 18 | 1 | 6 | 1.8 JT | 1.8 JT | SB08W | 1.8 | 1.8 JT | 1.8 JT | 0.33 UT | 3.3 UT | SB09E | 0.392 | 0.165 U | 1.67 J |
| Total HPAHs | µg/kg-wet | 18 | 6 | 33 | 6.6 T | 87 JT | SB08W | 30.8 | 21.5 | 73 J | 0.4 UT | 87 JT | SB08W | 10.6 | 0.345 U | 39.4 J |
| Total LPAHs | µg/kg-wet | 18 | 18 | 100 | 5.2 JT | 200 T | SB06W | 46.6 | 32 J | 115 J | 5.2 JT | 200 T | SB06W | 46.6 | 32 J | 115 J |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.3 U | 7.3 U | SB010E; SB010W; SB011E; SB011W; SB02E; SB03E; SB03W; SB04E; SB04W; SB05W; SB06E; SB06W; SB07E; SB07W; SB08E; SB08W; SB09E; SB09W | 3.65 | 3.65 U | 3.65 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 18 | 18 | 100 | 2.11 | 5.98 | SB07W | 2.87 | 2.69 | 4.22 | 2.11 | 5.98 | SB07W | 2.87 | 2.69 | 4.22 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 18 | 0 | 0 | -- | -- | -- | -- | -- | -- | 30 U | 30 U | SB010E; SB010W; SB011E; SB011W; SB02E; SB03E; SB03W; SB04E; SB04W; SB05W; SB06E; SB06W; SB07E; SB07W; SB08E; SB08W; SB09E; SB09W | 15 | 15 U | 15 U |
| ***Smallmouth bass (whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 14 | 10 | 71 | 0.002 J | 0.024 J | 06R024 | 0.0073 | 0.006 J | 0.0173 J | 0.002 U | 0.024 J | 06R024 | 0.00554 | 0.0035 J | 0.0143 J |
| Lead | mg/kg-wet | 14 | 14 | 100 | 0.0048 J | 0.303 J | 08R010 | 0.0423 | 0.00725 J | 0.193 J | 0.0048 J | 0.303 J | 08R010 | 0.0423 | 0.00725 J | 0.193 J |
| Mercury | mg/kg-wet | 14 | 14 | 100 | 0.052 | 0.114 | 04R023 | 0.0831 | 0.08 | 0.109 | 0.052 | 0.114 | 04R023 | 0.0831 | 0.08 | 0.109 |
| Nickel | mg/kg-wet | 14 | 7 | 50 | 0.07 | 0.2 | 04R023 | 0.127 | 0.13 | 0.188 | 0.02 U | 0.2 | 04R023 | 0.0746 | 0.0525 | 0.174 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 14 | 14 | 100 | 5.12 T | 14 T | 08R010 | 8.41 | 7.17 | 13.4 | 5.12 T | 14 T | 08R010 | 8.41 | 7.17 | 13.4 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 UT | 9.6 UT | 04R023; 08R010 | 2.48 | 2 U | 4.8 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | 25 UT | 33 UT | 07R009; 08R010 | 15.4 | 15.5 U | 16.5 U |
| Naphthalene | µg/kg-wet | 14 | 2 | 14 | 51 T | 86 T | 07R009 | 68.5 | 68.5 | 84.3 | 30 UT | 86 T | 07R009 | 23.3 | 16 U | 63.3 |
| Phenanthrene | µg/kg-wet | 14 | 2 | 14 | 49 T | 85 T | 07R009 | 67 | 67 | 83.2 | 25 UT | 85 T | 07R009 | 22.8 | 15.8 U | 61.6 |
| Total cPAHs | µg/kg-wet | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | 25 UT | 33 UT | 07R009; 08R010 | 15.4 | 15.5 U | 16.5 U |
| Total HPAHs | µg/kg-wet | 14 | 1 | 7 | 75 T | 75 T | 04R023 | 75 | 75 T | 75 T | 25 UT | 75 T | 04R023 | 19.7 | 15.8 U | 37 |
| Total LPAHs | µg/kg-wet | 14 | 7 | 50 | 31 JT | 308 T | 07R009 | 120 | 45 T | 291 | 30 UT | 308 T | 07R009 | 67.9 | 23.5 J | 272 |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | 250 U | 330 U | 07R009; 08R010 | 154 | 155 U | 165 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 UT | 6.4 UT | 03R014; 04R023; 05R006; 07R009; 08R010; 08R032; 09R006 | 2.92 | 3.2 U | 3.2 U |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 14 | 0 | 0 | -- | -- | -- | -- | -- | -- | 130 UT | 160 UT | 06R024; 07R009; 08R010; 08R032; 09R006 | 76.4 | 77.5 U | 80 U |

Table D5.1-1. Summary Statistics for Other Contaminants in Fish Tissue, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| ***Sturgeon (stomach contents)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 3 | 3 | 100 | 0.008 T | 0.054 | STWB03 | 0.033 | 0.037 | 0.0523 | 0.008 T | 0.054 | STWB03 | 0.033 | 0.037 | 0.0523 |
| Lead | mg/kg-wet | 3 | 3 | 100 | 0.103 T | 1.5 | STWB03 | 0.581 | 0.139 | 1.36 | 0.103 T | 1.5 | STWB03 | 0.581 | 0.139 | 1.36 |
| Mercury | mg/kg-wet | 3 | 3 | 100 | 0.0073 J | 0.0119 J | STWB03 | 0.0102 | 0.0115 J | 0.0119 J | 0.0073 J | 0.0119 J | STWB03 | 0.0102 | 0.0115 J | 0.0119 J |
| Nickel | mg/kg-wet | 3 | 3 | 100 | 0.267 | 2.33 | STWB03 | 1.08 | 0.631 T | 2.16 | 0.267 | 2.33 | STWB03 | 1.08 | 0.631 T | 2.16 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 1 | 1 | 100 | 0.0242 T | 0.0242 T | STWB04 | 0.0242 | 0.0242 T | 0.0242 T | 0.0242 T | 0.0242 T | STWB04 | 0.0242 | 0.0242 T | 0.0242 T |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.0188 U | 0.0188 U | STWB04 | 0.0094 | 0.0094 U | 0.0094 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 3 | 2 | 67 | 2.2 | 210 | STWB03 | 106 | 106 | 200 | 0.081 U | 210 | STWB03 | 70.7 | 2.2 | 189 |
| Naphthalene | µg/kg-wet | 3 | 1 | 33 | 260 | 260 | STWB03 | 260 | 260 | 260 | 1.4 U | 260 | STWB03 | 87.2 | 0.75 U | 234 |
| Phenanthrene | µg/kg-wet | 3 | 3 | 100 | 0.76 | 2300 | STWB03 | 767 | 1.1 | 2070 | 0.76 | 2300 | STWB03 | 767 | 1.1 | 2070 |
| Total cPAHs | µg/kg-wet | 3 | 2 | 67 | 19 T | 2000 T | STWB03 | 1010 | 1010 | 1900 | 0.081 UT | 2000 T | STWB03 | 673 | 19 T | 1800 |
| Total HPAHs | µg/kg-wet | 3 | 3 | 100 | 0.98 JT | 5100 T | STWB03 | 1710 | 35 T | 4590 | 0.98 JT | 5100 T | STWB03 | 1710 | 35 T | 4590 |
| Total LPAHs | µg/kg-wet | 3 | 3 | 100 | 2.6 JT | 3800 T | STWB03 | 1270 | 2.6 JT | 3420 J | 2.6 JT | 3800 T | STWB03 | 1270 | 2.6 JT | 3420 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 1 | 1 | 100 | 0.161 J | 0.161 J | STWB04 | 0.161 | 0.161 J | 0.161 J | 0.161 J | 0.161 J | STWB04 | 0.161 | 0.161 J | 0.161 J |
| ***Sturgeon (fillet without skin)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.00975 U | 0.0105 UT | RM 3.5-9.2 | 0.00506 | 0.0051 U | 0.00523 U |
| Lead | mg/kg-wet | 5 | 1 | 20 | 0.0165 | 0.0165 | RM 3.5-9.2 | 0.0165 | 0.0165 | 0.0165 | 0.00975 U | 0.0165 | RM 3.5-9.2 | 0.00733 | 0.0051 U | 0.0143 |
| Mercury | mg/kg-wet | 5 | 5 | 100 | 0.0963 | 0.322 T | RM 3.5-9.2 | 0.242 | 0.263 | 0.319 | 0.0963 | 0.322 T | RM 3.5-9.2 | 0.242 | 0.263 | 0.319 |
| Nickel | mg/kg-wet | 5 | 5 | 100 | 0.0351 | 1.65 | RM 3.5-9.2 | 0.727 | 0.586 T | 1.58 | 0.0351 | 1.65 | RM 3.5-9.2 | 0.727 | 0.586 T | 1.58 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 5 | 5 | 100 | 0.12 T | 0.874 T | RM 3.5-9.2 | 0.501 | 0.559 T | 0.822 | 0.12 T | 0.874 T | RM 3.5-9.2 | 0.501 | 0.559 T | 0.822 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.23 U | 1 U | RM 3.5-9.2 | 0.4 | 0.455 UT | 0.495 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.8 U | 3.9 U | RM 3.5-9.2 | 1.92 | 1.9 UT | 1.95 U |
| Naphthalene | µg/kg-wet | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.8 UT | 4.9 U | RM 3.5-9.2 | 2.1 | 2.05 U | 2.39 U |
| Phenanthrene | µg/kg-wet | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.8 U | 5.8 U | RM 3.5-9.2 | 2.12 | 1.95 U | 2.71 U |
| Total cPAHs | µg/kg-wet | 5 | 0 | 0 | -- | -- | -- | -- | -- | -- | 15 UT | 16 UT | RM 3.5-9.2 | 7.6 | 7.5 UT | 7.9 U |
| Total HPAHs | µg/kg-wet | 5 | 2 | 40 | 0.9 JT | 2.5 JT | RM 3.5-9.2 | 1.7 | 1.7 J | 2.42 J | 0.9 JT | 15 UT | RM 3.5-9.2 | 5.18 | 7.5 UT | 7.5 U |
| Total LPAHs | µg/kg-wet | 5 | 3 | 60 | 3.1 JT | 23.1 T | RM 3.5-9.2 | 9.87 | 3.4 JT | 21.1 J | 3.1 JT | 23.1 T | RM 3.5-9.2 | 6.72 | 3.1 JT | 19.2 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 5 | 3 | 60 | 1.5 J | 1.6 J | RM 3.5-9.2 | 1.57 | 1.6 J | 1.6 J | 1.5 J | 3.9 U | RM 3.5-9.2 | 1.71 | 1.6 JT | 1.94 U |
| ***Sturgeon (whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 15 | 15 | 100 | 0.003 J | 0.019 T | STWB04 | 0.0076 | 0.006 | 0.0155 | 0.003 J | 0.019 T | STWB04 | 0.0076 | 0.006 | 0.0155 |
| Lead | mg/kg-wet | 15 | 15 | 100 | 0.007 | 0.024 | STWB01 | 0.0138 | 0.012 | 0.0219 | 0.007 | 0.024 | STWB01 | 0.0138 | 0.012 | 0.0219 |
| Mercury | mg/kg-wet | 15 | 15 | 100 | 0.034 | 0.14 T | STWB04 | 0.0545 | 0.046 | 0.0917 | 0.034 | 0.14 T | STWB04 | 0.0545 | 0.046 | 0.0917 |
| Nickel | mg/kg-wet | 15 | 1 | 7 | 0.461 | 0.461 | STWB01 | 0.461 | 0.461 | 0.461 | 0.061 U | 0.461 | STWB01 | 0.0755 | 0.047 U | 0.19 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 15 | 15 | 100 | 0.098 T | 0.446 T | STWB04 | 0.18 | 0.168 T | 0.284 | 0.098 T | 0.446 T | STWB04 | 0.18 | 0.168 T | 0.284 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 15 | 13 | 87 | 0.0123 J | 0.0618 J | STWB02 | 0.0331 | 0.033 J | 0.0544 J | 0.0123 J | 0.0618 J | STWB02 | 0.0303 | 0.0256 J | 0.0532 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.081 U | 0.081 U | STWB01; STWB02; STWB03; STWB04; STWB05 | 0.0405 | 0.0405 U | 0.0405 U |
| Naphthalene | µg/kg-wet | 15 | 8 | 53 | 4.1 | 14 | STWB03 | 6.39 | 5.15 | 11.7 | 0.4 U | 14 | STWB03 | 3.81 | 4.1 | 9.38 |
| Phenanthrene | µg/kg-wet | 15 | 10 | 67 | 0.37 J | 5.3 | STWB03 | 1.13 | 0.665 | 3.5 | 0.36 U | 5.3 | STWB03 | 0.815 | 0.48 JT | 2.5 |
| Total cPAHs | µg/kg-wet | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.081 UT | 0.081 UT | STWB01; STWB02; STWB03; STWB04; STWB05 | 0.0405 | 0.0405 UT | 0.0405 U |
| Total HPAHs | µg/kg-wet | 15 | 2 | 13 | 0.82 T | 1.6 T | STWB03 | 1.21 | 1.21 | 1.56 | 0.098 UT | 1.6 T | STWB03 | 0.204 | 0.049 UT | 1.05 |
| Total LPAHs | µg/kg-wet | 15 | 15 | 100 | 1.1 T | 59 T | STWB03 | 8.97 | 6.4 JT | 27.5 J | 1.1 T | 59 T | STWB03 | 8.97 | 6.4 JT | 27.5 J |

Table D5.1-1. Summary Statistics for Other Contaminants in Fish Tissue, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.3 U | 7.3 U | STWB01; STWB02; STWB03; STWB04; STWB05 | 3.65 | 3.65 U | 3.65 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 15 | 15 | 100 | 0.911 | 2.38 | STWB02 | 1.47 | 1.35 | 2.12 | 0.911 | 2.38 | STWB02 | 1.47 | 1.35 | 2.12 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 15 | 0 | 0 | -- | -- | -- | -- | -- | -- | 30 U | 30 U | STWB01; STWB02; STWB03; STWB04; STWB05 | 15 | 15 U | 15 U |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
RM - river mile
PCB - polychlorinated biphenyl
TEQ - toxicity equivalence

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D5.1-2. Summary Statistics for Other Contaminants in Invertebrate Tissue, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| ***Clam (Corbicula spp. – body without shell)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 37 | 37 | 100 | 0.04 J | 0.218 | FC002 | 0.0873 | 0.076 | 0.157 J | 0.04 J | 0.218 | FC002 | 0.0873 | 0.076 | 0.157 J |
| Lead | mg/kg-wet | 37 | 37 | 100 | 0.036 | 0.316 | 07R006 | 0.0932 | 0.072 | 0.206 | 0.036 | 0.316 | 07R006 | 0.0932 | 0.072 | 0.206 |
| Mercury | mg/kg-wet | 34 | 34 | 100 | 0.005 JT | 0.0263 J | CA11E | 0.0113 | 0.0102 J | 0.0222 J | 0.005 JT | 0.0263 J | CA11E | 0.0113 | 0.0102 J | 0.0222 J |
| Nickel | mg/kg-wet | 37 | 37 | 100 | 0.151 | 0.485 J | FC030 | 0.3 | 0.303 T | 0.445 J | 0.151 | 0.485 J | FC030 | 0.3 | 0.303 T | 0.445 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 37 | 37 | 100 | 0.497 T | 5.32 T | FC0061 | 1.44 | 1.08 T | 3.26 | 0.497 T | 5.32 T | FC0061 | 1.44 | 1.08 T | 3.26 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 40 | 32 | 80 | 0.0256 J | 0.0837 J | FC017 | 0.0584 | 0.0644 J | 0.0795 J | 0.0234 U | 1 U | 06R002; 07R003; 07R006 | 0.0929 | 0.0644 J | 0.5 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 38 | 33 | 87 | 0.78 J | 490 | FC015 | 36.5 | 4.6 | 220 | 0.17 U | 490 | FC015 | 33 | 4.65 | 120 |
| Naphthalene | µg/kg-wet | 38 | 4 | 11 | 2.6 | 33 | FC015 | 11.9 | 6 | 29.4 | 0.97 UT | 33 UT | 06R002; FC015 | 3.28 | 0.95 U | 16.1 U |
| Phenanthrene | µg/kg-wet | 38 | 35 | 92 | 2.7 | 300 | FC015 | 37 | 16 | 169 | 2.7 | 300 | FC015 | 35.3 | 16 | 165 |
| Total cPAHs | µg/kg-wet | 38 | 36 | 95 | 5.7 T | 2700 T | FC015 | 239 | 63.5 J | 1030 | 5.7 T | 2700 T | FC015 | 228 | 59 J | 815 |
| Total HPAHs | µg/kg-wet | 38 | 38 | 100 | 17 T | 4450 T | FC014 | 450 | 160 J | 1570 | 17 T | 4450 T | FC014 | 450 | 160 J | 1570 |
| Total LPAHs | µg/kg-wet | 38 | 35 | 92 | 6.1 JT | 542 T | FC015 | 62.5 | 30.5 T | 261 | 6.1 JT | 542 T | FC015 | 59.2 | 29.3 | 251 |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 37 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.3 U | 330 U | 06R002 | 20.6 | 7 U | 156 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 41 | 37 | 90 | 0.373 | 1.07 | FC017 | 0.611 | 0.624 | 0.839 J | 0.373 | 12 U | FC009 | 0.805 | 0.629 | 1.07 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 10 | 0 | 0 | -- | -- | -- | -- | -- | -- | 30 U | 160 UT | 06R002; 07R003; 07R006 | 34.5 | 15 U | 80 U |
| ***Clam (Corbicula spp. – depurated w/o shell)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 3 | 3 | 100 | 0.052 J | 0.101 J | CA11E | 0.081 | 0.09 J | 0.0999 J | 0.052 J | 0.101 J | CA11E | 0.081 | 0.09 J | 0.0999 J |
| Lead | mg/kg-wet | 3 | 3 | 100 | 0.033 | 0.058 | CA10W | 0.0483 | 0.054 | 0.0576 | 0.033 | 0.058 | CA10W | 0.0483 | 0.054 | 0.0576 |
| Mercury | mg/kg-wet | 2 | 2 | 100 | 0.0195 J | 0.0223 J | CA02W | 0.0209 | 0.0209 J | 0.0222 J | 0.0195 J | 0.0223 J | CA02W | 0.0209 | 0.0209 J | 0.0222 J |
| Nickel | mg/kg-wet | 3 | 3 | 100 | 0.179 | 0.204 | CA10W | 0.193 | 0.195 | 0.203 | 0.179 | 0.204 | CA10W | 0.193 | 0.195 | 0.203 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 3 | 3 | 100 | 0.283 T | 0.856 T | CA02W | 0.505 | 0.376 T | 0.808 | 0.283 T | 0.856 T | CA02W | 0.505 | 0.376 T | 0.808 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 3 | 2 | 67 | 0.0328 J | 0.0367 J | CA10W | 0.0348 | 0.0348 J | 0.0365 J | 0.0191 U | 0.0367 J | CA10W | 0.0264 | 0.0328 J | 0.0363 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 3 | 1 | 33 | 0.43 J | 0.43 J | CA11E | 0.43 | 0.43 J | 0.43 J | 0.2 U | 0.43 J | CA11E | 0.212 | 0.105 U | 0.398 J |
| Naphthalene | µg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.6 U | 3.3 U | CA10W | 1.28 | 1.4 U | 1.63 U |
| Phenanthrene | µg/kg-wet | 3 | 3 | 100 | 4.2 | 25 | CA02W | 11.1 | 4.2 | 22.9 | 4.2 | 25 | CA02W | 11.1 | 4.2 | 22.9 |
| Total cPAHs | µg/kg-wet | 3 | 3 | 100 | 6.7 JT | 26 JT | CA02W | 13.3 | 7.1 T | 24.1 J | 6.7 JT | 26 JT | CA02W | 13.3 | 7.1 T | 24.1 J |
| Total HPAHs | µg/kg-wet | 3 | 3 | 100 | 22 T | 180 JT | CA02W | 75.3 | 24 JT | 164 J | 22 T | 180 JT | CA02W | 75.3 | 24 JT | 164 J |
| Total LPAHs | µg/kg-wet | 3 | 3 | 100 | 6.7 JT | 41 JT | CA02W | 18.6 | 8 JT | 37.7 J | 6.7 JT | 41 JT | CA02W | 18.6 | 8 JT | 37.7 J |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.3 U | 8.2 U | CA02W | 3.88 | 3.88 U | 4.08 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 3 | 3 | 100 | 0.428 | 0.663 | CA10W | 0.547 | 0.549 | 0.652 | 0.428 | 0.663 | CA10W | 0.547 | 0.549 | 0.652 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 30 U | 34 U | CA02W | 16 | 16 U | 16.9 U |
| ***Crayfish (whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 32 | 32 | 100 | 0.007 J | 0.036 J | 05R003 | 0.0172 | 0.016 J | 0.0295 J | 0.007 J | 0.036 J | 05R003 | 0.0172 | 0.016 J | 0.0295 J |
| Lead | mg/kg-wet | 32 | 32 | 100 | 0.041 J | 1.3 JT | 04R002 | 0.144 | 0.0975 J | 0.235 J | 0.041 J | 1.3 JT | 04R002 | 0.144 | 0.0975 J | 0.235 J |
| Mercury | mg/kg-wet | 32 | 32 | 100 | 0.02 | 0.041 | 06R001 | 0.0287 | 0.0285 | 0.0391 | 0.02 | 0.041 | 06R001 | 0.0287 | 0.0285 | 0.0391 |
| Nickel | mg/kg-wet | 32 | 31 | 97 | 0.18 | 0.83 | 07R006 | 0.382 | 0.371 | 0.57 J | 0.18 | 0.83 | 07R006 | 0.374 | 0.366 J | 0.568 J |

Table D5.1-2. Summary Statistics for Other Contaminants in Invertebrate Tissue, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 15 | 15 | 100 | 0.242 T | 3.89 T | CR11E | 1.13 | 0.676 T | 3.35 | 0.242 T | 3.89 T | CR11E | 1.13 | 0.676 T | 3.35 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 32 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.00212 U | 2 U | 07R003 | 0.438 | 0.5 U | 0.5 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 32 | 5 | 16 | 0.22 JT | 7.5 | CR06W | 1.76 | 0.28 J | 6.11 | 0.22 JT | 37 UT | 07R004 | 14 | 16.5 U | 16.5 U |
| Naphthalene | µg/kg-wet | 32 | 5 | 16 | 0.47 JT | 2.9 J | CR06W | 1.02 | 0.6 J | 2.44 J | 0.47 JT | 82 UT | 07R004 | 22.7 | 16.5 U | 35.7 U |
| Phenanthrene | µg/kg-wet | 32 | 2 | 6 | 7.6 | 97 T | 06R004 | 52.3 | 52.3 | 92.5 | 0.46 UT | 97 T | 06R004 | 18.3 | 16.5 U | 43.8 U |
| Total cPAHs | µg/kg-wet | 32 | 6 | 19 | 0.22 JT | 170 JT | 06R004 | 35.7 | 0.41 J | 138 J | 0.22 JT | 170 JT | 06R004 | 19.9 | 16.5 U | 29.5 |
| Total HPAHs | µg/kg-wet | 32 | 8 | 25 | 0.22 JT | 380 JT | 06R004 | 90 | 38.3 | 307 J | 0.22 JT | 380 JT | 06R004 | 41.2 | 16.5 U | 128 J |
| Total LPAHs | µg/kg-wet | 32 | 6 | 19 | 0.96 JT | 97 T | 06R004 | 21 | 2.45 J | 78.3 J | 0.96 JT | 97 T | 06R004 | 26.9 | 24.3 J | 45.7 U |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 32 | 2 | 6 | 15 J | 71 T | CR11E | 43 | 43 J | 68.2 J | 7.3 U | 370 U | 07R004 | 143 | 165 U | 165 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 32 | 5 | 16 | 0.0357 JT | 0.0657 J | CR08W | 0.0502 | 0.0509 J | 0.0639 J | 0.0357 JT | 2 UT | 07R003 | 0.445 | 0.5 U | 0.5 U |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 32 | 1 | 3 | 130 T | 130 T | 08R003 | 130 | 130 T | 130 T | 30 U | 190 UT | 07R004 | 75.3 | 85 U | 89.5 U |
| ***Epibenthic invertebrates (whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 2 | 2 | 100 | 0.0321 | 0.0366 | MIT009 | 0.0344 | 0.0344 | 0.0364 | 0.0321 | 0.0366 | MIT009 | 0.0344 | 0.0344 | 0.0364 |
| Lead | mg/kg-wet | 2 | 2 | 100 | 0.245 J | 1.06 J | MIT009 | 0.653 | 0.653 J | 1.02 J | 0.245 J | 1.06 J | MIT009 | 0.653 | 0.653 J | 1.02 J |
| Nickel | mg/kg-wet | 2 | 2 | 100 | 0.401 | 1.12 | MIT009 | 0.761 | 0.761 | 1.08 | 0.401 | 1.12 | MIT009 | 0.761 | 0.761 | 1.08 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 7 | 7 | 100 | 0.0652 T | 0.52 T | MIT009 | 0.328 | 0.341 T | 0.516 | 0.0652 T | 0.52 T | MIT009 | 0.328 | 0.341 T | 0.516 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 7 | 4 | 57 | 0.0111 J | 0.0214 J | MIT356 | 0.0145 | 0.0127 J | 0.0201 J | 0.00458 U | 0.0214 J | MIT356 | 0.0111 | 0.0111 J | 0.0189 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 7 | 7 | 100 | 0.12 | 0.544 | MIT356 | 0.297 | 0.264 | 0.484 | 0.12 | 0.544 | MIT356 | 0.297 | 0.264 | 0.484 |
| ***Lab-exposed clam (Corbicula fluminea – body without shell)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 34 | 34 | 100 | 0.0383 T | 0.0666 | BT023 | 0.0515 | 0.0496 | 0.0614 | 0.0383 T | 0.0666 | BT023 | 0.0515 | 0.0496 | 0.0614 |
| Lead | mg/kg-wet | 34 | 34 | 100 | 0.033 | 0.221 | BT002 | 0.0586 | 0.05 | 0.101 | 0.033 | 0.221 | BT002 | 0.0586 | 0.05 | 0.101 |
| Mercury | mg/kg-wet | 34 | 34 | 100 | 0.00705 T | 0.0162 | BT022 | 0.0104 | 0.0101 | 0.0125 | 0.00705 T | 0.0162 | BT022 | 0.0104 | 0.0101 | 0.0125 |
| Nickel | mg/kg-wet | 34 | 34 | 100 | 0.094 T | 0.313 J | BT033 | 0.151 | 0.144 J | 0.197 J | 0.094 T | 0.313 J | BT033 | 0.151 | 0.144 J | 0.197 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 34 | 34 | 100 | 0.0701 T | 1.56 T | BT017 | 0.465 | 0.388 | 1.11 | 0.0701 T | 1.56 T | BT017 | 0.465 | 0.388 | 1.11 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 34 | 25 | 74 | 0.0319 J | 0.109 J | BT017 | 0.0591 | 0.0519 J | 0.0978 J | 0.0307 U | 0.109 J | BT017 | 0.0506 | 0.049 J | 0.0978 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 34 | 32 | 94 | 0.46 J | 33 | BT012 | 2.44 | 0.655 | 8.81 | 0.12 U | 33 | BT012 | 2.3 | 0.64 | 8.23 |
| Naphthalene | µg/kg-wet | 34 | 1 | 3 | 5.1 | 5.1 | BT014 | 5.1 | 5.1 | 5.1 | 0.33 U | 5.1 | BT014 | 0.535 | 0.365 U | 0.6 U |
| Phenanthrene | µg/kg-wet | 34 | 34 | 100 | 3.5 | 120 | BT012 | 14.9 | 5.35 | 82.1 | 3.5 | 120 | BT012 | 14.9 | 5.35 | 82.1 |
| Total cPAHs | µg/kg-wet | 34 | 34 | 100 | 2.1 JT | 270 T | BT012 | 24.6 | 6.9 J | 111 J | 2.1 JT | 270 T | BT012 | 24.6 | 6.9 J | 111 J |
| Total HPAHs | µg/kg-wet | 34 | 34 | 100 | 13.1 JT | 1170 T | BT012 | 119 | 36.9 J | 644 J | 13.1 JT | 1170 T | BT012 | 119 | 36.9 J | 644 J |
| Total LPAHs | µg/kg-wet | 34 | 34 | 100 | 5.07 JT | 158 T | BT015 | 22.1 | 8.58 J | 134 | 5.07 JT | 158 T | BT015 | 22.1 | 8.58 J | 134 |

Table D5.1-2. Summary Statistics for Other Contaminants in Invertebrate Tissue, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 34 | 0 | 0 | -- | -- | -- | -- | -- | -- | 14 UJ | 14 UJ | BT001; BT002; BT004; BT005; BT0061; BT0062; BT007; BT008; BT009; BT010; BT011; BT012; BT013; BT014; BT015; BT016; BT017; BT018; BT019; BT020; BT021; BT022; BT023; BT024; BT025; BT026; BT0271; BT0272; BT028; BT029; BT030; BT031; BT032; BT033 | 7 | 7 U | 7 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 34 | 33 | 97 | 0.0292 J | 0.275 | BT017 | 0.0631 | 0.048 J | 0.108 J | 0.0292 J | 0.275 | BT017 | 0.0621 | 0.0468 J | 0.108 J |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 31 U | 31 U | BT001; BT002; BT004; BT005; BT0061; BT0062; BT009; BT010; BT011; BT012; BT014; BT015; BT016; BT018; BT019; BT023; BT033 | 15.5 | 15.5 U | 15.5 U |
| ***Lab-exposed worm (Lumbriculus variegatus – whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 34 | 34 | 100 | 0.0364 | 0.254 | BT007 | 0.0689 | 0.0533 J | 0.155 J | 0.0364 | 0.254 | BT007 | 0.0689 | 0.0533 J | 0.155 J |
| Lead | mg/kg-wet | 34 | 34 | 100 | 0.167 | 0.847 T | BT008 | 0.354 | 0.295 | 0.744 | 0.167 | 0.847 T | BT008 | 0.354 | 0.295 | 0.744 |
| Mercury | mg/kg-wet | 33 | 33 | 100 | 0.003 J | 0.0105 | BT016 | 0.00545 | 0.005 J | 0.00946 J | 0.003 J | 0.0105 | BT016 | 0.00545 | 0.005 J | 0.00946 J |
| Nickel | mg/kg-wet | 34 | 34 | 100 | 0.203 | 0.535 | BT025 | 0.376 | 0.367 | 0.525 | 0.203 | 0.535 | BT025 | 0.376 | 0.367 | 0.525 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 34 | 34 | 100 | 0.129 T | 31.6 T | BT002 | 4.24 | 1.88 | 16.6 | 0.129 T | 31.6 T | BT002 | 4.24 | 1.88 | 16.6 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 34 | 16 | 47 | 0.00666 J | 0.021 J | BT004 | 0.0137 | 0.0137 J | 0.0195 J | 0.00666 J | 0.215 U | BT028 | 0.0166 | 0.0152 U | 0.0264 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 34 | 34 | 100 | 2.2 | 1500 | BT014 | 107 | 16.5 | 600 | 2.2 | 1500 | BT014 | 107 | 16.5 | 600 |
| Naphthalene | µg/kg-wet | 34 | 6 | 18 | 2.9 | 31 | BT015 | 10.7 | 7.55 | 26 | 0.53 U | 31 | BT015 | 2.49 | 0.725 U | 8.79 |
| Phenanthrene | µg/kg-wet | 34 | 34 | 100 | 4.1 | 2500 | BT015 | 265 | 32 | 2200 | 4.1 | 2500 | BT015 | 265 | 32 | 2200 |
| Total cPAHs | µg/kg-wet | 34 | 34 | 100 | 36 T | 12000 T | BT014 | 1000 | 220 | 5340 | 36 T | 12000 T | BT014 | 1000 | 220 | 5340 |
| Total HPAHs | µg/kg-wet | 34 | 34 | 100 | 70.7 T | 33600 T | BT014 | 2780 | 549 | 16200 | 70.7 T | 33600 T | BT014 | 2780 | 549 | 16200 |
| Total LPAHs | µg/kg-wet | 34 | 34 | 100 | 12.3 T | 3760 T | BT015 | 422 | 63.1 | 3290 | 12.3 T | 3760 T | BT015 | 422 | 63.1 | 3290 |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 34 | 0 | 0 | -- | -- | -- | -- | -- | -- | 14 U | 28 U | BT020; BT0272; BT030 | 7.62 | 7 U | 14 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 34 | 34 | 100 | 0.242 J | 2.69 | BT017 | 0.644 | 0.508 | 1.16 | 0.242 J | 2.69 | BT017 | 0.644 | 0.508 | 1.16 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 17 | 0 | 0 | -- | -- | -- | -- | -- | -- | 31 U | 31 U | BT001; BT002; BT004; BT005; BT0061; BT0062; BT009; BT010; BT011; BT012; BT014; BT015; BT016; BT018; BT019; BT023; BT033 | 15.5 | 15.5 U | 15.5 U |
| ***Mussel (body without shell)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 7 | 7 | 100 | 0.0905 | 0.188 | FM006 | 0.123 | 0.108 | 0.174 | 0.0905 | 0.188 | FM006 | 0.123 | 0.108 | 0.174 |
| Lead | mg/kg-wet | 7 | 7 | 100 | 0.0386 | 0.22 | FM006 | 0.139 | 0.118 | 0.217 | 0.0386 | 0.22 | FM006 | 0.139 | 0.118 | 0.217 |
| Mercury | mg/kg-wet | 7 | 7 | 100 | 0.0022 J | 0.0061 J | FM021 | 0.00424 | 0.0048 J | 0.00589 J | 0.0022 J | 0.0061 J | FM021 | 0.00424 | 0.0048 J | 0.00589 J |
| Nickel | mg/kg-wet | 7 | 7 | 100 | 0.308 | 0.712 | FM021 | 0.456 | 0.41 | 0.652 | 0.308 | 0.712 | FM021 | 0.456 | 0.41 | 0.652 |

Table D5.1-2. Summary Statistics for Other Contaminants in Invertebrate Tissue, Study Area (RM 1.9-11.8).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 7 | 7 | 100 | 0.0101 T | 1.09 T | FM006 | 0.259 | 0.132 T | 0.827 | 0.0101 T | 1.09 T | FM006 | 0.259 | 0.132 T | 0.827 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 7 | 1 | 14 | 0.007 J | 0.007 J | FM006 | 0.007 | 0.007 J | 0.007 J | 0.003 UJ | 0.062 UJ | FM033 | 0.0123 | 0.0147 UJ | 0.0263 UJ |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 7 | 7 | 100 | 0.51 J | 5.2 J | FM006 | 1.45 | 0.79 J | 4 J | 0.51 J | 5.2 J | FM006 | 1.45 | 0.79 J | 4 J |
| Naphthalene | µg/kg-wet | 7 | 7 | 100 | 1.1 J | 2.1 J | FM033 | 1.47 | 1.5 J | 1.95 J | 1.1 J | 2.1 J | FM033 | 1.47 | 1.5 J | 1.95 J |
| Phenanthrene | µg/kg-wet | 7 | 7 | 100 | 1.4 J | 8.4 J | FM006 | 3.66 | 2.9 J | 7.2 J | 1.4 J | 8.4 J | FM006 | 3.66 | 2.9 J | 7.2 J |
| Total cPAHs | µg/kg-wet | 7 | 7 | 100 | 4.6 JT | 63 JT | FM006 | 14.4 | 6.7 JT | 46.9 J | 4.6 JT | 63 JT | FM006 | 14.4 | 6.7 JT | 46.9 J |
| Total HPAHs | µg/kg-wet | 7 | 7 | 100 | 13 JT | 130 JT | FM006 | 35 | 19 JT | 99.1 J | 13 JT | 130 JT | FM006 | 35 | 19 JT | 99.1 J |
| Total LPAHs | µg/kg-wet | 7 | 7 | 100 | 3 JT | 14 JT | FM006 | 8.21 | 8.4 JT | 13.1 J | 3 JT | 14 JT | FM006 | 8.21 | 8.4 JT | 13.1 J |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | 130 UJ | 260 UJ | FM004; FM006; FM033 | 92.9 | 65 UJ | 130 UJ |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 7 | 7 | 100 | 0.063 J | 0.181 J | FM025 | 0.122 | 0.125 J | 0.17 J | 0.063 J | 0.181 J | FM025 | 0.122 | 0.125 J | 0.17 J |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 7 | 0 | 0 | -- | -- | -- | -- | -- | -- | 20 UJ | 40 UJ | FM004; FM006 | 14.2 | 10 UJ | 20 UJ |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
RM - river mile
PCB - polychlorinated biphenyl
TEQ - toxicity equivalence

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D5.1-3. Summary Statistics for Other Contaminants in Fish Tissue, Downtown Reach (RM 11.8-15.3) and Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| ***Brown bullhead (whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 3 | 3 | 100 | 0.0045 JT | 0.006 | 20R001; 28R001 | 0.0055 | 0.006 | 0.006 | 0.0045 JT | 0.006 | 20R001; 28R001 | 0.0055 | 0.006 | 0.006 |
| Lead | mg/kg-wet | 3 | 3 | 100 | 0.015 T | 0.021 | 20R001 | 0.0183 | 0.019 | 0.0208 | 0.015 T | 0.021 | 20R001 | 0.0183 | 0.019 | 0.0208 |
| Mercury | mg/kg-wet | 3 | 3 | 100 | 0.054 T | 0.094 | 20R001 | 0.0717 | 0.067 | 0.0913 | 0.054 T | 0.094 | 20R001 | 0.0717 | 0.067 | 0.0913 |
| Nickel | mg/kg-wet | 3 | 3 | 100 | 0.19 T | 0.82 | 28R001 | 0.427 | 0.27 | 0.765 | 0.19 T | 0.82 | 28R001 | 0.427 | 0.27 | 0.765 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 3 | 3 | 100 | 0.487 T | 1.23 T | 20R001 | 0.811 | 0.715 T | 1.18 | 0.487 T | 1.23 T | 20R001 | 0.811 | 0.715 T | 1.18 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 U | 1 U | 20R001; 28R001 | 0.5 | 0.5 U | 0.5 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 33 UT | 33 UT | 20R001; 28R001 | 16.5 | 16.5 UT | 16.5 U |
| Naphthalene | µg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 33 UT | 70 UT | 28R001 | 22.7 | 16.5 UT | 33.2 U |
| Phenanthrene | µg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 33 UT | 83 UT | 28R001 | 24.8 | 16.5 UT | 39 U |
| Total cPAHs | µg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 33 UT | 33 UT | 20R001; 28R001 | 16.5 | 16.5 UT | 16.5 U |
| Total HPAHs | µg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 33 UT | 93 UT | 28R001 | 26.5 | 16.5 UT | 43.5 U |
| Total LPAHs | µg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 33 UT | 86 UT | 28R001 | 25.3 | 16.5 UT | 40.4 U |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 330 UJ | 330 UJ | 20R001; 28R001 | 165 | 165 UJ | 165 UJ |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1 UT | 33 UT | 20R001; 28R001 | 11.2 | 16.5 UT | 16.5 U |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 170 UT | 170 UT | 20R001; 28R001 | 85 | 85 UT | 85 U |
| ***Chinook (stomach contents)*** | | | | | | | | | | | | | | | | |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 1 | 1 | 100 | 0.316 T | 0.316 T | T04 | 0.316 | 0.316 T | 0.316 T | 0.316 T | 0.316 T | T04 | 0.316 | 0.316 T | 0.316 T |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.0221 U | 0.0221 U | T04 | 0.0111 | 0.0111 U | 0.0111 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 1 | 1 | 100 | 1.07 J | 1.07 J | T04 | 1.07 | 1.07 J | 1.07 J | 1.07 J | 1.07 J | T04 | 1.07 | 1.07 J | 1.07 J |
| Naphthalene | µg/kg-wet | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 11 U | 11 U | T04 | 5.5 | 5.5 U | 5.5 U |
| Phenanthrene | µg/kg-wet | 1 | 1 | 100 | 23.5 | 23.5 | T04 | 23.5 | 23.5 | 23.5 | 23.5 | 23.5 | T04 | 23.5 | 23.5 | 23.5 |
| Total cPAHs | µg/kg-wet | 1 | 1 | 100 | 16 JT | 16 JT | T04 | 16 | 16 JT | 16 JT | 16 JT | 16 JT | T04 | 16 | 16 JT | 16 JT |
| Total HPAHs | µg/kg-wet | 1 | 1 | 100 | 59.4 JT | 59.4 JT | T04 | 59.4 | 59.4 JT | 59.4 JT | 59.4 JT | 59.4 JT | T04 | 59.4 | 59.4 JT | 59.4 JT |
| Total LPAHs | µg/kg-wet | 1 | 1 | 100 | 28 JT | 28 JT | T04 | 28 | 28 JT | 28 JT | 28 JT | 28 JT | T04 | 28 | 28 JT | 28 JT |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 1 | 1 | 100 | 0.767 | 0.767 | T04 | 0.767 | 0.767 | 0.767 | 0.767 | 0.767 | T04 | 0.767 | 0.767 | 0.767 |
| ***Chinook (fillet without skin)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Mercury | mg/kg-wet | 3 | 3 | 100 | 0.0448 | 0.1 | Clackamas Fish Hatchery | 0.0812 | 0.0989 | 0.0999 | 0.0448 | 0.1 | Clackamas Fish Hatchery | 0.0812 | 0.0989 | 0.0999 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 3 | 3 | 100 | 0.0962 JT | 0.181 T | Clackamas Fish Hatchery | 0.149 | 0.17 JT | 0.18 J | 0.0962 JT | 0.181 T | Clackamas Fish Hatchery | 0.149 | 0.17 JT | 0.18 J |
| ***Chinook (fillet)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.015 U | 0.0159 U | Clackamas Fish Hatchery | 0.00777 | 0.00785 U | 0.00794 U |
| Lead | mg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.015 U | 0.0159 U | Clackamas Fish Hatchery | 0.00777 | 0.00785 U | 0.00794 U |
| Nickel | mg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.045 U | 0.0476 U | Clackamas Fish Hatchery | 0.0233 | 0.0235 U | 0.0238 U |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 3 | 3 | 100 | 0.133 JT | 0.201 JT | Clackamas Fish Hatchery | 0.171 | 0.179 T | 0.199 J | 0.133 JT | 0.201 JT | Clackamas Fish Hatchery | 0.171 | 0.179 T | 0.199 J |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.91 U | 0.92 U | Clackamas Fish Hatchery | 0.457 | 0.455 U | 0.46 U |

Table D5.1-3. Summary Statistics for Other Contaminants in Fish Tissue, Downtown Reach (RM 11.8-15.3) and Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.8 U | 4 U | Clackamas Fish Hatchery | 1.93 | 1.9 U | 1.99 U |
| Naphthalene | µg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.8 U | 4 U | Clackamas Fish Hatchery | 1.93 | 1.9 U | 1.99 U |
| Phenanthrene | µg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.8 U | 4.1 U | Clackamas Fish Hatchery | 1.95 | 1.9 U | 2.04 U |
| Total cPAHs | µg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 15 UT | 16 UT | Clackamas Fish Hatchery | 7.67 | 7.5 UT | 7.95 U |
| Total HPAHs | µg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 15 UT | 16 UT | Clackamas Fish Hatchery | 7.67 | 7.5 UT | 7.95 U |
| Total LPAHs | µg/kg-wet | 3 | 2 | 67 | 1.8 JT | 5.4 T | Clackamas Fish Hatchery | 3.6 | 3.6 J | 5.22 J | 1.8 JT | 5.4 T | Clackamas Fish Hatchery | 3.03 | 1.9 UT | 5.05 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.8 U | 4 U | Clackamas Fish Hatchery | 1.93 | 1.9 U | 1.99 U |
| ***Chinook (whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 8 | 4 | 50 | 0.005 J | 0.0164 | T04 | 0.0101 | 0.00944 | 0.0156 | 0.005 J | 0.0169 U | Clackamas Fish Hatchery | 0.00914 | 0.00825 U | 0.0146 |
| Lead | mg/kg-wet | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.003 UJ | 0.0251 U | T04 | 0.00709 | 0.00805 U | 0.0111 U |
| Mercury | mg/kg-wet | 8 | 8 | 100 | 0.00935 J | 0.0623 | Clackamas Fish Hatchery | 0.0344 | 0.0328 | 0.0613 | 0.00935 J | 0.0623 | Clackamas Fish Hatchery | 0.0344 | 0.0328 | 0.0613 |
| Nickel | mg/kg-wet | 8 | 8 | 100 | 0.0676 | 0.409 JT | T04 | 0.219 | 0.233 | 0.371 J | 0.0676 | 0.409 JT | T04 | 0.219 | 0.233 | 0.371 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 7 | 7 | 100 | 0.198 JT | 0.508 T | T04 | 0.318 | 0.246 T | 0.498 | 0.198 JT | 0.508 T | T04 | 0.318 | 0.246 T | 0.498 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.18 U | 1 U | 26R111 | 0.349 | 0.46 U | 0.493 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.13 U | 27 UT | 26R111 | 2.68 | 1.93 U | 9.46 U |
| Naphthalene | µg/kg-wet | 8 | 1 | 12 | 3.8 | 3.8 | T04 | 3.8 | 3.8 | 3.8 | 2.8 U | 27 UT | 26R111 | 3.49 | 1.95 U | 10.1 |
| Phenanthrene | µg/kg-wet | 8 | 3 | 38 | 0.62 | 0.84 | T04 | 0.717 | 0.69 | 0.825 | 0.62 | 27 UT | 26R111 | 2.93 | 1.93 U | 9.46 U |
| Total cPAHs | µg/kg-wet | 8 | 3 | 38 | 0.21 JT | 0.32 JT | T04 | 0.267 | 0.27 JT | 0.315 J | 0.21 JT | 27 UT | 26R111 | 5.66 | 7.5 U | 11.6 U |
| Total HPAHs | µg/kg-wet | 8 | 4 | 50 | 0.21 JT | 1.37 JT | T04 | 0.725 | 0.66 J | 1.31 J | 0.21 JT | 27 UT | 26R111 | 4.99 | 4.44 J | 11.6 U |
| Total LPAHs | µg/kg-wet | 8 | 6 | 75 | 5.04 JT | 9.77 JT | T04 | 6.24 | 5.46 J | 8.95 J | 3.9 UT | 27 UT | 26R111 | 6.61 | 5.46 J | 12.2 J |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 4 | 3 | 75 | 200 | 240 | T04 | 217 | 210 | 237 | 200 | 2000 U | 26R111 | 413 | 225 | 886 |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 8 | 6 | 75 | 0.57 J | 2.6 JT | Clackamas Fish Hatchery | 1.56 | 1.55 J | 2.45 J | 0.57 J | 3.9 U | Clackamas Fish Hatchery | 1.48 | 1.55 J | 2.39 J |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 64 U | 140 UT | 26R111 | 42.4 | 33.8 U | 64.8 U |
| ***Lamprey Ammocoetes and Macropthalmia*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 8 | 7 | 88 | 0.003 J | 0.065 | Willamette Falls | 0.0373 | 0.051 | 0.0645 | 0.002 U | 0.065 | Willamette Falls | 0.0327 | 0.0325 | 0.0644 |
| Lead | mg/kg-wet | 8 | 5 | 62 | 0.0303 | 0.129 | Willamette Falls | 0.0844 | 0.0847 | 0.122 | 0.0149 U | 0.129 | Willamette Falls | 0.0557 | 0.0565 | 0.117 |
| Mercury | mg/kg-wet | 8 | 8 | 100 | 0.125 | 0.902 | LT023c | 0.343 | 0.214 | 0.828 J | 0.125 | 0.902 | LT023c | 0.343 | 0.214 | 0.828 J |
| Nickel | mg/kg-wet | 8 | 5 | 62 | 0.0547 | 0.268 | LT023c | 0.191 | 0.267 | 0.268 | 0.0442 U | 0.268 | LT023c | 0.128 | 0.0754 | 0.268 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 8 | 8 | 100 | 0.655 T | 0.971 T | Willamette Falls | 0.833 | 0.837 | 0.968 | 0.655 T | 0.971 T | Willamette Falls | 0.833 | 0.837 | 0.968 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 8 | 3 | 38 | 0.0175 J | 0.181 J | LT023b | 0.0851 | 0.0569 J | 0.169 J | 0.0106 U | 0.93 UJ | Willamette Falls | 0.258 | 0.301 J | 0.463 UJ |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 8 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.22 U | 4.9 U | Willamette Falls | 1.14 | 1.03 U | 2.42 U |
| Naphthalene | µg/kg-wet | 8 | 6 | 75 | 1.7 J | 11 | Willamette Falls | 5.4 | 3.5 | 10.7 | 1.7 J | 11 | Willamette Falls | 4.65 | 3.1 | 10.6 |
| Phenanthrene | µg/kg-wet | 8 | 6 | 75 | 2.4 | 8.2 | Willamette Falls | 5.33 | 5.45 | 7.8 | 2.4 | 20 U | Willamette Falls | 5.54 | 5.45 | 9.37 |
| Total cPAHs | µg/kg-wet | 8 | 3 | 38 | 0.25 JT | 2.5 JT | LT023c | 1.17 | 0.75 JT | 2.33 J | 0.25 JT | 54 UT | Willamette Falls | 7.27 | 5.25 J | 21.1 U |
| Total HPAHs | µg/kg-wet | 8 | 6 | 75 | 5.9 JT | 21 JT | LT023c | 12.1 | 11 J | 19.5 J | 5.9 JT | 21 JT | LT023c | 11.5 | 9.8 J | 18.9 J |
| Total LPAHs | µg/kg-wet | 8 | 7 | 88 | 3.6 JT | 48.1 JT | Willamette Falls | 23.6 | 20 JT | 45.9 J | 3.6 JT | 48.1 JT | Willamette Falls | 21.5 | 18 J | 45.6 J |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 4 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.3 U | 7.3 U | LT023b; LT023c | 3.65 | 3.65 U | 3.65 U |

Table D5.1-3. Summary Statistics for Other Contaminants in Fish Tissue, Downtown Reach (RM 11.8-15.3) and Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 8 | 8 | 100 | 1.92 | 11 | Willamette Falls | 6.22 | 6.51 | 10.4 J | 1.92 | 11 | Willamette Falls | 6.22 | 6.51 | 10.4 J |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 4 | 1 | 25 | 38 J | 38 J | LT023c | 38 | 38 J | 38 J | 30 U | 38 J | LT023c | 20.8 | 15 U | 34.6 J |
| ***Sculpin (whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 2 | 2 | 100 | 0.004 JT | 0.005 | SP12E | 0.0045 | 0.0045 J | 0.00495 J | 0.004 JT | 0.005 | SP12E | 0.0045 | 0.0045 J | 0.00495 J |
| Lead | mg/kg-wet | 2 | 2 | 100 | 0.0385 T | 0.055 | SP12E | 0.0468 | 0.0468 | 0.0542 | 0.0385 T | 0.055 | SP12E | 0.0468 | 0.0468 | 0.0542 |
| Mercury | mg/kg-wet | 2 | 2 | 100 | 0.0603 | 0.0742 T | SP12WA | 0.0673 | 0.0673 | 0.0735 | 0.0603 | 0.0742 T | SP12WA | 0.0673 | 0.0673 | 0.0735 |
| Nickel | mg/kg-wet | 2 | 2 | 100 | 0.153 T | 0.309 | SP12E | 0.231 | 0.231 | 0.301 | 0.153 T | 0.309 | SP12E | 0.231 | 0.231 | 0.301 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 2 | 2 | 100 | 0.194 T | 0.404 T | SP12E | 0.299 | 0.299 | 0.394 | 0.194 T | 0.404 T | SP12E | 0.299 | 0.299 | 0.394 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 2 | 1 | 50 | 0.0133 JT | 0.0133 JT | SP12WA | 0.0133 | 0.0133 JT | 0.0133 JT | 0.0133 JT | 0.0139 U | SP12E | 0.0101 | 0.0101 J | 0.013 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.081 U | 0.081 U | SP12E; SP12WA | 0.0405 | 0.0405 U | 0.0405 U |
| Naphthalene | µg/kg-wet | 2 | 2 | 100 | 1.6 | 3 T | SP12WA | 2.3 | 2.3 | 2.93 | 1.6 | 3 T | SP12WA | 2.3 | 2.3 | 2.93 |
| Phenanthrene | µg/kg-wet | 2 | 2 | 100 | 1.8 | 5.8 T | SP12WA | 3.8 | 3.8 | 5.6 | 1.8 | 5.8 T | SP12WA | 3.8 | 3.8 | 5.6 |
| Total cPAHs | µg/kg-wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.081 UT | 0.081 UT | SP12E; SP12WA | 0.0405 | 0.0405 U | 0.0405 U |
| Total HPAHs | µg/kg-wet | 2 | 1 | 50 | 6 T | 6 T | SP12WA | 6 | 6 T | 6 T | 0.098 UT | 6 T | SP12WA | 3.02 | 3.02 | 5.7 |
| Total LPAHs | µg/kg-wet | 2 | 2 | 100 | 9.2 JT | 25 JT | SP12WA | 17.1 | 17.1 J | 24.2 J | 9.2 JT | 25 JT | SP12WA | 17.1 | 17.1 J | 24.2 J |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.3 U | 7.3 U | SP12E; SP12WA | 3.65 | 3.65 U | 3.65 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 2 | 2 | 100 | 1.44 | 2.08 T | SP12WA | 1.76 | 1.76 | 2.05 | 1.44 | 2.08 T | SP12WA | 1.76 | 1.76 | 2.05 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 30 U | 30 U | SP12E; SP12WA | 15 | 15 U | 15 U |
| ***Smallmouth bass (whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-wet | 6 | 2 | 33 | 0.004 J | 0.011 | 28R001 | 0.0075 | 0.0075 J | 0.0107 J | 0.003 U | 0.011 | 28R001 | 0.0035 | 0.0015 U | 0.00925 J |
| Lead | mg/kg-wet | 6 | 6 | 100 | 0.003 J | 0.019 | 20R001 | 0.0085 | 0.0055 J | 0.0178 | 0.003 J | 0.019 | 20R001 | 0.0085 | 0.0055 J | 0.0178 |
| Mercury | mg/kg-wet | 6 | 6 | 100 | 0.167 | 0.549 | 20R001 | 0.322 | 0.26 | 0.54 | 0.167 | 0.549 | 20R001 | 0.322 | 0.26 | 0.54 |
| Nickel | mg/kg-wet | 6 | 6 | 100 | 0.13 | 1.57 | 20R001 | 0.725 | 0.6 | 1.51 | 0.13 | 1.57 | 20R001 | 0.725 | 0.6 | 1.51 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-wet | 6 | 6 | 100 | 1.76 T | 5.44 T | 20R001 | 3.15 | 2.42 | 5.22 | 1.76 T | 5.44 T | 20R001 | 3.15 | 2.42 | 5.22 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-wet | 6 | 5 | 83 | 2.7 NJ | 4.3 NJ | 20R001 | 3.5 | 3.3 NJ | 4.26 J | 2.3 U | 4.3 NJ | 20R001 | 3.11 | 3.2 J | 4.25 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 33 UT | 33 UT | 20R001; 28R001 | 16.5 | 16.5 U | 16.5 U |
| Naphthalene | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 33 UT | 70 UT | 28R001 | 25.8 | 25.8 U | 35 U |
| Phenanthrene | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 33 UT | 33 UT | 20R001; 28R001 | 16.5 | 16.5 U | 16.5 U |
| Total cPAHs | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 33 UT | 70 UT | 28R001 | 19.6 | 16.5 U | 30.4 U |
| Total HPAHs | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 33 UT | 93 UT | 28R001 | 21.5 | 16.5 U | 39 U |
| Total LPAHs | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 33 UT | 73 UT | 28R001 | 26.3 | 25.8 U | 36.5 U |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-wet | 6 | 1 | 17 | 790 J | 790 J | 20R001 | 790 | 790 J | 790 J | 330 UJ | 790 J | 20R001 | 269 | 165 UJ | 634 J |

Table D5.1-3. Summary Statistics for Other Contaminants in Fish Tissue, Downtown Reach (RM 11.8-15.3) and Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.4 UT | 2.3 UT | 20R001 | 0.883 | 0.875 U | 1.11 U |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-wet | 6 | 0 | 0 | -- | -- | -- | -- | -- | -- | 170 UJT | 170 UJT | 20R001; 28R001 | 85 | 85 U | 85 U |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
RM - river mile
PCB - polychlorinated biphenyl
TEQ - toxicity equivalence

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.
Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D5.1-4. Summary Statistics for Other Contaminants in Invertebrate Tissue, Downtown Reach (RM 11.8-15.3) and Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| ***Clam (Corbicula spp. – body without shell)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-Wet | 2 | 2 | 100 | 0.035 J | 0.053 J | CA12E | 0.044 | 0.044 J | 0.0521 J | 0.035 J | 0.053 J | CA12E | 0.044 | 0.044 J | 0.0521 J |
| Lead | mg/kg-Wet | 2 | 2 | 100 | 0.07 | 0.184 | CA12E | 0.127 | 0.127 | 0.178 | 0.07 | 0.184 | CA12E | 0.127 | 0.127 | 0.178 |
| Mercury | mg/kg-Wet | 2 | 2 | 100 | 0.02 J | 0.0245 J | CA12E | 0.0223 | 0.0223 J | 0.0243 J | 0.02 J | 0.0245 J | CA12E | 0.0223 | 0.0223 J | 0.0243 J |
| Nickel | mg/kg-Wet | 2 | 2 | 100 | 0.218 | 0.25 | CA12W | 0.234 | 0.234 | 0.248 | 0.218 | 0.25 | CA12W | 0.234 | 0.234 | 0.248 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-Wet | 2 | 2 | 100 | 0.458 T | 0.799 T | CA12E | 0.629 | 0.629 | 0.782 | 0.458 T | 0.799 T | CA12E | 0.629 | 0.629 | 0.782 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-Wet | 2 | 2 | 100 | 0.018 J | 0.0357 J | CA12E | 0.0269 | 0.0269 J | 0.0348 J | 0.018 J | 0.0357 J | CA12E | 0.0269 | 0.0269 J | 0.0348 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-Wet | 2 | 1 | 50 | 0.32 J | 0.32 J | CA12W | 0.32 | 0.32 J | 0.32 J | 0.16 U | 0.32 J | CA12W | 0.2 | 0.2 J | 0.308 J |
| Naphthalene | µg/kg-Wet | 2 | 1 | 50 | 78 | 78 | CA12E | 78 | 78 | 78 | 1.7 U | 78 | CA12E | 39.4 | 39.4 | 74.1 |
| Phenanthrene | µg/kg-Wet | 2 | 2 | 100 | 3.6 | 4.2 | CA12E | 3.9 | 3.9 | 4.17 | 3.6 | 4.2 | CA12E | 3.9 | 3.9 | 4.17 |
| Total cPAHs | µg/kg-Wet | 2 | 2 | 100 | 5.8 JT | 8.9 T | CA12E | 7.35 | 7.35 J | 8.75 J | 5.8 JT | 8.9 T | CA12E | 7.35 | 7.35 J | 8.75 J |
| Total HPAHs | µg/kg-Wet | 2 | 2 | 100 | 16 JT | 26 T | CA12E | 21 | 21 J | 25.5 J | 16 JT | 26 T | CA12E | 21 | 21 J | 25.5 J |
| Total LPAHs | µg/kg-Wet | 2 | 2 | 100 | 6.2 JT | 87 JT | CA12E | 46.6 | 46.6 J | 83 J | 6.2 JT | 87 JT | CA12E | 46.6 | 46.6 J | 83 J |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-Wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.3 U | 7.3 U | CA12E; CA12W | 3.65 | 3.65 U | 3.65 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-Wet | 2 | 2 | 100 | 0.671 | 0.784 | CA12E | 0.728 | 0.728 | 0.778 | 0.671 | 0.784 | CA12E | 0.728 | 0.728 | 0.778 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-Wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 30 U | 30 U | CA12E; CA12W | 15 | 15 U | 15 U |
| ***Clam (Corbicula spp. – depurated w/o shell)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-Wet | 1 | 1 | 100 | 0.058 J | 0.058 J | CA12E | 0.058 | 0.058 J | 0.058 J | 0.058 J | 0.058 J | CA12E | 0.058 | 0.058 J | 0.058 J |
| Lead | mg/kg-Wet | 1 | 1 | 100 | 0.114 | 0.114 | CA12E | 0.114 | 0.114 | 0.114 | 0.114 | 0.114 | CA12E | 0.114 | 0.114 | 0.114 |
| Mercury | mg/kg-Wet | 1 | 1 | 100 | 0.0223 J | 0.0223 J | CA12E | 0.0223 | 0.0223 J | 0.0223 J | 0.0223 J | 0.0223 J | CA12E | 0.0223 | 0.0223 J | 0.0223 J |
| Nickel | mg/kg-Wet | 1 | 1 | 100 | 0.194 | 0.194 | CA12E | 0.194 | 0.194 | 0.194 | 0.194 | 0.194 | CA12E | 0.194 | 0.194 | 0.194 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-Wet | 1 | 1 | 100 | 0.521 T | 0.521 T | CA12E | 0.521 | 0.521 T | 0.521 T | 0.521 T | 0.521 T | CA12E | 0.521 | 0.521 T | 0.521 T |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-Wet | 1 | 1 | 100 | 0.0224 J | 0.0224 J | CA12E | 0.0224 | 0.0224 J | 0.0224 J | 0.0224 J | 0.0224 J | CA12E | 0.0224 | 0.0224 J | 0.0224 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-Wet | 1 | 1 | 100 | 0.31 J | 0.31 J | CA12E | 0.31 | 0.31 J | 0.31 J | 0.31 J | 0.31 J | CA12E | 0.31 | 0.31 J | 0.31 J |
| Naphthalene | µg/kg-Wet | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 2.3 U | 2.3 U | CA12E | 1.15 | 1.15 U | 1.15 U |
| Phenanthrene | µg/kg-Wet | 1 | 1 | 100 | 2.6 | 2.6 | CA12E | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | CA12E | 2.6 | 2.6 | 2.6 |
| Total cPAHs | µg/kg-Wet | 1 | 1 | 100 | 6.2 JT | 6.2 JT | CA12E | 6.2 | 6.2 JT | 6.2 JT | 6.2 JT | 6.2 JT | CA12E | 6.2 | 6.2 JT | 6.2 JT |
| Total HPAHs | µg/kg-Wet | 1 | 1 | 100 | 18 JT | 18 JT | CA12E | 18 | 18 JT | 18 JT | 18 JT | 18 JT | CA12E | 18 | 18 JT | 18 JT |
| Total LPAHs | µg/kg-Wet | 1 | 1 | 100 | 4.6 JT | 4.6 JT | CA12E | 4.6 | 4.6 JT | 4.6 JT | 4.6 JT | 4.6 JT | CA12E | 4.6 | 4.6 JT | 4.6 JT |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-Wet | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.3 U | 7.3 U | CA12E | 3.65 | 3.65 U | 3.65 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-Wet | 1 | 1 | 100 | 0.548 | 0.548 | CA12E | 0.548 | 0.548 | 0.548 | 0.548 | 0.548 | CA12E | 0.548 | 0.548 | 0.548 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-Wet | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 30 U | 30 U | CA12E | 15 | 15 U | 15 U |
| ***Crayfish (whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-Wet | 2 | 2 | 100 | 0.01 | 0.011 | CR12E | 0.0105 | 0.0105 | 0.011 | 0.01 | 0.011 | CR12E | 0.0105 | 0.0105 | 0.011 |
| Lead | mg/kg-Wet | 2 | 2 | 100 | 0.079 | 0.135 | CR12E | 0.107 | 0.107 | 0.132 | 0.079 | 0.135 | CR12E | 0.107 | 0.107 | 0.132 |
| Mercury | mg/kg-Wet | 2 | 2 | 100 | 0.0268 | 0.0268 | CR12E; CR12W | 0.0268 | 0.0268 | 0.0268 | 0.0268 | 0.0268 | CR12E; CR12W | 0.0268 | 0.0268 | 0.0268 |
| Nickel | mg/kg-Wet | 2 | 2 | 100 | 0.271 J | 0.317 | CR12E | 0.294 | 0.294 J | 0.315 J | 0.271 J | 0.317 | CR12E | 0.294 | 0.294 J | 0.315 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-Wet | 2 | 2 | 100 | 0.193 T | 0.477 T | CR12E | 0.335 | 0.335 | 0.463 | 0.193 T | 0.477 T | CR12E | 0.335 | 0.335 | 0.463 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-Wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.00156 U | 0.0113 U | CR12W | 0.00322 | 0.00322 U | 0.00541 U |

Table D5.1-4. Summary Statistics for Other Contaminants in Invertebrate Tissue, Downtown Reach (RM 11.8-15.3) and Upriver Reach (RM 15.3-28.4).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-Wet | 2 | 2 | 100 | 0.14 J | 0.3 J | CR12E | 0.22 | 0.22 J | 0.292 J | 0.14 J | 0.3 J | CR12E | 0.22 | 0.22 J | 0.292 J |
| Naphthalene | µg/kg-Wet | 2 | 2 | 100 | 0.52 J | 0.54 J | CR12W | 0.53 | 0.53 J | 0.539 J | 0.52 J | 0.54 J | CR12W | 0.53 | 0.53 J | 0.539 J |
| Phenanthrene | µg/kg-Wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.71 U | 1.3 U | CR12W | 0.503 | 0.503 U | 0.635 U |
| Total cPAHs | µg/kg-Wet | 2 | 2 | 100 | 0.14 JT | 0.87 JT | CR12E | 0.505 | 0.505 J | 0.834 J | 0.14 JT | 0.87 JT | CR12E | 0.505 | 0.505 J | 0.834 J |
| Total HPAHs | µg/kg-Wet | 2 | 2 | 100 | 0.14 JT | 0.87 JT | CR12E | 0.505 | 0.505 J | 0.834 J | 0.14 JT | 0.87 JT | CR12E | 0.505 | 0.505 J | 0.834 J |
| Total LPAHs | µg/kg-Wet | 2 | 2 | 100 | 0.8 JT | 1.1 JT | CR12W | 0.95 | 0.95 J | 1.09 J | 0.8 JT | 1.1 JT | CR12W | 0.95 | 0.95 J | 1.09 J |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-Wet | 2 | 1 | 50 | 27 J | 27 J | CR12E | 27 | 27 J | 27 J | 7.3 U | 27 J | CR12E | 15.3 | 15.3 J | 25.8 J |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-Wet | 2 | 2 | 100 | 0.0847 J | 0.0911 J | CR12W | 0.0879 | 0.0879 J | 0.0908 J | 0.0847 J | 0.0911 J | CR12W | 0.0879 | 0.0879 J | 0.0908 J |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-Wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 30 U | 30 U | CR12E; CR12W | 15 | 15 U | 15 U |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
RM - river mile
PCB - polychlorinated biphenyl
TEQ - toxicity equivalence

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D5.1-5. Summary Statistics for Other Contaminants in Fish Tissue, Downstream Reach (RM 0 – 1.9 and Multnomah Channel).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| ***Carp (fillet)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-Wet | 3 | 2 | 67 | 0.005 J | 0.005 J | CP0004 | 0.005 | 0.005 J | 0.005 J | 0.003 U | 0.005 J | CP0004 | 0.00383 | 0.005 J | 0.005 J |
| Lead | mg/kg-Wet | 3 | 3 | 100 | 0.0461 | 0.053 | CP0004 | 0.0489 | 0.0476 | 0.0525 | 0.0461 | 0.053 | CP0004 | 0.0489 | 0.0476 | 0.0525 |
| Mercury | mg/kg-Wet | 3 | 3 | 100 | 0.0615 | 0.0747 | CP0004 | 0.066 | 0.0619 | 0.0734 | 0.0615 | 0.0747 | CP0004 | 0.066 | 0.0619 | 0.0734 |
| Nickel | mg/kg-Wet | 3 | 3 | 100 | 0.039 J | 0.078 | CP0004 | 0.0573 | 0.055 J | 0.0757 J | 0.039 J | 0.078 | CP0004 | 0.0573 | 0.055 J | 0.0757 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-Wet | 3 | 3 | 100 | 0.435 T | 0.562 T | CP0004 | 0.49 | 0.473 T | 0.553 | 0.435 T | 0.562 T | CP0004 | 0.49 | 0.473 T | 0.553 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-Wet | 3 | 2 | 67 | 0.0203 J | 0.0308 J | CP0004 | 0.0256 | 0.0256 J | 0.0303 J | 0.0196 U | 0.0308 J | CP0004 | 0.0203 | 0.0203 J | 0.0298 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-Wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.081 U | 0.081 U | CP0004 | 0.0405 | 0.0405 U | 0.0405 U |
| Naphthalene | µg/kg-Wet | 3 | 1 | 33 | 2.6 | 2.6 | CP0004 | 2.6 | 2.6 | 2.6 | 1.8 U | 2.6 | CP0004 | 1.52 | 1.05 U | 2.45 |
| Phenanthrene | µg/kg-Wet | 3 | 2 | 67 | 4.9 | 7.5 | CP0004 | 6.2 | 6.2 | 7.37 | 4.4 U | 7.5 | CP0004 | 4.87 | 4.9 | 7.24 |
| Total cPAHs | µg/kg-Wet | 3 | 1 | 33 | 0.98 JT | 0.98 JT | CP0004 | 0.98 | 0.98 JT | 0.98 JT | 0.081 UT | 0.98 JT | CP0004 | 0.354 | 0.0405 UT | 0.886 J |
| Total HPAHs | µg/kg-Wet | 3 | 3 | 100 | 6.2 T | 7.9 T | CP0004 | 6.93 | 6.7 JT | 7.78 J | 6.2 T | 7.9 T | CP0004 | 6.93 | 6.7 JT | 7.78 J |
| Total LPAHs | µg/kg-Wet | 3 | 3 | 100 | 22 T | 35 T | CP0004 | 30.7 | 35 T | 35 | 22 T | 35 T | CP0004 | 30.7 | 35 T | 35 |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-Wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.3 U | 7.3 U | CP0004 | 3.65 | 3.65 U | 3.65 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-Wet | 3 | 3 | 100 | 1.5 | 1.95 | CP0004 | 1.78 | 1.9 | 1.95 | 1.5 | 1.95 | CP0004 | 1.78 | 1.9 | 1.95 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-Wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 30 U | 30 U | CP0004 | 15 | 15 U | 15 U |
| ***Carp (body without fillet)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-Wet | 3 | 3 | 100 | 0.045 | 0.089 | CP0004 | 0.0717 | 0.081 | 0.0882 | 0.045 | 0.089 | CP0004 | 0.0717 | 0.081 | 0.0882 |
| Lead | mg/kg-Wet | 3 | 3 | 100 | 0.116 | 0.152 | CP0004 | 0.128 | 0.117 | 0.149 | 0.116 | 0.152 | CP0004 | 0.128 | 0.117 | 0.149 |
| Mercury | mg/kg-Wet | 3 | 3 | 100 | 0.0418 | 0.0509 | CP0004 | 0.047 | 0.0484 | 0.0507 | 0.0418 | 0.0509 | CP0004 | 0.047 | 0.0484 | 0.0507 |
| Nickel | mg/kg-Wet | 3 | 3 | 100 | 0.383 | 0.807 | CP0004 | 0.611 | 0.644 | 0.791 | 0.383 | 0.807 | CP0004 | 0.611 | 0.644 | 0.791 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-Wet | 3 | 3 | 100 | 0.614 T | 4.14 T | CP0004 | 1.81 | 0.684 T | 3.79 | 0.614 T | 4.14 T | CP0004 | 1.81 | 0.684 T | 3.79 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-Wet | 3 | 1 | 33 | 0.0295 J | 0.0295 J | CP0004 | 0.0295 | 0.0295 J | 0.0295 J | 0.0295 J | 0.0351 U | CP0004 | 0.021 | 0.0176 U | 0.0283 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-Wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.41 U | 1.7 U | CP0004 | 0.487 | 0.405 U | 0.806 U |
| Naphthalene | µg/kg-Wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 4 U | 8 UJ | CP0004 | 2.83 | 2.5 U | 3.85 UJ |
| Phenanthrene | µg/kg-Wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 3.9 U | 16 U | CP0004 | 4.97 | 4.95 U | 7.7 U |
| Total cPAHs | µg/kg-Wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.41 UT | 1.7 UT | CP0004 | 0.487 | 0.405 UT | 0.806 U |
| Total HPAHs | µg/kg-Wet | 3 | 1 | 33 | 12 T | 12 T | CP0004 | 12 | 12 T | 12 T | 0.98 UT | 12 T | CP0004 | 5.35 | 3.55 UT | 11.2 |
| Total LPAHs | µg/kg-Wet | 3 | 3 | 100 | 27 JT | 50 T | CP0004 | 36.7 | 33 JT | 48.3 J | 27 JT | 50 T | CP0004 | 36.7 | 33 JT | 48.3 J |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-Wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.3 U | 7.3 U | CP0004 | 3.65 | 3.65 U | 3.65 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-Wet | 3 | 3 | 100 | 2.18 | 2.62 | CP0004 | 2.46 | 2.57 | 2.62 | 2.18 | 2.62 | CP0004 | 2.46 | 2.57 | 2.62 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-Wet | 3 | 0 | 0 | -- | -- | -- | -- | -- | -- | 30 U | 30 U | CP0004 | 15 | 15 U | 15 U |
| ***Sculpin (whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-Wet | 2 | 2 | 100 | 0.007 | 0.009 | SP01E | 0.008 | 0.008 | 0.0089 | 0.007 | 0.009 | SP01E | 0.008 | 0.008 | 0.0089 |
| Lead | mg/kg-Wet | 2 | 2 | 100 | 0.026 | 0.043 | SP01E | 0.0345 | 0.0345 | 0.0422 | 0.026 | 0.043 | SP01E | 0.0345 | 0.0345 | 0.0422 |
| Mercury | mg/kg-Wet | 2 | 2 | 100 | 0.0326 | 0.0364 | SP01E | 0.0345 | 0.0345 | 0.0362 | 0.0326 | 0.0364 | SP01E | 0.0345 | 0.0345 | 0.0362 |
| Nickel | mg/kg-Wet | 2 | 2 | 100 | 0.353 | 0.371 | SP01E | 0.362 | 0.362 | 0.37 | 0.353 | 0.371 | SP01E | 0.362 | 0.362 | 0.37 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-Wet | 2 | 2 | 100 | 0.278 T | 0.332 T | SP01E | 0.305 | 0.305 | 0.329 | 0.278 T | 0.332 T | SP01E | 0.305 | 0.305 | 0.329 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-Wet | 2 | 1 | 50 | 0.0202 J | 0.0202 J | SP01W | 0.0202 | 0.0202 J | 0.0202 J | 0.00834 U | 0.0202 J | SP01W | 0.0122 | 0.0122 J | 0.0194 J |

Table D5.1-5. Summary Statistics for Other Contaminants in Fish Tissue, Downstream Reach (RM 0 – 1.9 and Multnomah Channel).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-Wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.081 U | 0.081 U | SP01E; SP01W | 0.0405 | 0.0405 U | 0.0405 U |
| Naphthalene | µg/kg-Wet | 2 | 2 | 100 | 1.3 | 1.7 | SP01E | 1.5 | 1.5 | 1.68 | 1.3 | 1.7 | SP01E | 1.5 | 1.5 | 1.68 |
| Phenanthrene | µg/kg-Wet | 2 | 2 | 100 | 2.1 | 3.7 | SP01E | 2.9 | 2.9 | 3.62 | 2.1 | 3.7 | SP01E | 2.9 | 2.9 | 3.62 |
| Total cPAHs | µg/kg-Wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.081 UT | 0.081 UT | SP01E; SP01W | 0.0405 | 0.0405 U | 0.0405 U |
| Total HPAHs | µg/kg-Wet | 2 | 2 | 100 | 3 T | 4.4 T | SP01W | 3.7 | 3.7 | 4.33 | 3 T | 4.4 T | SP01W | 3.7 | 3.7 | 4.33 |
| Total LPAHs | µg/kg-Wet | 2 | 2 | 100 | 8.4 T | 15 T | SP01E | 11.7 | 11.7 | 14.7 | 8.4 T | 15 T | SP01E | 11.7 | 11.7 | 14.7 |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-Wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.3 U | 7.3 U | SP01E; SP01W | 3.65 | 3.65 U | 3.65 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-Wet | 2 | 2 | 100 | 0.691 | 1.05 | SP01W | 0.871 | 0.871 | 1.03 | 0.691 | 1.05 | SP01W | 0.871 | 0.871 | 1.03 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-Wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 30 U | 30 U | SP01E; SP01W | 15 | 15 U | 15 U |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
RM - river mile
PCB - polychlorinated biphenyl
TEQ - toxicity equivalence

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table D5.1-6. Summary Statistics for Other Contaminants in Invertebrate Tissue, Downstream Reach (RM 0 – 1.9 and Multnomah Channel).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| ***Clam (Corbicula spp. – body without shell)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-Wet | 2 | 2 | 100 | 0.104 | 0.106 JT | CA01E | 0.105 | 0.105 J | 0.106 J | 0.104 | 0.106 JT | CA01E | 0.105 | 0.105 J | 0.106 J |
| Lead | mg/kg-Wet | 2 | 2 | 100 | 0.024 | 0.0373 T | CA01E | 0.0307 | 0.0307 | 0.0366 | 0.024 | 0.0373 T | CA01E | 0.0307 | 0.0307 | 0.0366 |
| Mercury | mg/kg-Wet | 2 | 2 | 100 | 0.008 J | 0.0123 JT | CA01E | 0.0102 | 0.0102 J | 0.0121 J | 0.008 J | 0.0123 JT | CA01E | 0.0102 | 0.0102 J | 0.0121 J |
| Nickel | mg/kg-Wet | 2 | 2 | 100 | 0.178 T | 0.257 J | FC003 | 0.218 | 0.218 J | 0.253 J | 0.178 T | 0.257 J | FC003 | 0.218 | 0.218 J | 0.253 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-Wet | 2 | 2 | 100 | 0.63 T | 1.36 T | CA01E | 0.995 | 0.995 | 1.32 | 0.63 T | 1.36 T | CA01E | 0.995 | 0.995 | 1.32 |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-Wet | 2 | 2 | 100 | 0.0363 JT | 0.0545 J | FC003 | 0.0454 | 0.0454 J | 0.0536 J | 0.0363 JT | 0.0545 J | FC003 | 0.0454 | 0.0454 J | 0.0536 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-Wet | 2 | 2 | 100 | 0.88 JT | 13 | FC003 | 6.94 | 6.94 J | 12.4 J | 0.88 JT | 13 | FC003 | 6.94 | 6.94 J | 12.4 J |
| Naphthalene | µg/kg-Wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.1 UT | 1.2 U | FC003 | 0.575 | 0.575 U | 0.598 U |
| Phenanthrene | µg/kg-Wet | 2 | 2 | 100 | 8.5 T | 59 | FC003 | 33.8 | 33.8 | 56.5 | 8.5 T | 59 | FC003 | 33.8 | 33.8 | 56.5 |
| Total cPAHs | µg/kg-Wet | 2 | 2 | 100 | 21 JT | 160 T | FC003 | 90.5 | 90.5 J | 153 J | 21 JT | 160 T | FC003 | 90.5 | 90.5 J | 153 J |
| Total HPAHs | µg/kg-Wet | 2 | 2 | 100 | 80 JT | 467 T | FC003 | 274 | 274 J | 448 J | 80 JT | 467 T | FC003 | 274 | 274 J | 448 J |
| Total LPAHs | µg/kg-Wet | 2 | 2 | 100 | 14 JT | 84.1 T | FC003 | 49.1 | 49.1 J | 80.6 J | 14 JT | 84.1 T | FC003 | 49.1 | 49.1 J | 80.6 J |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-Wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.3 UT | 14 U | FC003 | 5.33 | 5.33 U | 6.83 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-Wet | 2 | 2 | 100 | 0.435 | 0.577 T | CA01E | 0.506 | 0.506 | 0.57 | 0.435 | 0.577 T | CA01E | 0.506 | 0.506 | 0.57 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-Wet | 1 | 1 | 100 | 30 JT | 30 JT | CA01E | 30 | 30 JT | 30 JT | 30 JT | 30 JT | CA01E | 30 | 30 JT | 30 JT |
| ***Clam (Corbicula spp. – depurated w/o shell)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-Wet | 1 | 1 | 100 | 0.104 J | 0.104 J | CA01E | 0.104 | 0.104 J | 0.104 J | 0.104 J | 0.104 J | CA01E | 0.104 | 0.104 J | 0.104 J |
| Lead | mg/kg-Wet | 1 | 1 | 100 | 0.023 | 0.023 | CA01E | 0.023 | 0.023 | 0.023 | 0.023 | 0.023 | CA01E | 0.023 | 0.023 | 0.023 |
| Mercury | mg/kg-Wet | 1 | 1 | 100 | 0.0156 J | 0.0156 J | CA01E | 0.0156 | 0.0156 J | 0.0156 J | 0.0156 J | 0.0156 J | CA01E | 0.0156 | 0.0156 J | 0.0156 J |
| Nickel | mg/kg-Wet | 1 | 1 | 100 | 0.121 | 0.121 | CA01E | 0.121 | 0.121 | 0.121 | 0.121 | 0.121 | CA01E | 0.121 | 0.121 | 0.121 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-Wet | 1 | 1 | 100 | 1.2 T | 1.2 T | CA01E | 1.2 | 1.2 T | 1.2 T | 1.2 T | 1.2 T | CA01E | 1.2 | 1.2 T | 1.2 T |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-Wet | 1 | 1 | 100 | 0.0293 J | 0.0293 J | CA01E | 0.0293 | 0.0293 J | 0.0293 J | 0.0293 J | 0.0293 J | CA01E | 0.0293 | 0.0293 J | 0.0293 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-Wet | 1 | 1 | 100 | 0.43 J | 0.43 J | CA01E | 0.43 | 0.43 J | 0.43 J | 0.43 J | 0.43 J | CA01E | 0.43 | 0.43 J | 0.43 J |
| Naphthalene | µg/kg-Wet | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.8 U | 1.8 U | CA01E | 0.9 | 0.9 U | 0.9 U |
| Phenanthrene | µg/kg-Wet | 1 | 1 | 100 | 7.6 | 7.6 | CA01E | 7.6 | 7.6 | 7.6 | 7.6 | 7.6 | CA01E | 7.6 | 7.6 | 7.6 |
| Total cPAHs | µg/kg-Wet | 1 | 1 | 100 | 14 JT | 14 JT | CA01E | 14 | 14 JT | 14 JT | 14 JT | 14 JT | CA01E | 14 | 14 JT | 14 JT |
| Total HPAHs | µg/kg-Wet | 1 | 1 | 100 | 64 JT | 64 JT | CA01E | 64 | 64 JT | 64 JT | 64 JT | 64 JT | CA01E | 64 | 64 JT | 64 JT |
| Total LPAHs | µg/kg-Wet | 1 | 1 | 100 | 13 JT | 13 JT | CA01E | 13 | 13 JT | 13 JT | 13 JT | 13 JT | CA01E | 13 | 13 JT | 13 JT |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-Wet | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.3 U | 7.3 U | CA01E | 3.65 | 3.65 U | 3.65 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-Wet | 1 | 1 | 100 | 0.482 | 0.482 | CA01E | 0.482 | 0.482 | 0.482 | 0.482 | 0.482 | CA01E | 0.482 | 0.482 | 0.482 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-Wet | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 30 U | 30 U | CA01E | 15 | 15 U | 15 U |
| ***Crayfish (whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-Wet | 2 | 2 | 100 | 0.0175 T | 0.024 | CR01EA | 0.0208 | 0.0208 | 0.0237 | 0.0175 T | 0.024 | CR01EA | 0.0208 | 0.0208 | 0.0237 |
| Lead | mg/kg-Wet | 2 | 2 | 100 | 0.0455 T | 0.047 | CR01EA | 0.0463 | 0.0463 | 0.0469 | 0.0455 T | 0.047 | CR01EA | 0.0463 | 0.0463 | 0.0469 |
| Mercury | mg/kg-Wet | 2 | 2 | 100 | 0.0189 | 0.0209 T | CR01W | 0.0199 | 0.0199 | 0.0208 | 0.0189 | 0.0209 T | CR01W | 0.0199 | 0.0199 | 0.0208 |
| Nickel | mg/kg-Wet | 2 | 2 | 100 | 0.236 J | 0.341 T | CR01W | 0.289 | 0.289 J | 0.336 J | 0.236 J | 0.341 T | CR01W | 0.289 | 0.289 J | 0.336 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-Wet | 2 | 2 | 100 | 0.172 T | 0.313 JT | CR01EA | 0.243 | 0.243 J | 0.306 J | 0.172 T | 0.313 JT | CR01EA | 0.243 | 0.243 J | 0.306 J |

Table D5.1-6. Summary Statistics for Other Contaminants in Invertebrate Tissue, Downstream Reach (RM 0 – 1.9 and Multnomah Channel).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-Wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.0111 U | 0.0115 U | CR01EA | 0.00565 | 0.00565 U | 0.00574 U |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-Wet | 2 | 2 | 100 | 0.12 J | 0.32 J | CR01EA | 0.22 | 0.22 J | 0.31 J | 0.12 J | 0.32 J | CR01EA | 0.22 | 0.22 J | 0.31 J |
| Naphthalene | µg/kg-Wet | 2 | 2 | 100 | 0.61 J | 0.64 J | CR01EA | 0.625 | 0.625 J | 0.639 J | 0.61 J | 0.64 J | CR01EA | 0.625 | 0.625 J | 0.639 J |
| Phenanthrene | µg/kg-Wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.74 U | 1.9 U | CR01EA | 0.66 | 0.66 U | 0.921 U |
| Total cPAHs | µg/kg-Wet | 2 | 2 | 100 | 0.12 JT | 0.32 JT | CR01EA | 0.22 | 0.22 J | 0.31 J | 0.12 JT | 0.32 JT | CR01EA | 0.22 | 0.22 J | 0.31 J |
| Total HPAHs | µg/kg-Wet | 2 | 2 | 100 | 0.12 JT | 0.32 JT | CR01EA | 0.22 | 0.22 J | 0.31 J | 0.12 JT | 0.32 JT | CR01EA | 0.22 | 0.22 J | 0.31 J |
| Total LPAHs | µg/kg-Wet | 2 | 2 | 100 | 0.87 JT | 3.2 JT | CR01EA | 2.04 | 2.04 J | 3.08 J | 0.87 JT | 3.2 JT | CR01EA | 2.04 | 2.04 J | 3.08 J |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-Wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 7.3 U | 7.3 U | CR01EA; CR01W | 3.65 | 3.65 U | 3.65 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-Wet | 2 | 2 | 100 | 0.0357 J | 0.0492 J | CR01W | 0.0425 | 0.0425 J | 0.0485 J | 0.0357 J | 0.0492 J | CR01W | 0.0425 | 0.0425 J | 0.0485 J |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-Wet | 2 | 0 | 0 | -- | -- | -- | -- | -- | -- | 30 UJ | 30 UJ | CR01EA; CR01W | 15 | 15 UJ | 15 UJ |
| ***Lab-exposed clam (Corbicula fluminea – body without shell)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-Wet | 1 | 1 | 100 | 0.0497 | 0.0497 | BT003 | 0.0497 | 0.0497 | 0.0497 | 0.0497 | 0.0497 | BT003 | 0.0497 | 0.0497 | 0.0497 |
| Lead | mg/kg-Wet | 1 | 1 | 100 | 0.043 | 0.043 | BT003 | 0.043 | 0.043 | 0.043 | 0.043 | 0.043 | BT003 | 0.043 | 0.043 | 0.043 |
| Mercury | mg/kg-Wet | 1 | 1 | 100 | 0.0091 | 0.0091 | BT003 | 0.0091 | 0.0091 | 0.0091 | 0.0091 | 0.0091 | BT003 | 0.0091 | 0.0091 | 0.0091 |
| Nickel | mg/kg-Wet | 1 | 1 | 100 | 0.159 J | 0.159 J | BT003 | 0.159 | 0.159 J | 0.159 J | 0.159 J | 0.159 J | BT003 | 0.159 | 0.159 J | 0.159 J |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-Wet | 1 | 1 | 100 | 0.261 T | 0.261 T | BT003 | 0.261 | 0.261 T | 0.261 T | 0.261 T | 0.261 T | BT003 | 0.261 | 0.261 T | 0.261 T |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-Wet | 1 | 1 | 100 | 0.0314 J | 0.0314 J | BT003 | 0.0314 | 0.0314 J | 0.0314 J | 0.0314 J | 0.0314 J | BT003 | 0.0314 | 0.0314 J | 0.0314 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-Wet | 1 | 1 | 100 | 0.57 | 0.57 | BT003 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | BT003 | 0.57 | 0.57 | 0.57 |
| Naphthalene | µg/kg-Wet | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 1.2 U | 1.2 U | BT003 | 0.6 | 0.6 U | 0.6 U |
| Phenanthrene | µg/kg-Wet | 1 | 1 | 100 | 3.9 | 3.9 | BT003 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | BT003 | 3.9 | 3.9 | 3.9 |
| Total cPAHs | µg/kg-Wet | 1 | 1 | 100 | 5.6 JT | 5.6 JT | BT003 | 5.6 | 5.6 JT | 5.6 JT | 5.6 JT | 5.6 JT | BT003 | 5.6 | 5.6 JT | 5.6 JT |
| Total HPAHs | µg/kg-Wet | 1 | 1 | 100 | 20.6 JT | 20.6 JT | BT003 | 20.6 | 20.6 JT | 20.6 JT | 20.6 JT | 20.6 JT | BT003 | 20.6 | 20.6 JT | 20.6 JT |
| Total LPAHs | µg/kg-Wet | 1 | 1 | 100 | 6.85 JT | 6.85 JT | BT003 | 6.85 | 6.85 JT | 6.85 JT | 6.85 JT | 6.85 JT | BT003 | 6.85 | 6.85 JT | 6.85 JT |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-Wet | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 14 U | 14 U | BT003 | 7 | 7 U | 7 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-Wet | 1 | 1 | 100 | 0.0399 J | 0.0399 J | BT003 | 0.0399 | 0.0399 J | 0.0399 J | 0.0399 J | 0.0399 J | BT003 | 0.0399 | 0.0399 J | 0.0399 J |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-Wet | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 31 U | 31 U | BT003 | 15.5 | 15.5 U | 15.5 U |
| ***Lab-exposed worm (Lumbriculus variegatus – whole body)*** | | | | | | | | | | | | | | | | |
| **Metals** | | | | | | | | | | | | | | | | |
| Cadmium | mg/kg-Wet | 1 | 1 | 100 | 0.087 J | 0.087 J | BT003 | 0.087 | 0.087 J | 0.087 J | 0.087 J | 0.087 J | BT003 | 0.087 | 0.087 J | 0.087 J |
| Lead | mg/kg-Wet | 1 | 1 | 100 | 0.201 | 0.201 | BT003 | 0.201 | 0.201 | 0.201 | 0.201 | 0.201 | BT003 | 0.201 | 0.201 | 0.201 |
| Mercury | mg/kg-Wet | 1 | 1 | 100 | 0.0034 | 0.0034 | BT003 | 0.0034 | 0.0034 | 0.0034 | 0.0034 | 0.0034 | BT003 | 0.0034 | 0.0034 | 0.0034 |
| Nickel | mg/kg-Wet | 1 | 1 | 100 | 0.399 | 0.399 | BT003 | 0.399 | 0.399 | 0.399 | 0.399 | 0.399 | BT003 | 0.399 | 0.399 | 0.399 |
| **PCB TEQ** | | | | | | | | | | | | | | | | |
| Total PCB TEQ (ND = 0) | pg/g-Wet | 1 | 1 | 100 | 0.621 T | 0.621 T | BT003 | 0.621 | 0.621 T | 0.621 T | 0.621 T | 0.621 T | BT003 | 0.621 | 0.621 T | 0.621 T |
| **Pesticides** | | | | | | | | | | | | | | | | |
| gamma-Hexachlorocyclohexane (Lindane) | µg/kg-Wet | 1 | 1 | 100 | 0.012 J | 0.012 J | BT003 | 0.012 | 0.012 J | 0.012 J | 0.012 J | 0.012 J | BT003 | 0.012 | 0.012 J | 0.012 J |
| **Polycyclic Aromatic Hydrocarbons** | | | | | | | | | | | | | | | | |
| Benzo(a)pyrene | µg/kg-Wet | 1 | 1 | 100 | 24 | 24 | BT003 | 24 | 24 | 24 | 24 | 24 | BT003 | 24 | 24 | 24 |
| Naphthalene | µg/kg-Wet | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 0.46 U | 0.46 U | BT003 | 0.23 | 0.23 U | 0.23 U |
| Phenanthrene | µg/kg-Wet | 1 | 1 | 100 | 25 | 25 | BT003 | 25 | 25 | 25 | 25 | 25 | BT003 | 25 | 25 | 25 |
| Total cPAHs | µg/kg-Wet | 1 | 1 | 100 | 260 T | 260 T | BT003 | 260 | 260 T | 260 T | 260 T | 260 T | BT003 | 260 | 260 T | 260 T |
| Total HPAHs | µg/kg-Wet | 1 | 1 | 100 | 475 T | 475 T | BT003 | 475 | 475 T | 475 T | 475 T | 475 T | BT003 | 475 | 475 T | 475 T |
| Total LPAHs | µg/kg-Wet | 1 | 1 | 100 | 41.4 JT | 41.4 JT | BT003 | 41.4 | 41.4 JT | 41.4 JT | 41.4 JT | 41.4 JT | BT003 | 41.4 | 41.4 JT | 41.4 JT |

Table D5.1-6. Summary Statistics for Other Contaminants in Invertebrate Tissue, Downstream Reach (RM 0 – 1.9 and Multnomah Channel).

| | | | | | Detected Concentrations | | | | | | Detected and Not Detected Concentrations | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Units** | **# Analyzed** | **# Detected** | **% Detected** | **Minimum[a]** | **Maximum[a]** | **Maximum Location(s)** | **Mean** | **Median[b]** | **95th Percentile[b]** | **Minimum (full DL)[a]** | **Maximum (full DL)[a]** | **Maximum Location(s)** | **Mean (half DL)** | **Median (half DL)[b]** | **95th Percentile (half DL)[b]** |
| **Phthalates** | | | | | | | | | | | | | | | | |
| Butylbenzyl phthalate | µg/kg-Wet | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 14 U | 14 U | BT003 | 7 | 7 U | 7 U |
| **Semivolatile Organic Compounds** | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | µg/kg-Wet | 1 | 1 | 100 | 0.537 | 0.537 | BT003 | 0.537 | 0.537 | 0.537 | 0.537 | 0.537 | BT003 | 0.537 | 0.537 | 0.537 |
| **Phenols** | | | | | | | | | | | | | | | | |
| Pentachlorophenol | µg/kg-Wet | 1 | 0 | 0 | -- | -- | -- | -- | -- | -- | 31 U | 31 U | BT003 | 15.5 | 15.5 U | 15.5 U |

**Notes:**

[a] Whenever several result values match maximum or minimum value, qualifier and descriptor preference has been given in the following order: U over J over A over N over T over no qualification.

[b] Median is the exact result value ranking as the 0.50 percentile in an ascending list of all results, and 95th percentile is the exact result value of the 0.95 ranking result. When the ascending list of all results doesn't produce an exact match to the corresponding percentile rank, average of two adjacent results ranking closest to 0.50 percentile is the median, and an interpolated value is the 95th percentile. Such median or 95th percentile value is not qualified. It is qualified with "U" if both results ranking immediately above and below the corresponding percentile are "U" qualified, and with "J" if at least one of the results is "J" qualified.

-- data not available.
cPAH - carcinogenic polycyclic aromatic hydrocarbon
DL - detection limit
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
ND - not detected
RM - river mile
PCB - polychlorinated biphenyl
TEQ - toxicity equivalence

Reason codes for qualifiers:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material; identification of the compound is not definitive.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:
A - Total value based on limited number of analytes.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D5.2
# CONTAMINANTS IN BIOTA—FIGURES

**FINAL**

February 8, 2016

# LIST OF FIGURES

Figure D5.2-1. Box−Whisker Plot of Detected PCB TEQ (ND = 0) and Total DDT Isomers in Biota by Sample Type, RM 0.8−12.2

Figure D5.2-2. Box−Whisker Plot of Detected Total DDE Isomers and Total DDD Isomers in Biota by Sample Type, RM 0.8−12.2

Figure D5.2-3. Box−Whisker Plot of Detected Total cPAHs BaPEq and Low Molecular Weight PAHs in Biota by Sample Type, RM 0.8−12.2

Figure D5.2-4. Box−Whisker Plot of Detected High Molecular Weight PAHs and Hexachlorobenzene in Biota by Sample Type, RM 0.8−12.2

Figure D5.2-5. Box−Whisker Plot of Detected Cadmium and gamma−Hexachlorocyclohexane (Lindane) in Biota by Sample Type, RM 0.8−12.2

Figure D5.2-6. Box−Whisker Plot of Detected Lead and Mercury in Biota by Sample Type, RM 0.8−12.2

Figure D5.2-7a-e. Scatter Plot of PCB TEQ (ND = 0) in Tissue Samples by River Mile, RM 0.8−12.2

Figure D5.2-8a-e. Scatter Plot of Total DDT in Tissue Samples by River Mile, RM 0.8−12.2

Figure D5.2-9a-e. Scatter Plot of Total DDE in Tissue Samples by River Mile, RM 0.8−12.2

Figure D5.2-10a-e. Scatter Plot of Total DDD in Tissue Samples by River Mile, RM 0.8−12.2

Figure D5.2-11. Scatter Plot of Total cPAHs BaPEq in Tissue Samples by River Mile, RM 0.8−12.2

Figure D5.2-12. Scatter Plot of Low Molecular Weight PAHs in Tissue Samples by River Mile, RM 0.8−12.2

Figure D5.2-13. Scatter Plot of High Molecular Weight PAHs in Tissue Samples by River Mile, RM 0.8−12.2

Figure D5.2-14a-e. Scatter Plot of Hexachlorobenzene in Tissue Samples by River Mile, RM 0.8−12.2

Figure D5.2-15a-e. Scatter Plot of gamma−Hexachlorocyclohexane (Lindane) in Tissue Samples by River Mile, RM 0.8−12.2

Figure D5.2-16a-e. Scatter Plot of Cadmium in Tissue Samples by River Mile, RM 0.8−12.2

Figure D5.2-17a-e. Scatter Plot of Lead in Tissue Samples by River Mile, RM 0.8−12.2

Figure D5.2-18a-e. Scatter Plot of Mercury in Tissue Samples by River Mile, RM 0.8−12.2

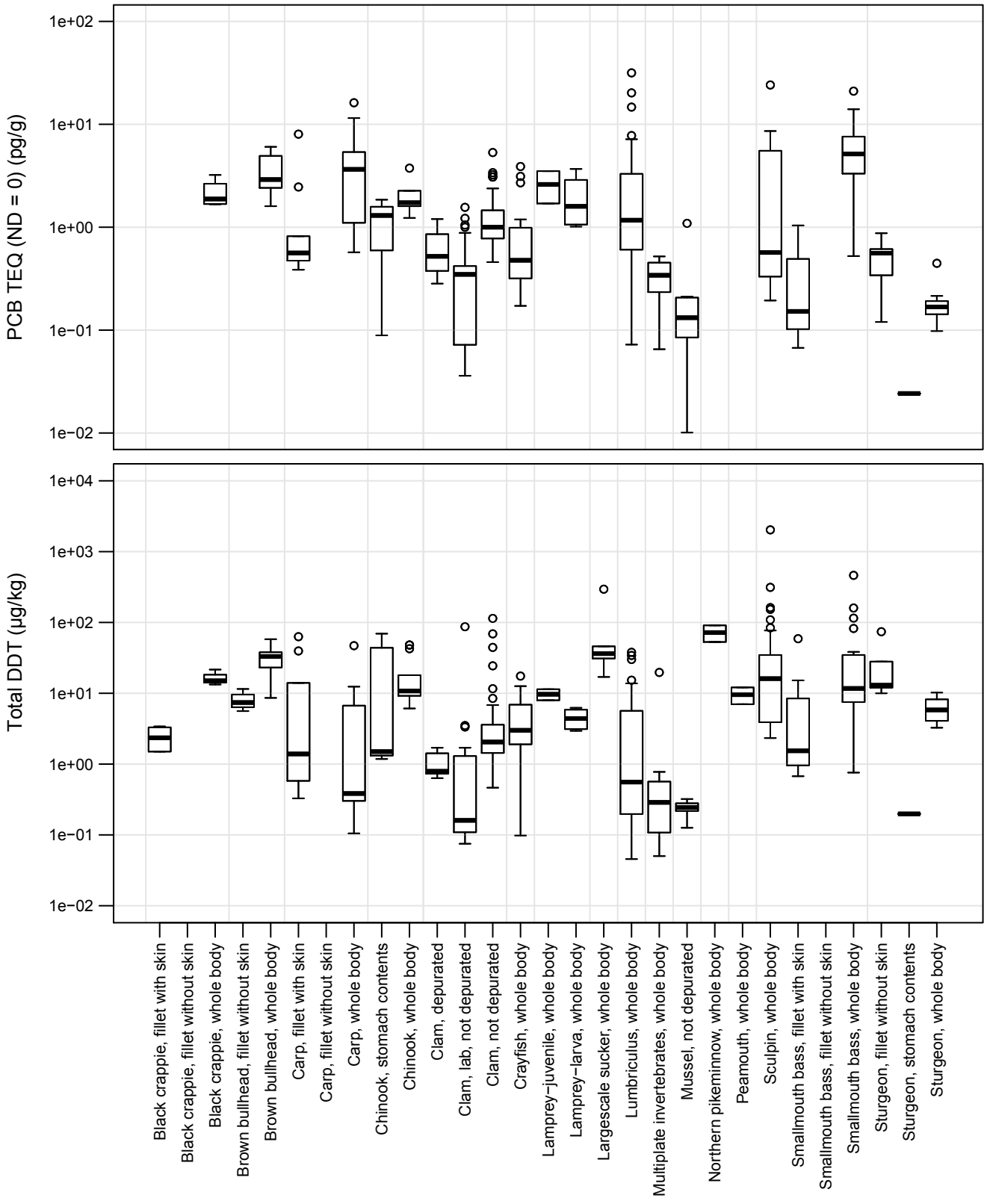



**Figure D5.2−1**
Portland Harbor RI/FS
Remedial Investigation Report
Box−Whisker Plot of Detected PCB TEQ (ND = 0)
and Total DDT Isomers in Biota
by Sample Type, RM 0.8−12.2

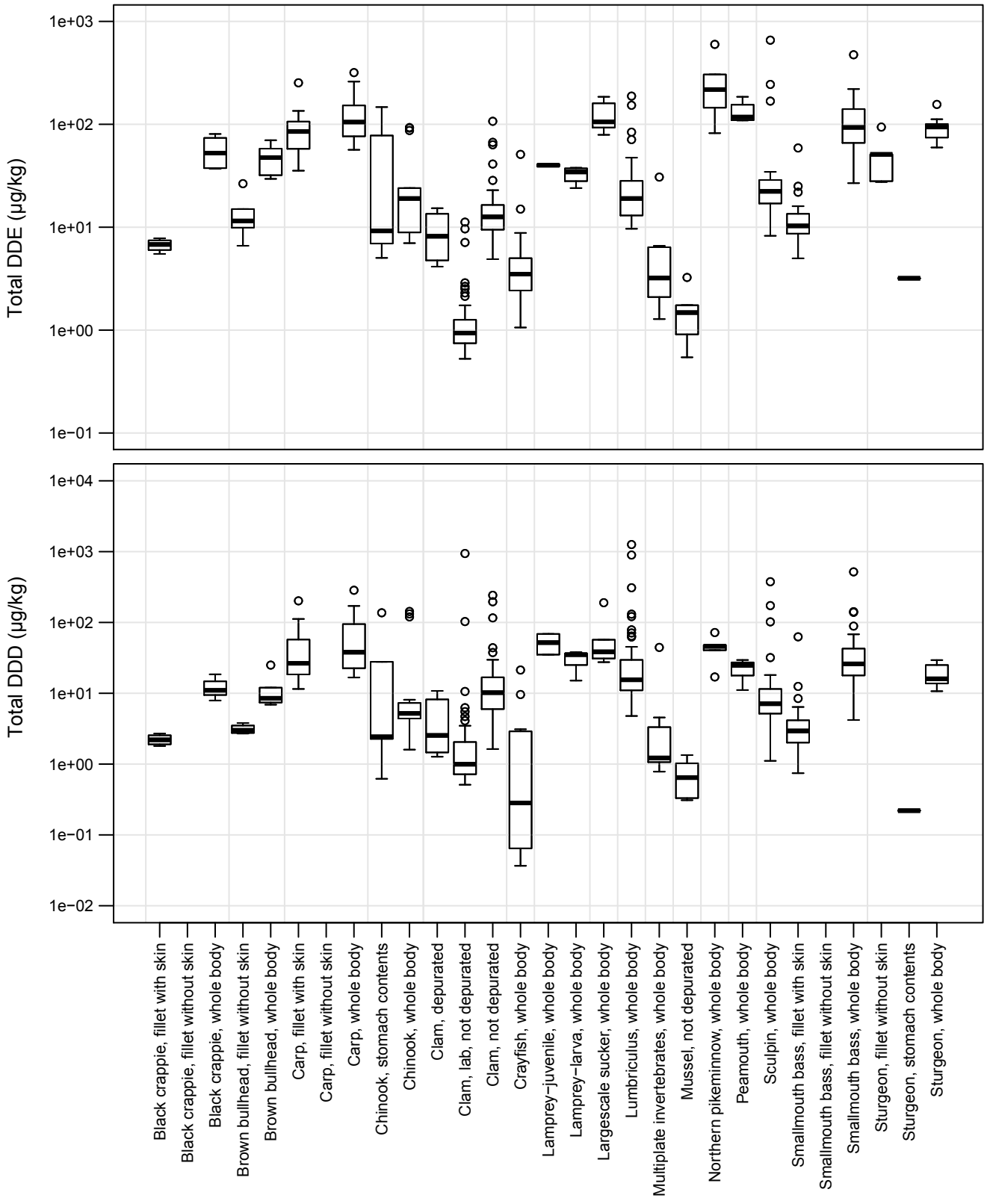



**Figure D5.2−2**
Portland Harbor RI/FS
Remedial Investigation Report
Box−Whisker Plot of Detected Total DDE Isomers
and Total DDD Isomers in Biota
by Sample Type, RM 0.8−12.2

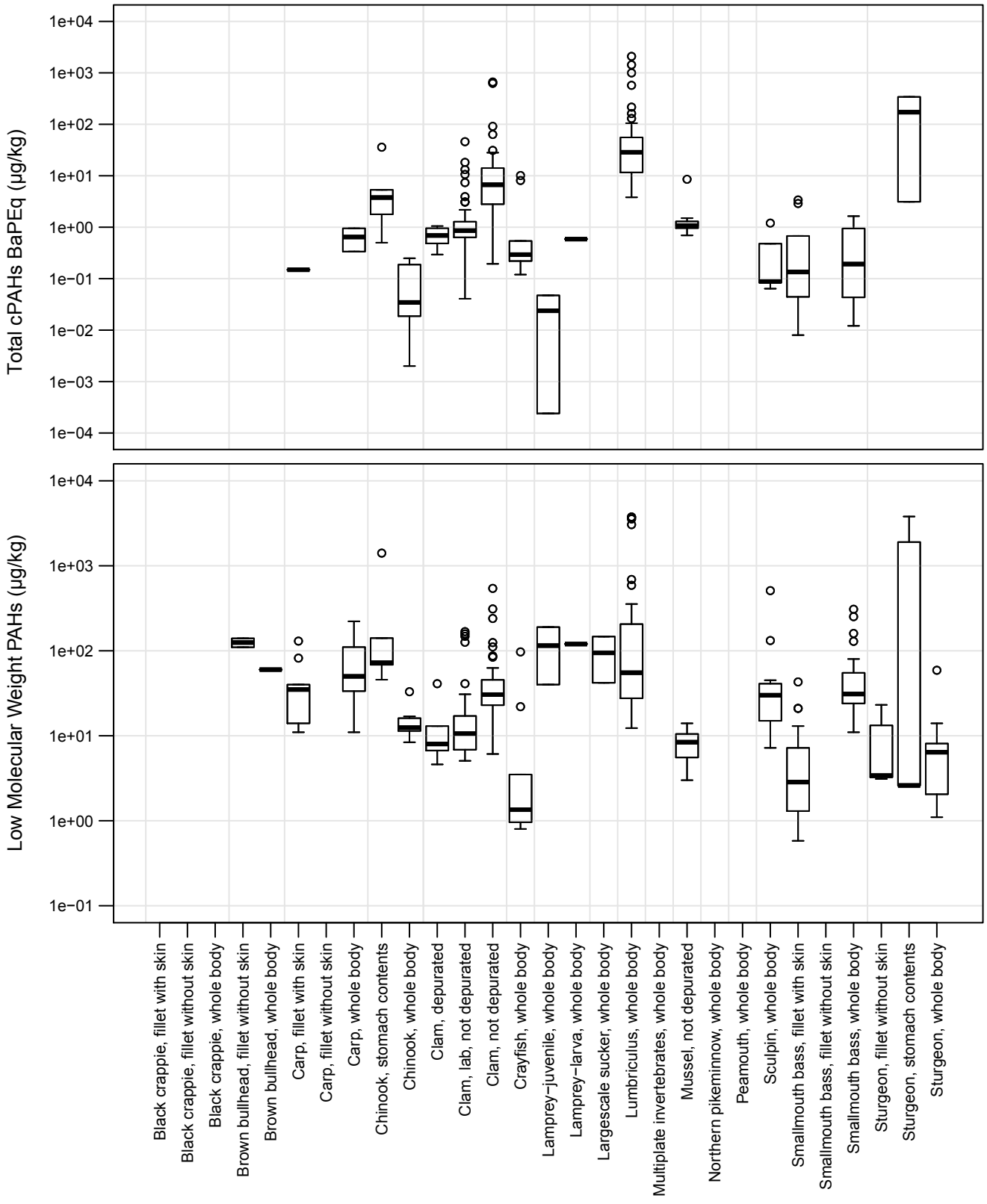



**Figure D5.2−3**
Portland Harbor RI/FS
Remedial Investigation Report
Box−Whisker Plot of Detected Total cPAHs BaPEq and
Low Molecular Weight PAHs in Biota
by Sample Type, RM 0.8−12.2

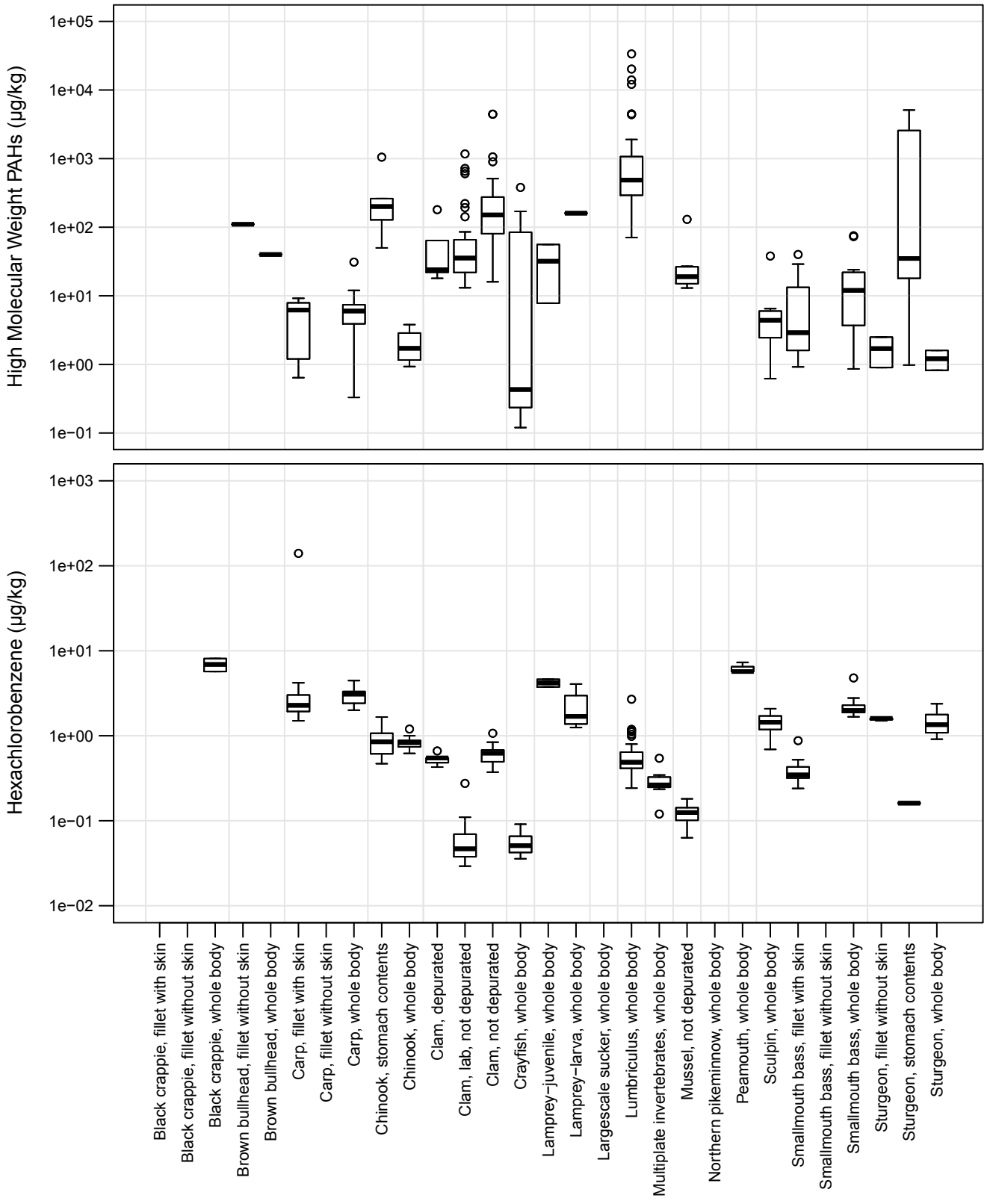



**Figure D5.2−4**
Portland Harbor RI/FS
Remedial Investigation Report
Box−Whisker Plot of Detected High Molecular Weight PAHs
and Hexachlorobenzene in Biota
by Sample Type, RM 0.8−12.2

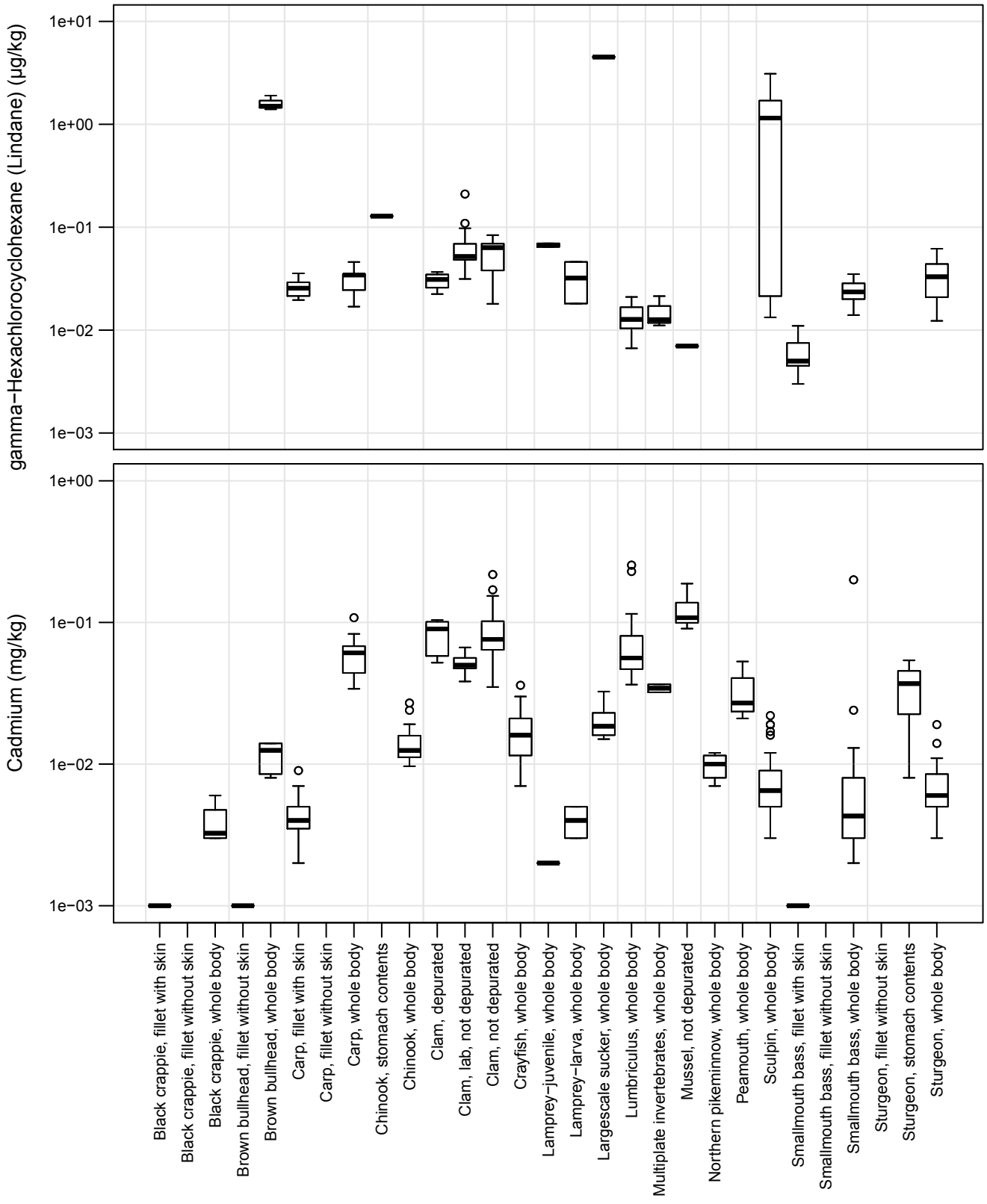



**Figure D5.2−5**
Portland Harbor RI/FS
Remedial Investigation Report
Box−Whisker Plot of Detected Cadmium and
gamma−Hexachlorocyclohexane (Lindane) in Biota
by Sample Type, RM 0.8−12.2

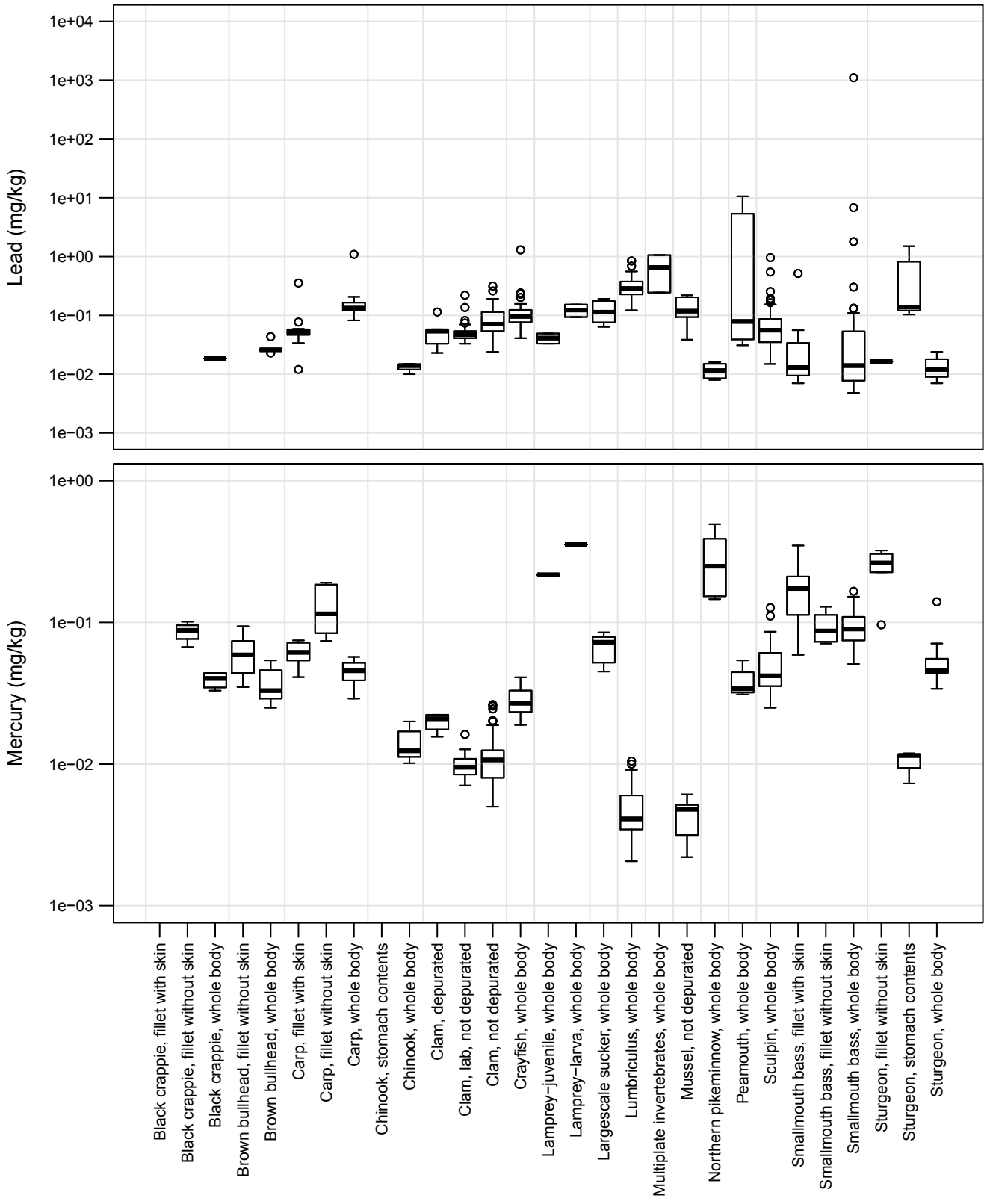



**Figure D5.2−6**
Portland Harbor RI/FS
Remedial Investigation Report
Box−Whisker Plot of Detected Lead
and Mercury in Biota
by Sample Type, RM 0.8−12.2

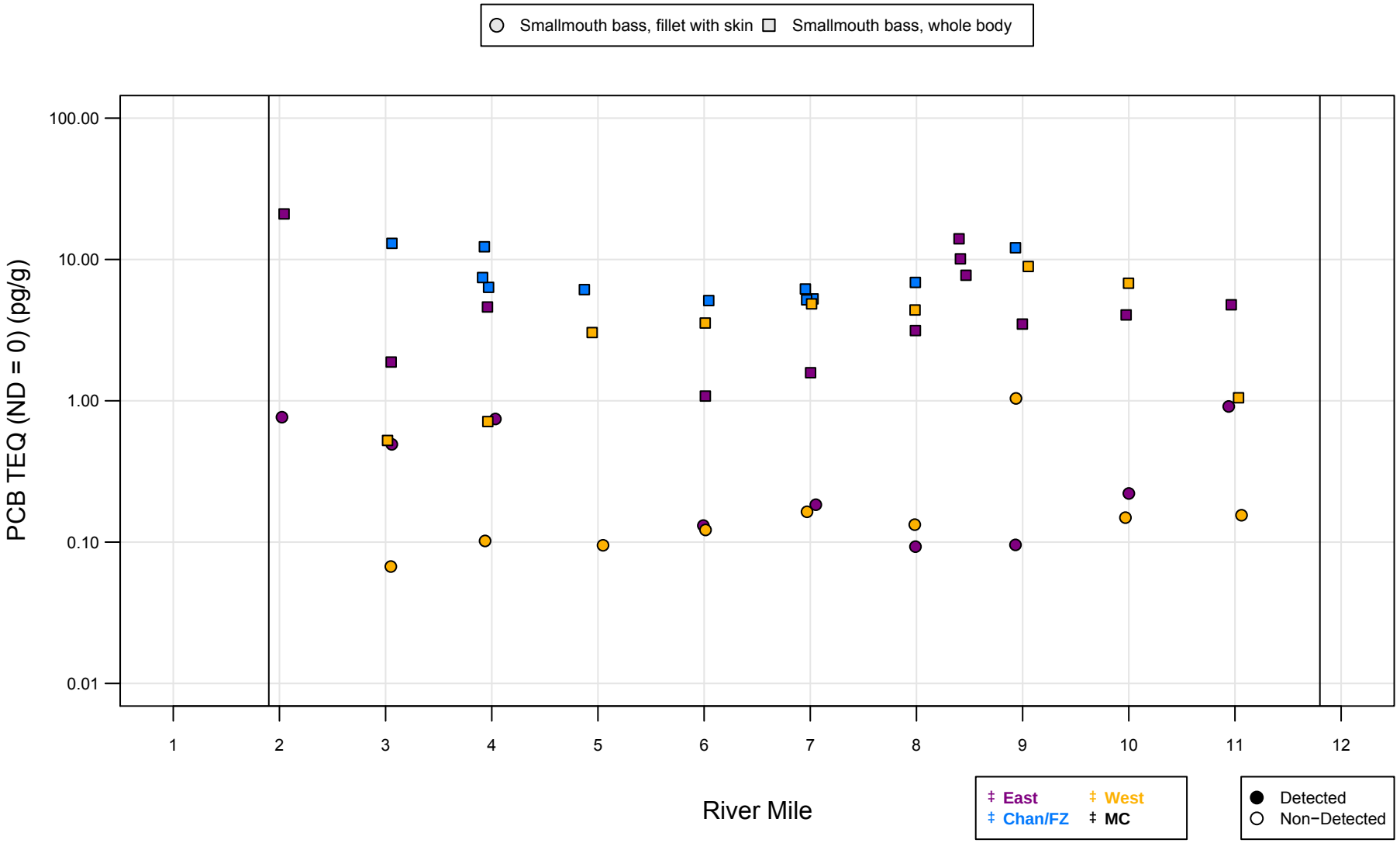



**Figure D5.2−7a**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of PCB TEQ (ND = 0) in
Tissue Samples by River Mile, RM 0.8−12.2

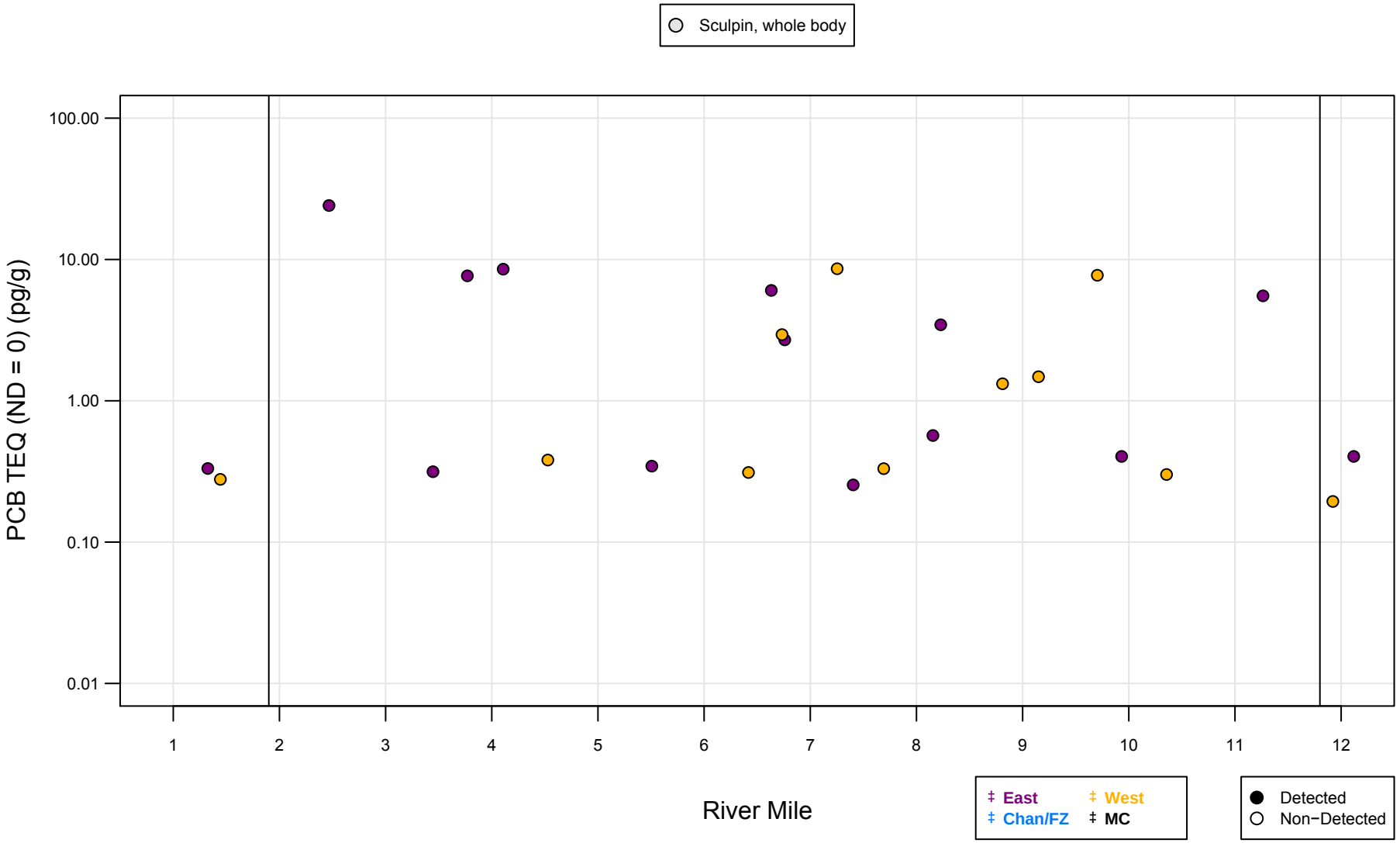



**Figure D5.2−7b**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of PCB TEQ (ND = 0) in
Tissue Samples by River Mile, RM 0.8−12.2

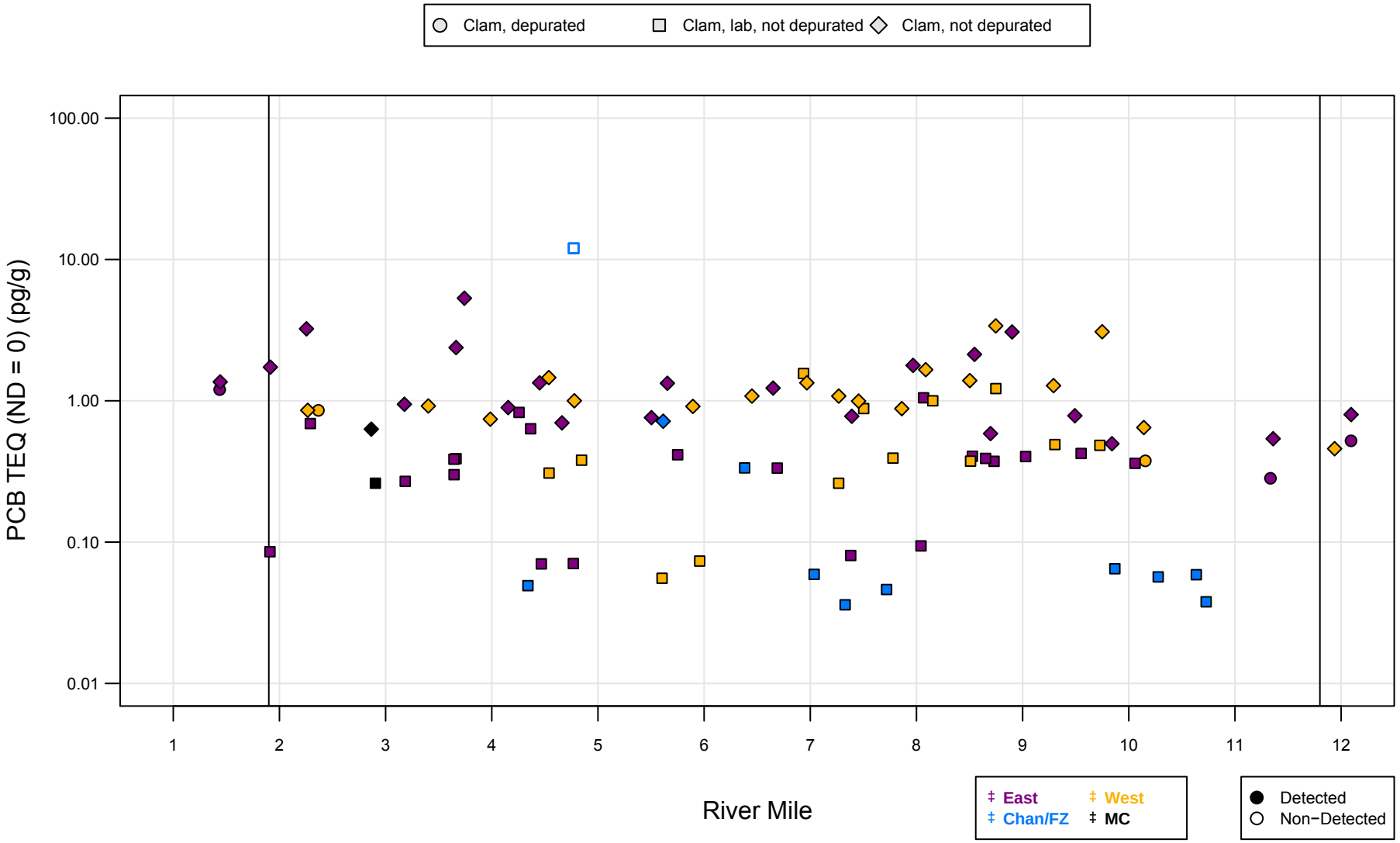



**Figure D5.2−7c**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of PCB TEQ (ND = 0) in
Tissue Samples by River Mile, RM 0.8−12.2

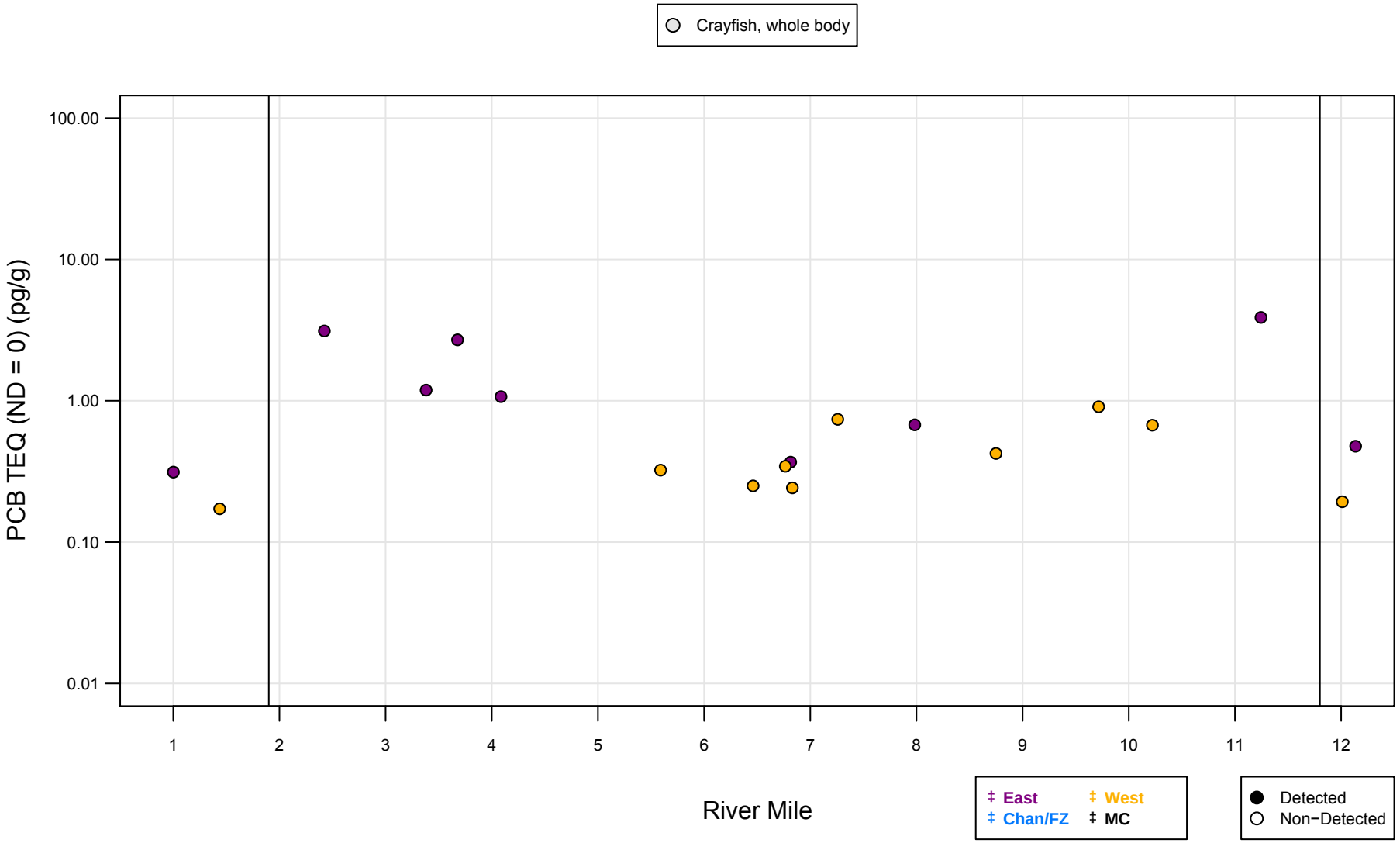



**Figure D5.2−7d**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of PCB TEQ (ND = 0) in
Tissue Samples by River Mile, RM 0.8−12.2

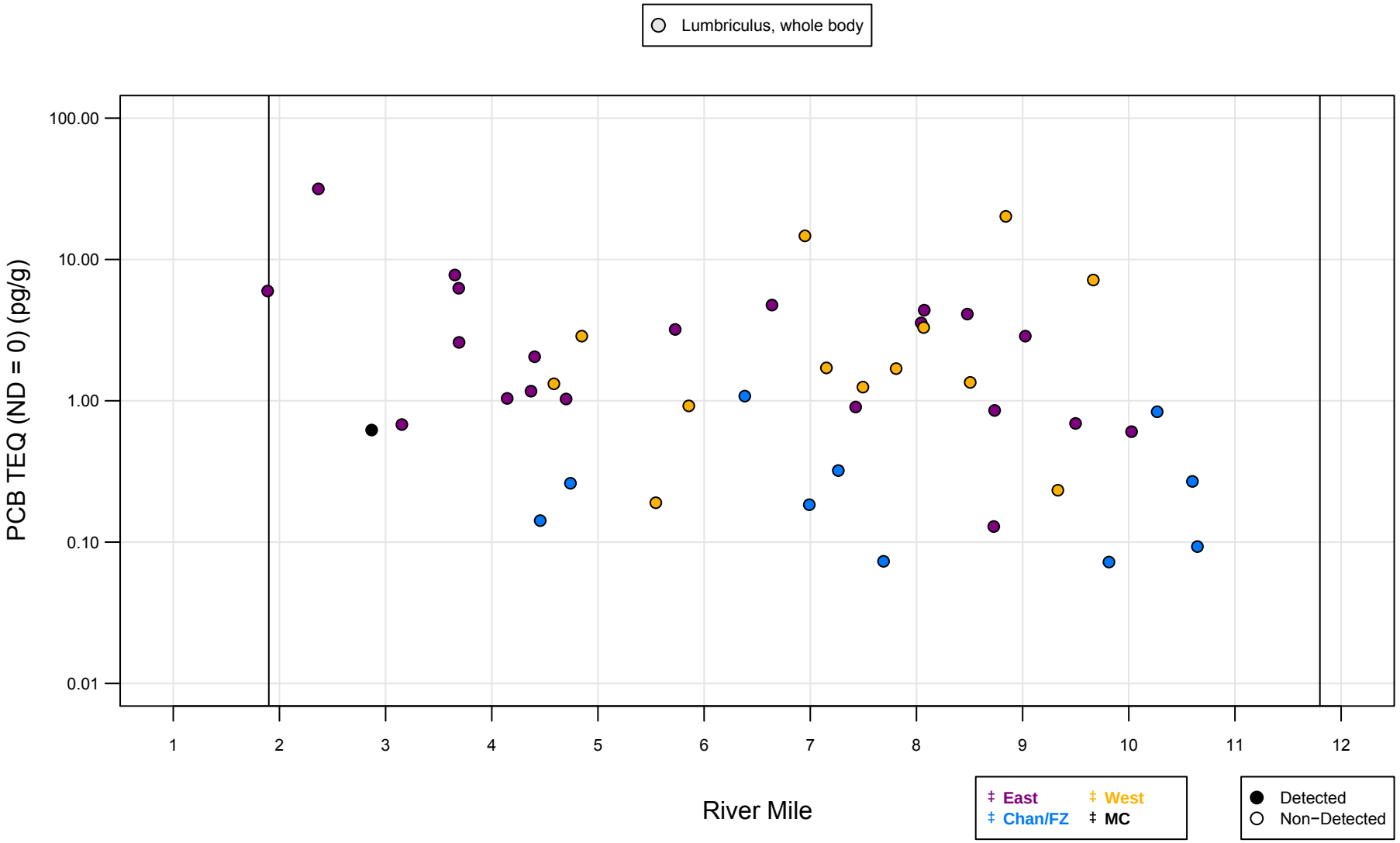



**Figure D5.2−7e**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of PCB TEQ (ND = 0) in
Tissue Samples by River Mile, RM 0.8−12.2

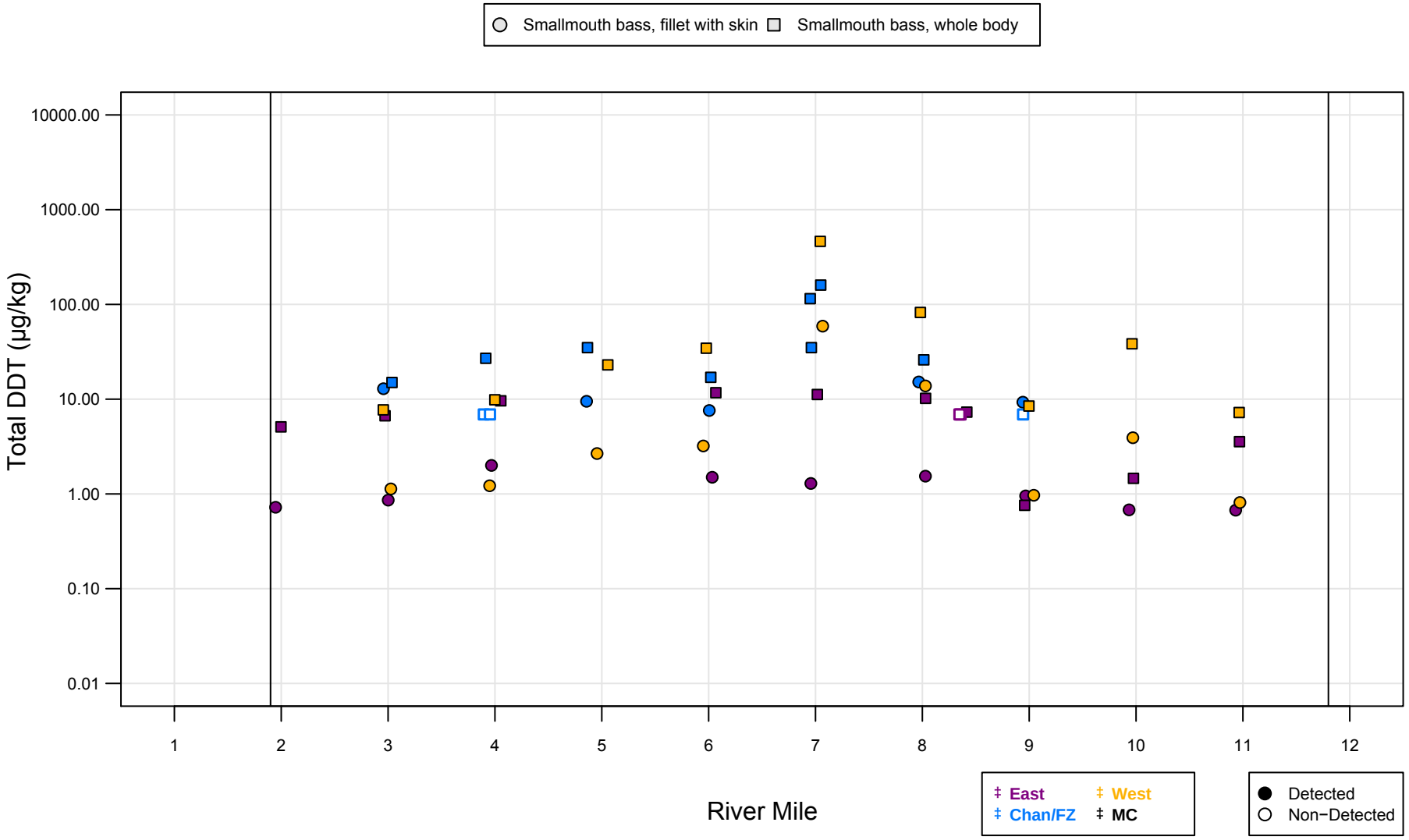



**Figure D5.2−8a**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDT in Tissue Samples
by River Mile, RM 0.8−12.2

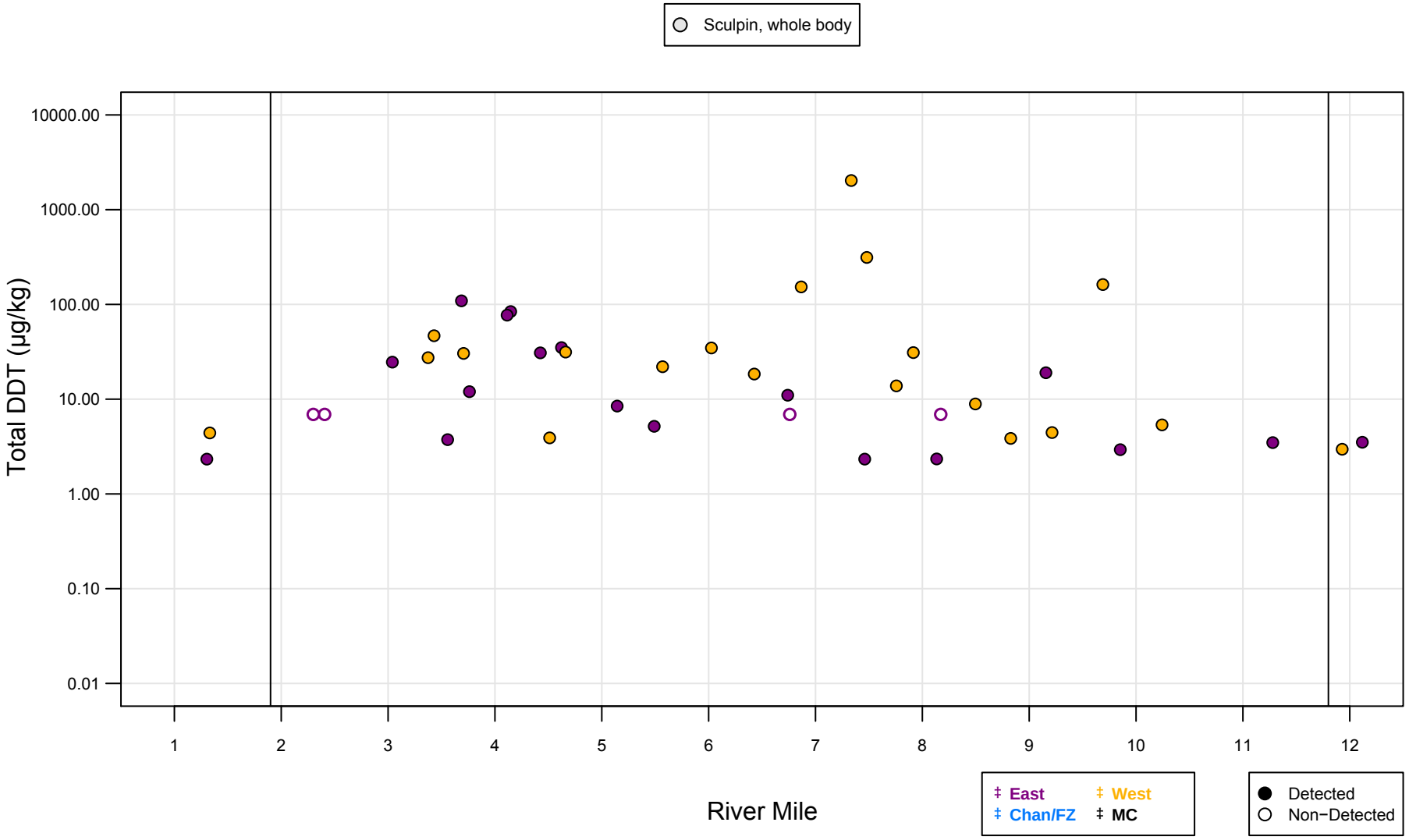



**Figure D5.2−8b**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDT in Tissue Samples
by River Mile, RM 0.8−12.2

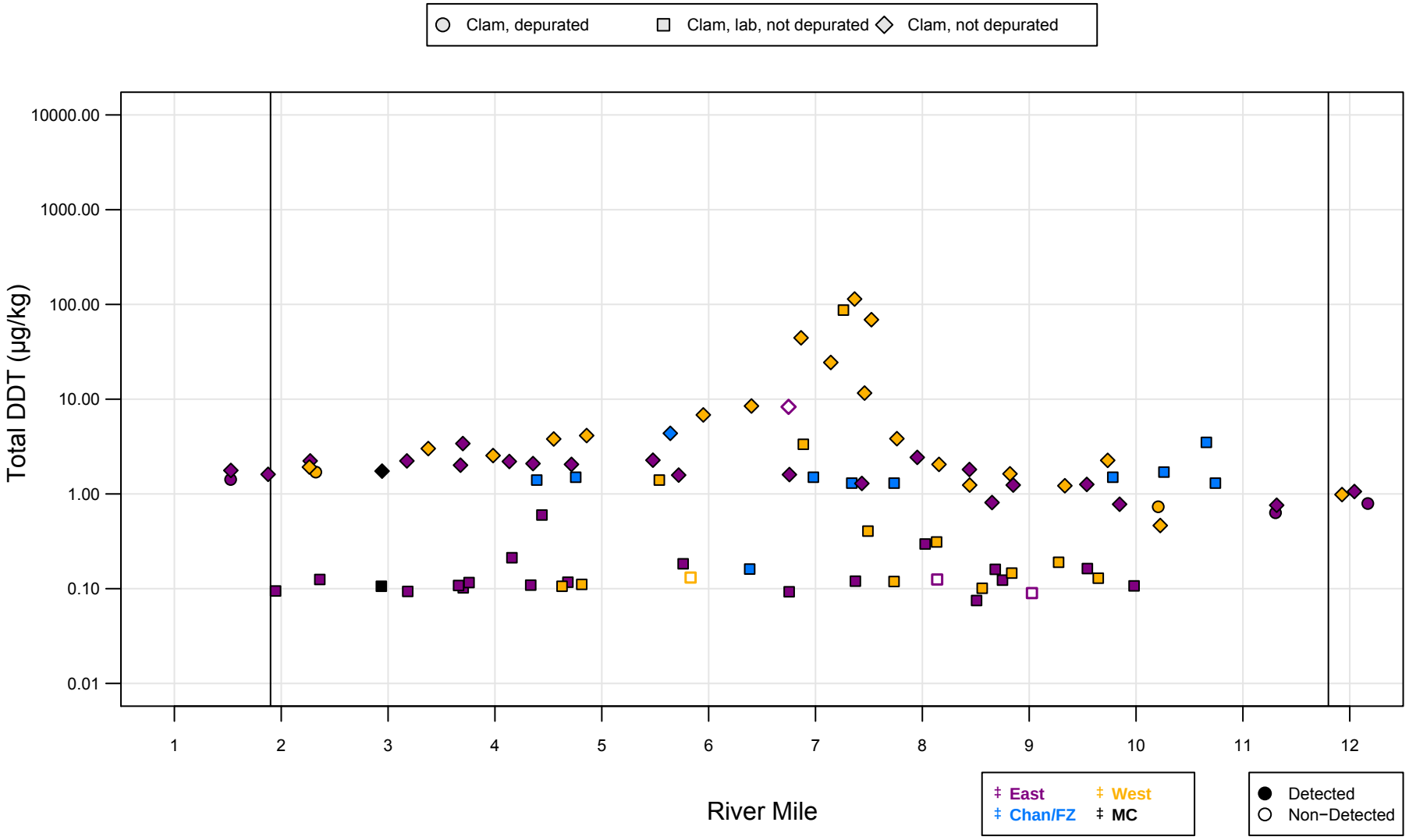



**Figure D5.2−8c**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDT in Tissue Samples
by River Mile, RM 0.8−12.2

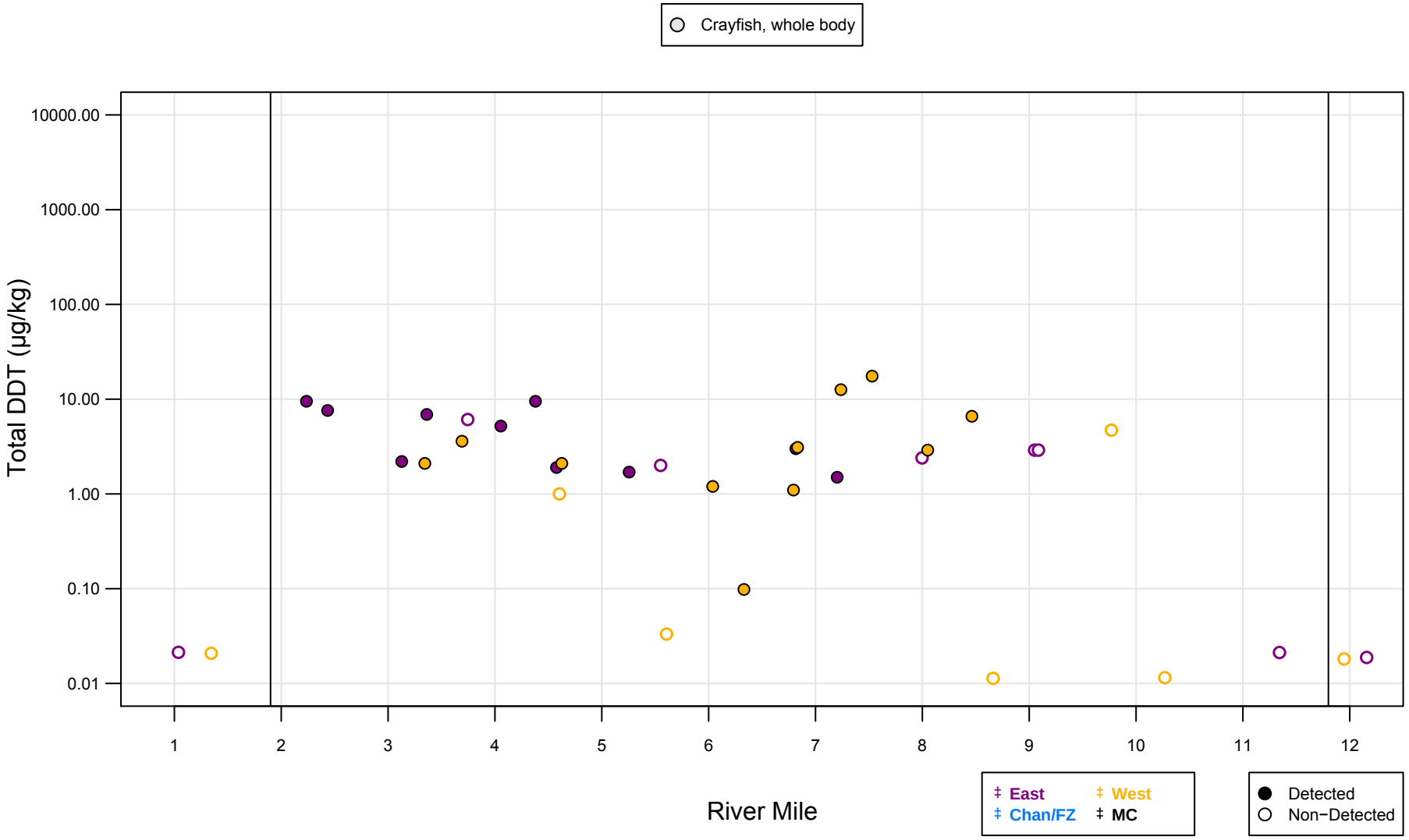



**Figure D5.2−8d**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDT in Tissue Samples
by River Mile, RM 0.8−12.2

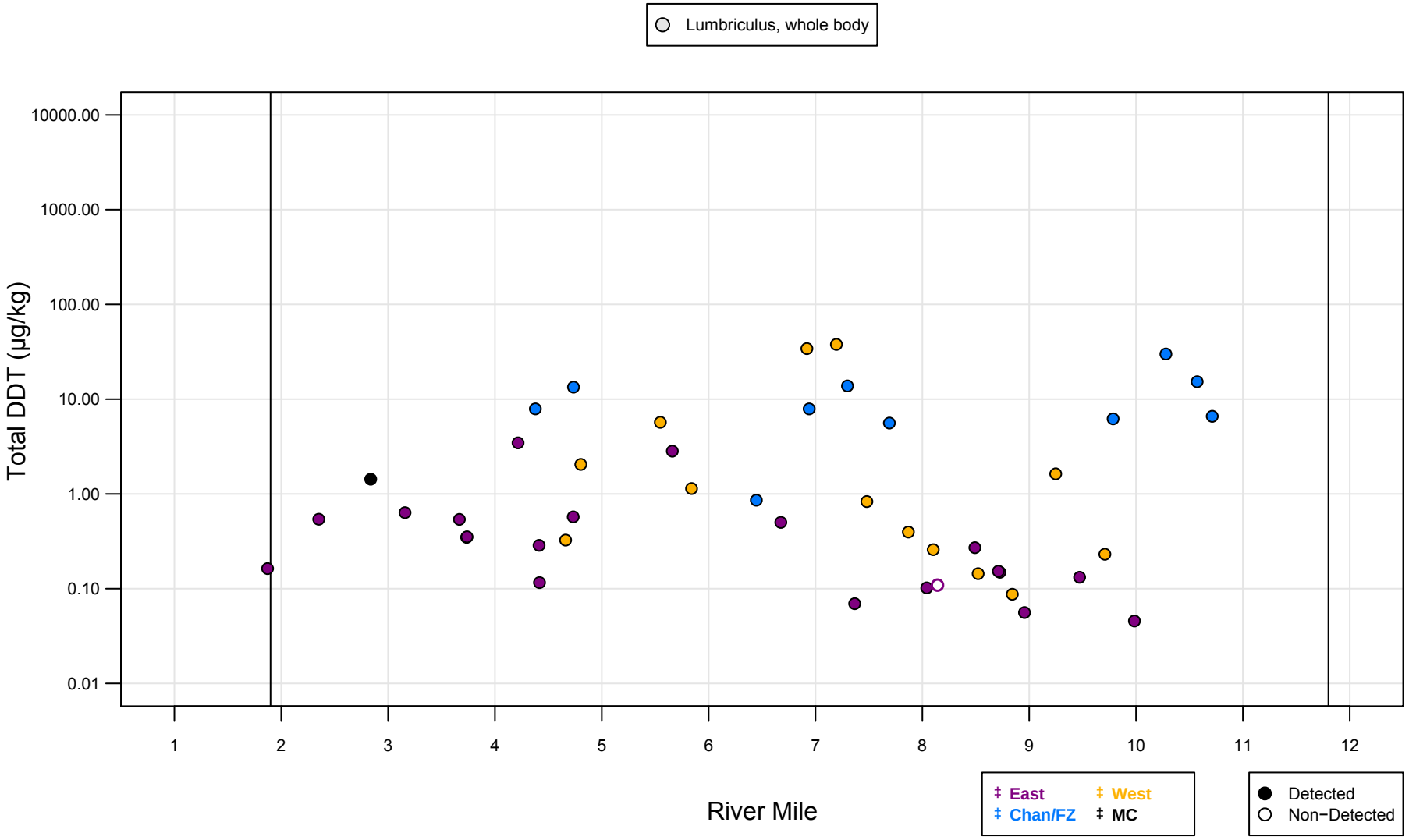



**Figure D5.2−8e**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDT in Tissue Samples
by River Mile, RM 0.8−12.2

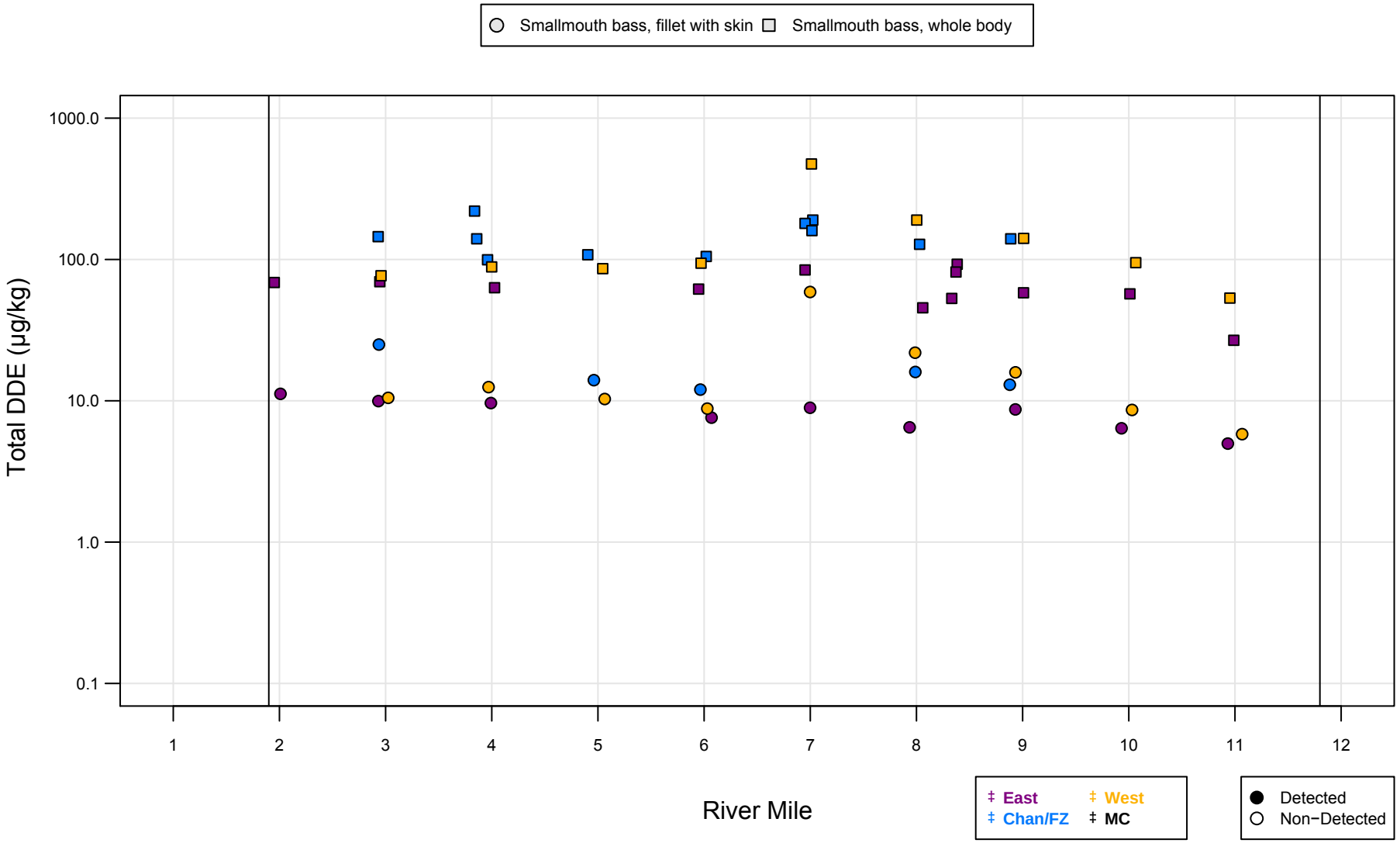



**Figure D5.2−9a**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDE in Tissue Samples
by River Mile, RM 0.8−12.2

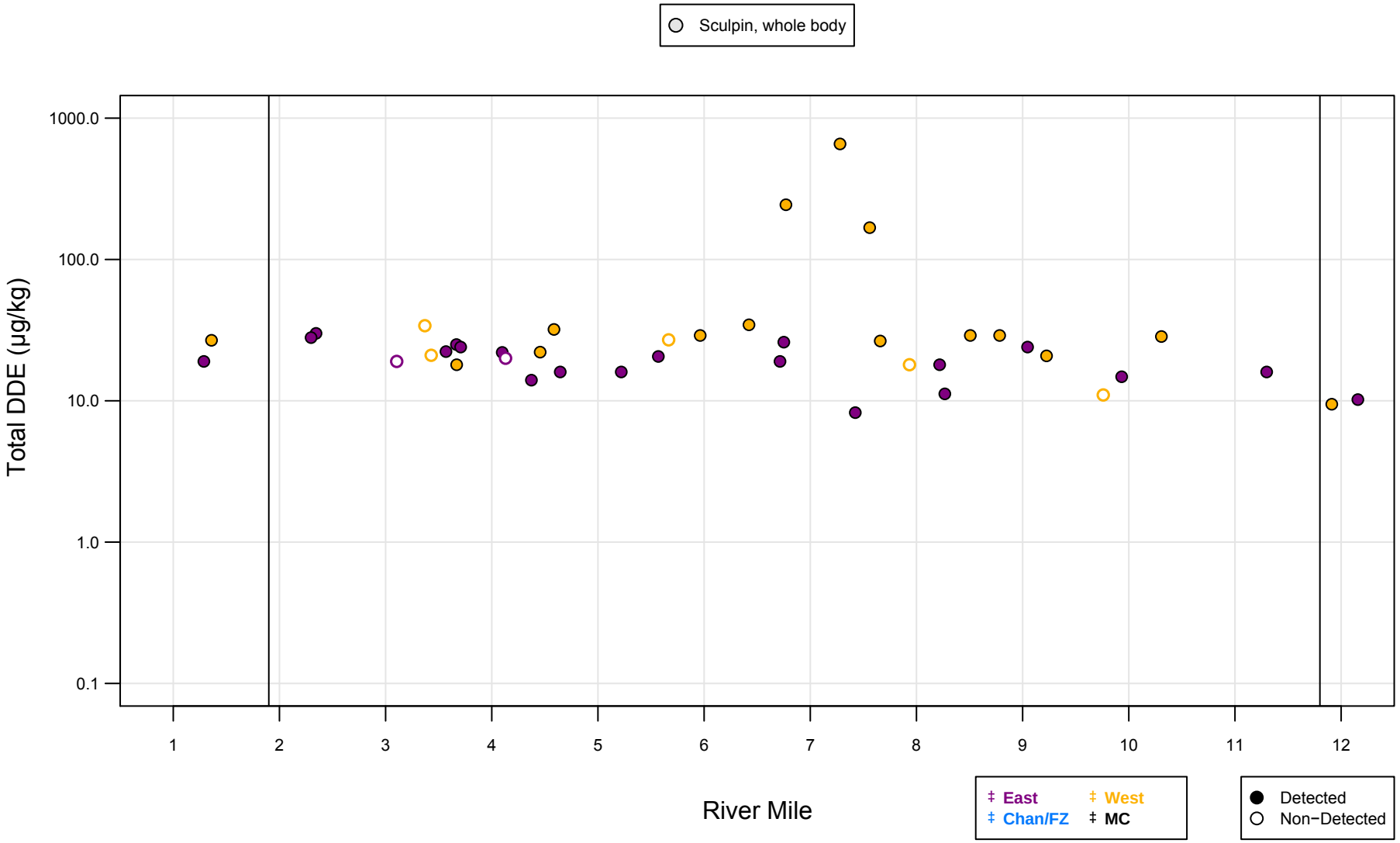



**Figure D5.2−9b**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDE in Tissue Samples
by River Mile, RM 0.8−12.2

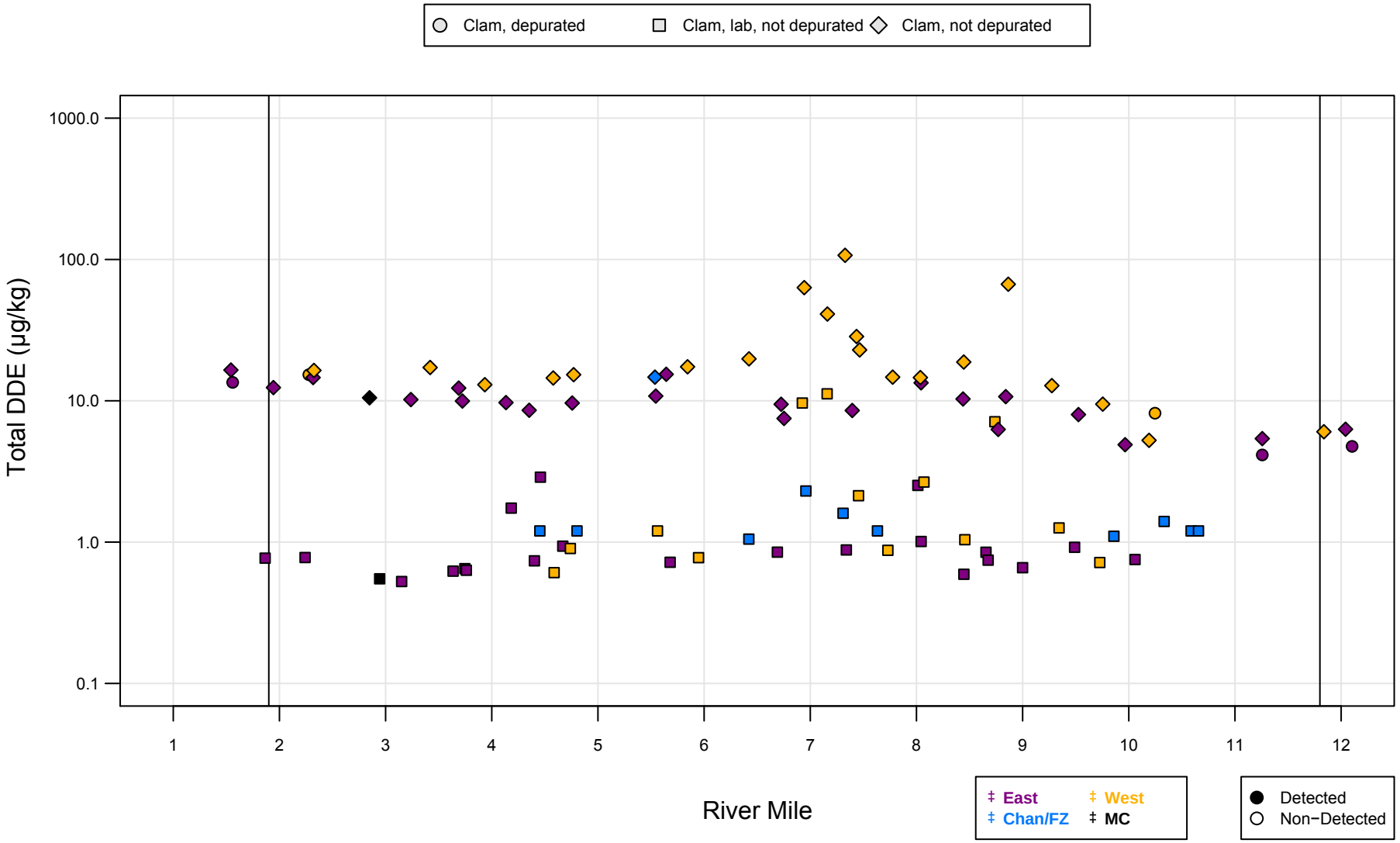



**Figure D5.2−9c**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDE in Tissue Samples
by River Mile, RM 0.8−12.2

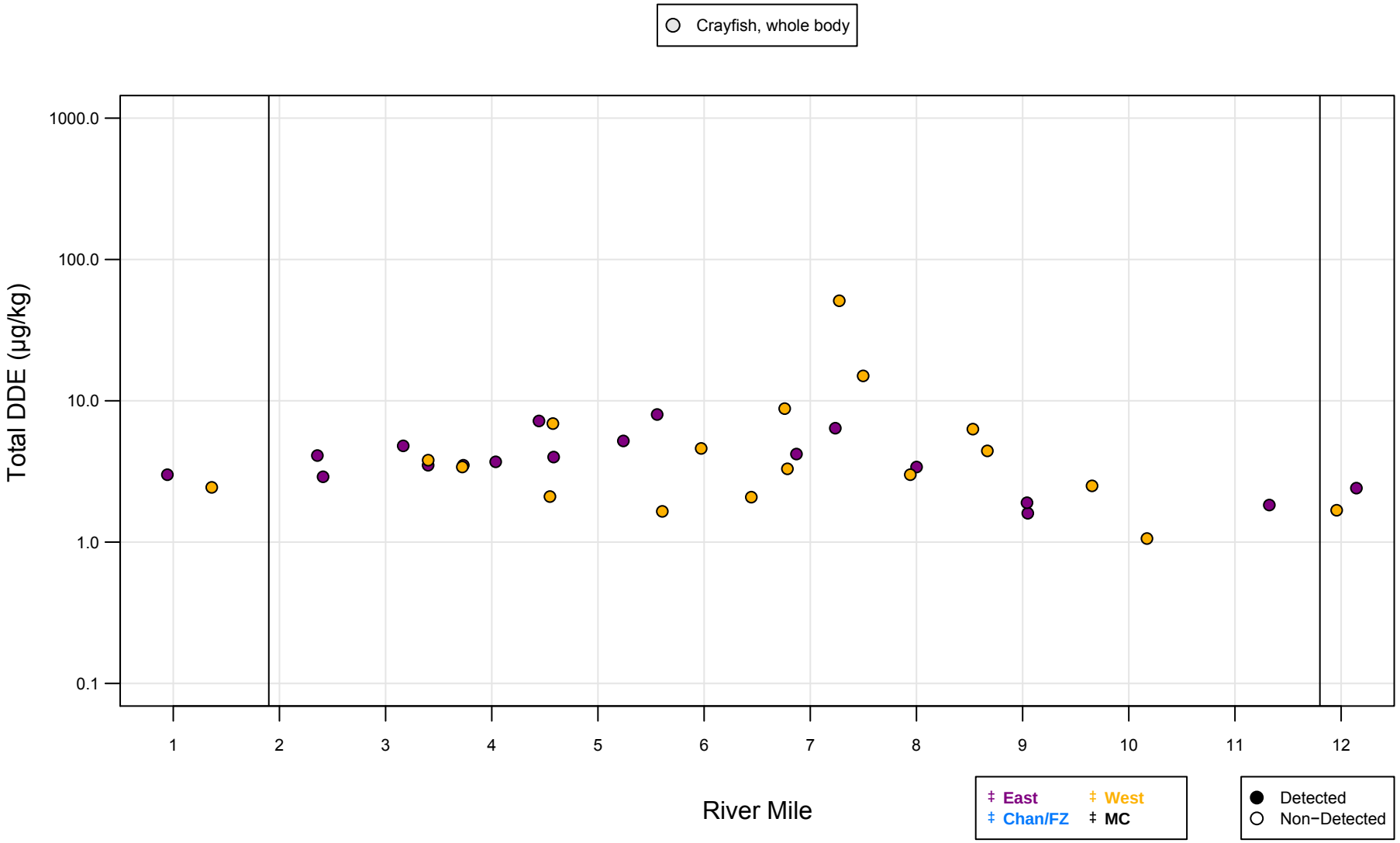



**Figure D5.2−9d**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDE in Tissue Samples
by River Mile, RM 0.8−12.2

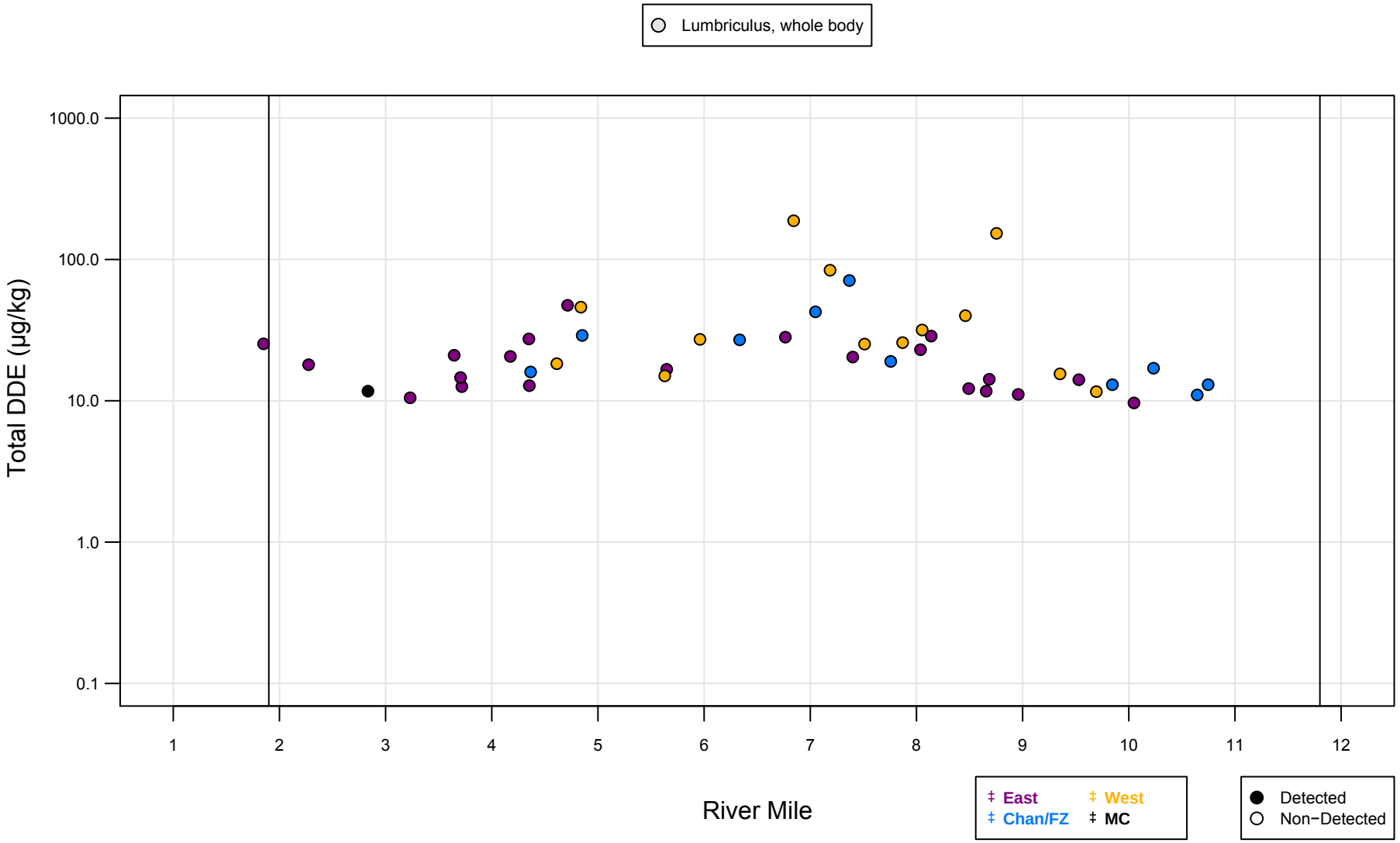



**Figure D5.2−9e**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDE in Tissue Samples
by River Mile, RM 0.8−12.2

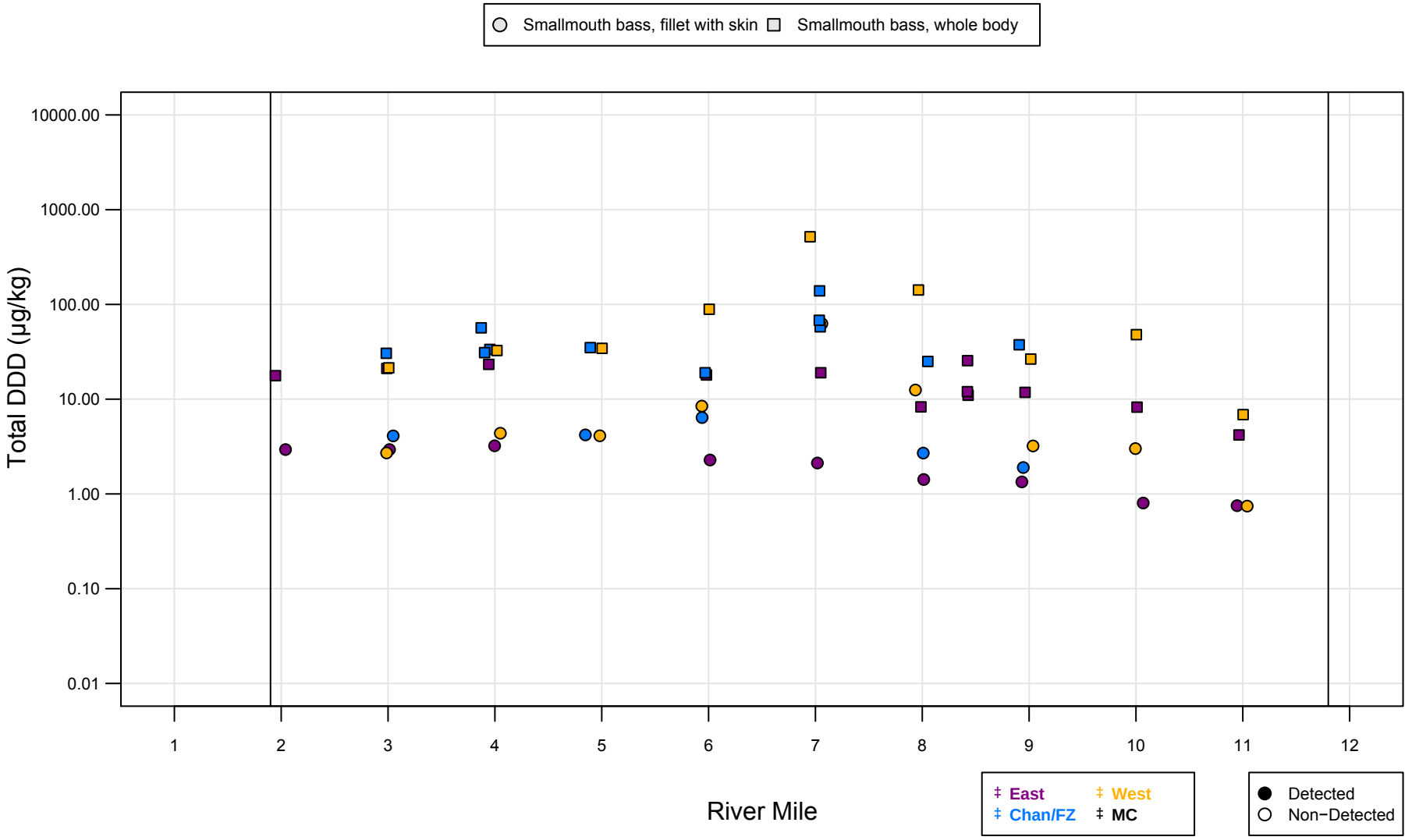



**Figure D5.2−10a**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDD in Tissue Samples
by River Mile, RM 0.8−12.2

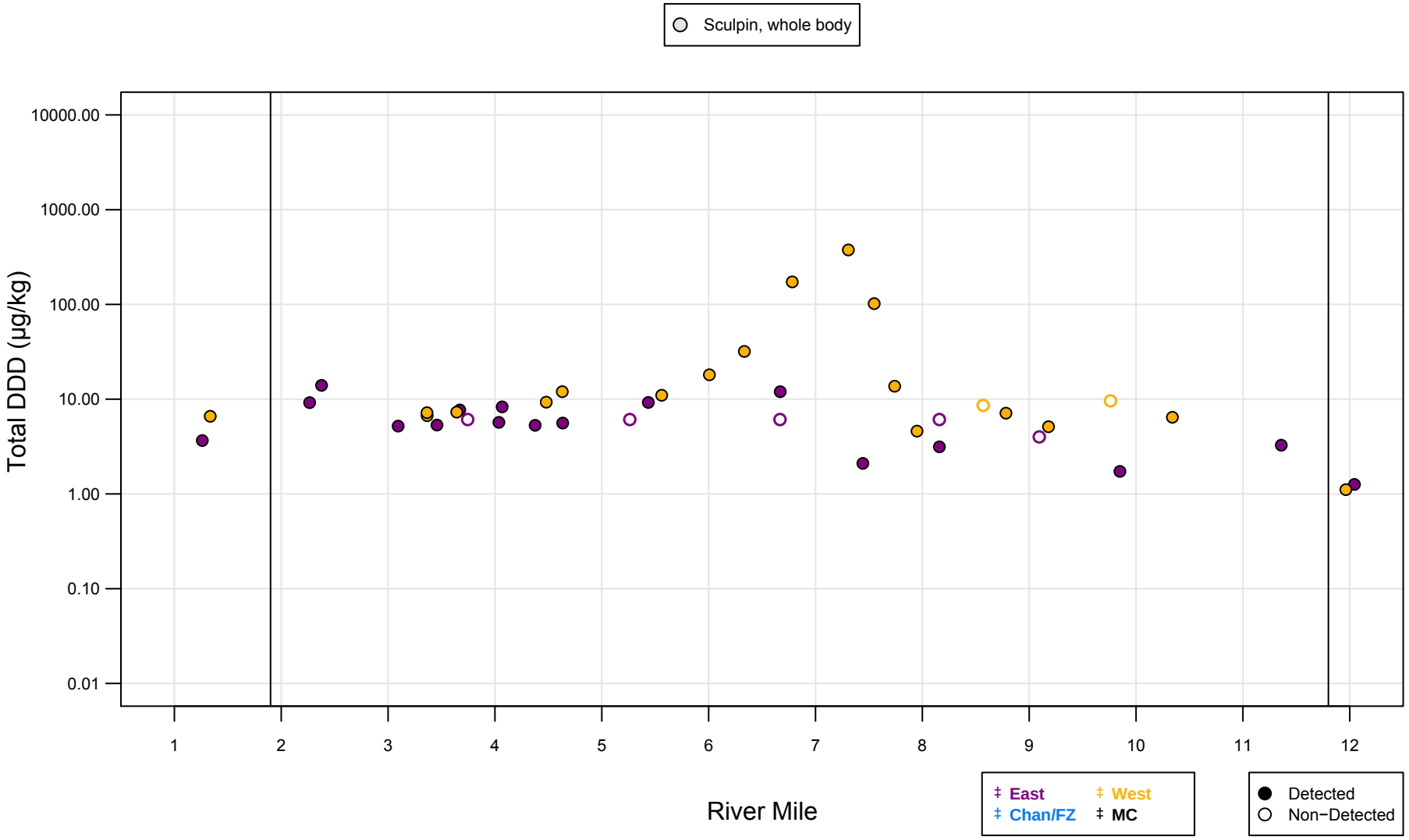



**Figure D5.2−10b**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDD in Tissue Samples
by River Mile, RM 0.8−12.2

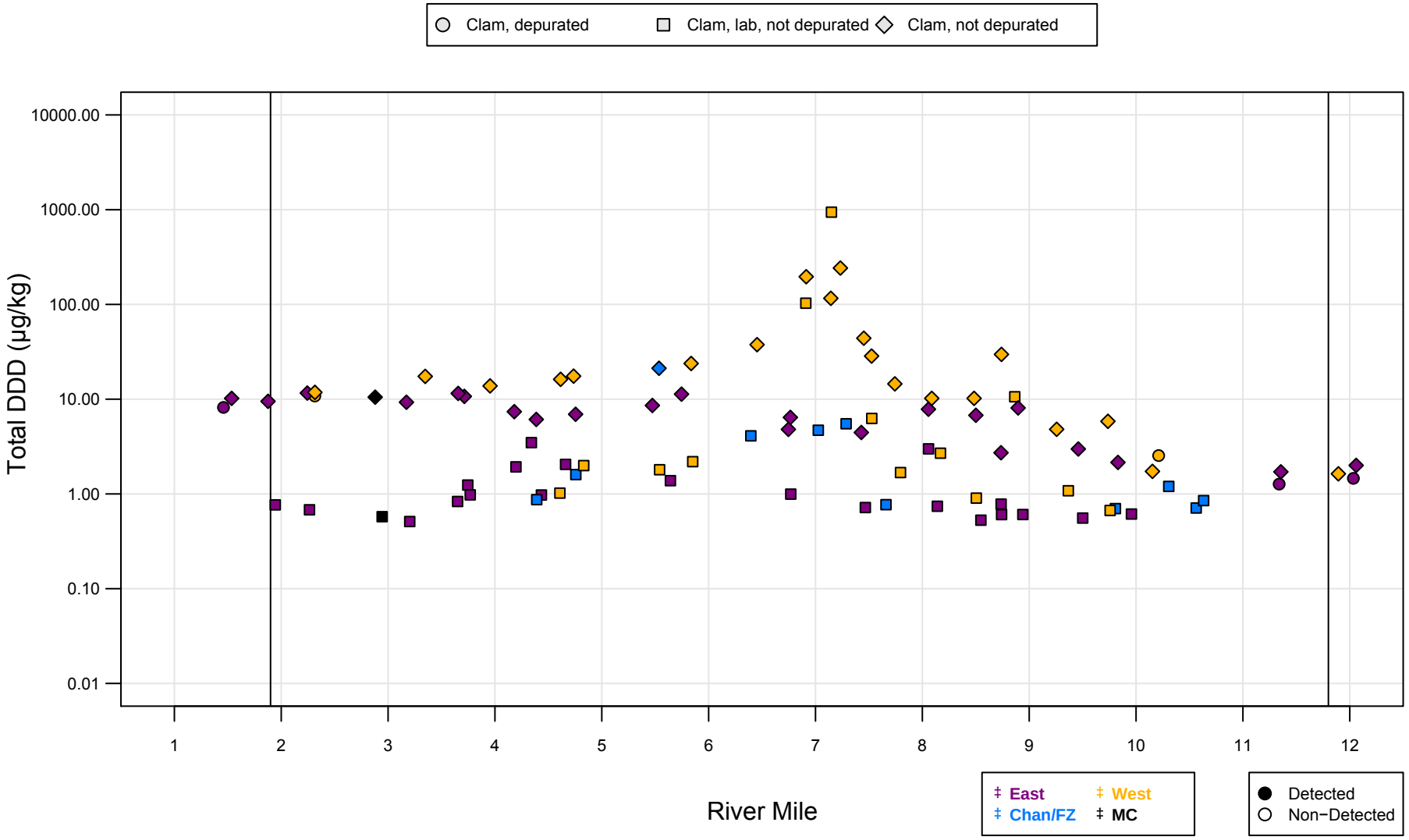



**Figure D5.2−10c**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDD in Tissue Samples
by River Mile, RM 0.8−12.2

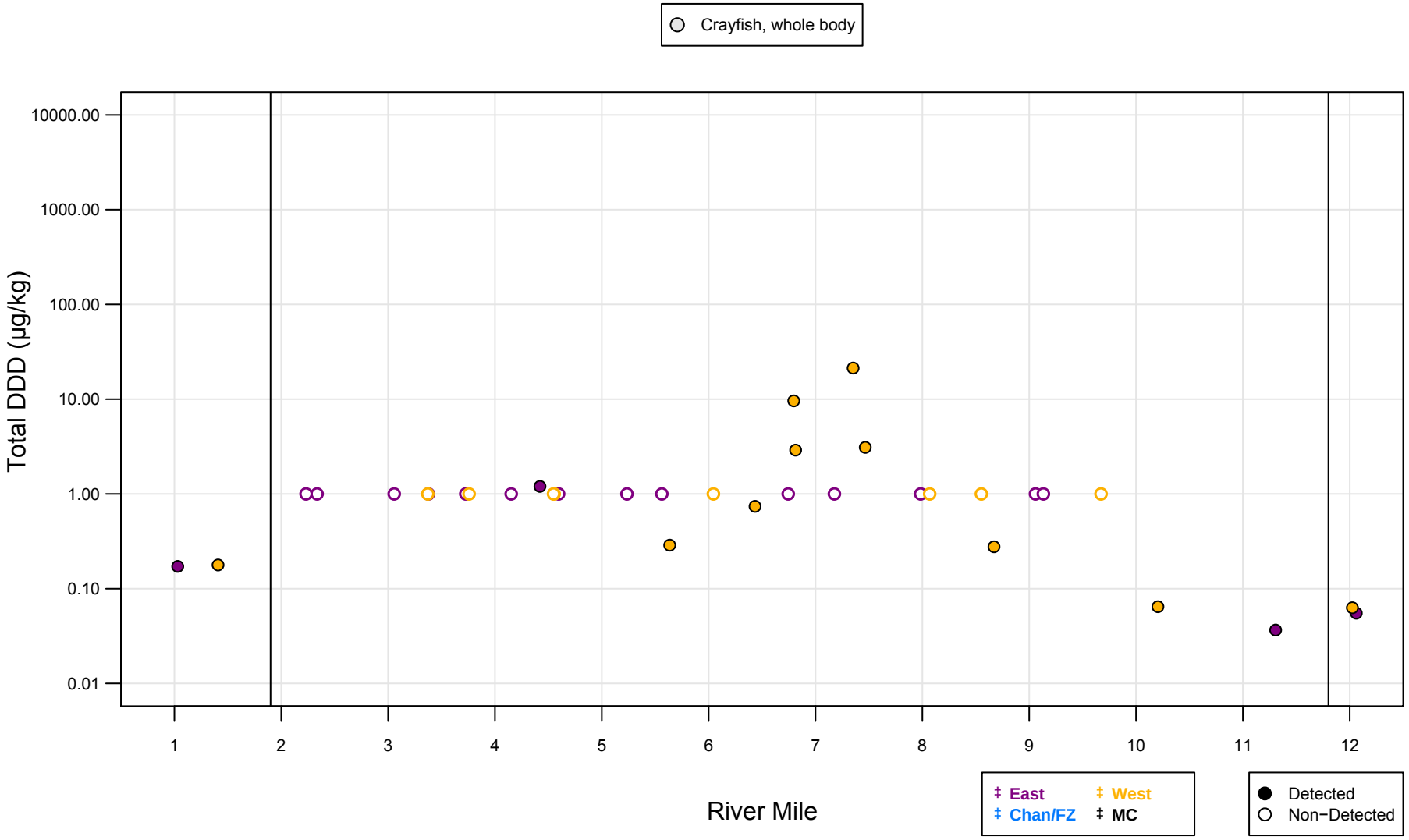



**Figure D5.2−10d**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDD in Tissue Samples
by River Mile, RM 0.8−12.2

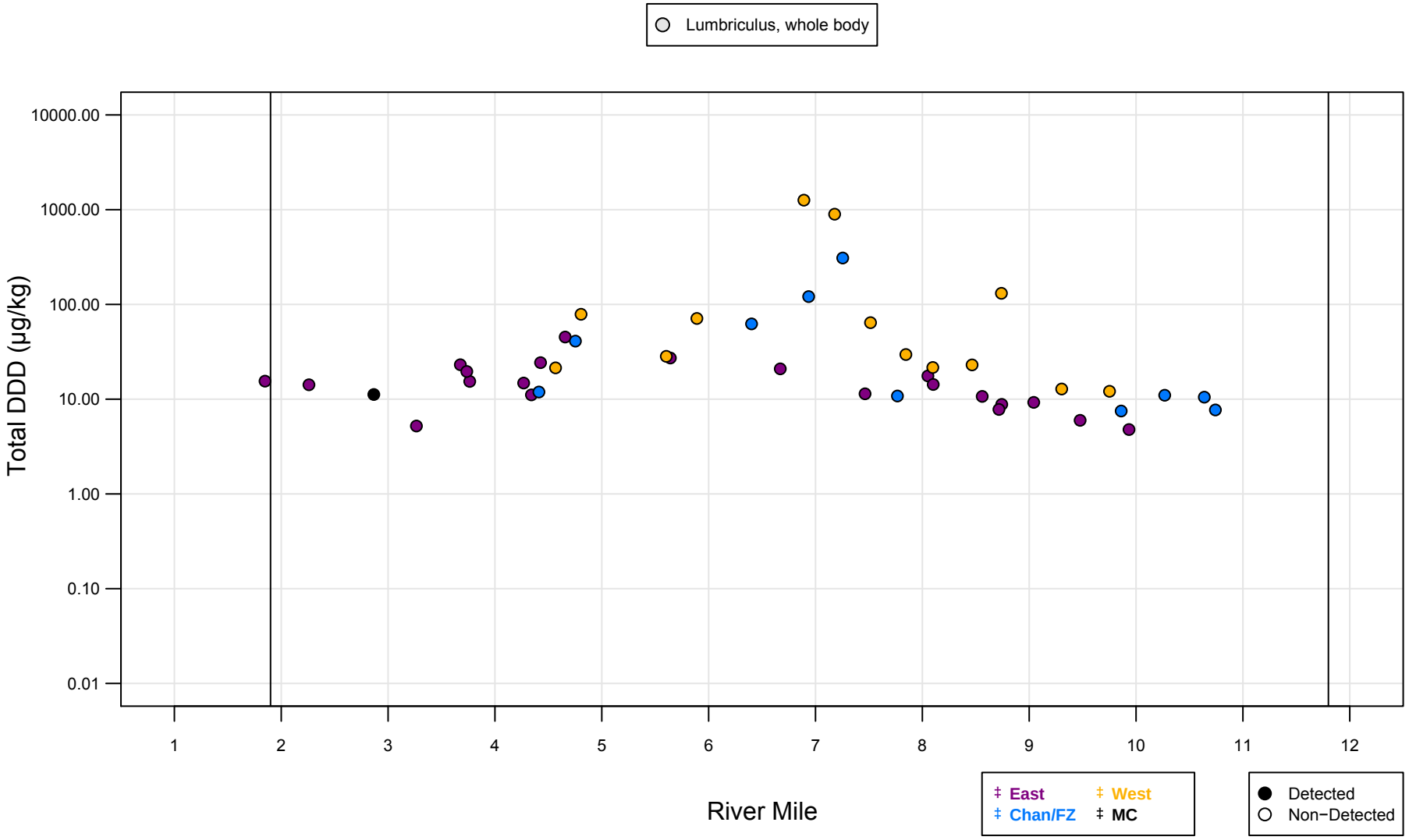



**Figure D5.2−10e**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total DDD in Tissue Samples
by River Mile, RM 0.8−12.2

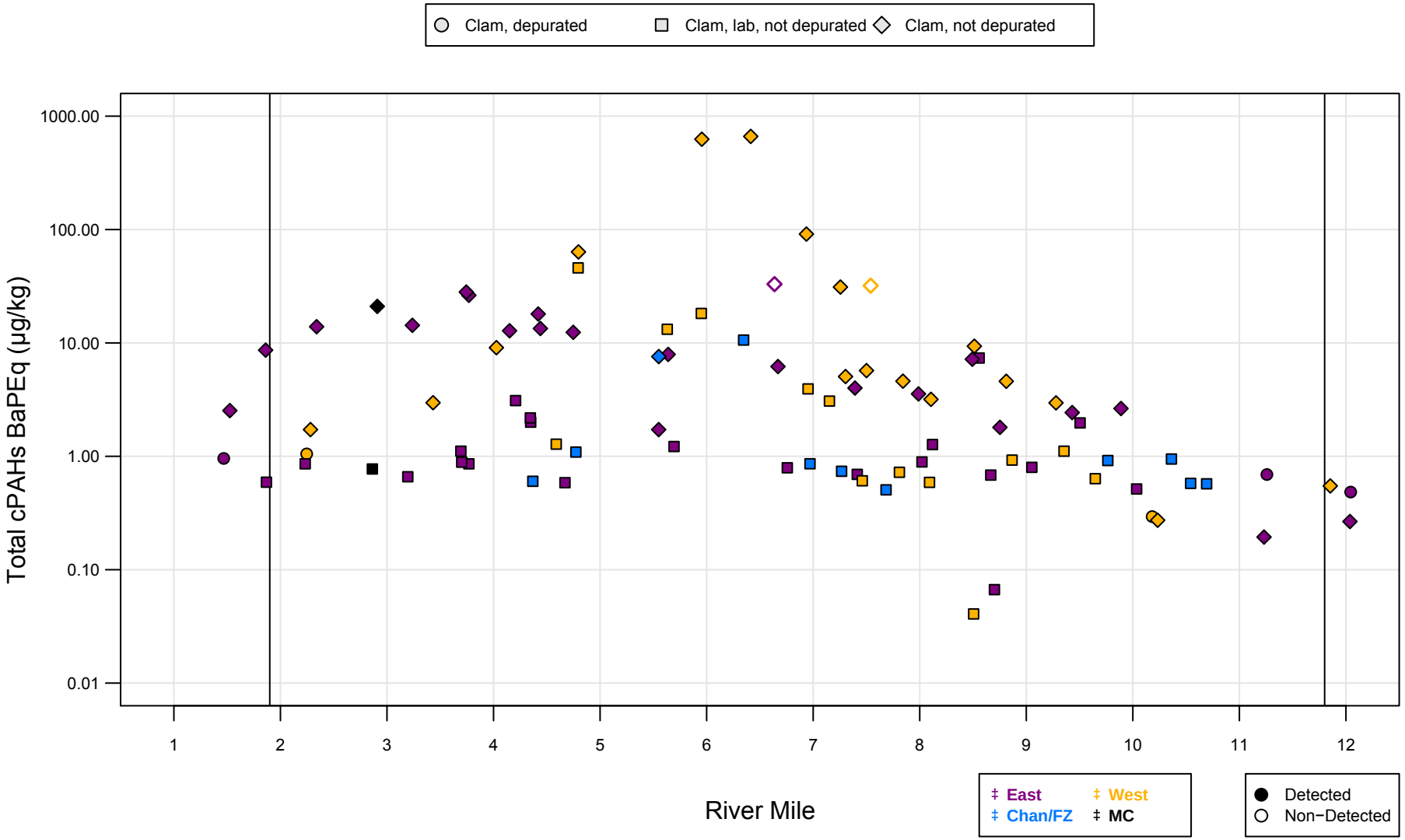



**Figure D5.2−11**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Total cPAHs BaPEq in
Tissue Samples by River Mile, RM 0.8−12.2

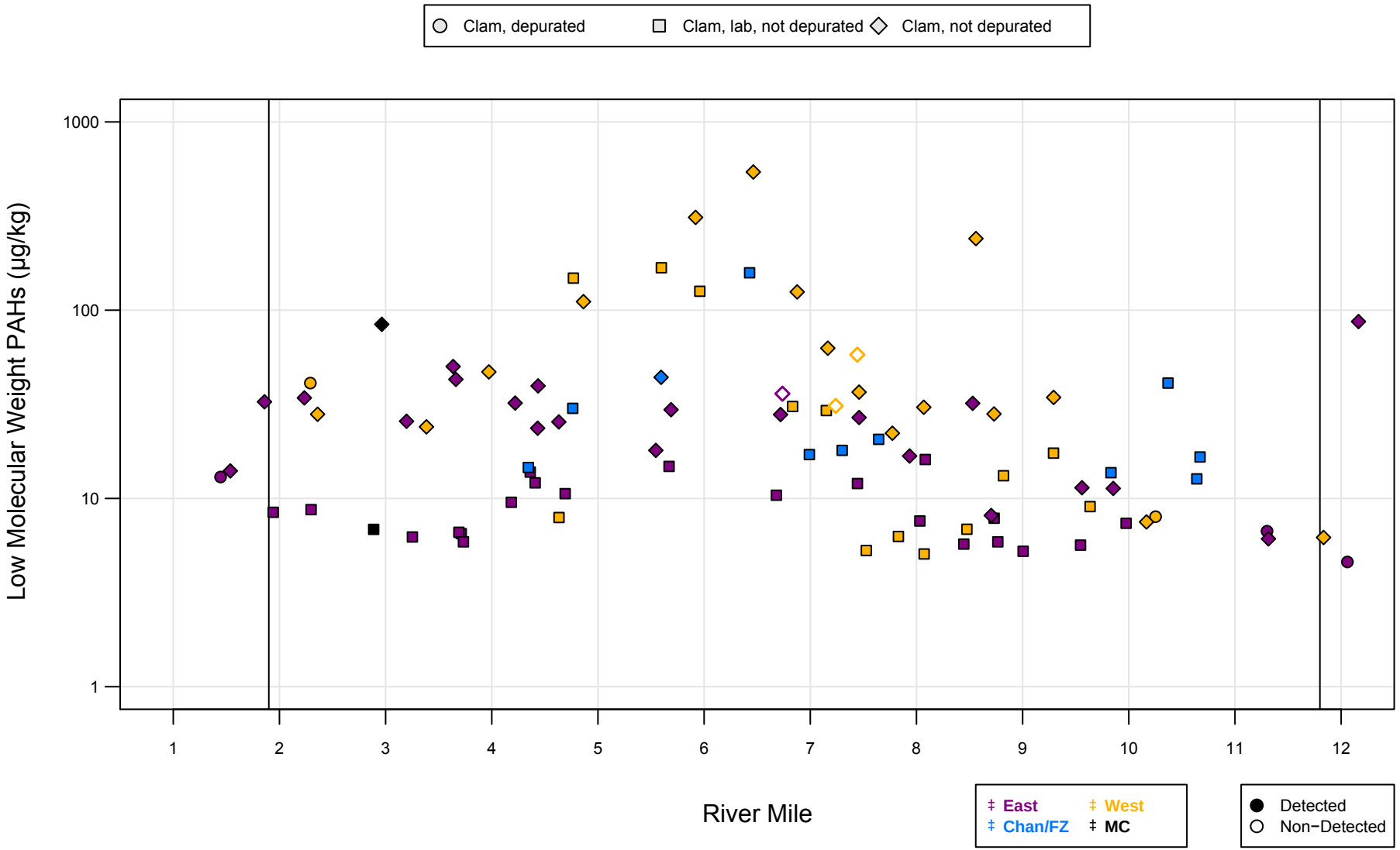



**Figure D5.2−12**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Low Molecular Weight PAHs in
Tissue Samples by River Mile, RM 0.8−12.2

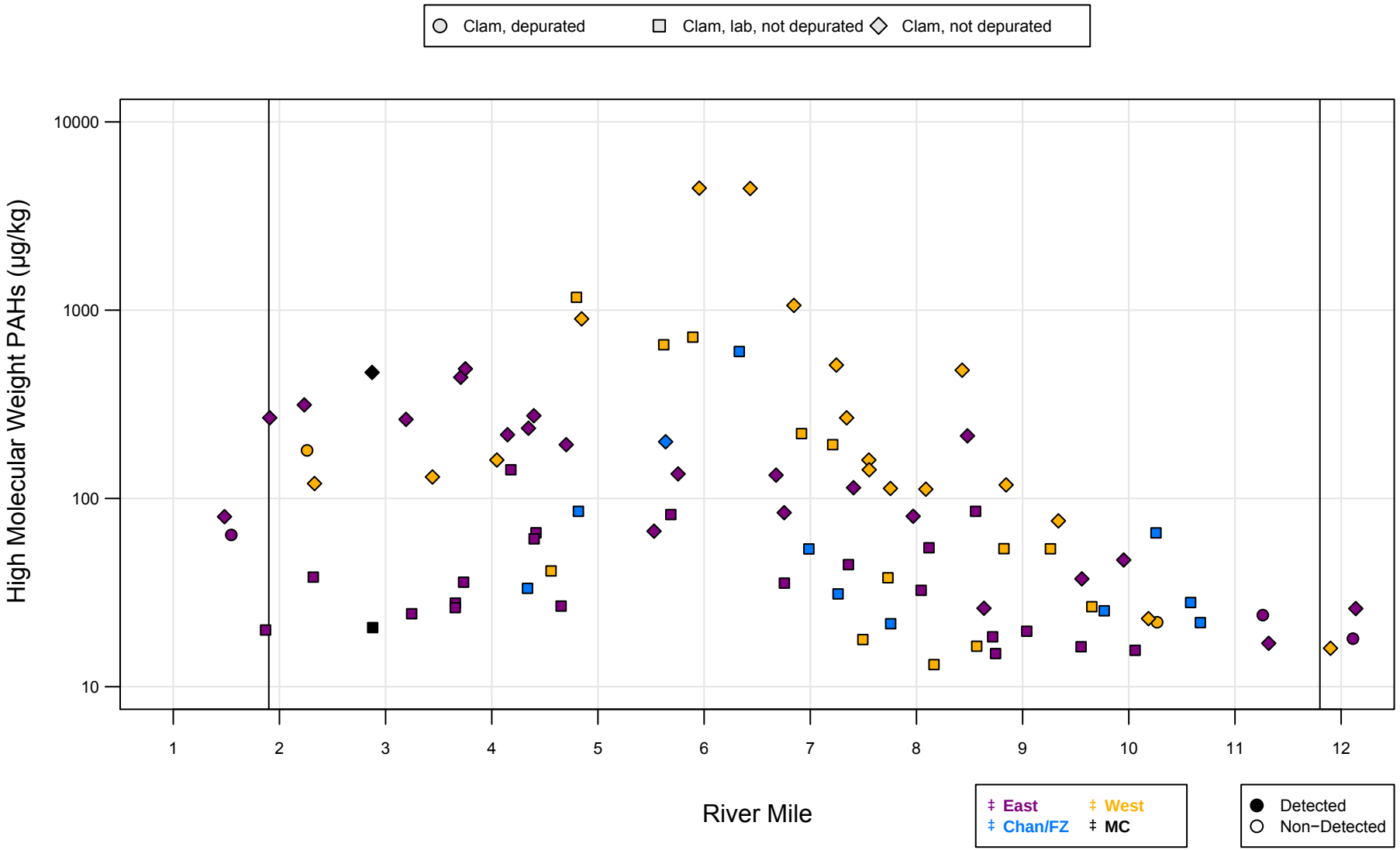



**Figure D5.2−13**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of High Molecular Weight PAHs in
Tissue Samples by River Mile, RM 0.8−12.2

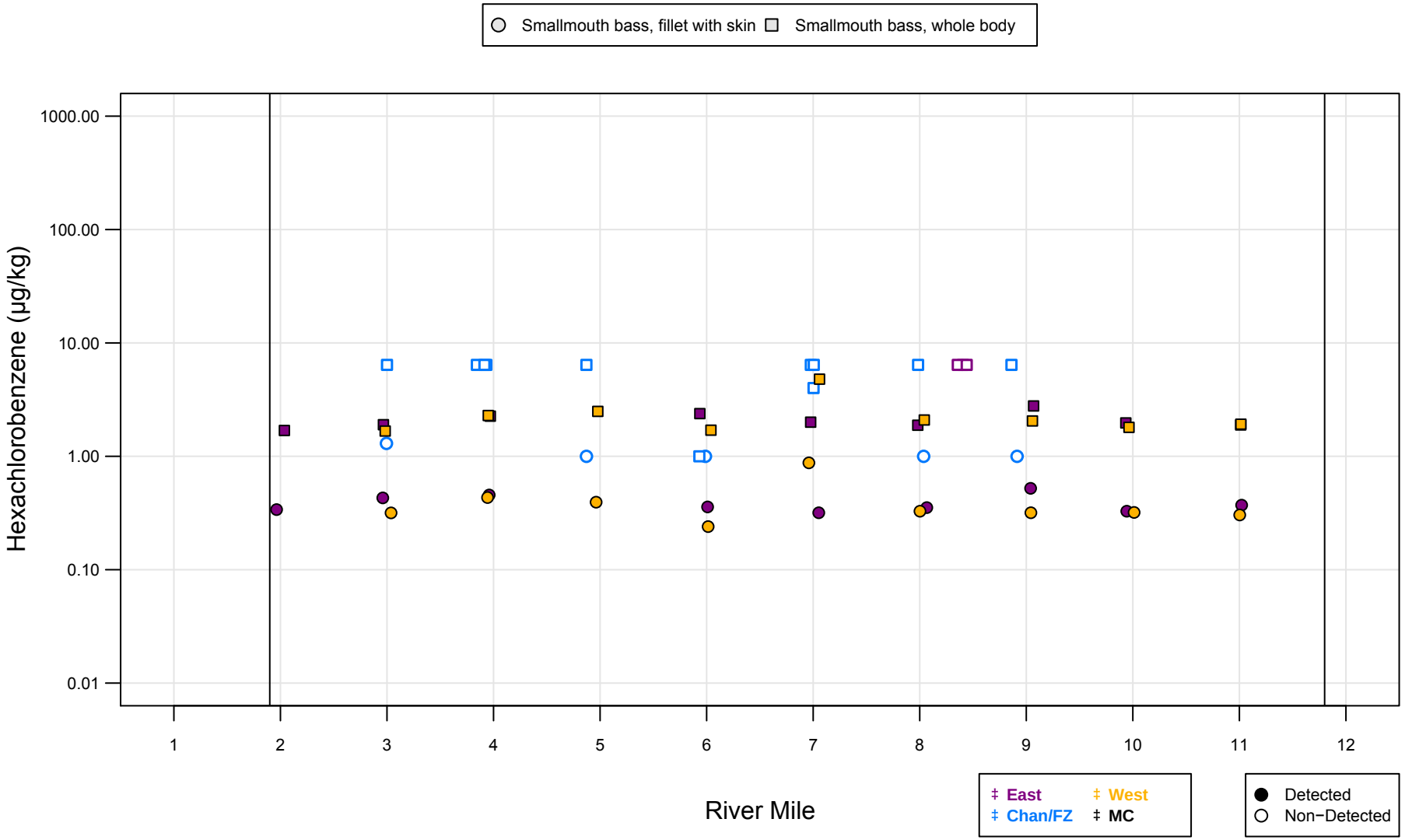



**Figure D5.2−14a**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Hexachlorobenzene in
Tissue Samples by River Mile, RM 0.8−12.2

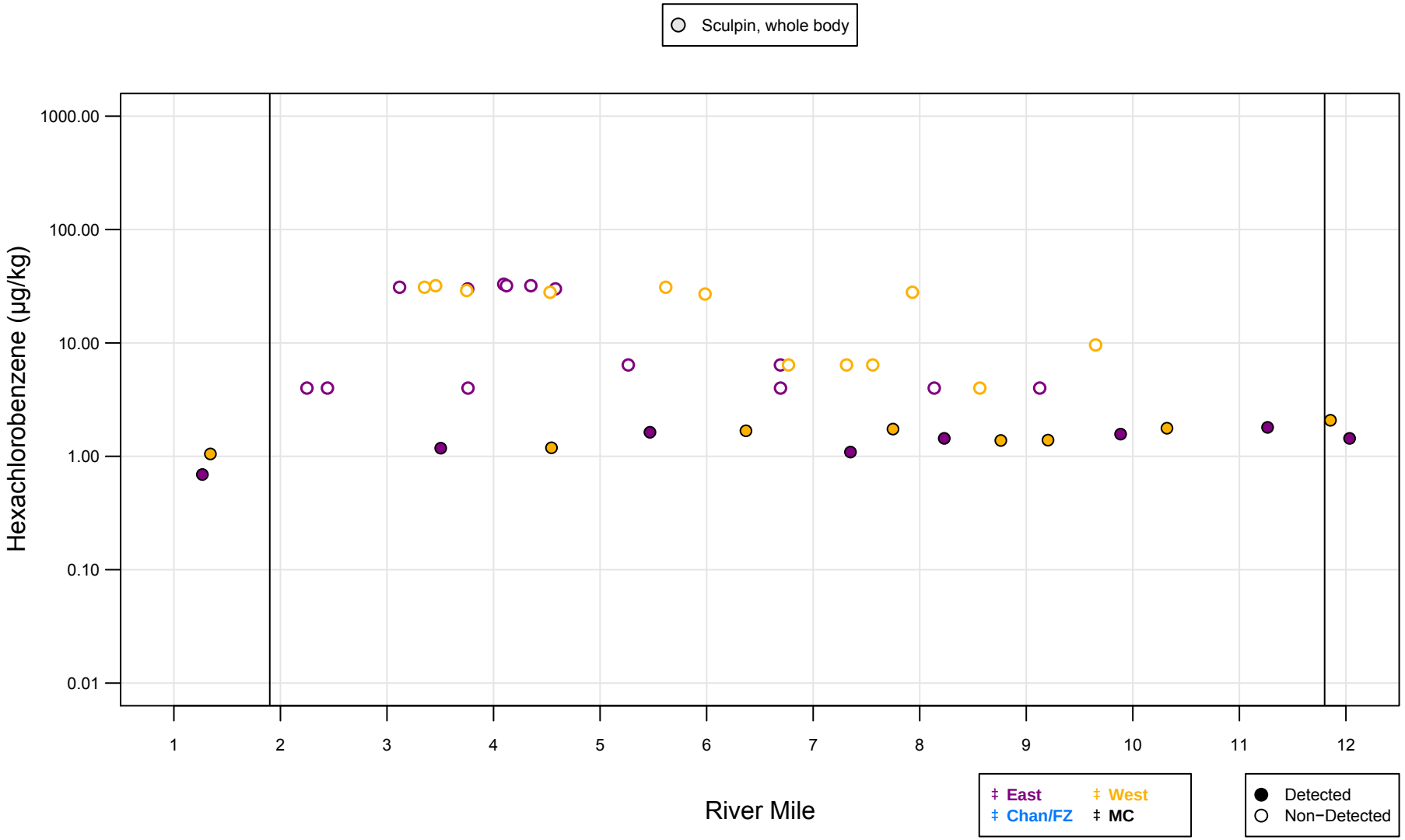



**Figure D5.2−14b**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Hexachlorobenzene in
Tissue Samples by River Mile, RM 0.8−12.2

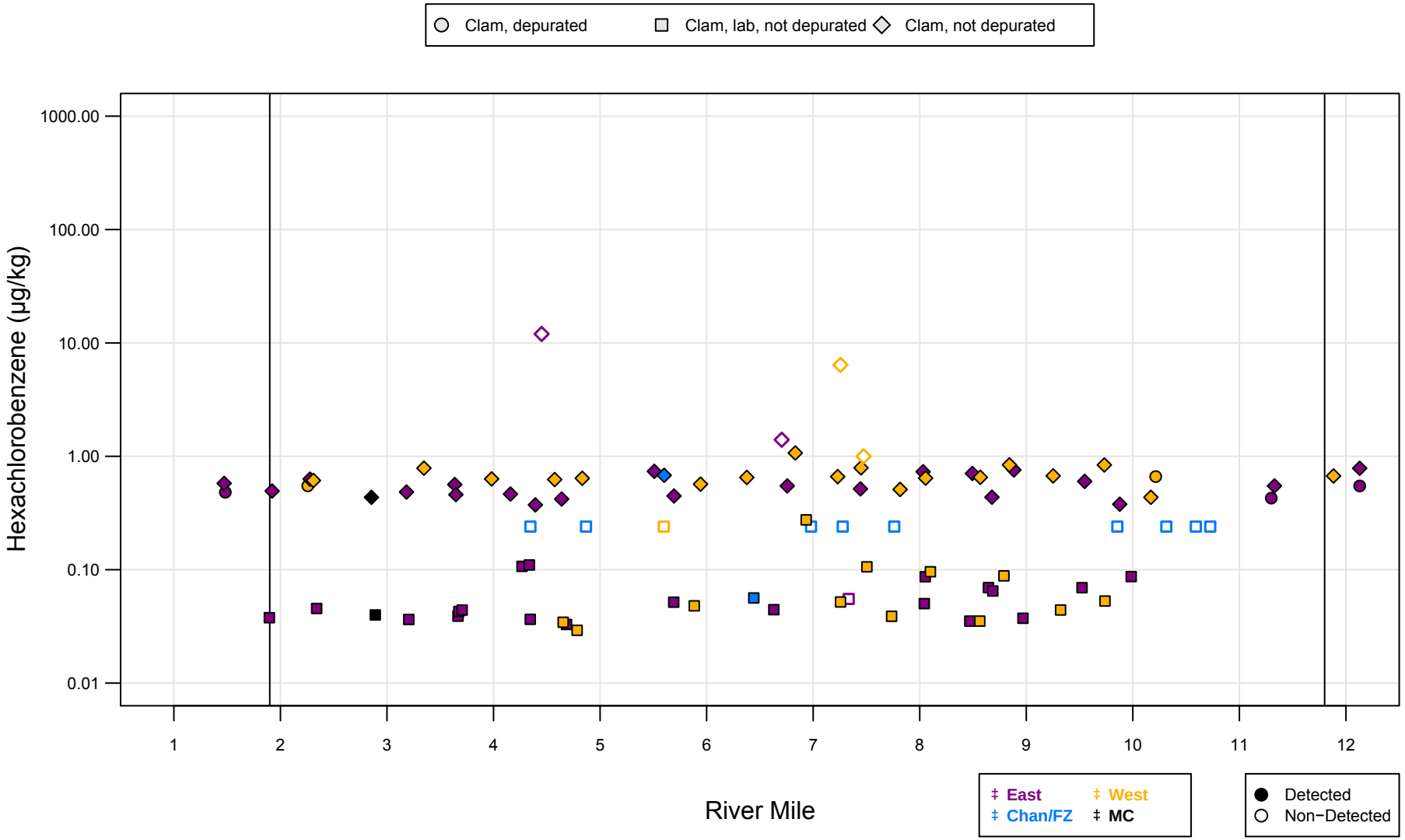



**Figure D5.2−14c**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Hexachlorobenzene in
Tissue Samples by River Mile, RM 0.8−12.2

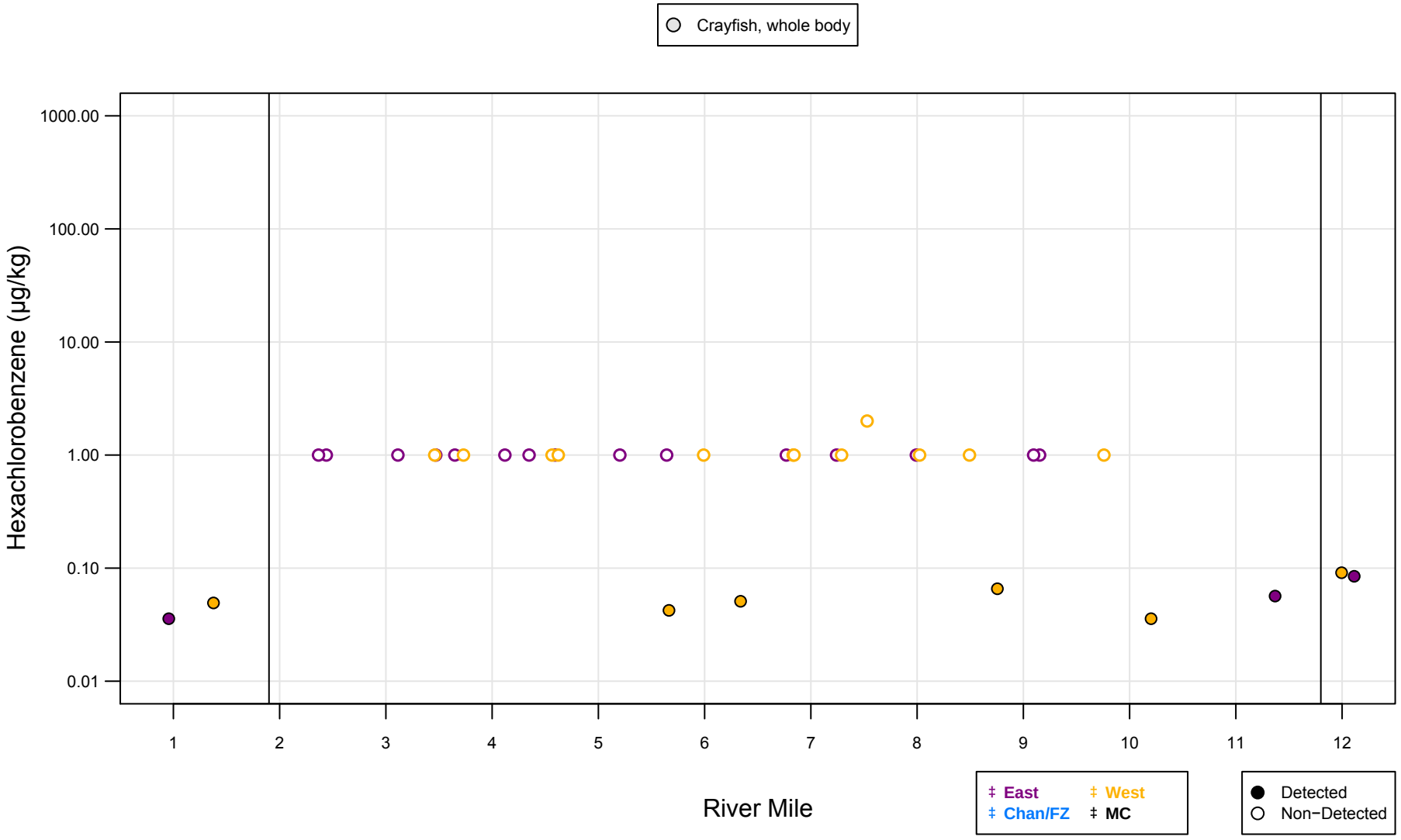



**Figure D5.2−14d**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Hexachlorobenzene in
Tissue Samples by River Mile, RM 0.8−12.2

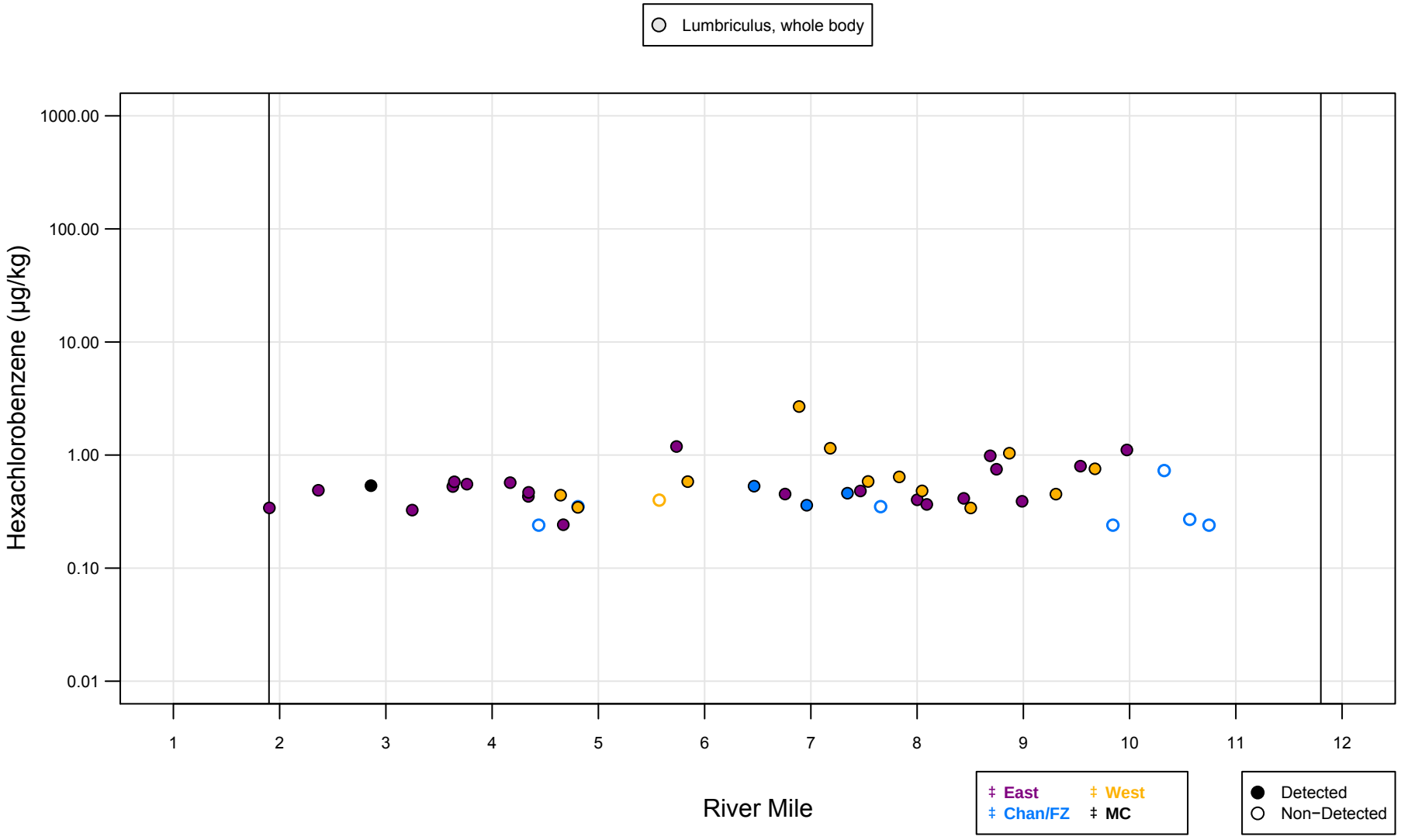



**Figure D5.2−14e**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Hexachlorobenzene in
Tissue Samples by River Mile, RM 0.8−12.2

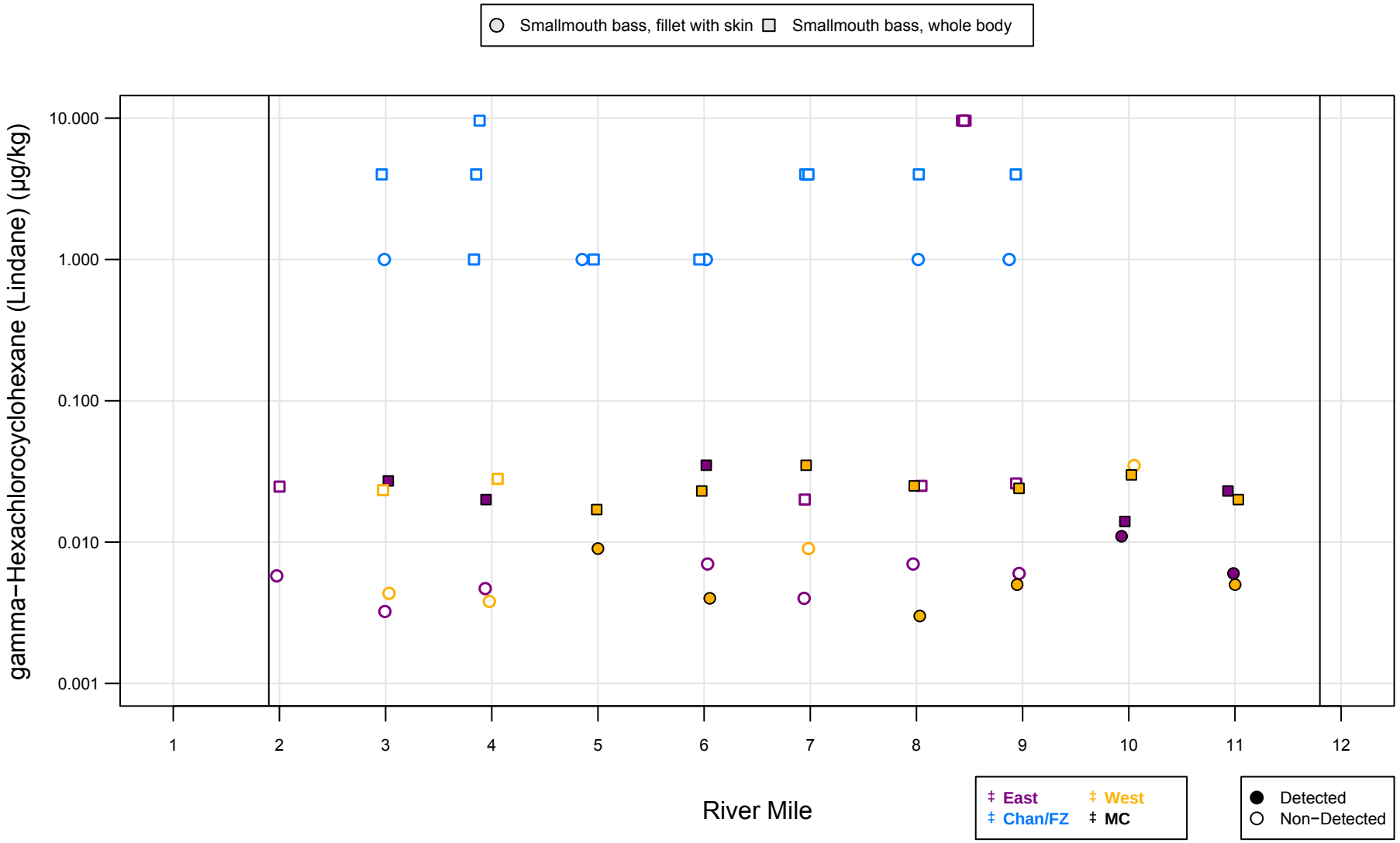



**Figure D5.2−15a**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of gamma−Hexachlorocyclohexane (Lindane) in
Tissue Samples by River Mile, RM 0.8−12.2

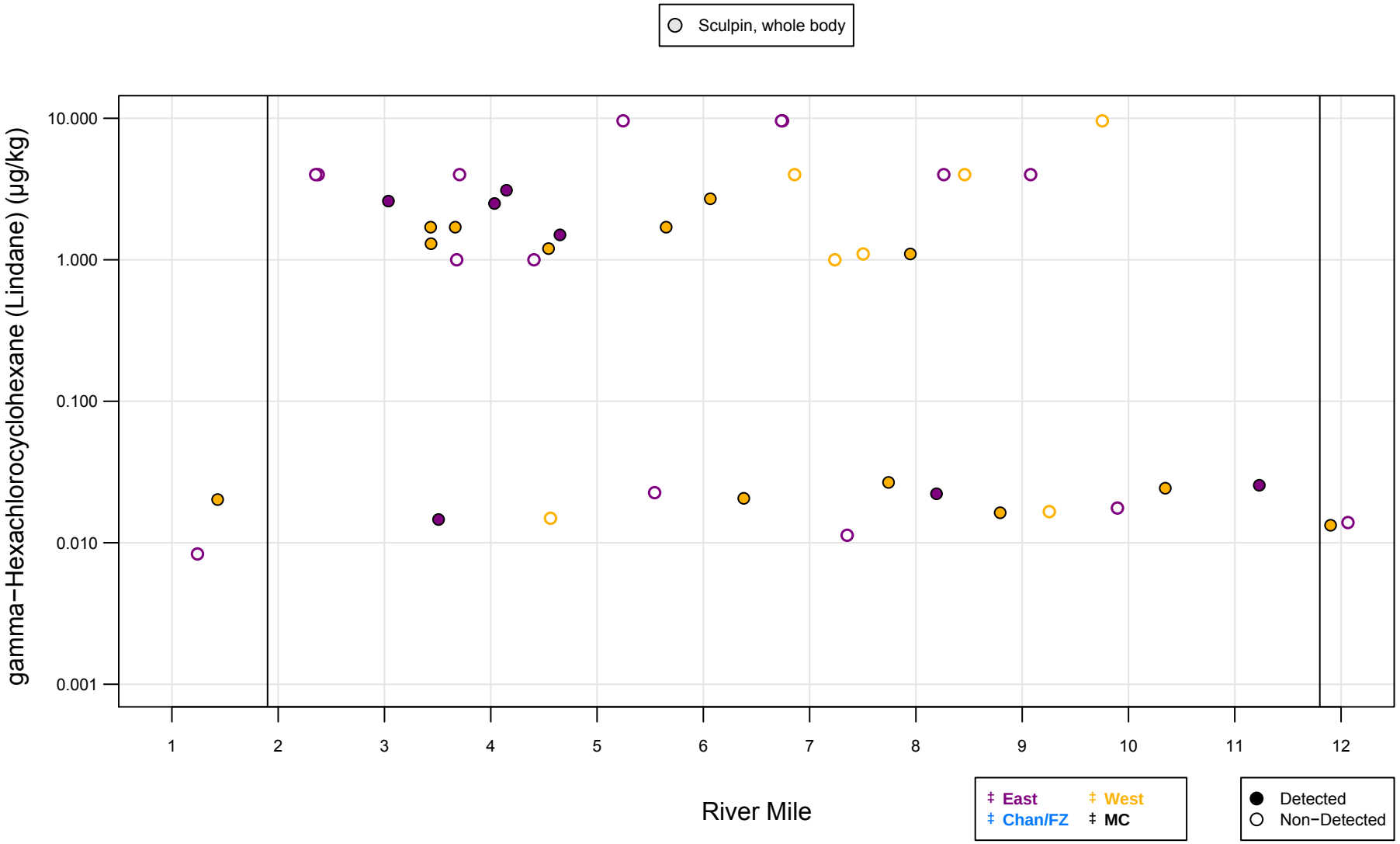



**Figure D5.2−15b**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of gamma−Hexachlorocyclohexane (Lindane) in
Tissue Samples by River Mile, RM 0.8−12.2

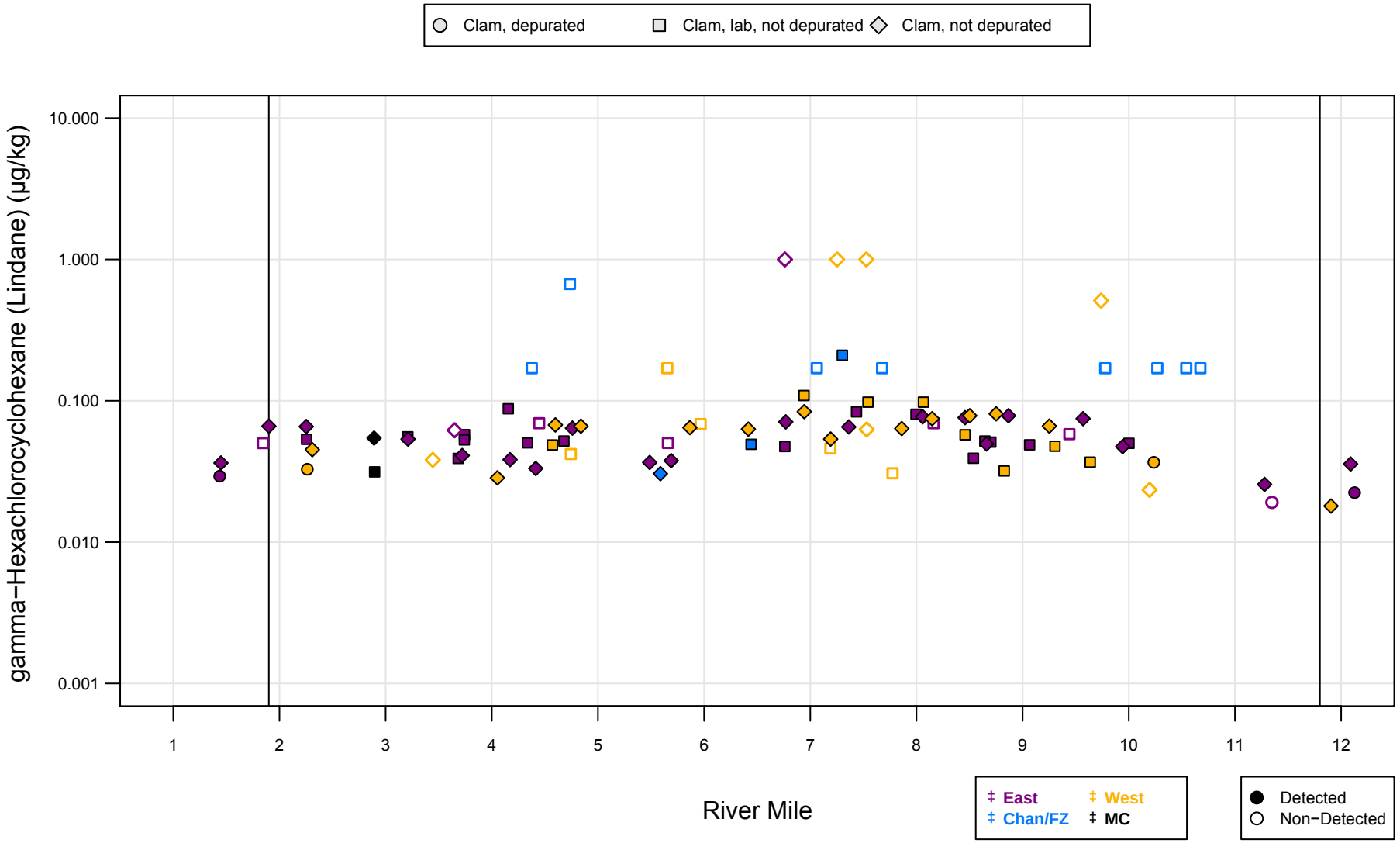



**Figure D5.2−15c**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of gamma−Hexachlorocyclohexane (Lindane) in
Tissue Samples by River Mile, RM 0.8−12.2

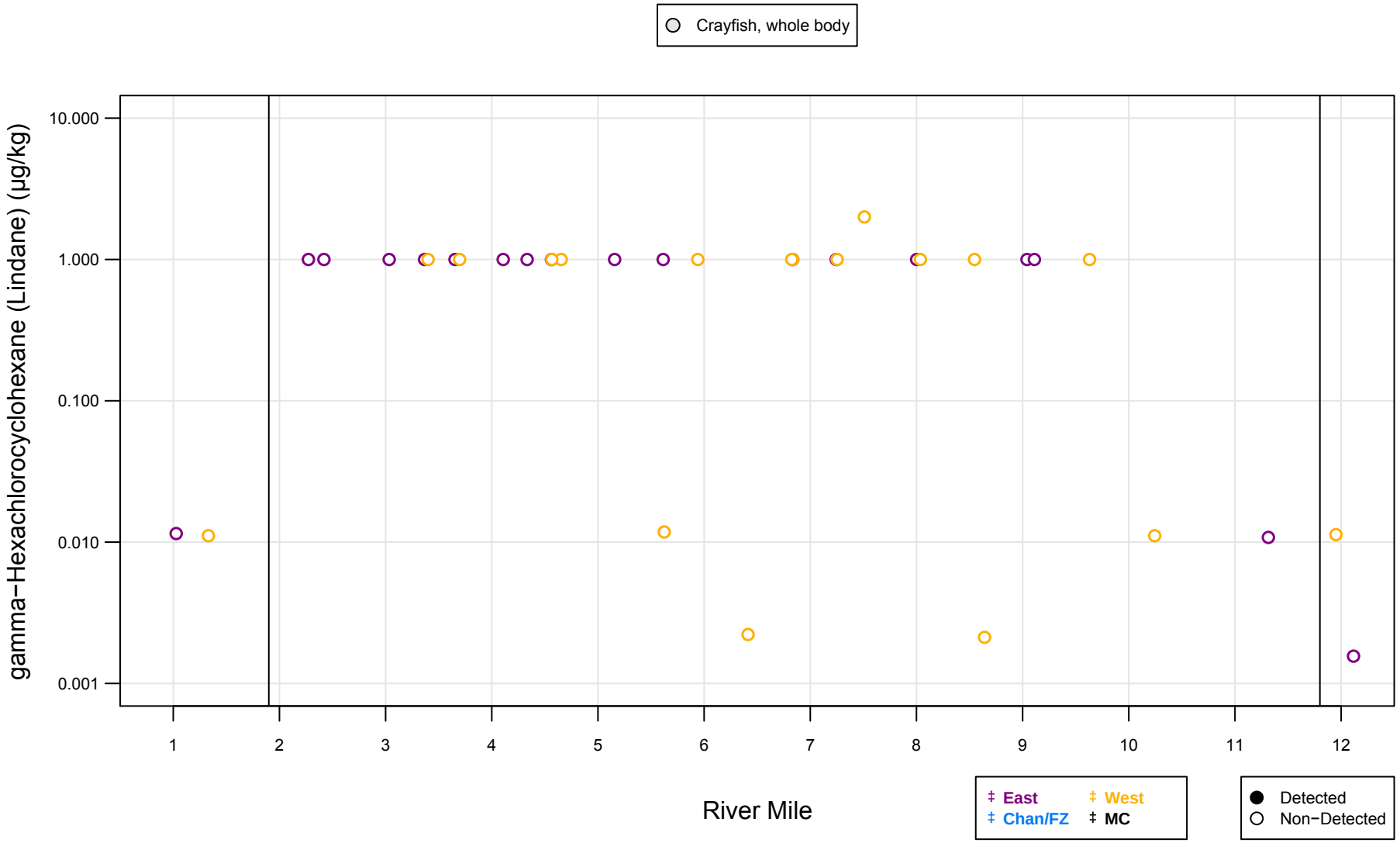



**Figure D5.2−15d**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of gamma−Hexachlorocyclohexane (Lindane) in
Tissue Samples by River Mile, RM 0.8−12.2

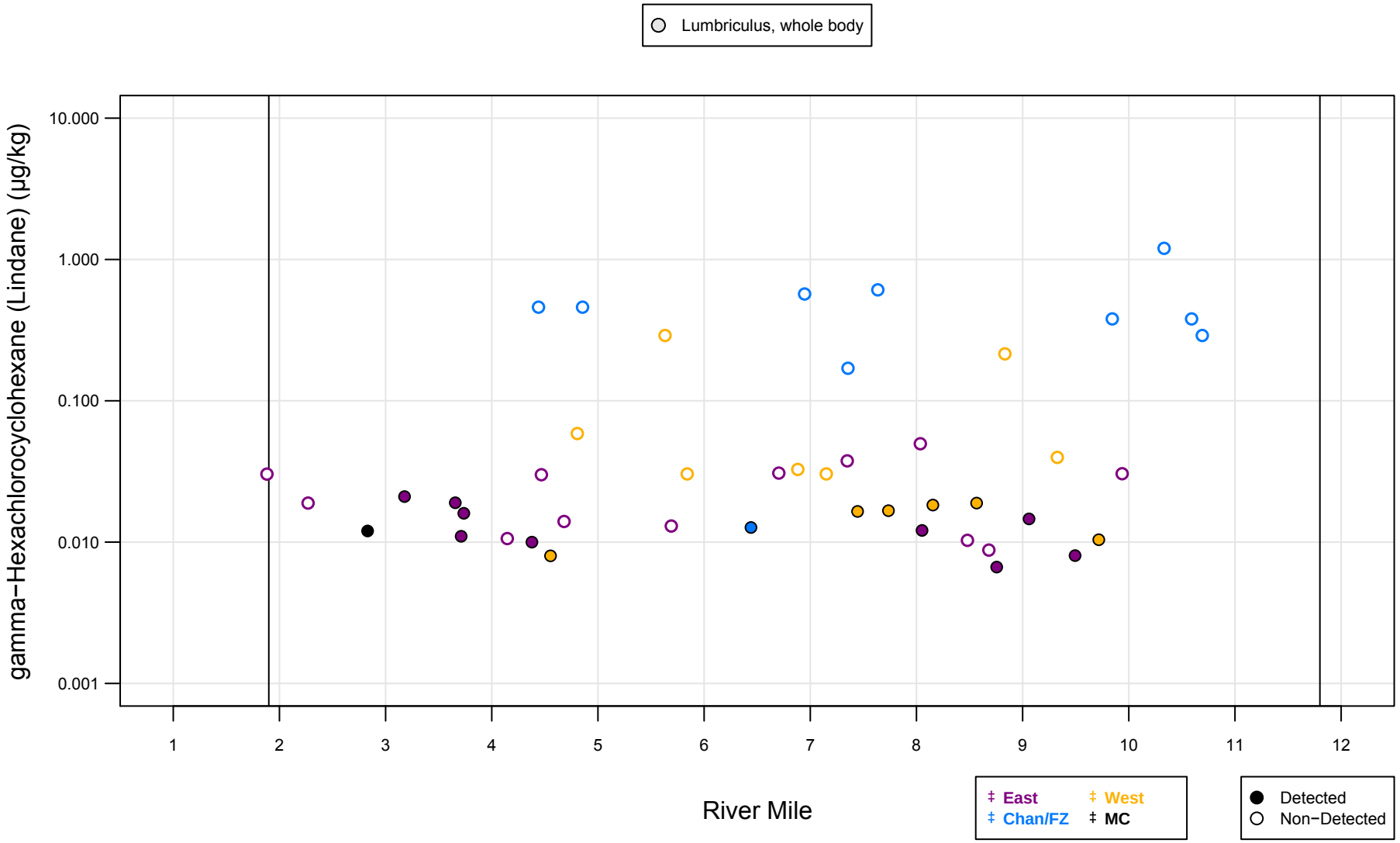



**Figure D5.2−15e**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of gamma−Hexachlorocyclohexane (Lindane) in
Tissue Samples by River Mile, RM 0.8−12.2

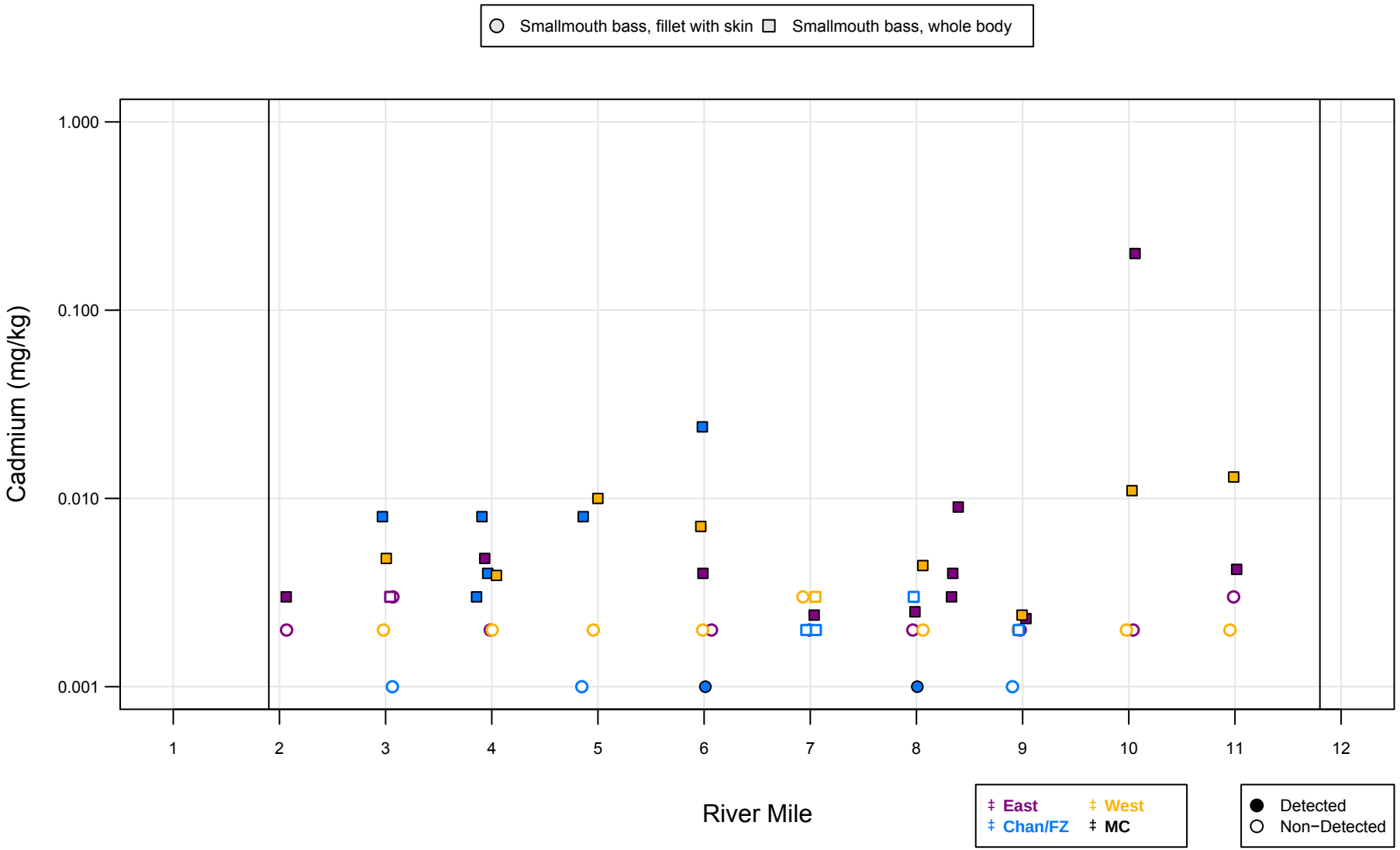



**Figure D5.2−16a**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Cadmium in
Tissue Samples by River Mile, RM 0.8−12.2

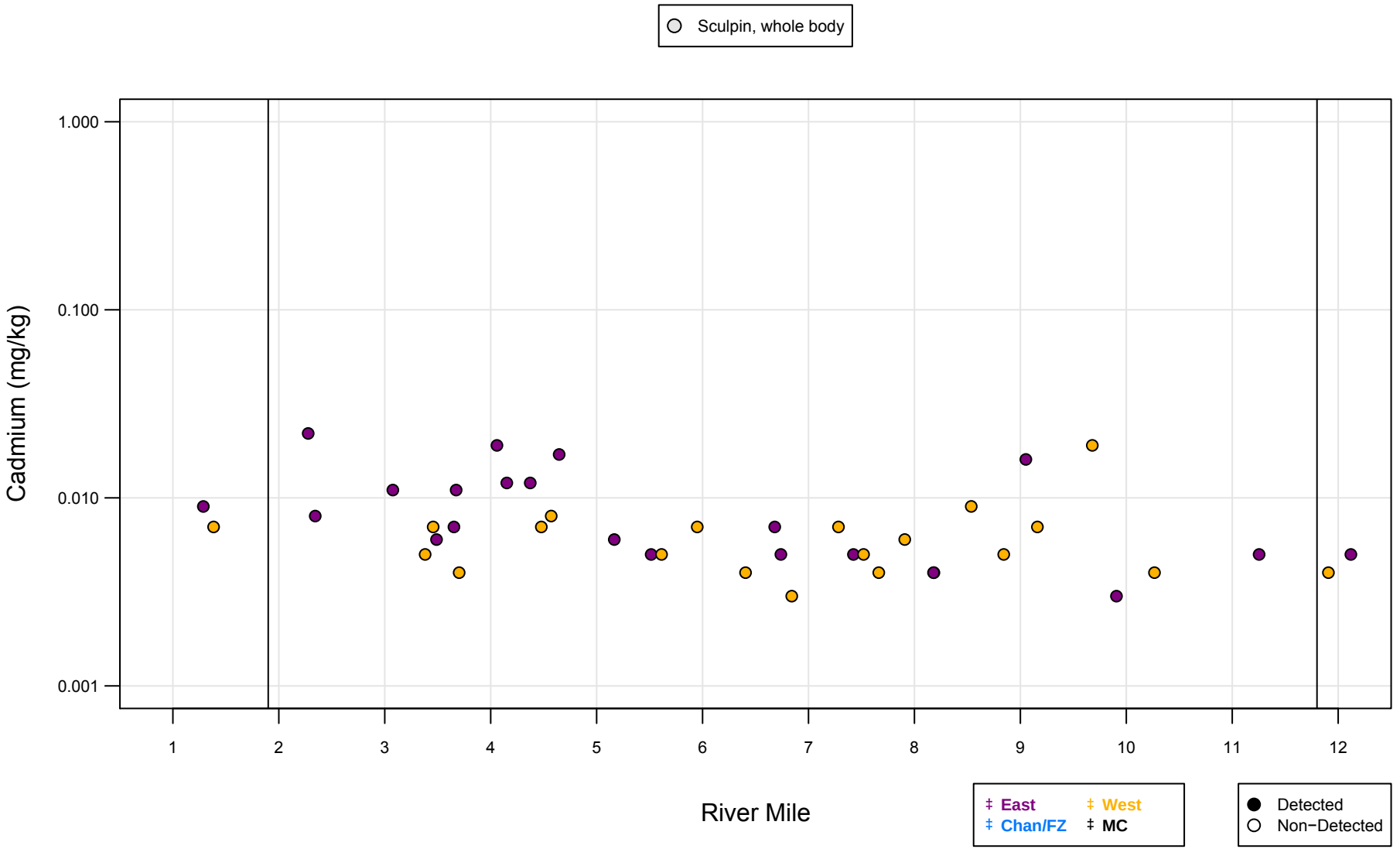



**Figure D5.2−16b**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Cadmium in
Tissue Samples by River Mile, RM 0.8−12.2

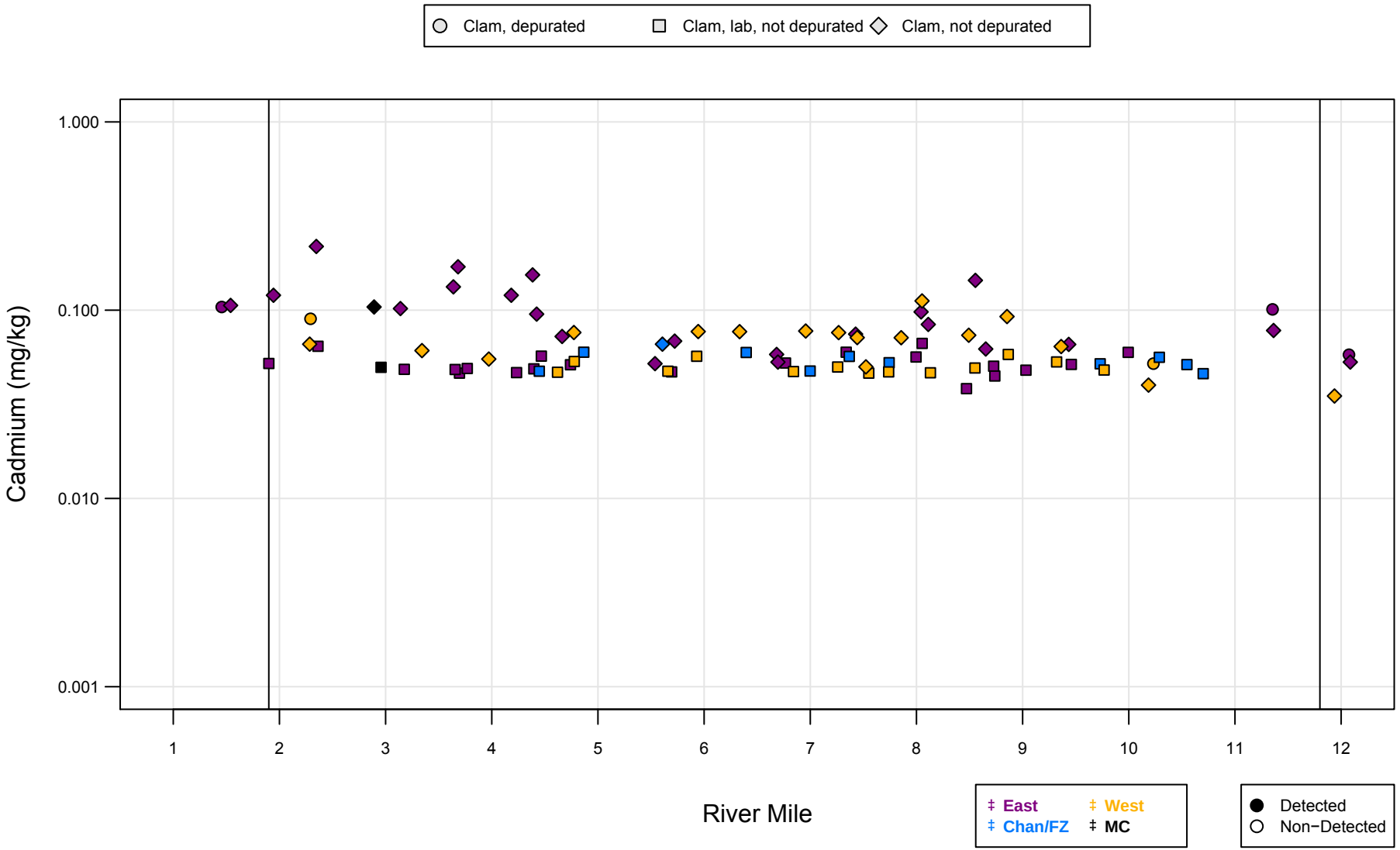



**Figure D5.2−16c**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Cadmium in
Tissue Samples by River Mile, RM 0.8−12.2

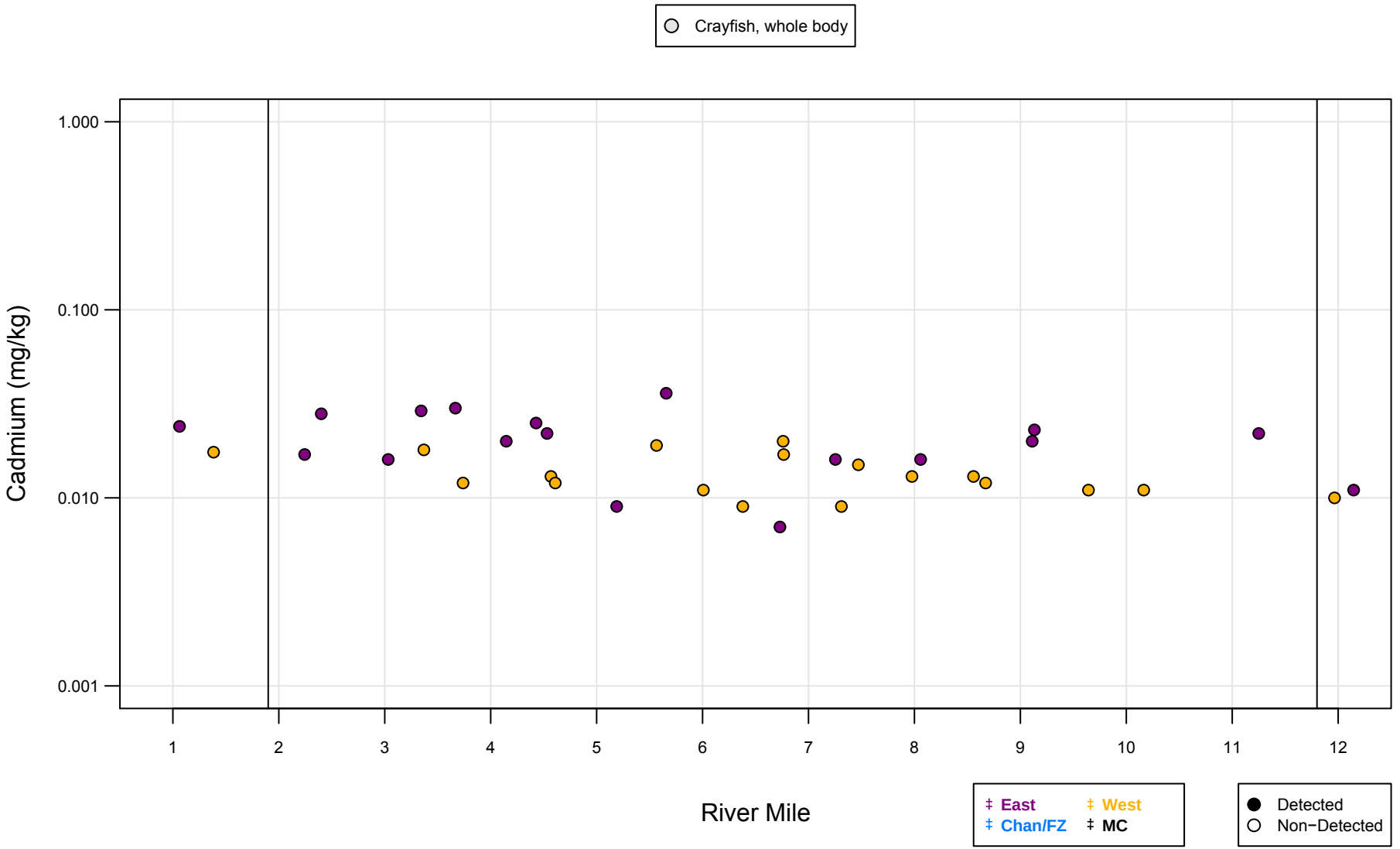



**Figure D5.2−16d**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Cadmium in
Tissue Samples by River Mile, RM 0.8−12.2

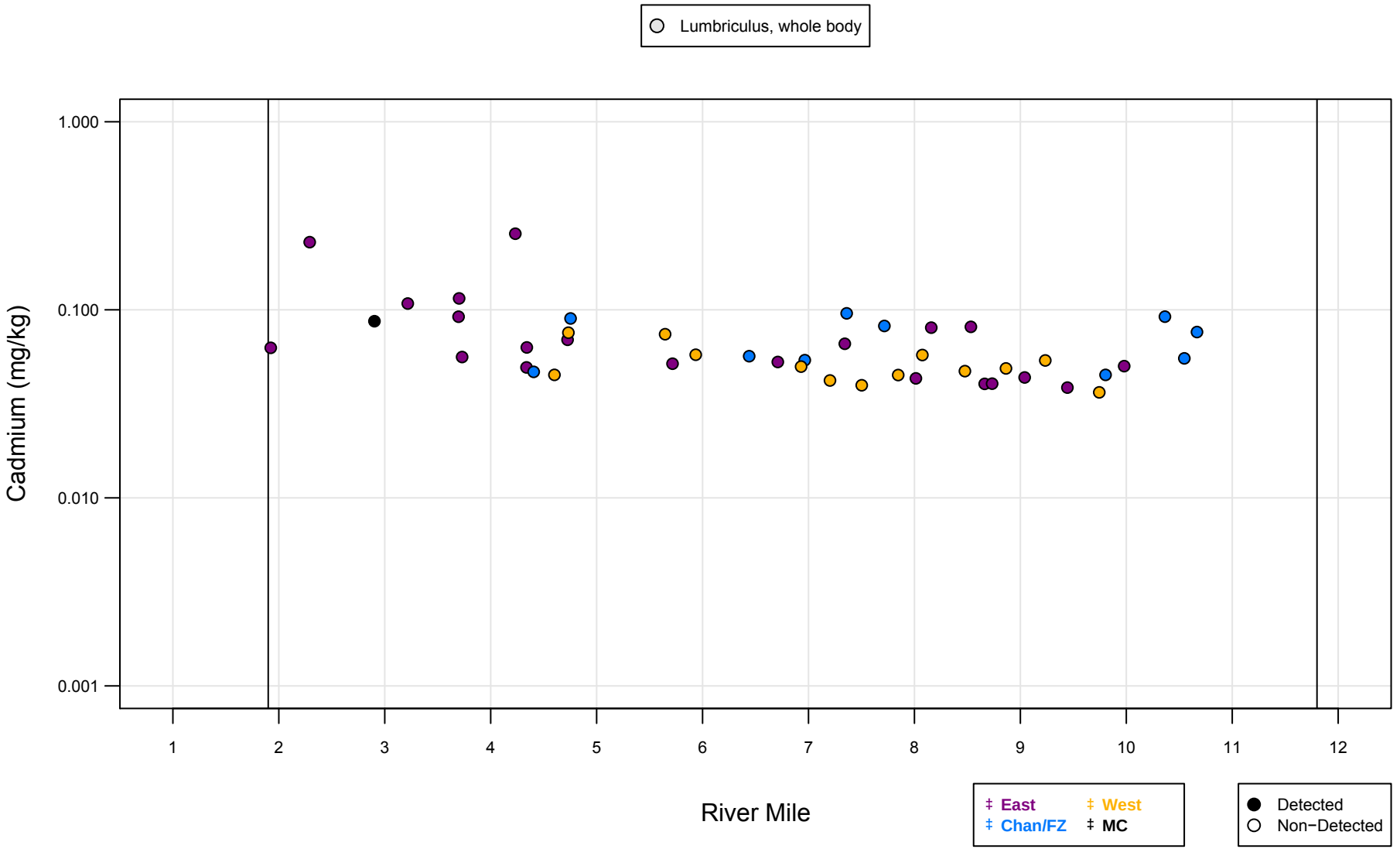



**Figure D5.2−16e**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Cadmium in
Tissue Samples by River Mile, RM 0.8−12.2

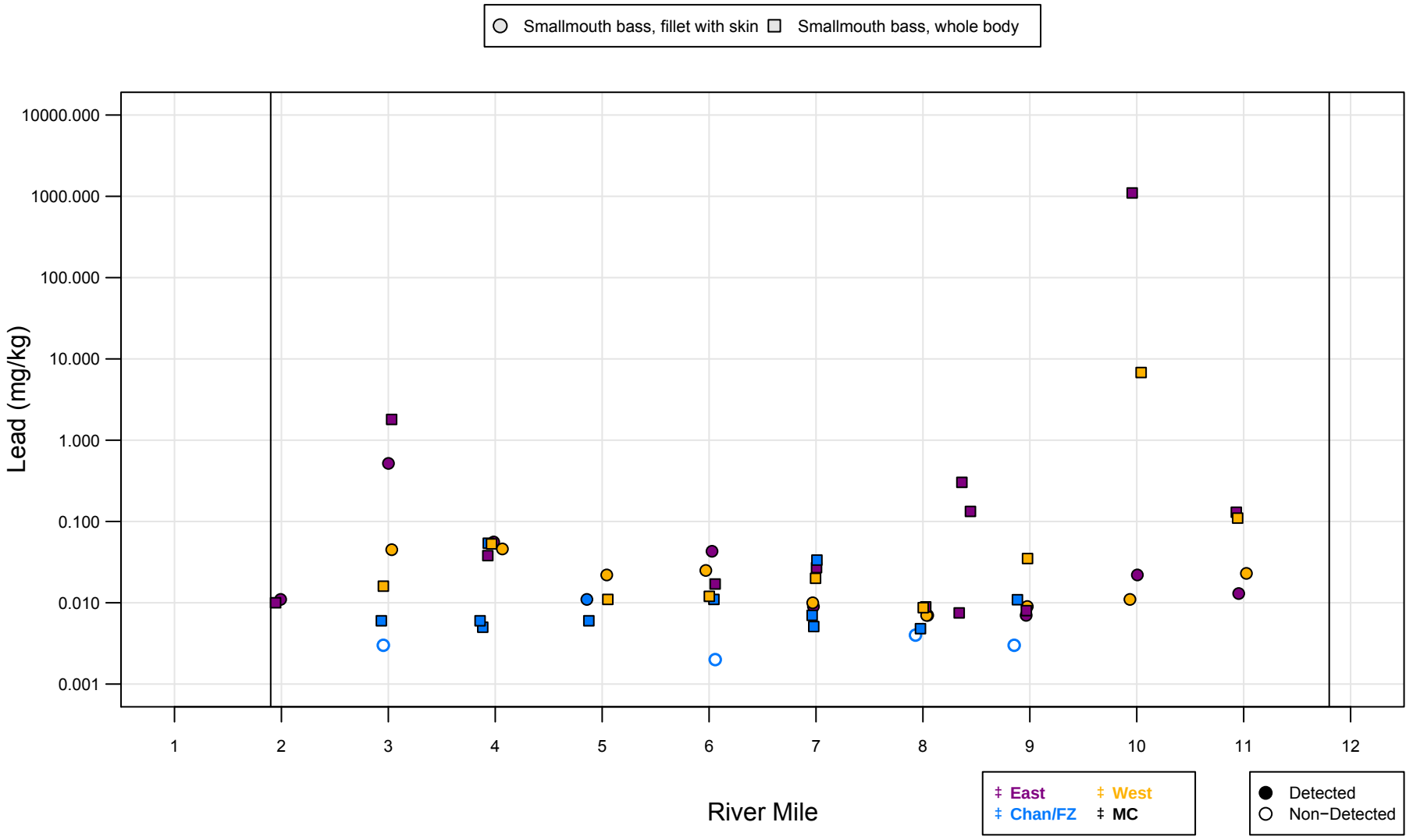



**Figure D5.2−17a**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Lead in
Tissue Samples by River Mile, RM 0.8−12.2

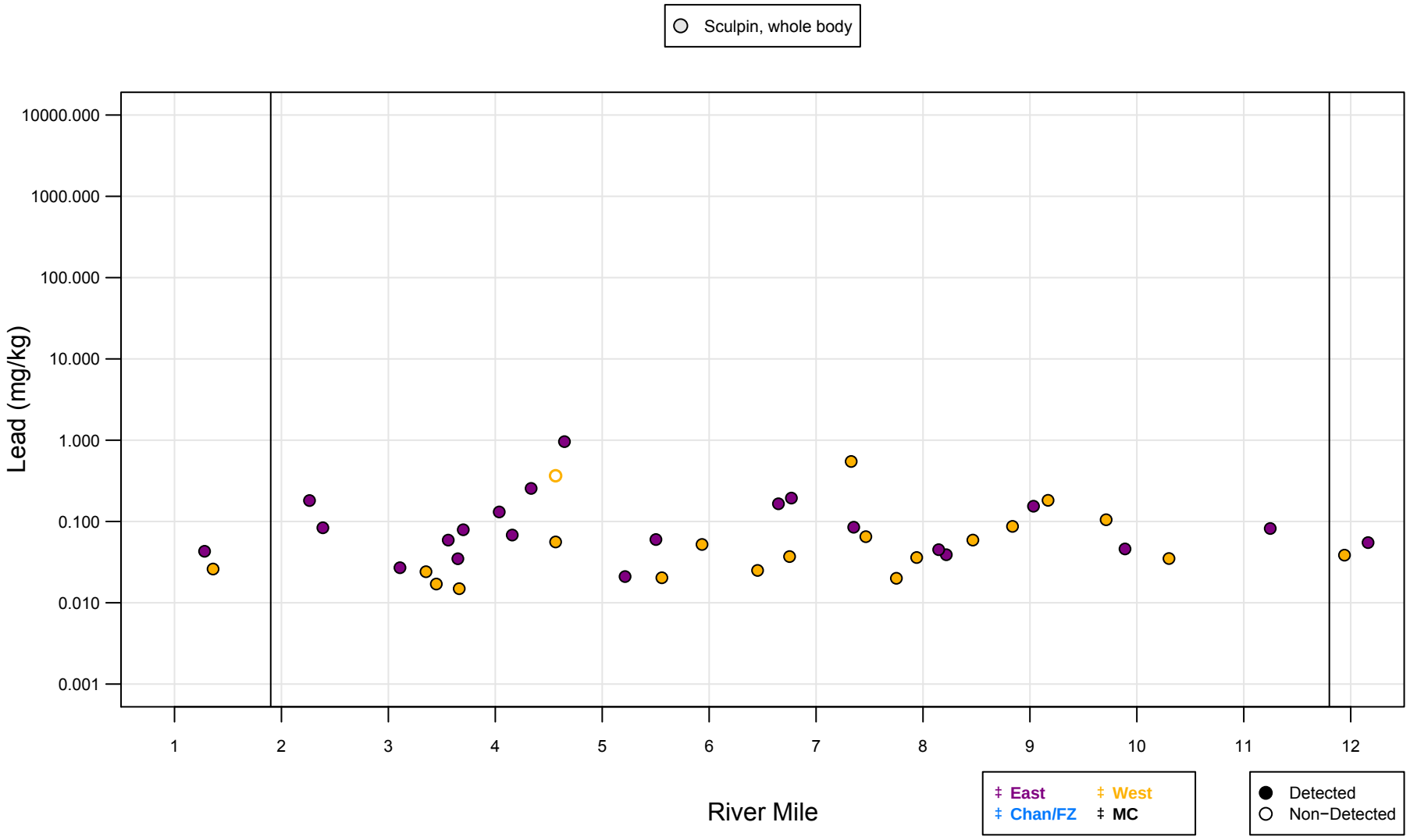



**Figure D5.2−17b**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Lead in
Tissue Samples by River Mile, RM 0.8−12.2

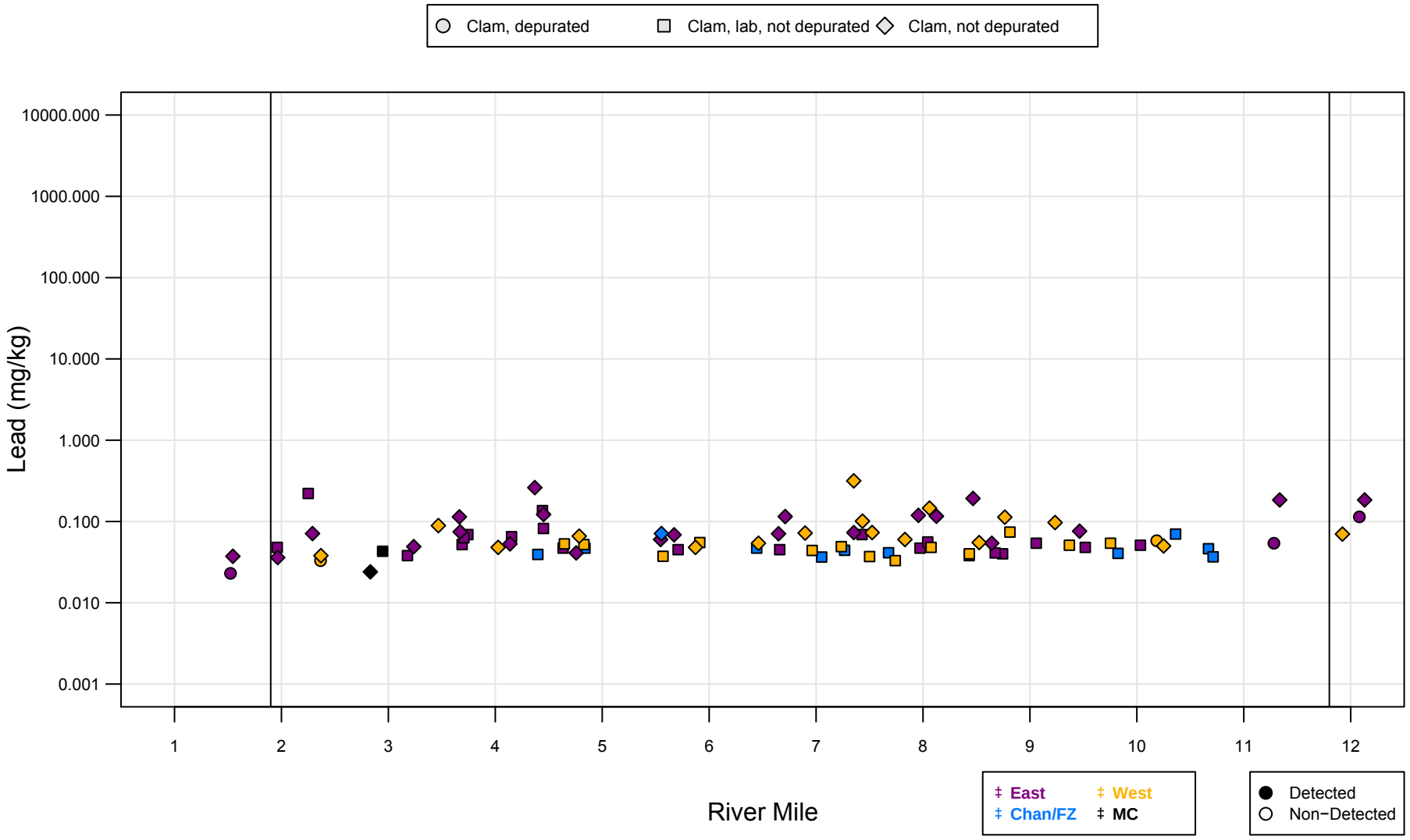



**Figure D5.2−17c**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Lead in
Tissue Samples by River Mile, RM 0.8−12.2

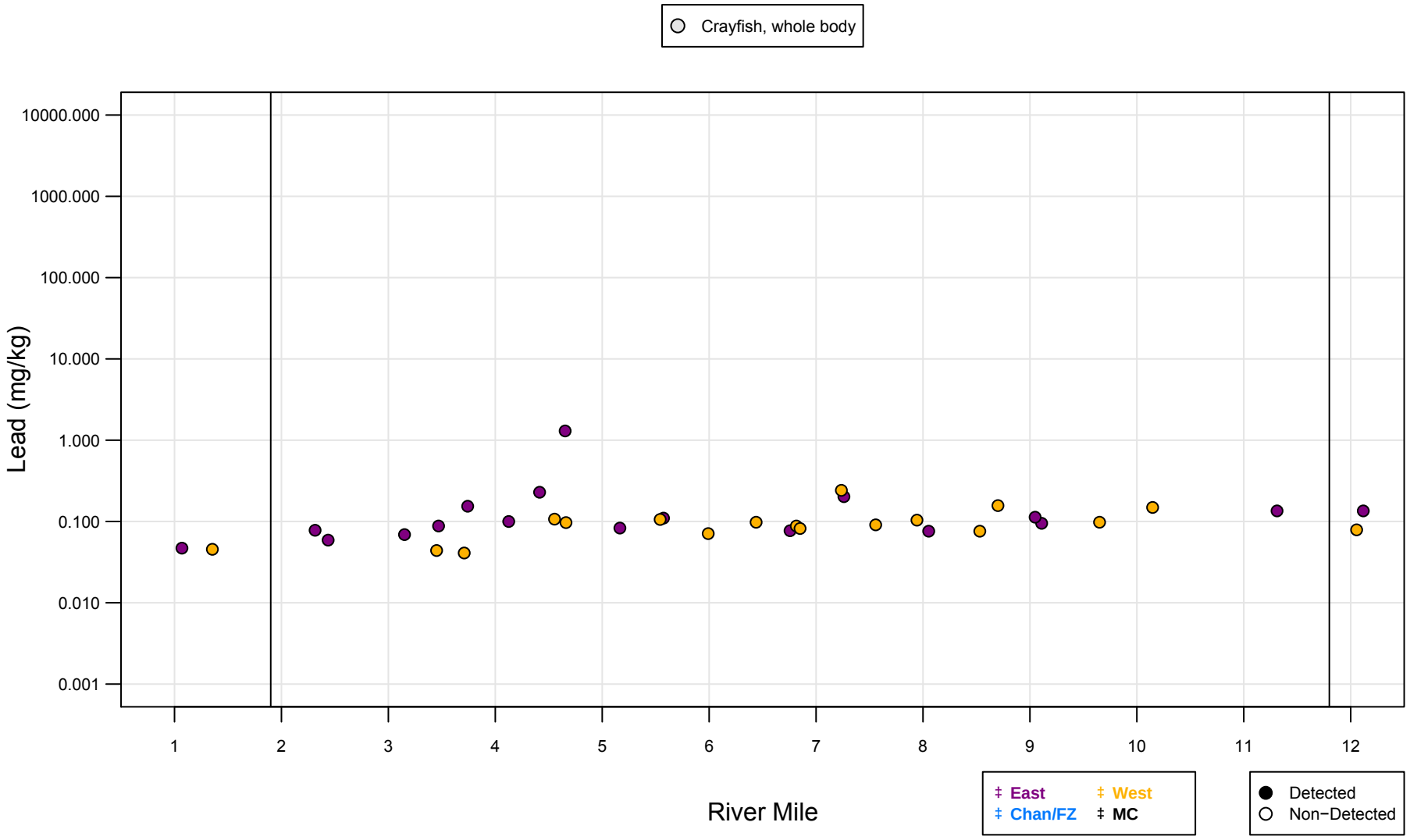



**Figure D5.2−17d**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Lead in
Tissue Samples by River Mile, RM 0.8−12.2

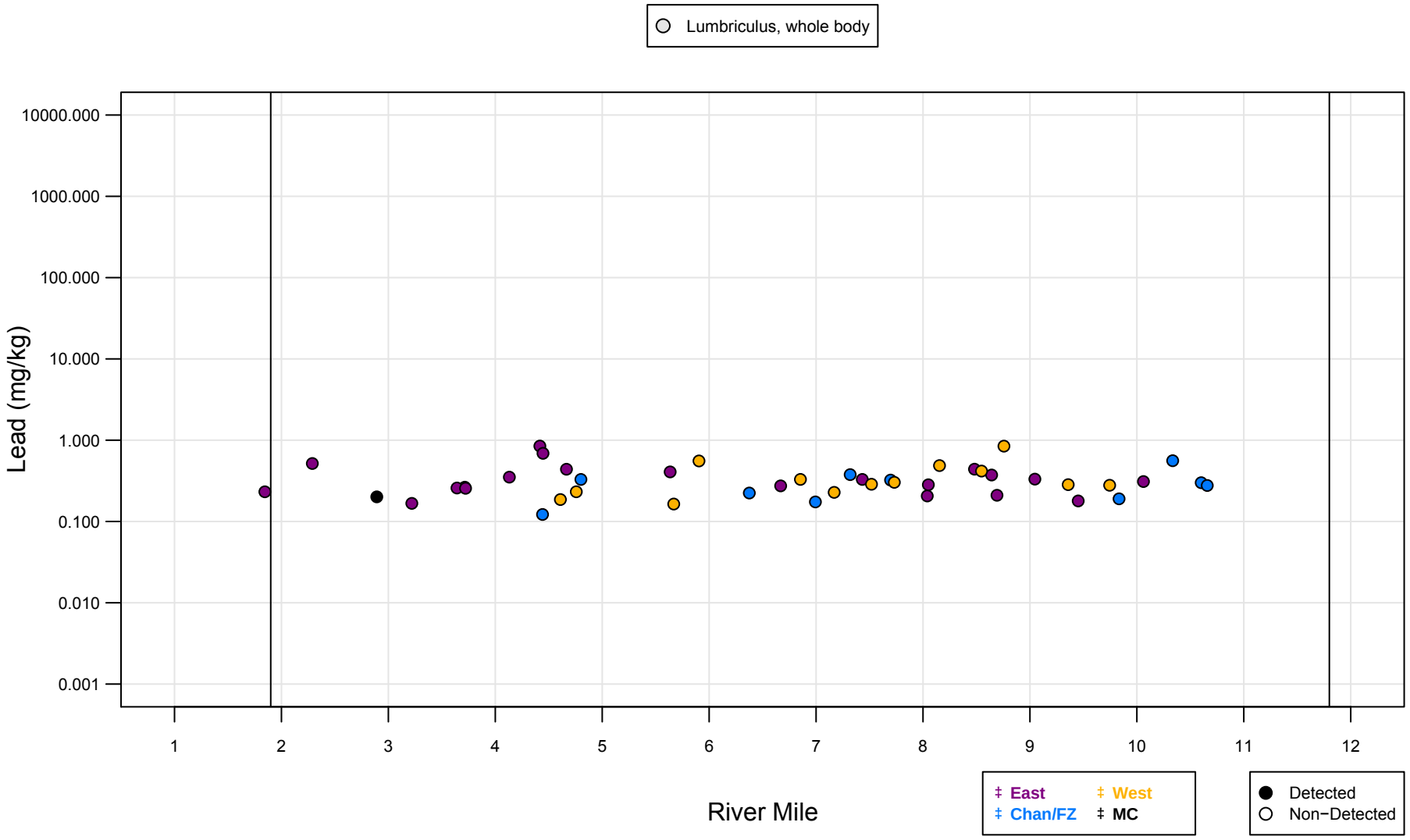



**Figure D5.2−17e**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Lead in
Tissue Samples by River Mile, RM 0.8−12.2

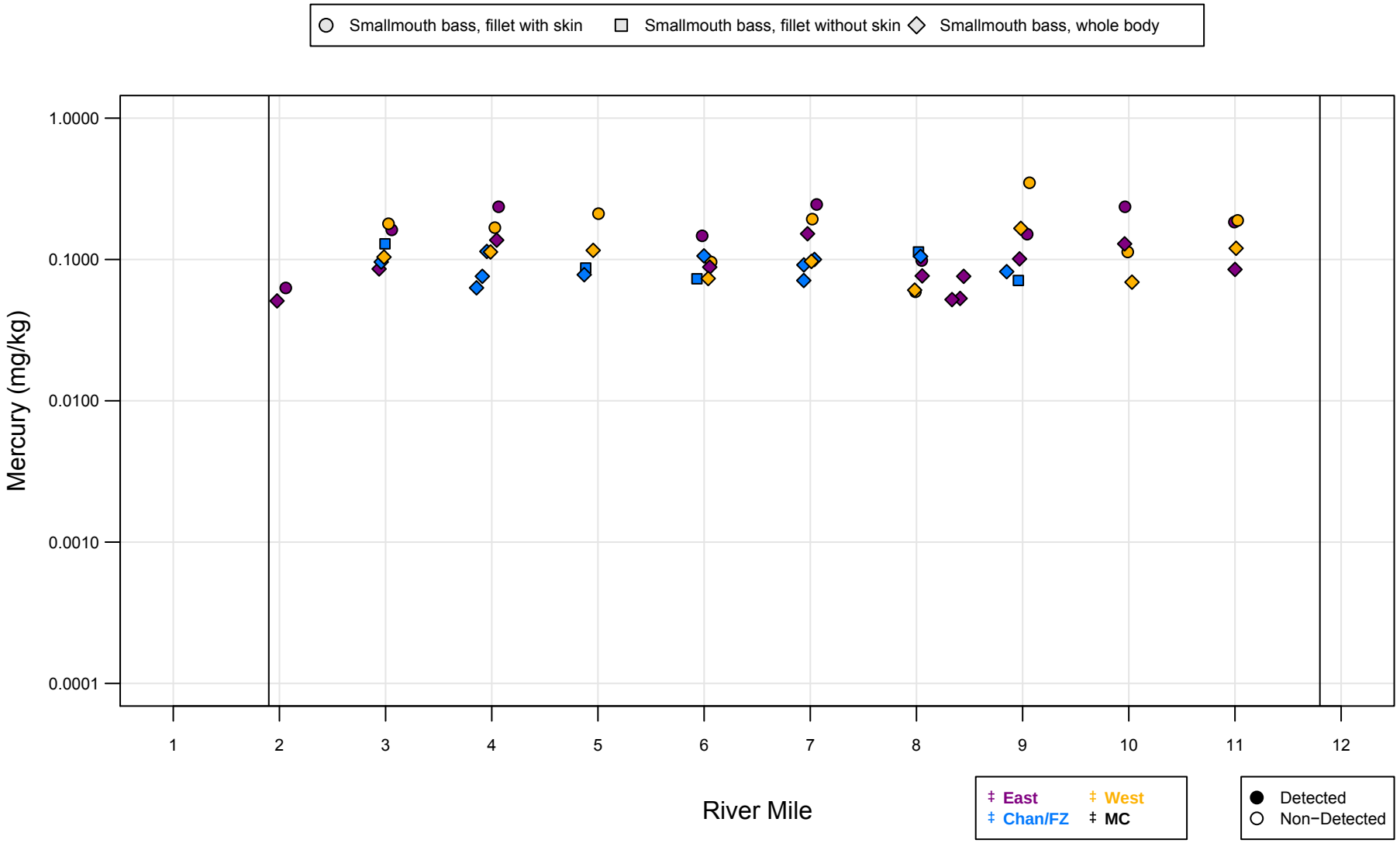



**Figure D5.2−18a**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Mercury in
Tissue Samples by River Mile, RM 0.8−12.2

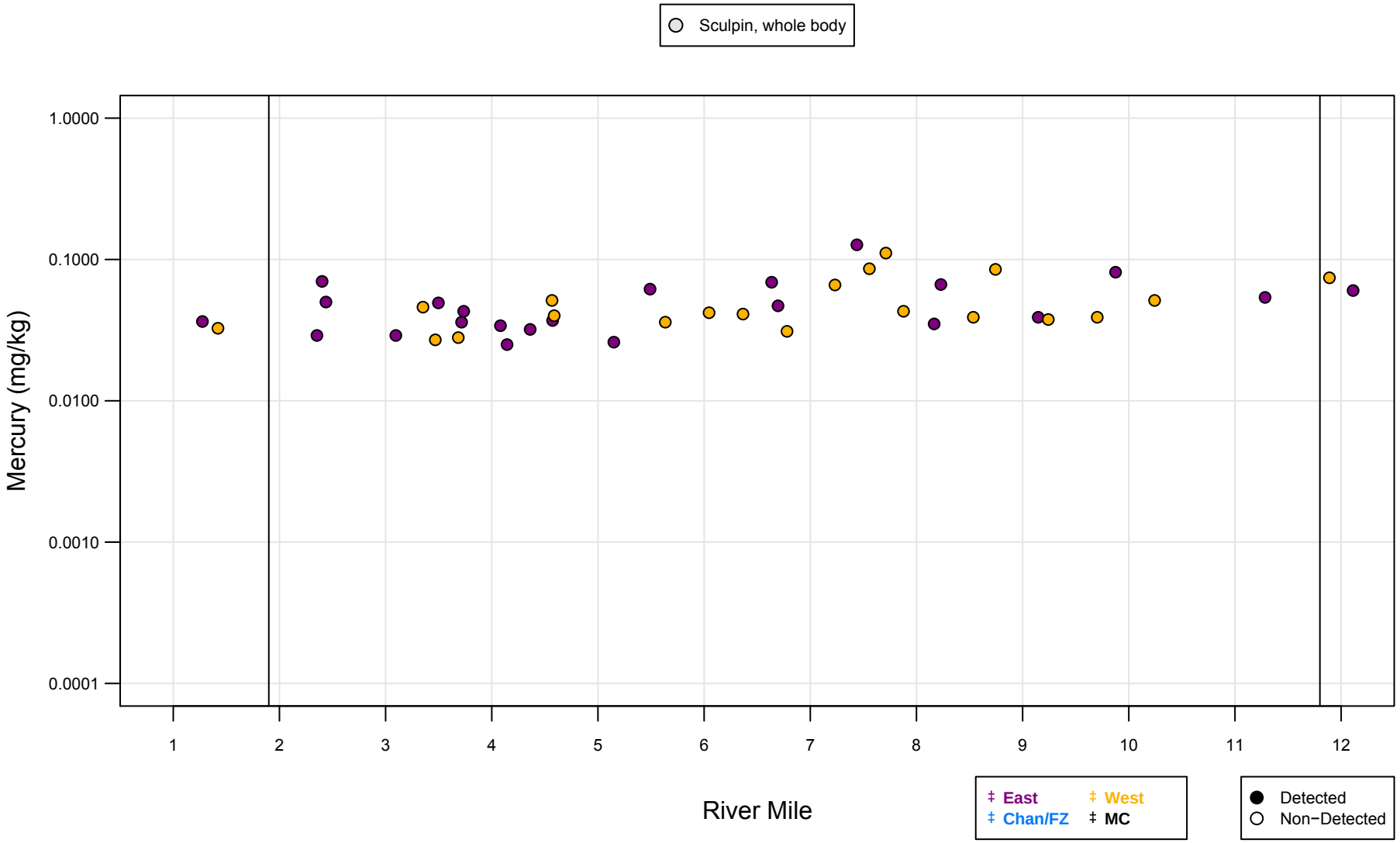



**Figure D5.2−18b**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Mercury in
Tissue Samples by River Mile, RM 0.8−12.2

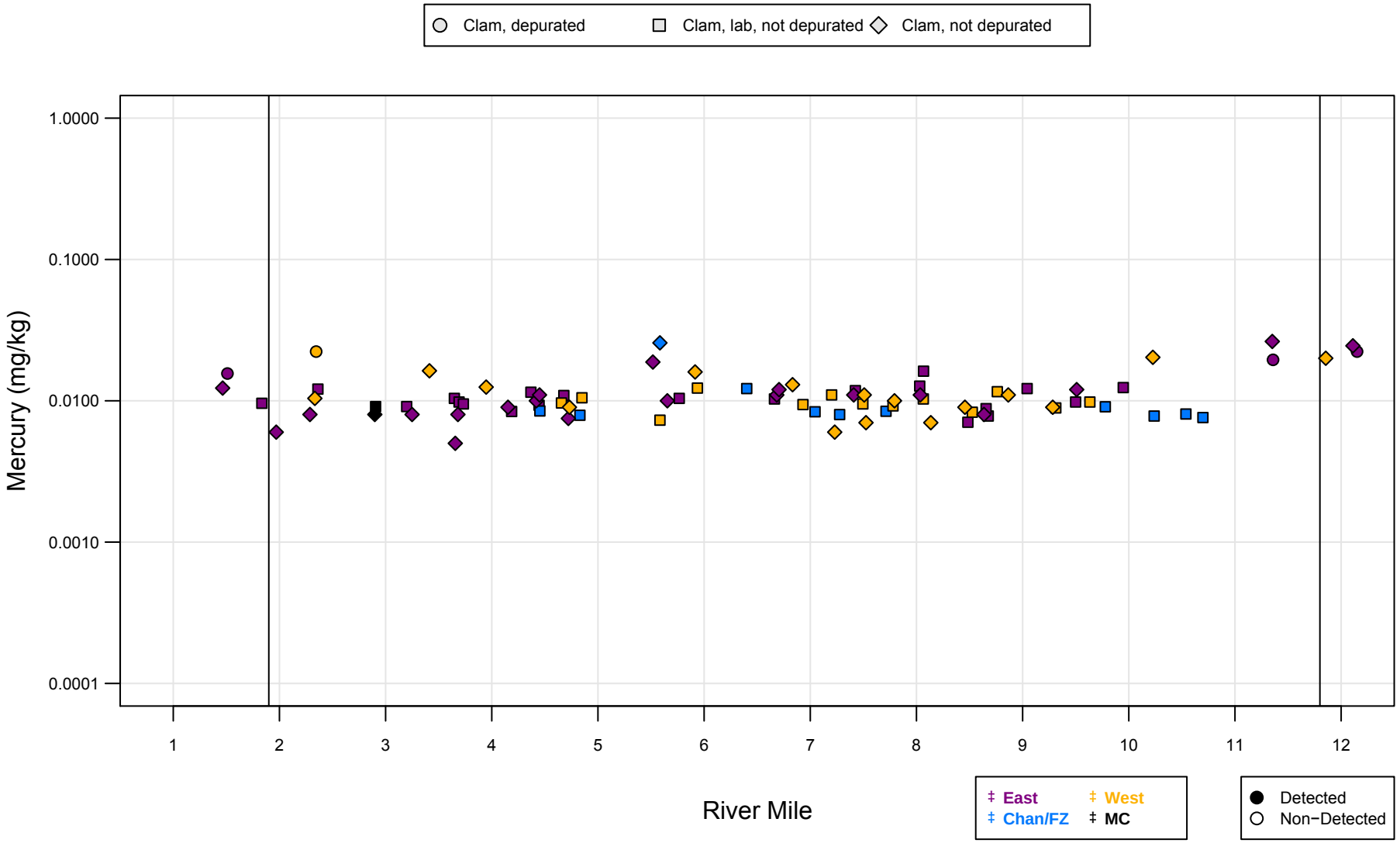



**Figure D5.2−18c**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Mercury in
Tissue Samples by River Mile, RM 0.8−12.2

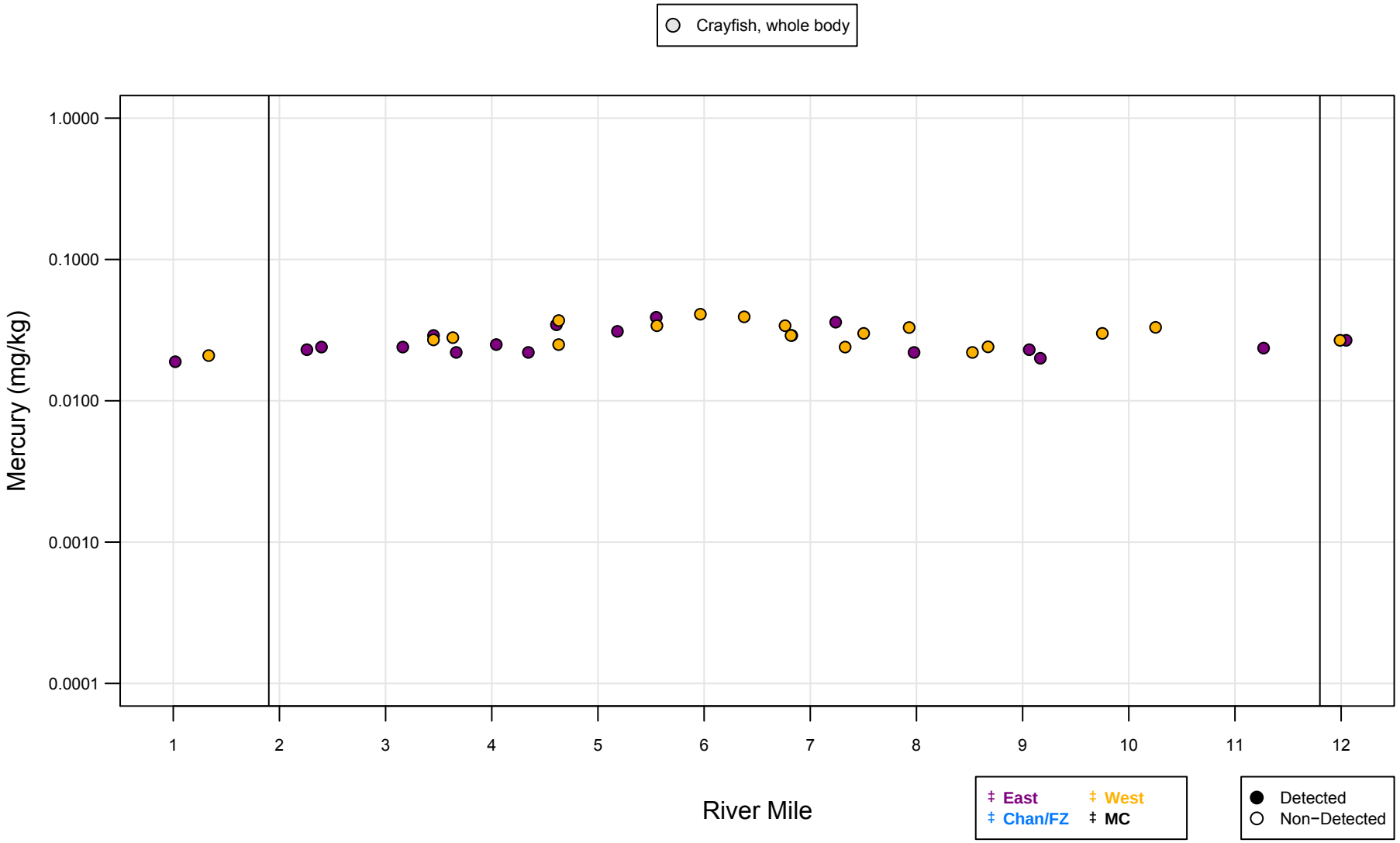



**Figure D5.2−18d**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Mercury in
Tissue Samples by River Mile, RM 0.8−12.2

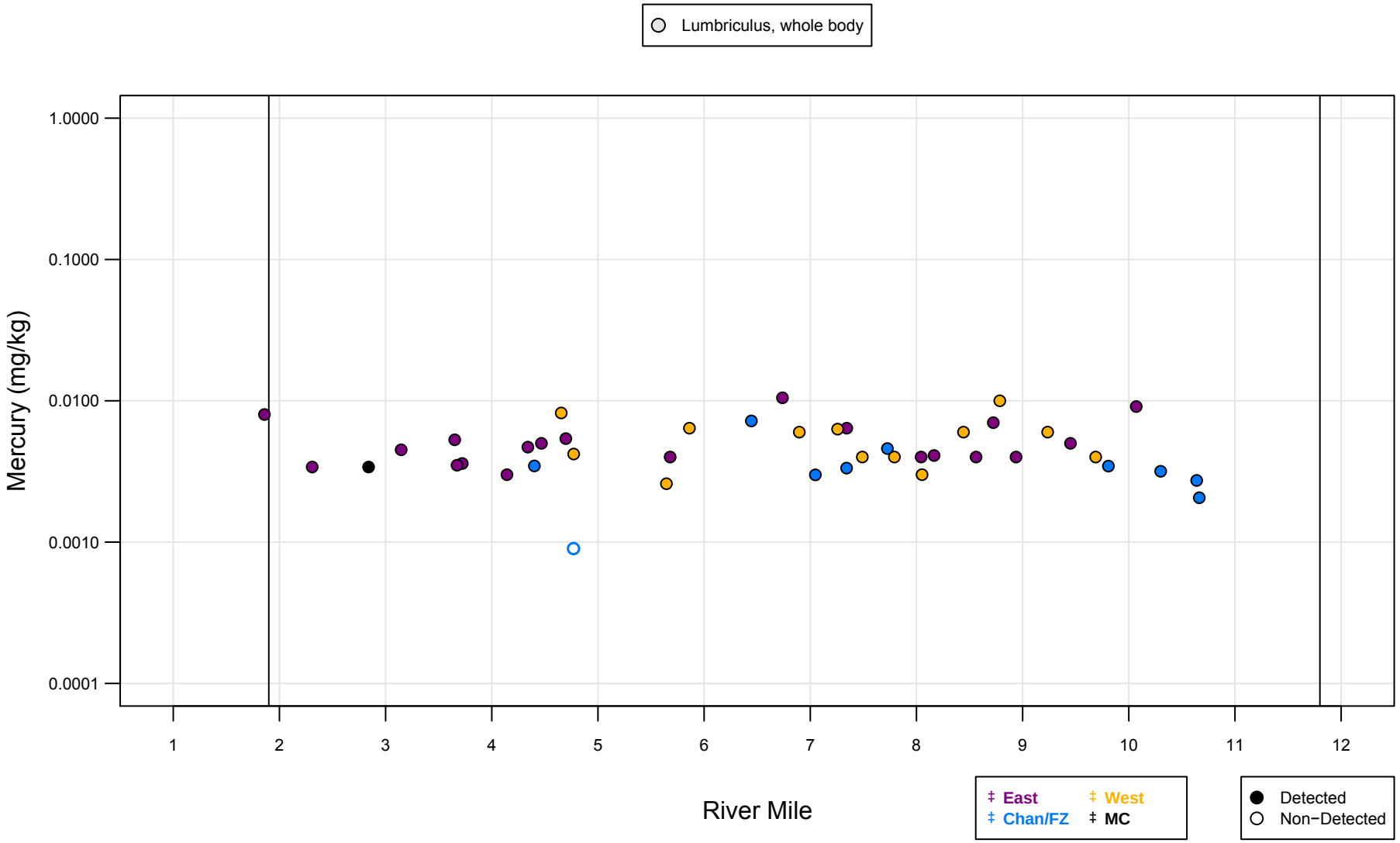



**Figure D5.2−18e**

Portland Harbor RI/FS
Remedial Investigation Report
Scatter Plot of Mercury in
Tissue Samples by River Mile, RM 0.8−12.2

PORTLAND HARBOR RI/FS

REMEDIAL INVESTIGATION REPORT

# APPENDIX D5.3
# PATTERNS AND TRENDS OF PCBS, PCDD/FS, DDX, AND PAHS IN BIOTA

February 8, 2016

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# APPENDIX D5.3 PATTERNS AND TRENDS OF PCBS, PCDD/FS, DDX, AND PAHS IN BIOTA

## D5.3.1 Introduction

This appendix provides additional details on the nature of polychlorinated biphenyls (PCBs), polychlorinated dibenzo-p-dioxins/furans (PCDD/Fs), DDx in biota by examining the patterns in their constituent chemicals. Stacked bar charts, designed to reveal potential distinctive patterns in the relative abundance of components (e.g., homologs, isomers), are used to examine the nature of contaminants in this appendix. Figures D5.3-1 through D5.3-7 show the distribution of PCB homologs, PCDD/F homologs, and individual components of DDx in each sample, and the distribution of PAHs in clam samples. The analyte components are shown in the stacked bars as a percent of the total concentration, while the total concentration of the indicator contaminant is displayed as a line on a logarithmic scale. Sample type and ID labels are provided on the x-axis, and river mile is indicated on the secondary x-axis along the top of the chart.

## D5.3.2 Patterns and Trends of PCBs in Biota

Fish assimilate and metabolize different PCB congeners at different rates; therefore, the PCB pattern in fish tissue may not closely resemble the pattern of the Aroclor that was released into the river or of the standard used by the laboratory to identify and quantify the PCBs in the sample. The limitations of the Aroclor analysis are described in Appendix D1.4. Because of the uncertainties related to Aroclor identification and because PCB congeners were analyzed in most of the tissue samples used for the Portland Harbor RI, PCB patterns in tissue are described only in terms of homologs.

PCBs were detected in all fish samples from the study area. Although PCB homolog composition varied throughout the river, tetrachlorobiphenyls (tetraCBs), pentachlorobiphenyls (pentaCBs), hexachlorobiphenyls (hexaCBs), and heptachlorobiphenyls (heptaCBs) were typically present in proportions greater than 10 percent (Figure D5.3-1). HexaCBs and heptaCBs were generally dominant in fish tissue samples from throughout the study area. Monochlorobiphenyls (monoCBs), dichlorobiphenyls (diCBs), and nonachlorobiphenyls (nonaCBs) were very rare, while trichlorobiphenyls (triCBs) and octachlorobiphenyls (octaCBs) were rare in comparison to the other homologs. For many fish species, more highly chlorinated PCB homologs appear to be seen more frequently in the upper reaches of the study area than in the lower third.

PCBs were detected in all invertebrate samples from the study area that were analyzed for PCB congeners. PCBs were not detected in 10 crayfish tissue composites that were only analyzed for Aroclors, which have a higher detection limit than PCB congeners. Among PCB homologs in invertebrate samples, tetraCBs, pentaCBs, hexaCBs, and heptaCBs were most abundant overall, appearing similar to the fish tissue samples (Figure D5.3-2). Laboratory-exposed clams were distinctive in appearing to contain a relatively large fraction of diCBs, which were present in relatively lower percentages in

field-collected clams from the same locations, with the exception of location FC027 Rep 1 (RM 8.7E). PCB patterns in crayfish varied widely. In particular, the PCB pattern in crayfish sample 06R031 (RM 6.8E) is notable for its high percentage of monoCBs and diCBs and relatively low content of triCBs, tetraCBs, and pentaCBs. The PCB pattern in clams and worms exposed at the laboratory to sediments from three locations (BT002 at RM 2.3E, BT017 at RM 6.9W, and BT028 at RM 8.8W) appeared to contain distinctly higher levels of tetraCBs and lower levels of hexaCBs and heptaCBs than the remaining samples. This pattern was reflected only slightly in field-collected clam samples from these locations.

As in the study area, PCB congeners in fish samples from the upriver reach and above-falls locations included predominantly tetraCBs, pentaCBs, hexaCBs, and heptaCBs. Chlorination levels were lower for juvenile Chinook and juvenile lamprey than for brown bullhead and smallmouth bass: juvenile Chinook and juvenile lamprey contained higher proportions of triCBs and tetraCBs, whereas brown bullhead and smallmouth bass contained more heptaCBs and octaCBs. Upstream invertebrate samples returned few detected congener results; therefore, the patterns in these samples were not examined.

### D5.3.3 Patterns and Trends of Total PCDD/F Homologs and TCDD TEQ in Biota

PCDD/Fs were detected in all fish tissue samples from the study area. The homolog distribution in fish tissues was quite variable, with differences evident between species as well as between locations and tissue types within species (Figure D5.3-3). In carp, juvenile lamprey, and sculpin tissues with total PCDD/Fs concentrations above 50 pg/g, octachlorodibenzo-p-dioxin (OCDD) tended to dominate many of the samples, with secondary dominance shown variously by hexachlorodibenzo-p-dioxins (HxCDDs), heptachlorodibenzo-p-dioxins (HpCDDs), tetrachlorodibenzofurans (TCDFs), pentachlorodibenzofurans (PeCDFs), and hexachlorodibenzofurans (HxCDFs). In smallmouth bass samples with total PCDD/Fs concentrations above 50 pg/g, PCDD/F patterns were dominated by PeCDFs and TCDFs. Overall, smallmouth bass were notable for the apparent dominance of TCDFs and PeCDFs and relatively low levels of HpCDDs and OCDD at many locations compared to other fish species from the study area. Round 3 sturgeon, which were individual whole-body samples, were dominated by TCDFs. The PCDD/F patterns for sturgeon samples from the ODHS/USEPA/ATSDR Fish Contaminant Study (ODHS, EPA, and ASTDR 2003), which were fillet samples, appear distinctly different from Round 3 whole-body sturgeon.

As in the study area, dioxin and furan homolog patterns varied among species, locations and individual samples in fish tissue from upstream areas. For example, TCDFs dominated the PCDD/F pattern for juvenile lamprey from above the falls, whereas OCDD was the predominant homolog for juvenile lamprey from the upriver reach area (below the falls); OCDD was also clearly the dominant homolog in juvenile Chinook. Smallmouth bass contained a high proportion of PeCDF in many cases, whereas HxCDD was the most abundant homolog in two of the three brown bullhead samples. One brown bullhead sample was notable for its large proportion of TCDD (30 percent of total PCDD/Fs as the sum of

homologs); this homolog did not account for more than 10 percent of the PCDD/Fs in any other sample from the upriver reach or above the falls. Additional differences were noted among samples from the same species and similar locations.

PCDD/Fs were detected in all invertebrate tissue samples from the study area. The PCDD/F homolog distribution was more consistent across invertebrate species than fish tissue species in that OCDD was often the most abundant homolog, usually followed by TCDFs and HpCDDs. Pentachlorodibenzo-p-dioxins (PeCDDs), HxCDDs, heptachlorodibenzofurans (HpCDFs), and OCDF tended to be the least abundant homolog groups (Figure D5.3-4). Distinct homolog patterns seemed to be present in many samples that contained higher total PCDD/Fs concentrations than typically found for each invertebrate sample type. Distinct signatures were seen in every species and in several locations. For example, various invertebrate samples collected from the vicinity of RM 7W exhibited a visually distinct PCDD/F pattern, including field-collected and laboratory-exposed clam and worm samples from BT017 and BT018 and crayfish from location 07R006. TCDFs were the most abundant group in these samples, followed by PeCDFs. Among epibenthic samples, MIT003/005/006 (multiplate samples from RM 6.5–7.4) appeared to have an unusual pattern, with TCDFs most abundant, followed by OCDD. The PCDD/F pattern in crayfish from location 08R003 (RM 8W, near the mouth of Swan Island Lagoon) was also unusual, with PeCDFs dominant, followed by OCDD and TCDFs. Additional distinct patterns were found in various samples from other locations (Figure D5.3-4). PCDD/F analyses were not conducted on the invertebrate samples from outside of the study area.

### D5.3.4 Patterns and Trends of DDx Compounds in Biota

DDx compounds were detected in all fish tissue samples from the study area. 4,4´-DDE accounted for more that 50 percent of the DDx concentration in fish tissues, with some exceptions (Figure D5.3-5). DDDs constituted 25 percent or more of the DDx in various samples of sculpin, carp, largescale sucker, juvenile Chinook, juvenile lamprey, and smallmouth bass, particularly in fishing areas from RM 3 to 9. In many of the sculpin samples and in juvenile Chinook samples from T01 (RM 3.4E) and T03 (RM 9.7W), 4,4´-DDT dominated; and in juvenile Chinook samples from T02 (RM 6.9W), 4,4’-DDD dominated the three whole-body composite samples.

In fish upstream of the study area, the most abundant isomer in all tissues was 4,4´-DDE, which accounted for at least 50 percent and up to 85 percent of DDx. Typically 4,4´-DDT was the next most abundant; all other DDx compounds were also present at varying levels.

DDx compounds were detected in all invertebrate tissue samples from the study area. In general, 4,4´-DDD and 4,4´-DDE were the dominant isomers in invertebrate tissues (Figure D5.3-6). Crayfish DDx profiles were dominated by 4,4´-DDE or various other DDx compounds, depending on location. Laboratory-exposed clam samples from the U.S. Army Corps of Engineers investigation (Tetra Tech 2006) also had a high percentage of 4,4´-DDT; however, the 2,4´-isomers of the DDx compounds were generally not detected in

these samples, resulting in the absence of data for 2,4´-DDD and a shift in the apparent DDx pattern.

Three invertebrate samples (one of juvenile Chinook stomach content, one of laboratory-exposed worm tissue, and one of laboratory-exposed clam tissue) from the upriver reaches were analyzed for DDx isomers. In the stomach content sample, the most abundant isomer was 4,4´-DDE, which contributed over 80 percent to the DDx concentration. In worms, 4,4´-DDE and 2,4´-DDT were the two most abundant isomers; in the laboratory-exposed clams, 4,4´-DDE, 4,4´-DDT, and 2,4´-DDT were most abundant.

### D5.3.5 Patterns and Trends of PAHs in Clam Tissue

PAH patterns were examined only in clam tissue associated with sediment from the study area. PAHs were detected in all clam tissue samples collected.

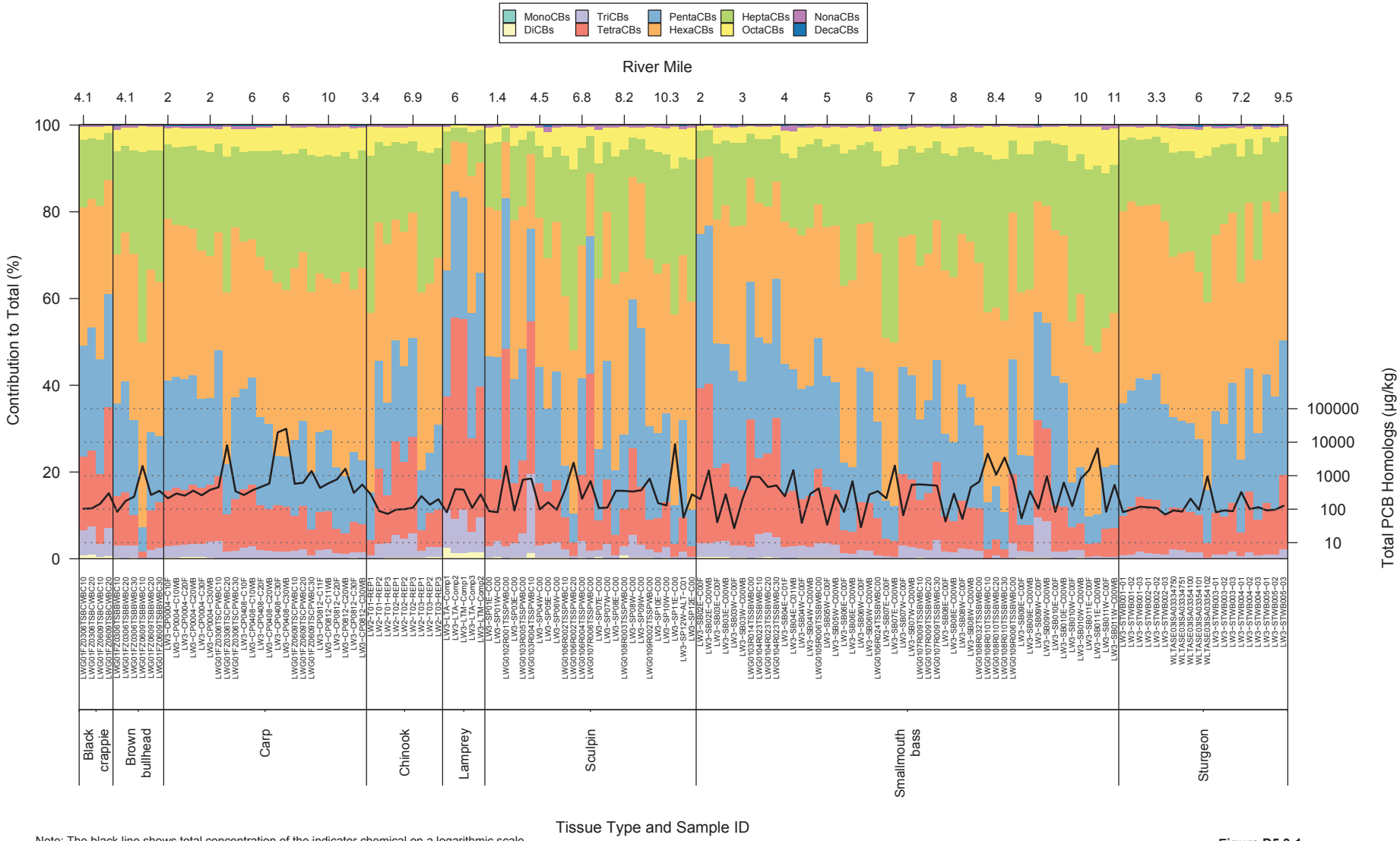
Clam tissue from the study area generally contained relatively higher proportions of phenanthrene, fluoranthene, pyrene, and chrysene, with lesser proportions of benzo(a)anthracene. Low-molecular-weight polycyclic aromatic hydrocarbons (LPAHs) other than phenanthrene and the five- and six-ring high-molecular-weight polycyclic aromatic hydrocarbons (HPAHs) (see Table 5.1-7) were generally present but not prevalent (Figure D5.3-7). Naphthalene and dibenzo(a,h)anthracene were each detected in only a few samples, but naphthalene was the dominant PAH in the field-collected, undepurated clam from location CA12E (RM 12.1E; sample LW3-CA12E-C00). Naphthalene was not detected in the depurated clam sample from this location. Additional samples with PAH patterns that appeared to differ from surrounding areas included field-collected clams from locations FC014 (RM 5.9W), FC015 (RM 6.4W), and FC025 (RM 8.5W), and laboratory-exposed clams for locations WR-VC-29 (RM 7.7, just downstream of Swan Island Lagoon in the navigation channel), BT026 (RM 8.5E, in Swan Island Lagoon), and BT031 (RM 9.5E). PAH patterns in three field-collected clam samples from Round 1 were obscured by non-detects; only fluoranthene and pyrene were detected in two of these samples.

PAH data are available for only one clam sample that represents exposures upriver of the study area. HPAHs accounted for almost two-thirds of the total concentration in this sample.

### D5.3.6 References

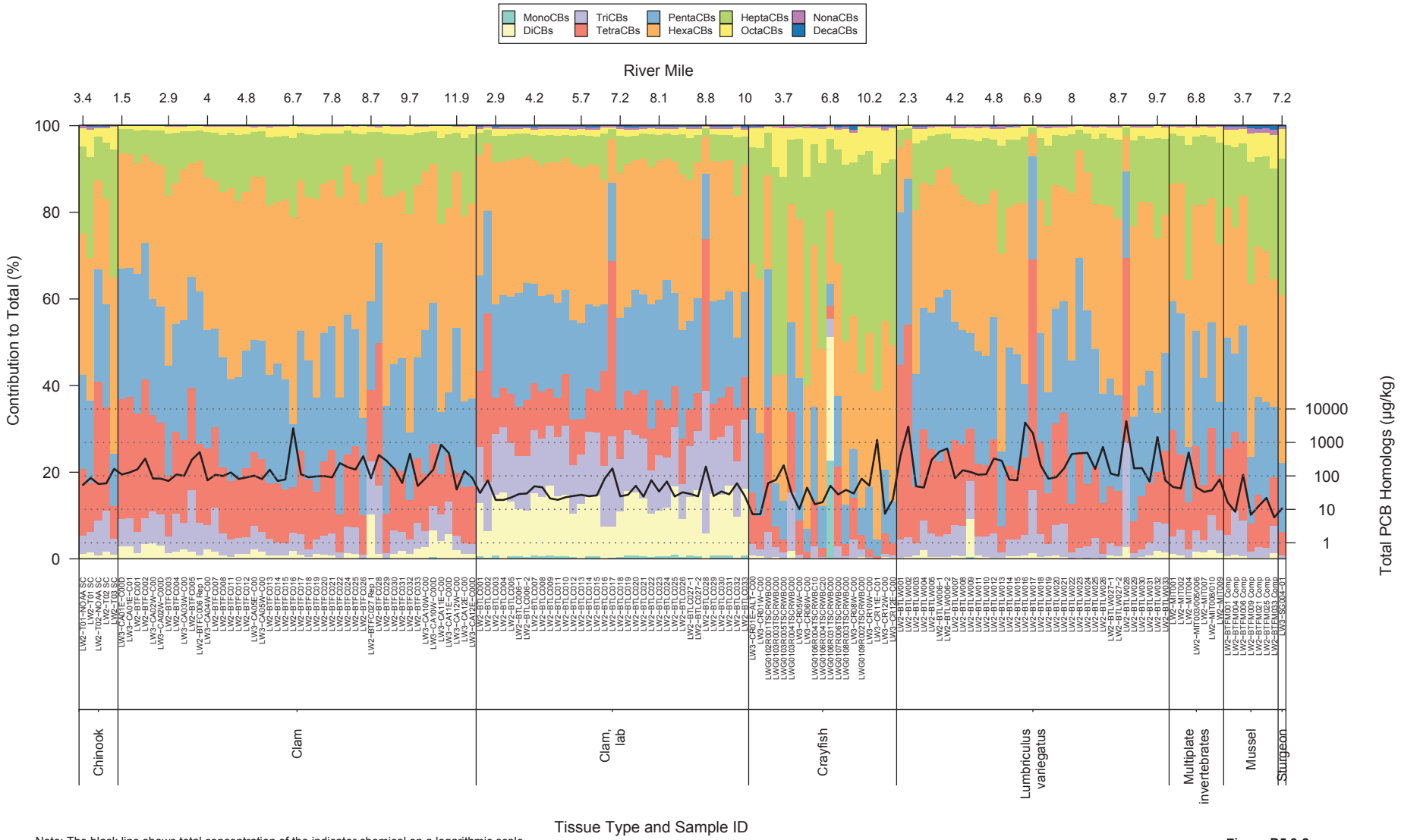
Tetra Tech. 2006. Dredge Material Management Plan Sediment Characterization Report Lower Willamette River Federal Navigation Channel, OR. WLCDRD05. Prepared for the U.S. Army Corps of Engineers, Portland District, Portland, OR. Tetra Tech EC, Inc., Portland, OR. January 2006.

ODHS, USEPA, and ATSDR. 2003. Salmon, Sturgeon, and Lamprey Tissue Investigation, Portland Harbor Site. WLTASE03. Prepared for Oregon Department of Health Services, Portland, OR, U.S. Environmental Protection Agency Region 10, Seattle, WA, and U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry, Atlanta, GA. 2003.



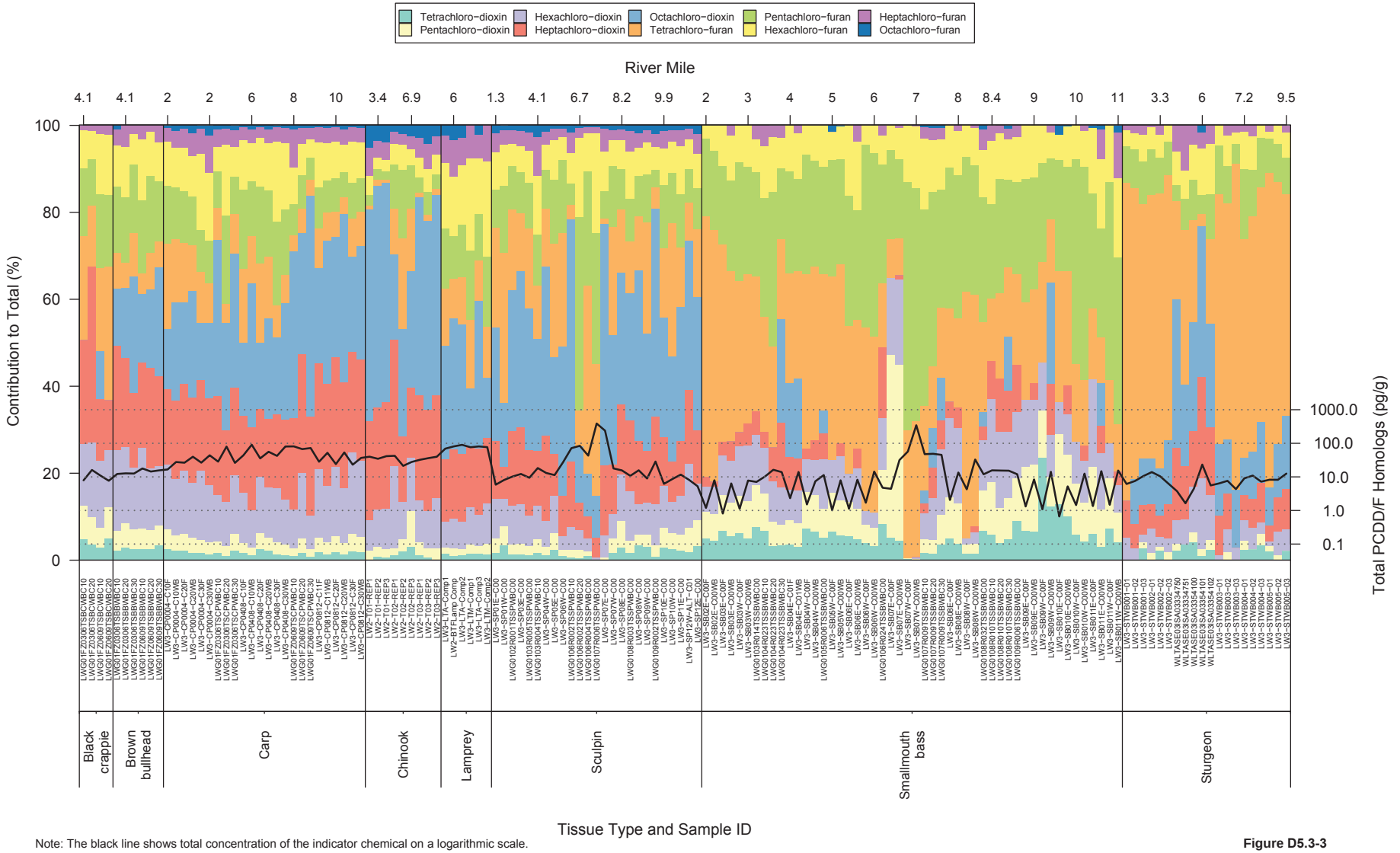

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

**Figure D5.3-1**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of PCB Homolog Patterns
in Fish Tissue (RM 0.8 to 12.2)



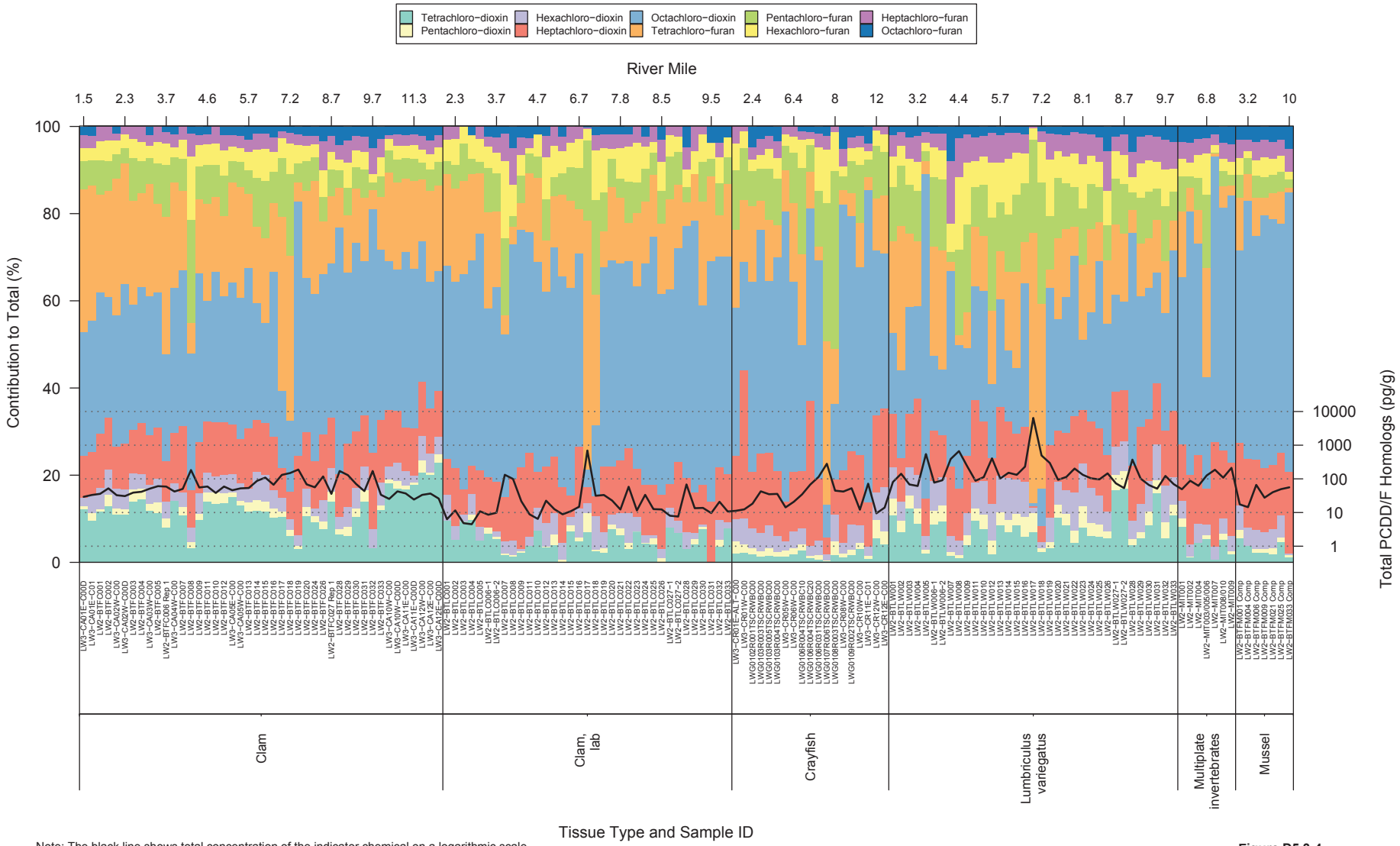

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

**Figure D5.3-2**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of PCB Homolog Patterns
in Invertebrate Tissue (RM 0.8 to 12.2)



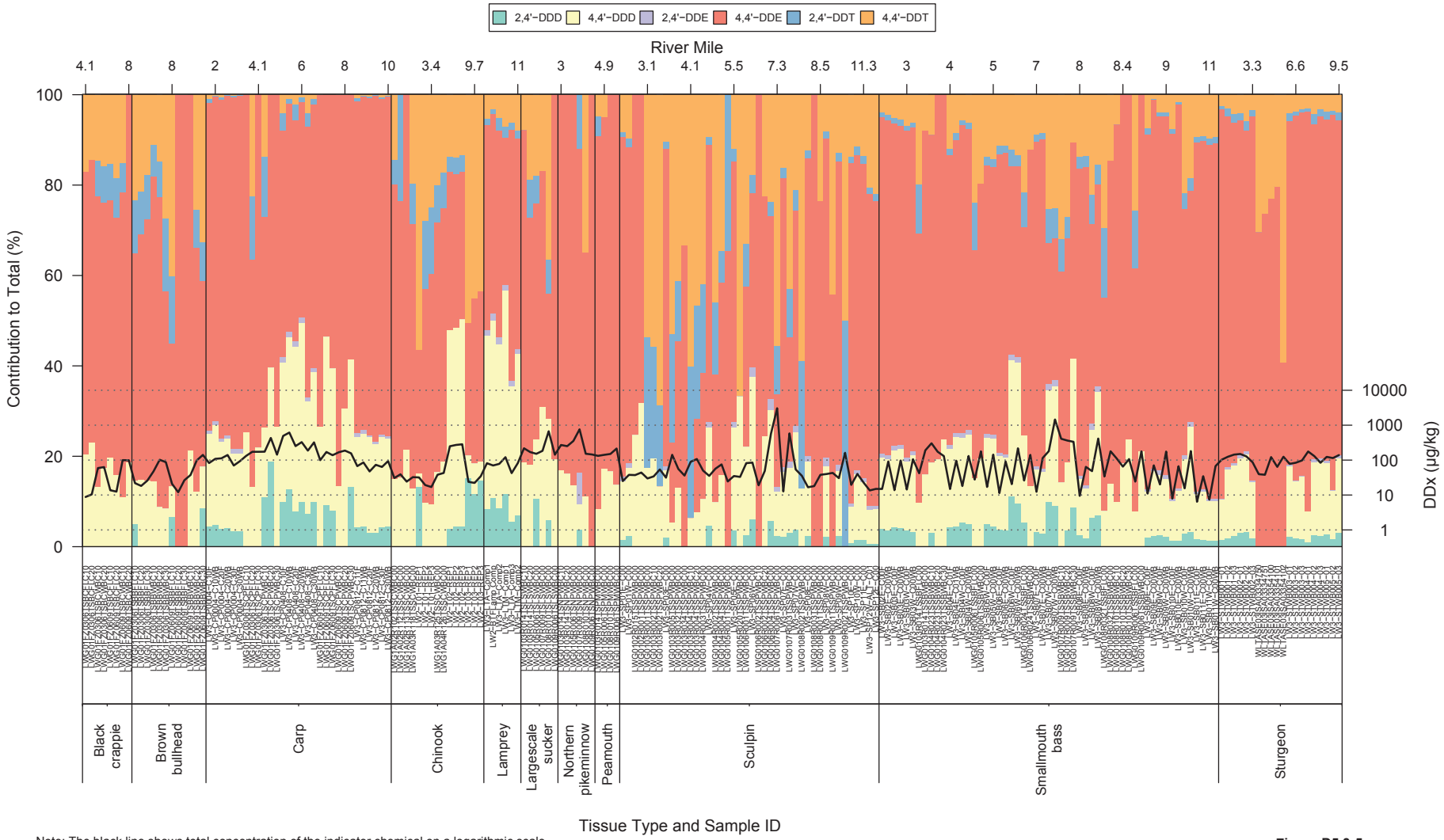

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

**Figure D5.3-3**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of PCDD/F Patterns
in Fish Tissue (RM 0.8 to 12.2)



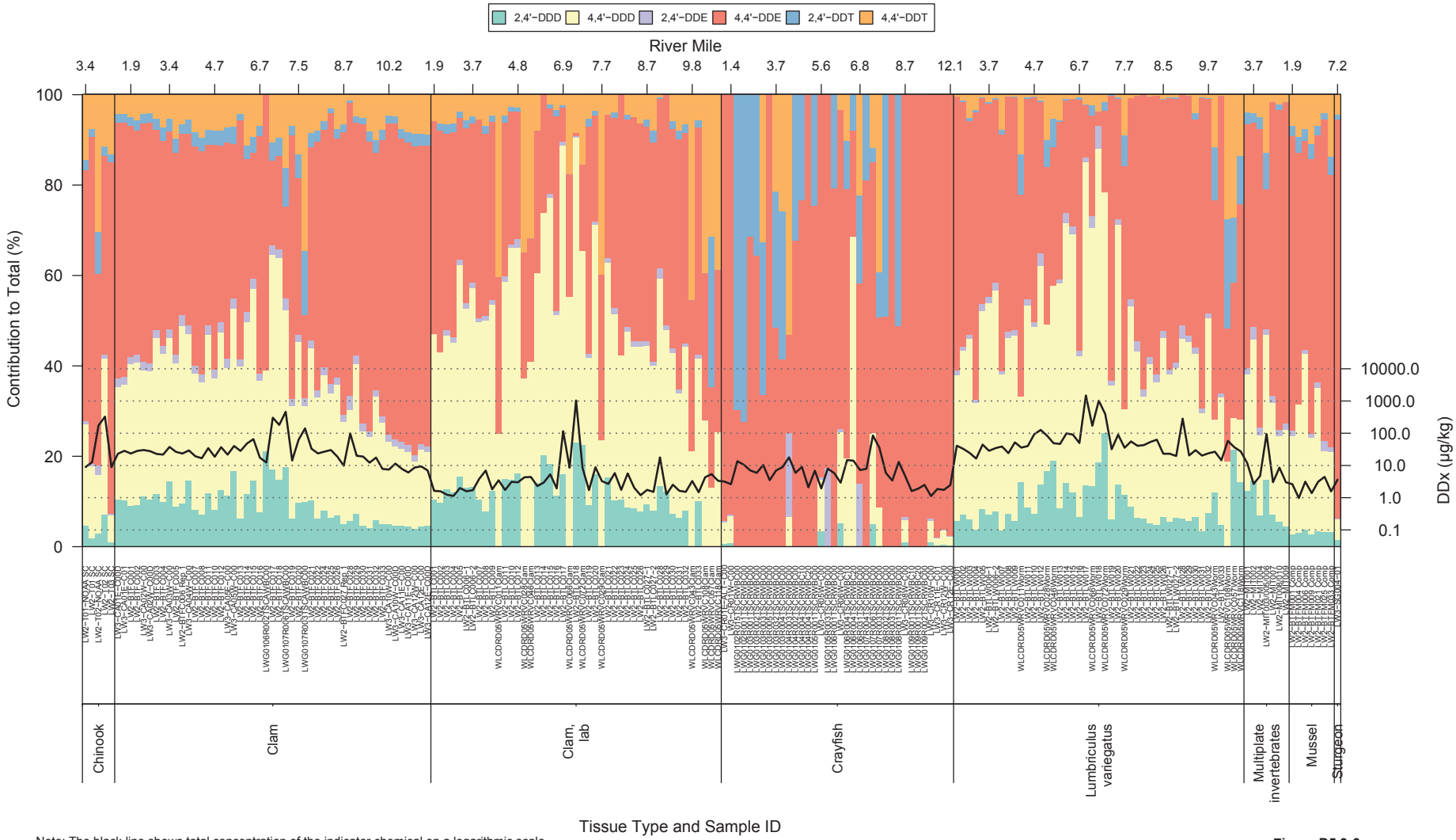

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

**Figure D5.3-4**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of PCDD/F Patterns
in Invertebrate Tissue (RM 0.8 to 12.2)



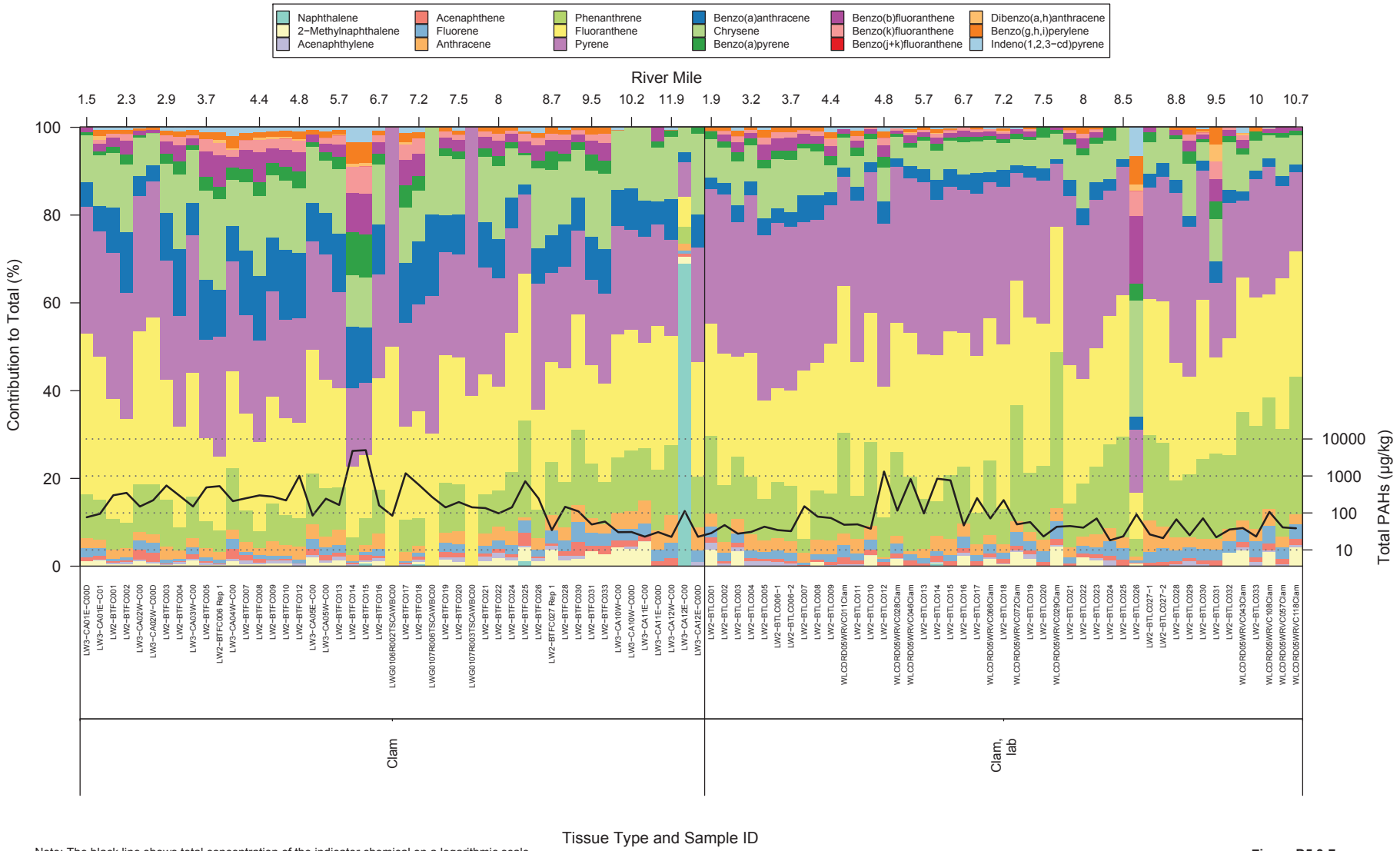

Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

**Figure D5.3-5**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of DDx Patterns
in Fish Tissue (RM 0.8 to 12.2)




Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

**Figure D5.3-6**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of DDx Patterns
in Invertebrate Tissue (RM 0.8 to 12.2)




Note: The black line shows total concentration of the indicator chemical on a logarithmic scale.

**Figure D5.3-7**
Portland Harbor RI/FS
Remedial Investigation Report
Stacked Bar Chart of PAH Patterns
in Clam Tissue (RM 0.8 to 12.2)