New Bedford Harbor Superfund Site

U.S. Army Corps of Engineers New England District

Final Marsh Island After Action Report

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New Bedford Harbor Superfund Site

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Acronyms and Abbreviations

CMR	Code of Massachusetts Regulations
cy	cubic yards
EPA	U.S. Environmental Protection Agency
FSP	Field Sampling Plan
ft.	feet
GPS	global positioning system
Jacobs	Jacobs Engineering Group, Inc.
MCP	Massachusetts Contingency Plan
mg/kg	milligrams per kilogram
MI	Marsh Island
NAE	U.S. Army Corps of Engineers – New England District
PCB	polychlorinated biphenyl
QAPP	Quality Assurance Project Plan
RBG	Risk-Based Goals
RTK	real-time kinematic
Sevenson	Sevenson Environmental Services, Inc.
TCL	target cleanup level
TSCA	Toxic Substances Control Act
UCL	upper confidence limit
Work Plan	Draft Final Marsh Island Intertidal Remediation Work Plan

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1. Introduction

Remediation and restoration of the Marsh Island (MI) intertidal zone and adjacent parcels were conducted by Jacobs Engineering Group, Inc. (Jacobs) under U.S. Army Corps of Engineers – New England District (NAE) Interim Remediation Action Contract No. W912WJ-14-D-0002 between August 2017 and October 2017. The primary objective of remedial action at MI was to remove soil and sediment with polychlorinated biphenyl (PCB) concentrations greater than the site-specific target cleanup levels (TCLs) as established in the *1998 Record of Decision for the New Bedford Harbor Superfund Site* (EPA 1998), and to restore the site to baseline or comparable conditions. TCLs established for the MI Site are 25 milligrams per kilogram (mg/kg) for soil and sediment one foot (ft.) deep or less in intertidal areas for recreational use, and 50 mg/kg for soil and sediment deeper than 1 ft. in intertidal areas as well as for all depths in subtidal areas. MI is a small peninsula located on the eastern side of lower New Bedford Harbor extending from the Moby Dick Marina to the residential area beginning at Taber Street, which is a distance of approximately 3,300 ft. (Figure 1-1).

The purpose of this After Action Report is to document the remediation activity and final disposition of the restored MI area. Contaminated sediments were removed and the MI area was restored in accordance with the *Draft Final Marsh Island Intertidal Remediation Work Plan* (Work Plan) (Jacobs 2017). The designed excavation areas are presented on Figure 1-1.

2. Remedial Activities

The methods used to complete the remedial activities at the Site are presented below.

2.1 Site Preparation

Sampling of sediment and soil from the subtidal, intertidal, and upland areas around MI was conducted in 1999, 2000, 2001, 2004 and 2005, which provided the horizontal and vertical boundaries of the excavation operation for PCB soil and sediment (ENSR 2006). At the direction of U.S. Environmental Protection Agency (EPA), additional data gap sampling was conducted in 2016 and 2017 to further refine excavation boundaries. Figure 2-1 and Table 2-1 present the pre-excavation sampling locations and PCB concentrations in sediments for the MI intertidal zone.

Pre-existing conditions at MI were documented prior to the initiation of remedial activities to establish baseline conditions for backfill, contouring, and re-establishment of native vegetation. This included a pre-excavation elevation survey and mapping of wetland cover type within the intertidal area (Figure 2-2). Other pre-excavation preparation activities included the installation of a security gate, site clearing, video survey of a sewer main under the proposed access road, clearing and construction of the access road, and mobilization of equipment.

2.2 Removal of Contaminated Sediments

Excavation was conducted by Sevenson Environmental Services, Inc. (Sevenson) with track-mounted excavators operated in the intertidal zone and guided by real-time kinematic global positioning system (RTK GPS) (Figure 2-3). Excavated material was loaded onto scows positioned on land where it was mixed and stabilized with Portland cement. The material was then loaded into roll-offs and transported by truck to the

EPA/NAE facility on Sawyer Street in New Bedford for further stabilization and load out. See Section 3 below for additional disposal details.

A borrow area was identified on MI that would serve as a potential source of sand for backfilling excavation units. An area of approximately 100 ft. by 60 ft. was selected (Figure 2-4) that is within a larger area scheduled for excavation as part of a saltmarsh restoration project funded by the Natural Resource Damage Trustees. Three samples representing depth intervals from 0 to 3 ft. were collected and analyzed for substances listed in the Massachusetts Contingency Plan (MCP) Method 1 tables (310 Code of Massachusetts Regulations (CMR) 40.0975(6)(b)). Analytical data from these samples showed no exceedance of MCP S1 guidelines (see Attachment 1). Approximately 3 ft. of material were removed from the borrow area and used in several of the beach areas (MI-1, MI-2, and MI-3) and to stabilize the shoreline bank areas at MI-8 and MI-12. After excavation was completed in the borrow area, the area was graded and smoothed.

A total of 2,184 cubic yards (cy) of contaminated sediment was removed from the MI intertidal zone. This value is based on estimates derived from the pre-excavation and post-excavation survey data. The as-built limits of excavation are presented on Figure 2-3 and vary slightly with the merging of the excavation areas MI-8 and MI-10 from the original excavation boundaries (Figure 1-1).

2.3 Environmental Sampling

Post-excavation verification sampling was conducted by an independent party in accordance with the *Confirmatory Sampling Field Sampling Plan, Lower Harbor Winter 2016 Dredge Areas and Parcel 265, Draft Final Field Sampling Plan Addendum #2, Marsh Island (*Confirmatory Sampling Field Sampling Plan [FSP]) (Battelle 2017) as well as the *Uniform Federal Policy - Quality Assurance Project Plan* (*QAPP) Addendum* (Battelle 2016). Fifty-eight verification/screening samples were collected within the 12 excavation areas, including both sidewall and floor samples within each excavation area. Jacobs screened these verification samples using immunoassay analysis to evaluate whether any further removal of contaminated sediment was required (Figure 2-5).

A spatially-representative subset of the verification samples pre-designated as confirmatory samples in the *Confirmatory Sampling Field Sampling Plan* was submitted for PCB congeners following excavation to ensure compliance with the applicable TCL. PCB analysis for 139 PCB congeners was performed by an independent party according to the methods outlined in the *QAPP Addendum* (Battelle 2016). Post-excavation average concentrations were calculated for the MI intertidal areas (4.8 mg/kg) and subtidal areas (31 mg/kg) prior to placement of clean backfill as summarized in Table 2-2.

Pursuant to the 1998 ROD, to assess recreational dermal exposure to intertidal soils and sediments, a 95% upper confidence limit (UCL) calculation (a conservative estimate of the mean) was performed on the final remediated and restored condition of the top foot of the MI intertidal zone in and around the 12 excavation areas (i.e., remediated areas as well as areas not requiring remediation). This 95% UCL estimate of the mean was calculated to be 3.53 mg/kg, as detailed further in Attachment 2. All compliance calculations are below applicable TCLs. Verification and confirmation sample data are presented in the *Draft Intertidal Verification and Confirmatory Report 2016-2017 Dredge Seasons* (Battelle 2018).

Ambient air monitoring was conducted by an independent party at fixed monitoring locations during MI remedial activities in accordance with the *Draft Final Ambient Air Monitoring Plan for Remediation Activities*

(Jacobs 2015), plus one additional location set up in MI to monitor local concentrations during the field work only. No exceedances to Risk-Based Goals (RBGs) were identified (EPA 2018).

2.4 Site Restoration

Site restoration activities were completed following the removal of contaminated sediments according to the methods defined in the Work Plan. Restoration activities included backfill, planting of native trees, shrubs and saltmarsh grasses, and hydroseeding a conservation seed mix. Backfill of excavated areas was performed by Sevenson using fill material from an uncontaminated virgin source as specified in the Work Plan, as well as from the MI borrow area discussed above in Section 2.2. A post-excavation drone survey was conducted by Nearview, LLC to document post-restoration topography and vegetative cover (Nearview 2018).

The plant community composition at MI was restored on an approximate 1:1 basis, as compared between the pre-excavation (Figure 2-2) and post-excavation (Figure 2-6) wetland distribution. The exception to this restoration ratio is mudflat, because excavated mudflat areas were not backfilled and restored, except to establish a stable slope near the low marsh border. A debris pile consisting of tires and broken flower pots, approximately 15 ft. by 30 ft., was located east of MI-8 (Figure 2-6). This feature was not disturbed during the remedial actions at MI.

Site monitoring and maintenance will continue through the first five full growing seasons (Fall 2023) to document the extent to which the wetland restoration and, where applicable, upland restoration goals of the project are being met. The monitoring and maintenance protocols are described in the Work Plan. Upland areas impacted by construction were restored in accordance with the upland tree and shrub planting plan (Jacobs 2017) to ensure that impacted native trees and shrubs were replaced with suitable native species. Additional site restoration details are provided in Table 2-3.

3. Waste Management

Sediment generated from the MI Intertidal Remediation was disposed in accordance with the Toxic Substances Control Act (TSCA). A total of 2,383.05 tons of stabilized sediment generated during the MI Intertidal Remediation was transported via truck from the Sawyer Street facility to Worcester, Massachusetts where it was transloaded to rail cars for ultimate disposal at the Wayne Disposal, Inc. Site #2 Landfill, operated by US Ecology, Inc. in Belleville, MI.

4. References

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U.S. Environmental Protection Agency (EPA). 1998. Record of Decision for the Upper and Lower Harbor Operable Unit, New Bedford Harbor Superfund Site. September 1998. USEPA Region 1 – New England.

——— 2018. Air Monitoring Data Status as of April 2018. Table E-1, Ambient Air Monitoring Program—Total Detectable PCB Homologues. http://www2.epa.gov/new- bedfordharbor/new-bedford-harbor-cleanup-plans-technical-documents-and-environmental-data

Figures

Route 195

A36

SUBTIDAL AREA
DREDGED IN 2017

River Ave.

Moby Dick
Marina

Lower Harbor
(Acushnet River)

Marsh Island

Riverside
Cemetary

Radio
Transmission
Tower

Radio
Transmission
Tower

Taber St.

Cherry St.

Hedge St.

USGS, MassGIS

Legend

- MLLW
- MHW
- MU-36 Limits of Excavation

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap

0 200 400 Feet

Basemap Data Source:
MassGIS, ESRI

August 2018

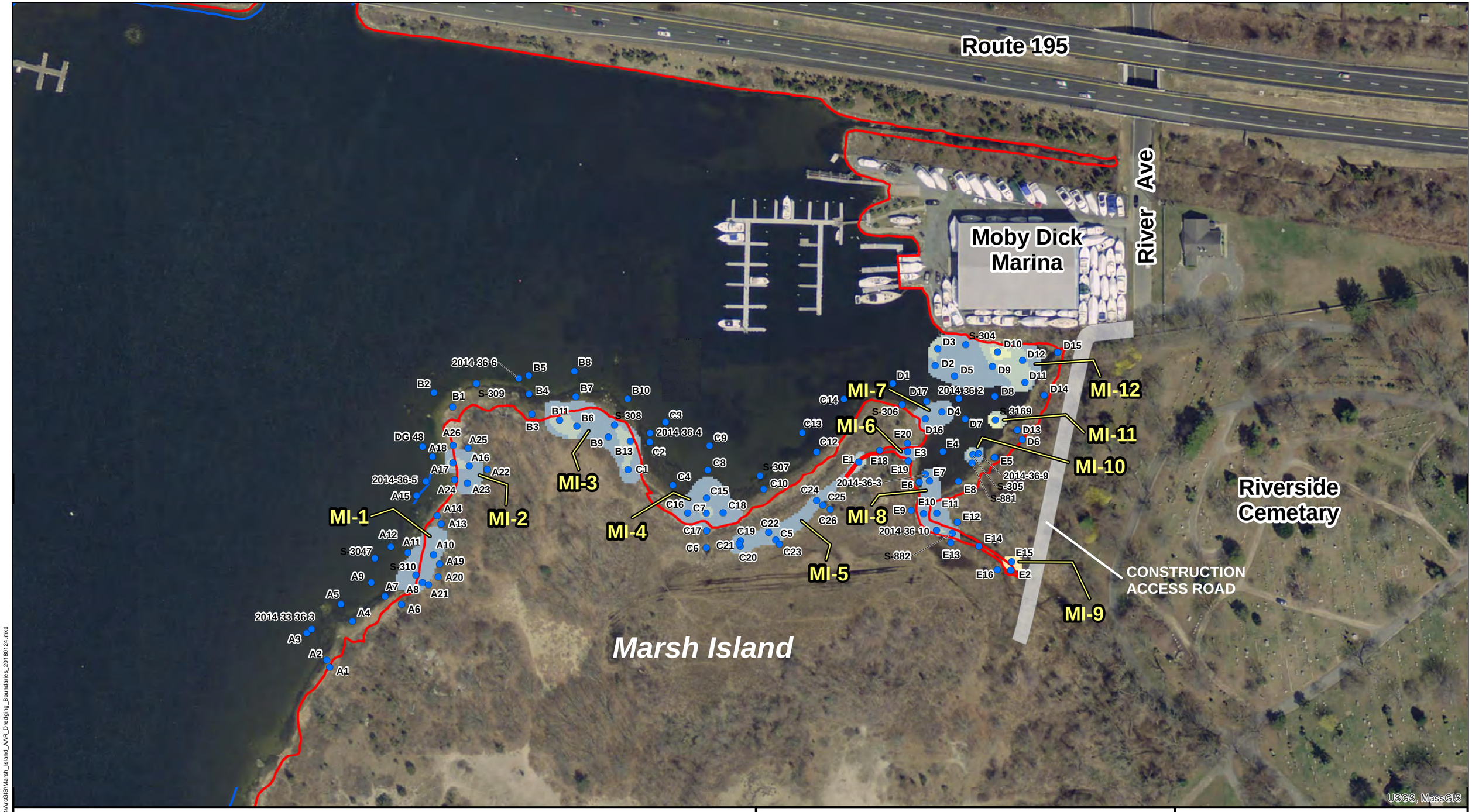
Marsh Island
Site Location and Pre-Excavation Features

New Bedford Harbor Superfund Site

JACOBS

Figure 1-1

Path: Y:\NBH\Projects\35BG100\120180124\ArcGIS\Marsh_Island_AAR_Site_Location_20180124.mxd



Legend

- Sample Location
- MLLW
- MHW

Thickness of Sediment to Remove, ft
2.5 1.5
2 1

Construction Access Road

0 125 250 Feet

Basemap Data Source: MassGIS, ESRI

August 2018

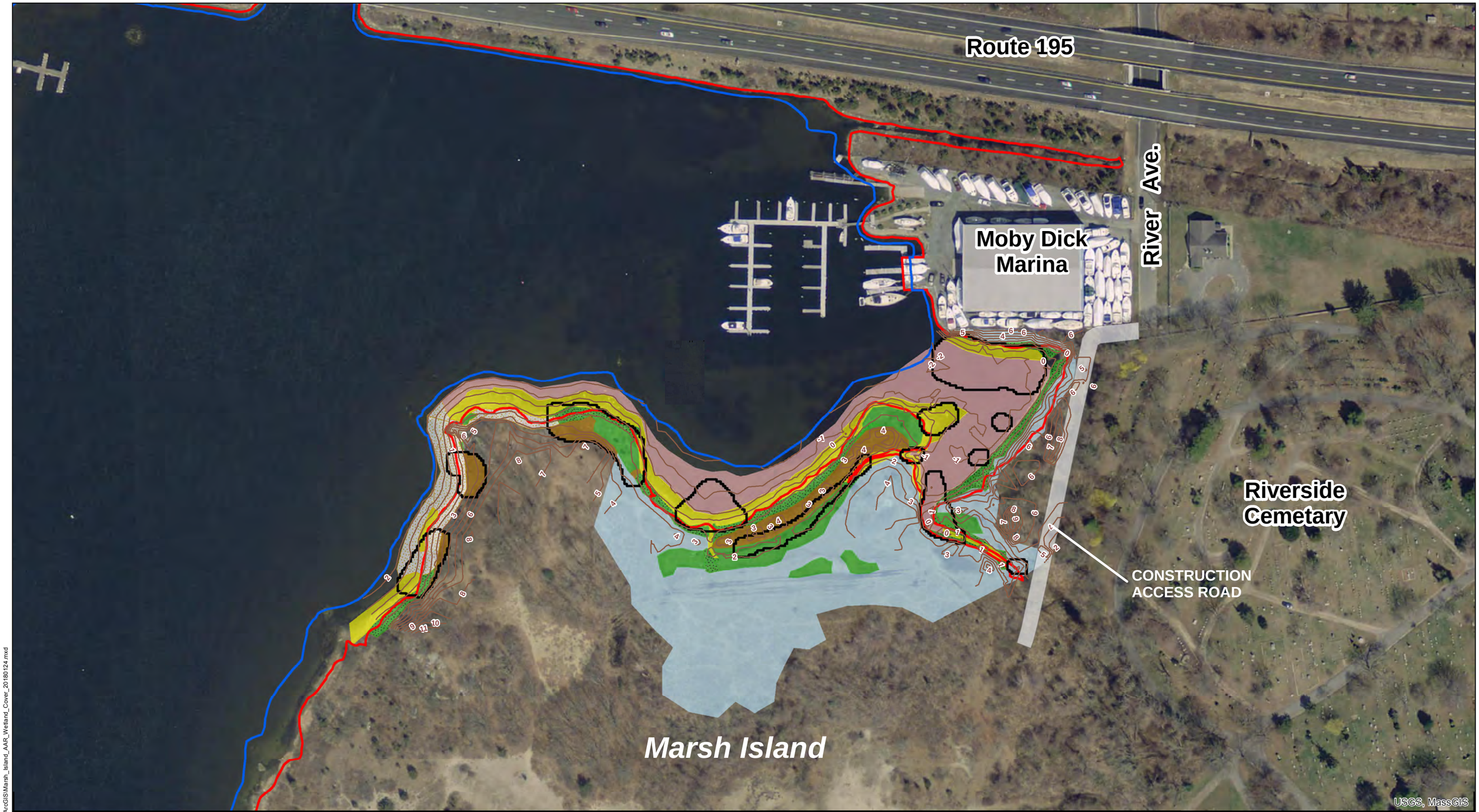
Marsh Island
Pre-Excavation Contaminant Boundaries

New Bedford Harbor Superfund Site

JACOBS

Figure 2-1

Path: Y:\NBH\Projects\35BG100\120180124\ArcGIS\Marsh_Island_AAR_Dredging_Boundaries_20180124.mxd



Legend

- MLLW
- MHW
- Limits of Excavation
- Construction Access Road
- Pre-Excavation Topography (1ft Contour)

Wetland Cover Types

- Upland
- Beach
- High Marsh
- Low Marsh
- Mudflat
- Wrack
- Phragmites

0 125 250 Feet

Basemap Data Source: MassGIS, ESRI

August 2018

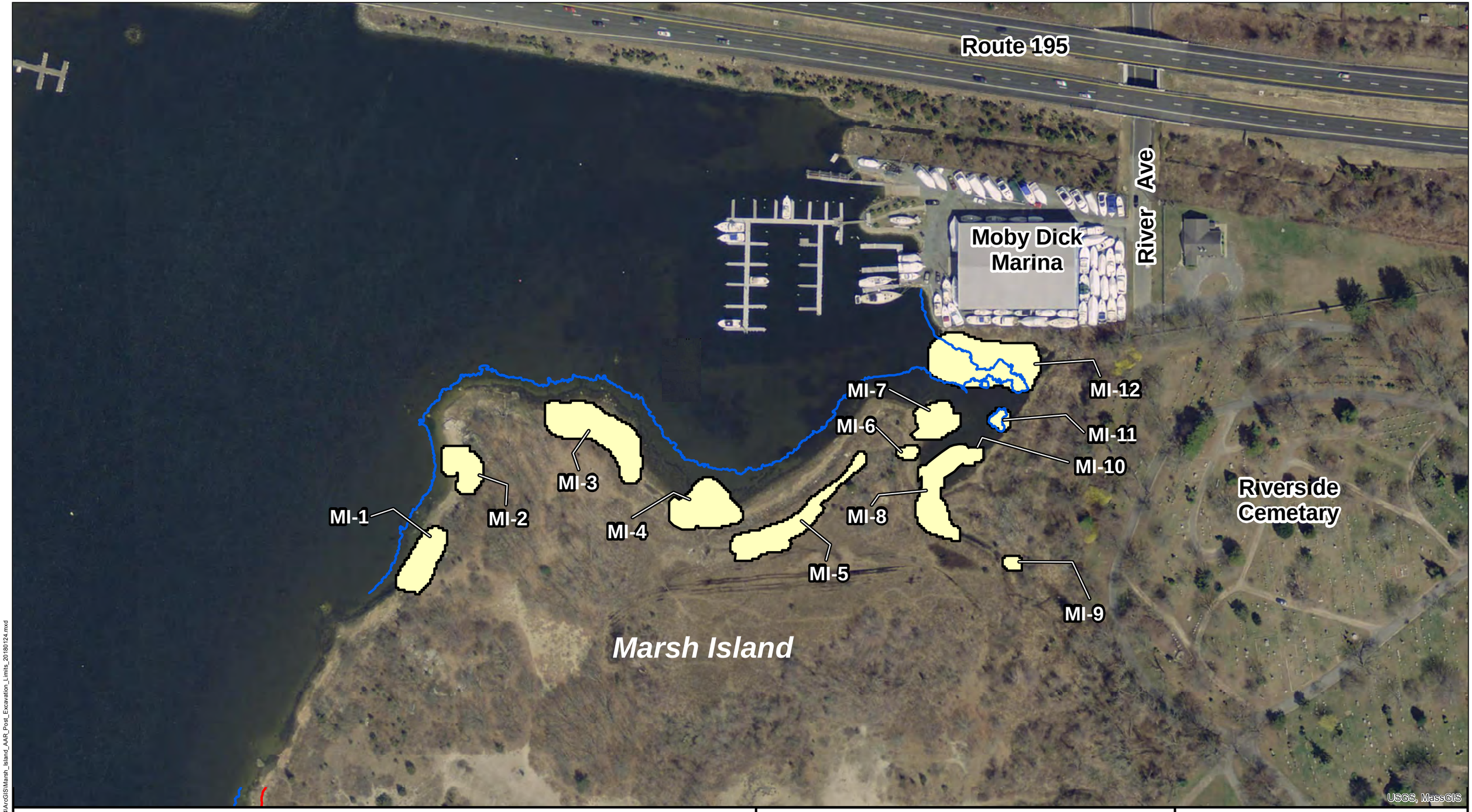
Marsh Island
Pre-Excavation Wetland Cover and Topography

New Bedford Harbor Superfund Site

JACOBS

Figure 2-2

Path: Y:\NBH\Projects\35BG\001\20180124\ArcGIS\Marsh_Island_AAR_Wetland_Cover_20180124.mxd



Legend

- MLLW (Post-Excavation)
- MHHW (Post-Excavation)
- **Limits of Excavation**

0 125 250 Feet

Basemap Data Source: MassGIS, ESRI

August 2018

Marsh Island
Post-Excavation Limits

New Bedford Harbor Superfund Site

JACOBS

Figure 2-3

Path: Y:\NBH\Projects\35BG100120180124\ArcGIS\Marsh_Island_AAR_Post_Excavation_Limits_20180124.mxd

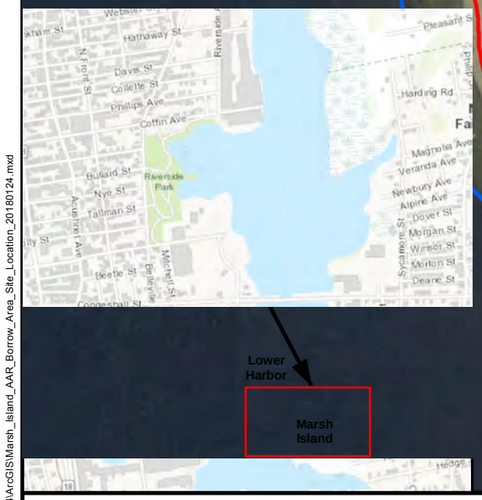
Lower Harbor
(Acushnet River)

Marsh Island

Riverside
Cemetary

Radio
Transmission
Tower

Radio
Transmission
Tower



USGS, MassGIS

Legend

MLLW
MHW
Limits of Excavation
Borrow Area

0 100 200 Feet

Basemap Data Source:
MassGIS, ESRI

August 2018

Marsh Island Site Location and Features Showing Borrow Area

New Bedford Harbor Superfund Site

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Figure 2-4

Path: Y:\NBH\Projects\35BG100\120180124\ArcGIS\Marsh_Island_AAR_Borrow_Area_Site_Location_20180124.mxd

Moby Dick Marina

River Ave.

MIS-41
MIS-42
MIV-20
MIV-21
MIV-22
MIV-23
MI-12
MI-7
MIS-28
MIS-27
MIV-14
MIV-19
MIS-39
MI-11
MIS-29
MI-6
MIV-13
MIS-26
MIS-25
MIS-30
MIS-37
MIV-18
MI-10
MIV-15
MIS-33
MIS-31
MI-8
MIV-16
MIS-32
MIV-12
MIS-21
MIS-22
MIV-11
MIS-20
MI-5
MIS-23
MIS-19
MIV-09
MIV-10
MIS-18
MIS-24
MIV-07
MIS-16
MIV-08
MIS-17
MI-4
MIS-14
MIV-17
MIS-34
MIS-35
MI-9
MIS-09
MIV-04
MIS-10
MIV-05
MIV-06
MIS-08
MIS-13
MI-3
MIS-11
MIS-12
MIS-05
MIS-06
MIV-03
MIS-07
MI-2
MI-1
MIS-03
MIV-02
MIS-02
MIS-04
MIV-01
MIS-01

Riverside Cemetary

Marsh Island

USGS, MassGIS

Path: Y:\NBH\Projects\35BG100\12018012\4\ArcGIS\Marsh_Island_AAR_Verification_Samping_Locations_20180124.mxd

Legend

- MLLW (Post-Excavation)
- MHHW (Post-Excavation)
- **Post-Excavation Limits**

- **Saltmarsh**
- **Mudflat**
- **Beach**
- **Upland**

- **Verification Sample Location (floor)**
- **Verification Sample Location (sidewall)**
- **Confirmatory Sample Location**

0 75 150 Feet

Basemap Data Source:
MassGIS, ESRI

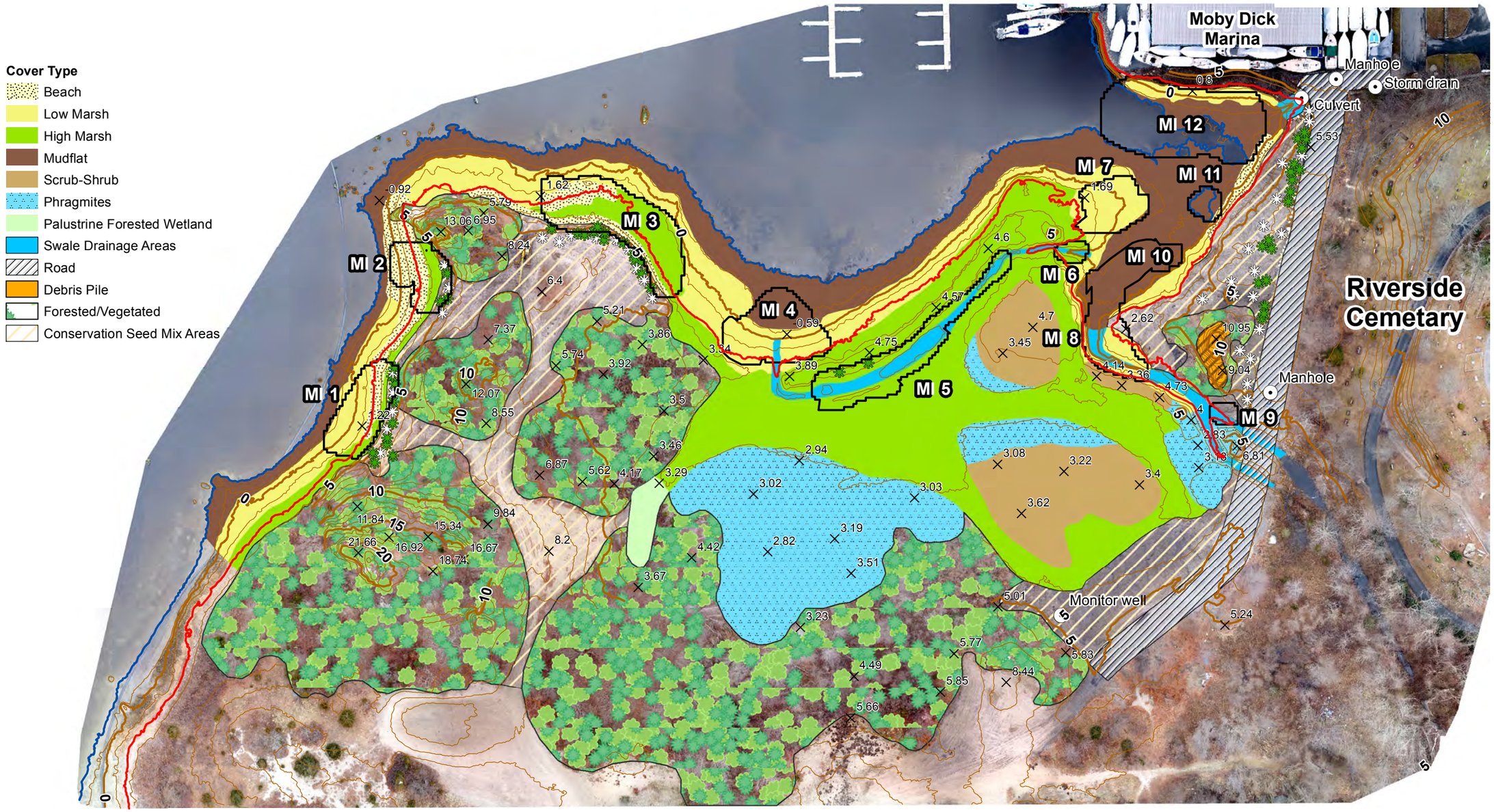
August 2018

Marsh Island Intertidal Verification and Confirmatory Sample Locations

New Bedford Harbor Superfund Site

JACOBS

Figure 2-5



Marsh Island

Legend

- Tree (planted 2017)
- Tree/Shrub (planted 2017)
- RTK GNSS Elevations (ft)
- Other Features

Post-Excavation Contours

- 1 ft contours
- 5 ft contours
- MLLW (-1.97 NAVD88)
- MHHW (1.99 NAVD88)
- 2017 PCB Remediation Area

Survey provided by Nearview, LLC (Mar. 2018)

Note: Survey Info - Real Time Kinematic (RTK) Global Navigation Satellite Systems (GNSS) - Vertical Datum NAVD88 in feet.

0 100 200 Feet

August 2018

Marsh Island Post-Excavation and Restoration Record Drawing

New Bedford Harbor Superfund Site

JACOBS

Figure 2-6

Path: Y:\NBH\Projects\35BG100\120180124\ArcGIS\Marsh_Island_AAR_Post_Dredge_Restoration_20180124D.mxd

Tables

Table 2-1
Pre-Excavation PCB Data Points

Location	Depth Interval (inches)	Collection Date	Location	Total PCB [1] (ppm)
MI-A1	0-6	12/8/2004	Upland Soil	1.0
MI-A1	6-8	12/8/2004	Upland Soil	0.6
MI-A1	8-13	12/8/2004	Upland Soil	0.1
MI-A2	0-3	12/8/2004	Beachcombing	3.5
MI-A2	3-9	12/8/2004	Beachcombing	0.2
MI-A2	9-13	12/8/2004	Beachcombing	0.01
MI-A3	0-4	12/9/2004	Beachcombing	2.1
MI-A3	4-8	12/9/2004	Beachcombing	0.3
MI-A3	8-13	12/9/2004	Beachcombing	0.01
MI-A3	13-19	12/9/2004	Beachcombing	0.01
MI-A3	19-24	12/9/2004	Beachcombing	0.01
MI-A3	24-29	12/9/2004	Beachcombing	0.01
MI-A4	0-4	12/8/2004	Beachcombing	1.2
MI-A4	4-7	12/8/2004	Beachcombing	1.90
MI-A4	7-10	12/8/2004	Beachcombing	0.2
MI-A4	10-12	12/8/2004	Beachcombing	0.07
MI-A5	0-7	12/9/2004	Beachcombing	3.0
MI-A5	7-9	12/9/2004	Beachcombing	0.3
MI-A5	9-15	12/9/2004	Beachcombing	0.1
MI-A6	0-6	1/8/2005	Upland Soil	0.4
MI-A6	6-12	1/8/2005	Upland Soil	0.2
MI-A6	12-18	1/8/2005	Upland Soil	0.2
MI-A7	0-6	12/8/2004	Beachcombing	2.6
MI-A7	6-10	12/8/2004	Beachcombing	0.06
MI-A7	10-19	12/8/2004	Beachcombing	0.01
MI-A8	0-3	12/8/2004	Upland Soil	**43**
MI-A8	3-7	12/8/2004	Upland Soil	**10**
MI-A8	7-14	12/8/2004	Upland Soil	**0.2**
MI-A9	0-7	12/9/2004	Beachcombing	0.6
MI-A9	7-13	12/9/2004	Beachcombing	0.01
MI-A9	13-18	12/9/2004	Beachcombing	0.03
MI-A10	0-4	12/8/2004	Upland Soil	11
MI-A10	4-7	12/8/2004	Upland Soil	12
MI-A10	7-11	12/8/2004	Upland Soil	**27**
MI-A11	0-4	12/9/2004	Beachcombing	5.9
MI-A11	4-9	12/9/2004	Beachcombing	19
MI-A11	9-15	12/9/2004	Beachcombing	0.04
MI-A12	0-4	12/9/2004	Beachcombing	5.6
MI-A12	4-8	12/9/2004	Beachcombing	0.3
MI-A12	8-17	12/9/2004	Beachcombing	0.02

Table 2-1
Pre-Excavation PCB Data Points

Location	Depth Interval (inches)	Collection Date	Location	Total PCB [1] (ppm)
MI-A13	0-6	12/8/2004	Upland Soil	16
MI-A13	6-10	12/8/2004	Upland Soil	7.1
MI-A13	10-15	12/8/2004	Upland Soil	3.6
MI-A14	0-5	12/8/2004	Upland Soil	4.4
MI-A14	5-10	12/8/2004	Upland Soil	0.9
MI-A15	0-8	12/9/2004	Beachcombing	7.1
MI-A15	8-18	12/9/2004	Beachcombing	0.2
MI-A15	18-26	12/9/2004	Beachcombing	0.03
MI-A16	0-3	12/9/2004	Upland Soil	6.7
MI-A16	3-7	12/9/2004	Upland Soil	15
MI-A16	7-8	12/9/2004	Upland Soil	**47**
MI-A16	8-12	12/9/2004	Upland Soil	**66**
MI-A16	12-14	12/9/2004	Upland Soil	17
MI-A17	0-8	12/9/2004	Beachcombing	3.3
MI-A17	8-14	12/9/2004	Beachcombing	**109**
MI-A17	14-20	12/9/2004	Beachcombing	0.07
MI-A17	20-26	12/9/2004	Beachcombing	0.02
MI-A18	0-6	12/9/2004	Beachcombing	3.7
MI-A18	6-9	12/9/2004	Beachcombing	1.5
MI-A18	9-12	12/9/2004	Beachcombing	0.3
MI-A19	0-6	October 2005	Upland Soil	19
MI-A19	6-12	October 2005	Upland Soil	1.8
MI-A20	0-6	October 2005	Upland Soil	0.7
MI-A20	6-12	October 2005	Upland Soil	0.2
MI-A21	0-6	October 2005	Upland Soil	23
MI-A21	6-12	October 2005	Upland Soil	0.7
MI-A22	0-6	October 2005	Upland Soil	19
MI-A22	6-12	October 2005	Upland Soil	0.4
MI-A23	0-6	October 2005	Upland Soil	**33**
MI-A24	0-6	October 2005	Beachcombing	3.6
MI-A24	6-12	October 2005	Beachcombing	7.5
MI-A25	0-6	October 2005	Upland Soil	19
MI-A25	6-12	October 2005	Upland Soil	22
MI-A26	0-6	October 2005	Upland Soil	2.5
MI-A26	6-12	October 2005	Upland Soil	16
MI-B1	0-6	1/10/2005	Beachcombing	1.9
MI-B1	6-12	1/10/2005	Beachcombing	0.2
MI-B1	12-18	1/10/2005	Beachcombing	0.3
MI-B2	0-6	1/10/2005	Beachcombing	1.3
MI-B2	6-12	1/10/2005	Beachcombing	0.4

Table 2-1
Pre-Excavation PCB Data Points

Location	Depth Interval (inches)	Collection Date	Location	Total PCB [1] (ppm)
MI-B2	12-18	1/10/2005	Beachcombing	0.6
MI-B3	0-2	12/9/2004	Beachcombing	1.5
MI-B3	2-9	12/9/2004	Beachcombing	2.5
MI-B3	9-16	12/9/2004	Beachcombing	0.2
MI-B4	0-6	12/9/2004	Beachcombing	10
MI-B4	6-12	12/9/2004	Beachcombing	0.5
MI-B5	0-8	12/9/2004	Beachcombing	3.7
MI-B5	8-13	12/9/2004	Beachcombing	0.3
MI-B5	13-19	12/9/2004	Beachcombing	0.2
MI-B6	0-7	12/9/2004	Upland Soil	**90**
MI-B6	7-12	12/9/2004	Upland Soil	0.5
MI-B6	12-19	12/9/2004	Upland Soil	0.03
MI-B7	0-5	December 2004	Beachcombing	12
MI-B7	5-9	December 2004	Beachcombing	5.1
MI-B7	9-16	December 2004	Beachcombing	0.04
MI-B7	16-22	December 2004	Beachcombing	0.01
MI-B8	0-5	December 2004	Beachcombing	2
MI-B8	5-14	December 2004	Beachcombing	0.08
MI-B8	14-21	December 2004	Beachcombing	0.01
MI-B9	0-5	December 2004	Upland Soil	**59**
MI-B9	5-9	December 2004	Upland Soil	4.5
MI-B9	9-10	December 2004	Upland Soil	1.8
MI-B9	10-14	December 2004	Upland Soil	0.3
MI-B10	0-8	December 2004	Beachcombing	2.5
MI-B10	8-13	December 2004	Beachcombing	0.3
MI-B10	13-19	December 2004	Beachcombing	0.03
MI-B11	0-6	October 2005	Upland Soil	**52**
MI-B11	6-12	October 2005	Upland Soil	**87**
MI-B13	0-6	October 2005	Upland Soil	**207**
MI-B13	6-12	October 2005	Upland Soil	**87**
MI-C1	0-3	December 2004	Upland Soil	20
MI-C1	3-7	December 2004	Upland Soil	**31**
MI-C1	7-10	December 2004	Upland Soil	1.7
MI-C1	10-13	December 2004	Upland Soil	0.3
MI-C2	0-3	December 2004	Beachcombing	6.6
MI-C2	3-12	December 2004	Beachcombing	0.1
MI-C2	12-19	December 2004	Beachcombing	0.01
MI-C2	19-25	December 2004	Beachcombing	0.01
MI-C3	0-5	December 2004	Beachcombing	3.7
MI-C3	5-11	December 2004	Beachcombing	0.1

Table 2-1
Pre-Excavation PCB Data Points

Location	Depth Interval (inches)	Collection Date	Location	Total PCB [1] (ppm)
MI-C3	11-16	December 2004	Beachcombing	0.05
MI-C3	16-25	December 2004	Beachcombing	0.01
MI-C4	0-5	December 2004	Beachcombing	2.2
MI-C4	5-14	December 2004	Beachcombing	0.8
MI-C4	14-17	December 2004	Beachcombing	38
MI-C5	0-9	December 2004	Upland Soil	**49**
MI-C5	9-13	December 2004	Upland Soil	14
MI-C5	13-20	December 2004	Upland Soil	6.9
MI-C6	0-7	December 2004	Upland Soil	5.7
MI-C6	7-15	December 2004	Upland Soil	10
MI-C6	15-20	December 2004	Upland Soil	11
MI-C7	0-4	December 2004	Beachcombing	**676**
MI-C7	4-10	December 2004	Beachcombing	3.3
MI-C7	10-16	December 2004	Beachcombing	**45**
MI-C8	0-8	December 2004	Beachcombing	5.1
MI-C8	8-16	December 2004	Beachcombing	14
MI-C8	16-18	December 2004	Beachcombing	0.3
MI-C9	0-9	December 2004	Subtidal	**29**
MI-C9	8-15	December 2004	Subtidal	0.08
MI-C10	0-8	December 2004	Beachcombing	1.2
MI-C10	8-14	December 2004	Beachcombing	0.1
MI-C10	14-21	December 2004	Beachcombing	0.08
MI-C12	0-5	December 2004	Beachcombing	1
MI-C12	5-11	December 2004	Beachcombing	0.08
MI-C12	11-16	December 2004	Beachcombing	0.01
MI-C13	0-10	December 2004	Beachcombing	0.2
MI-C13	10-19	December 2004	Beachcombing	0.02
MI-C13	19-25	December 2004	Beachcombing	0.01
MI-C13	25-31	December 2004	Beachcombing	0.01
MI-C14	0-6	December 2004	Beachcombing	0.7
MI-C14	6-15	December 2004	Beachcombing	0.05
MI-C14	15-19	December 2004	Beachcombing	0.03
MI-C15	0-6	October 2005	Beachcombing	**28**
MI-C15	6-12	October 2005	Beachcombing	21
MI-C16	0-6	October 2005	Beachcombing	**293**
MI-C16	6-12	October 2005	Beachcombing	0.8
MI-C17	0-6	October 2005	Upland Soil	16
MI-C17	6-12	October 2005	Upland Soil	1.8
MI-C18	0-6	October 2005	Beachcombing	**577**
MI-C18	6-12	October 2005	Beachcombing	6.2

Table 2-1
Pre-Excavation PCB Data Points

Location	Depth Interval (inches)	Collection Date	Location	Total PCB [1] (ppm)
MI-C19	0-6	October 2005	Upland Soil	19
MI-C19	6-12	October 2005	Upland Soil	**32**
MI-C20	0-6	October 2005	Upland Soil	**26**
MI-C20	6-12	October 2005	Upland Soil	17
MI-C21	0-6	October 2005	Upland Soil	17
MI-C22	0-6	October 2005	Upland Soil	**28**
MI-C22	6-12	October 2005	Upland Soil	23
MI-C23	0-6	October 2005	Upland Soil	8.8
MI-C23	6-12	October 2005	Upland Soil	13
MI-C24	0-6	October 2005	Upland Soil	**42**
MI-C24	6-12	October 2005	Upland Soil	**26**
MI-C25	0-6	October 2005	Upland Soil	9.4
MI-C25	6-12	October 2005	Upland Soil	18
MI-C26	0-6	October 2005	Upland Soil	13
MI-C26	6-12	October 2005	Upland Soil	19
MI-D1	0-5	December 2004	Beachcombing	3.6
MI-D1	5-9	December 2004	Beachcombing	0.2
MI-D1	9-17	December 2004	Beachcombing	0.02
MI-D1	17-25	December 2004	Beachcombing	0.03
MI-D2	0-6	December 2004	Beachcombing	**26**
MI-D2	6-12	December 2004	Beachcombing	**43**
MI-D2	12-17	December 2004	Beachcombing	34
MI-D2	17-23	December 2004	Beachcombing	0.2
MI-D3	0-7	December 2004	Beachcombing	20
MI-D3	7-13	December 2004	Beachcombing	**27**
MI-D3	13-24	December 2004	Beachcombing	1.7
MI-D3	24-28	December 2004	Beachcombing	0.5
MI-D4	0-4	December 2004	Beachcombing	**34**
MI-D4	4-15	December 2004	Beachcombing	1.4
MI-D4	15-22	December 2004	Beachcombing	0.2
MI-D5	0-10	December 2004	Beachcombing	24
MI-D5	10-16	December 2004	Beachcombing	0.07
MI-D5	16-20	December 2004	Beachcombing	0.04
MI-D6	0-10	December 2004	Beachcombing	0.05
MI-D6	10-16	December 2004	Beachcombing	0.01
MI-D6	16-20	December 2004	Beachcombing	0.01
MI-D7	0-9	December 2004	Beachcombing	9.9
MI-D7	9-15	December 2004	Beachcombing	0.9
MI-D7	15-24	December 2004	Beachcombing	0.2
MI-D8	0-8	December 2004	Beachcombing	13

Table 2-1
Pre-Excavation PCB Data Points

Location	Depth Interval (inches)	Collection Date	Location	Total PCB [1] (ppm)
MI-D8	8-16	December 2004	Beachcombing	0.1
MI-D8	16-23	December 2004	Beachcombing	0.01
MI-D8	23-28	December 2004	Beachcombing	0.01
MI-D9	0-9	December 2004	Beachcombing	**43**
MI-D9	16-25	December 2004	Beachcombing	0.05
MI-D9	25-29	December 2004	Beachcombing	0.05
MI-D10	0-12	December 2004	Beachcombing	**27**
MI-D10	12-14	December 2004	Beachcombing	5.3
MI-D10	14-23	December 2004	Beachcombing	**115**
MI-D10	23-28	December 2004	Beachcombing	0.7
MI-D11	0-10	December 2004	Beachcombing	**107**
MI-D11	10-17	December 2004	Beachcombing	**55**
MI-D11	17-35	December 2004	Beachcombing	0.2
MI-D12	0-7	December 2004	Beachcombing	18
MI-D12	7-13.5	December 2004	Beachcombing	**36**
MI-D12	13.5-21	December 2004	Beachcombing	0.3
MI-D12	21-27	December 2004	Beachcombing	0.3
MI-D13	0-6	December 2004	Beachcombing	0.4
MI-D13	6-12	December 2004	Beachcombing	0.3
MI-D13	12-18	December 2004	Beachcombing	6.6
MI-D14	0-6	December 2004	Beachcombing	0.8
MI-D14	6-12	December 2004	Beachcombing	1.1
MI-D14	12-18	December 2004	Beachcombing	0.6
MI-D15	0-6	December 2004	Beachcombing	1.8
MI-D15	6-12	December 2004	Beachcombing	1.3
MI-D15	12-18	December 2004	Beachcombing	6.2
MI-D15	18-24	December 2004	Beachcombing	12
MI-D16	0-6	October 2005	Beachcombing	**32**
MI-D16	6-12	October 2005	Beachcombing	10
MI-D17	0-6	October 2005	Beachcombing	17
MI-D17	6-12	October 2005	Beachcombing	0.3
MI-E1	0-4	December 2004	Beachcombing	4.6
MI-E1	4-10	December 2004	Beachcombing	4.3
MI-E1	10-13	December 2004	Beachcombing	**70**
MI-E2	0-5	December 2004	Beachcombing	0.2
MI-E2	5-12	December 2004	Beachcombing	0.1
MI-E2	12-16	December 2004	Beachcombing	0.04
MI-E3	0-7	December 2004	Beachcombing	**30**
MI-E3	7-14	December 2004	Beachcombing	**32**
MI-E3	14-18	December 2004	Beachcombing	5.8

Table 2-1
Pre-Excavation PCB Data Points

Location	Depth Interval (inches)	Collection Date	Location	Total PCB [1] (ppm)
MI-E3	18-33	December 2004	Beachcombing	0.07
MI-E4	0-6	December 2004	Beachcombing	7
MI-E4	6-14	December 2004	Beachcombing	0.1
MI-E4	14-19	December 2004	Beachcombing	0.04
MI-E4	19-28	December 2004	Beachcombing	0.01
MI-E5	0-6	December 2004	Beachcombing	0.3
MI-E5	6-12	December 2004	Beachcombing	0.3
MI-E5	12-18	December 2004	Beachcombing	1
MI-E6	0-10	December 2004	Beachcombing	15
MI-E6	10-14	December 2004	Beachcombing	0.1
MI-E6	14-19	December 2004	Beachcombing	0.07
MI-E6	19-26	December 2004	Beachcombing	0.01
MI-E7	0-10	December 2004	Beachcombing	**52**
MI-E7	10-14	December 2004	Beachcombing	5.6
MI-E7	14-17	December 2004	Beachcombing	0.4
MI-E7	17-23	December 2004	Beachcombing	0.1
MI-E8	0-6	December 2004	Beachcombing	6
MI-E8	6-12	December 2004	Beachcombing	0.6
MI-E8	12-18	December 2004	Beachcombing	0.3
MI-E9	0-6	December 2004	Upland Soil	1.1
MI-E9	6-12	December 2004	Upland Soil	0.2
MI-E9	12-18	December 2004	Upland Soil	0.1
MI-E10	0-11	December 2004	Beachcombing	**133**
MI-E10	11-20	December 2004	Beachcombing	4.7
MI-E10	20-22	December 2004	Beachcombing	6.2
MI-E11	0-4	December 2004	Upland Soil	**110**
MI-E11	4-11	December 2004	Upland Soil	3.6
MI-E12	0-4	December 2004	Upland Soil	15
MI-E12	4-14	December 2004	Upland Soil	0.05
MI-E12	14-29	December 2004	Upland Soil	0.01
MI-E13	0-4	December 2004	Upland Soil	0.2
MI-E13	4-12	December 2004	Upland Soil	0.04
MI-E13	12-21	December 2004	Upland Soil	0.03
MI-E14	0-4	December 2004	Beachcombing	5.3
MI-E14	4-12	December 2004	Beachcombing	0.3
MI-E14	12-23	December 2004	Beachcombing	0.02
MI-E14	23-26	December 2004	Beachcombing	0.02
MI-E15	0-13	December 2004	Upland Soil	5.6
MI-E15	13-17	December 2004	Upland Soil	7.3
MI-E15	17-22	December 2004	Upland Soil	**73**

Table 2-1
Pre-Excavation PCB Data Points

Location	Depth Interval (inches)	Collection Date	Location	Total PCB [1] (ppm)
MI-E16	0-4	December 2004	Upland Soil	0.2
MI-E16	4-11	December 2004	Upland Soil	0.02
MI-E16	11-15	December 2004	Upland Soil	0.03
MI-E18	0-6	October 2005	Beachcombing	0.1
MI-E18	6-12	October 2005	Beachcombing	0.05
MI-E19	0-6	October 2005	Upland Soil	2.6
MI-E19	6-12	October 2005	Upland Soil	2.3
MI-E20	0-6	October 2005	Upland Soil	6.2
MI-E20	6-12	October 2005	Upland Soil	1.4
2017-DG-48	0-6	April 2017	Subtidal	2.8[a]
2017-DG-48	6-12	April 2017	Subtidal	0.64[a]
2014-33-36-2	0-12	April 2014	Subtidal	3.5[b]
2014-33-36-2	12-24	April 2014	Subtidal	0.5[b]
2014-33-36-3	0-6	April 2014	Subtidal	20.9[b]
2014-33-36-3	6-18	April 2014	Subtidal	13.7[b]
2014-33-36-3	18-30	April 2014	Subtidal	0.5[b]
2014-33-36-4	0-10	April 2014	Subtidal	8.6[b]
2014-33-36-4	10-22	April 2014	Subtidal	5.5[b]
2014-33-36-5	0-6	April 2014	Subtidal	3.3[b]
2014-33-36-5	6-12	April 2014	Subtidal	2.8[b]
2014-33-36-5	12-18	April 2014	Subtidal	1.5[b]
2014-33-36-6	0-6	April 2014	Subtidal	6.6[b]
2014-33-36-6	6-17	April 2014	Subtidal	6.4[b]
2014-33-36-9	0-6	April 2014	Subtidal	0.5b
2014-33-36-9	6-18	April 2014	Subtidal	0.5b
2014-33-36-9	18-30	April 2014	Subtidal	1.1[b]
2014-33-36-10	0-7	April 2014	Subtidal	**73.5**[b]
2014-33-36-10	7-19	April 2014	Subtidal	2.1[b]
2014-33-36-10	19-31	April 2014	Subtidal	0.5[b]
S-304	0-12	1999	Beachcombing	1.8
S-304	12-24	1999	Beachcombing	18
S-305	0-12	1999	Beachcombing	2.2
S-305	12-24	1999	Beachcombing	**65**
S-306	0-12	1999	Beachcombing	2.4
S-306	12-24	1999	Beachcombing	0.5
S-307	0-12	1999	Beachcombing	0.1
S-307	12-24	1999	Beachcombing	0.01
S-308	0-12	1999	Upland Soil	**60**
S-308	12-24	1999	Upland Soil	1.5
S-309	0-12	1999	Beachcombing	2.8

Table 2-1
Pre-Excavation PCB Data Points

Location	Depth Interval (inches)	Collection Date	Location	Total PCB [1] (ppm)
S-309	12-24	1999	Beachcombing	0
S-310	0-12	1999	Beachcombing	**130**
S-310	12-24	1999	Beachcombing	0.7
S-881	0-12	2000	Beachcombing	19
S-881	12-24	2000	Beachcombing	7.9
S-881	24-36	2000	Beachcombing	2.7
S-882	0-12	2000	Beachcombing	**44**
S-882	12-24	2000	Beachcombing	45
S-882	24-36	2000	Beachcombing	2.5
S-3047	0-6	2001	Subtidal	9.5
S-3047	6-13	2001	Subtidal	7.9
S-3047	13-19	2001	Subtidal	1.8
S-3047	19-25	2001	Subtidal	0.8
S-3169	0-12	2001	Beachcombing	**40**
S-3169	12-19	2001	Beachcombing	**55**
S-3169	19-24	2001	Beachcombing	1.9
S-3169	24-36	2001	Beachcombing	0.1
S-3169	36-48	2001	Beachcombing	0.5

[1] - Total PCB method for all samples: sum of NOAA 18 congeners X 2.6 with the exception of:

[a] -Immunoassay

[b] - Total Aroclors

Bold font - Location included in remediation footprint

TCLs: 25 ppm for 0-1 foot interval, 50 ppm > 1 foot, and 50 ppm for subtidal

Table 2-2
Post-Excavation PCB Congener Sample Data (Prior to any Backfill)

Station ID	Sample ID	Field QC Code	Sample Date	Sum 139 PCB Congeners[1] (mg/kg)	Qual	Sum 139 PCB Congener Average[2] (mg/kg)
Saltmarsh: target cleanup level = 25 mg/kg in top 1 ft						
MIV-01	S-17S-MIV-01-00-10	SA	9/13/2017	0.13		4.8
MIV-01 (REP)	S-17S-MIV-01-00-10-REP	REP	9/13/2017	0.084		
MIV-03	S-17S-MIV-03-00-10	SA	9/13/2017	4.8		
MIV-04	S-17G-MIV-04-00-10	SA	8/30/2017	0.025		
MIV-06	S-17G-MIV-06-00-10	SA	8/30/2017	0.1		
MIV-08	S-17G-MIV-08-00-10	SA	8/30/2017	7.6		
MIV-11	S-17G-MIV-11-00-10	SA	9/1/2017	25		
MIV-11 (REP)	S-17S-MIV-11-00-10-REP	REP	9/1/2017	24		
MIV-14	S-17S-MIV-14-00-10	SA	9/13/2017	0.24		
MIV-16	S-17S-MIV-16-00-10	SA	9/12/2017	0.85		
Subtidal: target cleanup level[3] = 50 mg/kg in top 0.5 ft						
MIV-21	S-17S-MIV-21-00-05	SA	9/26/2017	33		31
MIV-23	S-17S-MIV-23-00-05	SA	10/3/2017	29		

Notes:

[1] Sum of 139 PCB congeners; non-detects are set to zero in the sums.

[2] Field duplicate results are averaged in the compliance calculation.

[3] At MIV-21 and MIV-23, mudflats were excavated but not backfilled and thus these areas became subtidal.

ID - identification; QC - quality control; PCB - polychlorinated biphenyl; Qual - qualifier

SA - field sample; REP - field duplicate

Table 2-3
Site Restoration Summary

PLANTING DATES (Completed)	
11/17/2017	Hydro seeding completed. (New England Conservation/Wildlife Mix with winter rye at 25 lbs per acre). Salt tolerant mix added by hand to small area east of MI-8
11/17/2017	Tree and shrub planting completed. (31 trees, 49 trees/shrubs)
10/13/2017	Saltmarsh plugs completed. (9,150 *Spartina alterniflora* 2" plugs, 4,150 *Spartina patens* 2" plugs, 4,150 *Achnatherum calamagrostis* 2" plugs, 900 *Ammophila sp* 2" plugs)
6/21/2018	High marsh plugs completed. (3,100 *Distichlis spicata* 2" plugs).
LOW MARSH AND HIGH MARSH ELEVATIONS (Bottom to Top)	
Low Marsh	Approximately 0.18 ft to 1.68 ft
High Marsh	1.68 ft to 2.68 ft
Conservation Seed Mix	Above 2.68 ft (New England Conservation/Wildlife Mix mixed with winter rye)
IMPORTED TOPSOIL	
Grain Size	0.074 mm (No. 200 sieve) to 9.51 mm (3/8-inch), with 45% measured at 0.420 mm (No. 40 sieve).
Organic Content	8.20%
Quantity	1,816 cubic yards of topsoil (screened loam)
SHORELINE PROTECTION	
Coir log	600 linear feet

Attachment 1

Sampling Results from Marsh Island Borrow Area

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	11:35	N1	MIBP01-090117	A209A	SO	SOLIDS, PERCENT	97		1	1	PERCENT
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	2-METHYLNAPHTHALENE	ND	U	0.1	0.18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	ACENAPHTHENE	ND	U	0.15	0.18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	ACENAPHTHYLENE	ND	U	0.088	0.18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	ANTHRACENE	ND	U	0.1	0.18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	BENZO(A)ANTHRACENE	ND	U	0.1	0.18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	BENZO(A)PYRENE	ND	U	0.088	0.18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	BENZO(B)FLUORANTHENE	ND	U	0.078	0.18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	BENZO(G,H,I)PERYLENE	ND	U	0.1	0.18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	BENZO(K)FLUORANTHENE	ND	U	0.097	0.18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	C11-C22 AROMATIC HYDROCARBONS	ND	U	8.7	18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	C11-C22 AROMATIC HYDROCARBONS	ND	U	8.7	18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	C19-C36 ALIPHATIC HYDROCARBONS	ND	U	7.1	18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	C9-C18 ALIPHATIC HYDROCARBONS	ND	U	10	18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	CHRYSENE	ND	U	0.097	0.18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	DIBENZ(A,H)ANTHRACENE	ND	U	0.088	0.18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	FLUORANTHENE	ND	U	0.075	0.18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	FLUORENE	ND	U	0.06	0.18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	INDENO(1,2,3-C,D)PYRENE	ND	U	0.072	0.18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	NAPHTHALENE	ND	U	0.11	0.18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	PHENANTHRENE	ND	U	0.071	0.18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	EPHMA	SO	PYRENE	ND	U	0.075	0.18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	ALUMINUM	1720		0.44	18	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	ANTIMONY	ND	U	0.043	0.49	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	ARSENIC	0.696		0.042	0.49	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	BARIUM	4.52		0.015	0.31	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	BERYLLIUM	0.163	J	0.0042	0.31	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	BORON	0.462	J,B	0.031	3.1	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	CADMIUM	0.024	J	0.0049	0.31	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	CALCIUM	538		1.1	6.2	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	CHROMIUM, TOTAL	3.22		0.016	0.62	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	COBALT	1.2		0.018	0.62	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	COPPER	12.4		0.098	1.5	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	IRON	3100		0.86	6.2	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	LEAD	7.43		0.054	0.31	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	MAGNESIUM	757		0.42	6.2	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	MANGANESE	49.8		0.098	0.31	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	NICKEL	3.67		0.027	0.62	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	POTASSIUM	265		1.8	62	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	SELENIUM	ND	U	0.1	0.62	mg/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	SILVER	ND	U	0.017	0.62	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	SODIUM	19.3	J	0.92	62	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	THALLIUM	ND	U	0.053	0.92	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	VANADIUM	7		0.023	0.62	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW6010C	SO	ZINC	30.6		0.1	1.2	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW7471B	SO	MERCURY	ND	U	0.0044	0.029	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	ALDRIN	ND	U	0.27	1.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	ALPHA BHC (ALPHA HEXACHLOROCYCLOHEX	ND	U	0.32	1.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	ALPHA ENDOSULFAN	ND	U	0.23	1.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	ALPHA-CHLORDANE	ND	U	0.2	1.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	BETA BHC (BETA HEXACHLOROCYCLOHEXAN	ND	U	0.32	1.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	BETA ENDOSULFAN	ND	U	0.32	3.2	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	DELTA BHC (DELTA HEXACHLOROCYCLOHEX	ND	U	0.31	1.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	DIELDRIN	ND	U	0.21	3.2	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	ENDOSULFAN SULFATE	ND	U	0.55	3.2	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	ENDRIN	ND	U	0.81	3.2	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	ENDRIN ALDEHYDE	ND	U	0.47	3.2	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	ENDRIN KETONE	ND	U	0.38	3.2	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	GAMMA BHC (LINDANE)	ND	U	0.26	1.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	GAMMA-CHLORDANE	ND	U	0.22	1.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	HEPTACHLOR	ND	U	0.28	1.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	HEPTACHLOR EPOXIDE	ND	U	0.21	1.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	METHOXYCHLOR	ND	U	0.48	16	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	P,P'-DDD	ND	U	0.19	3.2	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	P,P'-DDE	0.61	J	0.18	3.2	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	P,P'-DDT	2.2	JJ	0.3	3.2	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8081B	SO	TOXAPHENE	ND	U	6.7	32	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8082A	SO	PCB-1016 (AROCLOR 1016)	ND	U	6	16	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8082A	SO	PCB-1221 (AROCLOR 1221)	ND	U	8.1	16	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8082A	SO	PCB-1232 (AROCLOR 1232)	ND	U	9.4	16	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8082A	SO	PCB-1242 (AROCLOR 1242)	ND	U	5.8	16	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8082A	SO	PCB-1248 (AROCLOR 1248)	ND	U	6.2	16	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8082A	SO	PCB-1254 (AROCLOR 1254)	ND	U	4.8	16	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8082A	SO	PCB-1260 (AROCLOR 1260)	ND	U	6	16	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,1,1,2-TETRACHLOROETHANE	ND	U	0.66	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,1,1-TRICHLOROETHANE	ND	U	0.39	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,1,2,2-TETRACHLOROETHANE	ND	U	0.79	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,1,2-TRICHLOROETHANE	ND	U	0.91	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,1-DICHLOROETHANE	ND	U	1.6	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,1-DICHLOROETHENE	ND	U	0.87	4.7	ug/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,1-DICHLOROPROPENE	ND	U	0.86	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,2,3-TRICHLOROBENZENE	ND	U	0.71	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,2,3-TRICHLOROPROPANE	ND	U	1.1	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,2,4-TRICHLOROBENZENE	ND	U	0.74	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,2,4-TRIMETHYLBENZENE	ND	U	0.82	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,2-DIBROMO-3-CHLOROPROPANE	ND	U	1.4	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,2-DIBROMOETHANE (EDB)	ND	U	1.1	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,2-DICHLOROBENZENE	ND	U	0.73	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,2-DICHLOROETHANE	ND	U	0.94	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,2-DICHLOROPROPANE	ND	U	1.3	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,3,5-TRICHLOROBENZENE	ND	U	0.82	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,3,5-TRIMETHYLBENZENE (MESITYLENE)	ND	U	0.63	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,3-DICHLOROBENZENE	ND	U	0.58	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,3-DICHLOROPROPANE	ND	U	0.88	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,4-DICHLOROBENZENE	ND	U	0.41	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	1,4-DIOXANE (P-DIOXANE)	ND	U	31	470	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	2,2-DICHLOROPROPANE	ND	U	0.47	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	2-CHLOROTOLUENE	ND	U	1	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	2-HEXANONE	26	J	4.5	24	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	4-CHLOROTOLUENE	ND	U	0.46	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	ACETONE	73	J,B	4.8	24	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	BENZENE	ND	U	0.86	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	BROMOBENZENE	ND	U	0.7	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	BROMOCHLOROMETHANE	ND	U	0.86	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	BROMODICHLOROMETHANE	ND	U	0.56	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	BROMOFORM	ND	U	0.66	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	BROMOMETHANE	ND	U	1	9.4	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	CARBON DISULFIDE	ND	U	0.73	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	CARBON TETRACHLORIDE	ND	U	1.2	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	CHLOROBENZENE	ND	U	0.48	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	CHLOROETHANE	ND	U	1.2	9.4	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	CHLOROFORM	ND	U	0.33	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	CHLOROMETHANE	ND	UJ	1.3	9.4	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	CIS-1,2-DICHLOROETHENE	ND	U	0.86	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	CIS-1,3-DICHLOROPROPENE	ND	U	0.68	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	DIBROMOCHLOROMETHANE	ND	U	0.94	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	DIBROMOMETHANE	ND	U	0.48	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	DICHLORODIFLUOROMETHANE	ND	UJ	0.86	9.4	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	DIETHYL ETHER (ETHYL ETHER)	ND	U	0.75	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	ETHYLBENZENE	ND	U	0.61	4.7	ug/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	HEXACHLOROBUTADIENE	ND	U	0.7	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	ISOPROPYLBENZENE (CUMENE)	ND	U	0.86	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	M,P-XYLENE (SUM OF ISOMERS)	ND	U	1.6	9.4	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	METHYL ETHYL KETONE (2-BUTANONE)	ND	U	5.5	24	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	METHYL ISOBUTYL KETONE (4-METHYL-2-	ND	U	5.5	24	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	METHYL TERT-BUTYL ETHER (MTBE)	ND	U	1	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	METHYLENE CHLORIDE	ND	U	7.4	24	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	NAPHTHALENE	ND	U	0.83	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	N-BUTYLBENZENE	ND	U	0.86	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	N-PROPYLBENZENE	ND	U	0.78	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	O-XYLENE (1,2-DIMETHYLBENZENE)	ND	U	1.2	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	P-CYMENE (P-ISOPROPYLTOLUENE)	ND	U	0.71	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	SEC-BUTYLBENZENE	ND	U	0.86	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	STYRENE	ND	U	0.48	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	T-BUTYLBENZENE	ND	U	0.85	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	TETRACHLOROETHENE(PCE)	ND	U	1.1	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	TETRAHYDROFURAN	ND	U	4.2	47	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	TOLUENE	ND	U	1.3	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	TOTAL 1,2-DICHLOROETHENE	ND	U	0.67	9.4	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	TRANS-1,2-DICHLOROETHENE	ND	U	0.67	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	TRANS-1,3-DICHLOROPROPENE	ND	U	0.81	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	TRICHLOROETHENE(TCE)	ND	U	0.55	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	TRICHLOROFLUOROMETHANE	ND	U	0.86	9.4	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	VINYL ACETATE	ND	U	0.88	4.7	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	VINYL CHLORIDE	ND	UJ	0.82	9.4	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8260C	SO	XYLENES, TOTAL	ND	U	1.2	14	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	1,2,4-TRICHLOROBENZENE	ND	U	80	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	1,2-DICHLOROBENZENE	ND	U	87	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	1,2-DIPHENYLHYDRAZINE	ND	U	140	660	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	1,3-DICHLOROBENZENE	ND	U	77	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	1,4-DICHLOROBENZENE	ND	U	85	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	2,2'-OXYBIS(1-CHLORO)PROPANE	ND	U	88	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	2,4,5-TRICHLOROPHENOL	ND	U	150	810	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	2,4,6-TRICHLOROPHENOL	ND	U	150	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	2,4-DICHLOROPHENOL	ND	U	150	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	2,4-DIMETHYLPHENOL	ND	U	160	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	2,4-DINITROPHENOL	ND	U	370	810	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	2,4-DINITROTOLUENE	ND	U	84	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	2,6-DINITROTOLUENE	ND	U	78	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	2-CHLORONAPHTHALENE	ND	U	86	330	ug/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	2-CHLOROPHENOL	ND	U	160	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	2-METHYLNAPHTHALENE	ND	U	91	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	2-METHYLPHENOL (O-CRESOL)	ND	U	200	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	2-NITROANILINE	ND	U	74	810	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	2-NITROPHENOL	ND	U	160	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	3,3'-DICHLOROBENZIDINE	ND	U	110	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	3-NITROANILINE	ND	U	93	810	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	4,6-DINITRO-2-METHYLPHENOL	ND	U	330	810	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	4-BROMOPHENYL PHENYL ETHER	ND	U	84	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	4-CHLORO-3-METHYLPHENOL	ND	U	160	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	4-CHLOROANILINE	ND	U	120	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	4-CHLOROPHENYL PHENYL ETHER	ND	U	77	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	4-NITROANILINE	ND	U	130	810	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	4-NITROPHENOL	ND	U	310	810	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	ACENAPHTHENE	ND	U	64	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	ACENAPHTHYLENE	ND	U	70	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	ANTHRACENE	ND	U	83	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	BENZIDINE	ND	U	99	1500	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	BENZO(A)ANTHRACENE	ND	U	85	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	BENZO(A)PYRENE	ND	U	92	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	BENZO(B)FLUORANTHENE	ND	U	130	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	BENZO(G,H,I)PERYLENE	ND	U	100	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	BENZO(K)FLUORANTHENE	ND	U	82	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	BENZYL BUTYL PHTHALATE	ND	U	92	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	BIPHENYL (DIPHENYL)	ND	U	72	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	BIS(2-CHLOROETHOXY) METHANE	ND	U	95	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	BIS(2-CHLOROETHYL) ETHER (2-CHLORO	ND	U	80	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	BIS(2-ETHYLHEXYL) PHTHALATE	ND	U	97	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	CARBAZOLE	ND	U	110	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	CHRYSENE	ND	U	94	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	CRESOLS, M & P	ND	U	180	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	DIBENZ(A,H)ANTHRACENE	ND	U	130	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	DIBENZOFURAN	ND	U	78	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	DIETHYL PHTHALATE	ND	U	79	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	DIMETHYL PHTHALATE	ND	U	77	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	DI-N-BUTYL PHTHALATE	ND	U	100	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	DI-N-OCTYLPHTHALATE	ND	U	210	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	FLUORANTHENE	ND	U	100	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	FLUORENE	ND	U	80	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	HEXACHLOROBENZENE	ND	U	81	330	ug/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	HEXACHLOROBUTADIENE	ND	U	82	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	HEXACHLOROCYCLOPENTADIENE	ND	U	81	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	HEXACHLOROETHANE	ND	U	95	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	INDENO(1,2,3-C,D)PYRENE	ND	U	120	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	ISOPHORONE	ND	U	74	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	NAPHTHALENE	ND	U	86	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	NITROBENZENE	ND	U	90	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	N-NITROSODIMETHYLAMINE	ND	U	86	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	N-NITROSODI-N-PROPYLAMINE	ND	U	82	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	N-NITROSODIPHENYLAMINE	ND	U	220	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	PENTACHLOROPHENOL	ND	U	240	810	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	PHENANTHRENE	ND	U	82	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	PHENOL	ND	U	150	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW8270D	SO	PYRENE	ND	U	100	330	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	SW9012B	SO	CYANIDE	ND	U	0.076	0.25	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	VPHMA	SO	BENZENE	ND	U	0.028	0.24	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	VPHMA	SO	C5-C8 ALIPHATIC HYDROCARBONS	ND	U	12	24	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	VPHMA	SO	C5-C8 ALIPHATIC HYDROCARBONS	ND	U	12	24	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	VPHMA	SO	C9-C10 AROMATIC HYDROCARBONS	ND	U	12	24	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	VPHMA	SO	C9-C12 ALIPHATIC HYDROCARBONS	ND	U	12	24	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	VPHMA	SO	C9-C12 ALIPHATIC HYDROCARBONS	ND	U	12	24	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	VPHMA	SO	ETHYLBENZENE	ND	U	0.037	0.24	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	VPHMA	SO	M,P-XYLENE (SUM OF ISOMERS)	ND	U	0.088	0.49	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	VPHMA	SO	METHYL TERT-BUTYL ETHER (MTBE)	ND	U	0.082	0.24	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	VPHMA	SO	NAPHTHALENE	ND	U	0.057	1.2	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	VPHMA	SO	O-XYLENE (1,2-DIMETHYLBENZENE)	ND	U	0.03	0.24	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117	VPHMA	SO	TOLUENE	ND	U	0.11	0.24	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	A209A	SO	SOLIDS, PERCENT	97		1	1	PERCENT
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	2-METHYLNAPHTHALENE	ND	U	0.1	0.17	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	ACENAPHTHENE	ND	U	0.14	0.17	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	ACENAPHTHYLENE	ND	U	0.084	0.17	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	ANTHRACENE	ND	U	0.1	0.17	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	BENZO(A)ANTHRACENE	ND	U	0.1	0.17	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	BENZO(A)PYRENE	ND	U	0.084	0.17	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	BENZO(B)FLUORANTHENE	ND	U	0.074	0.17	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	BENZO(G,H,I)PERYLENE	ND	U	0.1	0.17	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	BENZO(K)FLUORANTHENE	ND	U	0.093	0.17	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	C11-C22 AROMATIC HYDROCARBONS	ND	U	8.3	17	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	C11-C22 AROMATIC HYDROCARBONS	ND	U	8.3	17	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	C19-C36 ALIPHATIC HYDROCARBONS	ND	U	6.8	17	mg/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	C9-C18 ALIPHATIC HYDROCARBONS	ND	U	9.6	17	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	CHRYSENE	ND	U	0.093	0.17	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	DIBENZ(A,H)ANTHRACENE	ND	U	0.084	0.17	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	FLUORANTHENE	ND	U	0.072	0.17	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	FLUORENE	ND	U	0.057	0.17	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	INDENO(1,2,3-C,D)PYRENE	ND	U	0.069	0.17	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	NAPHTHALENE	ND	U	0.11	0.17	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	PHENANTHRENE	ND	U	0.068	0.17	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	EPHMA	SO	PYRENE	ND	U	0.072	0.17	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	ALUMINUM	1790		0.46	19	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	ANTIMONY	ND	U	0.045	0.52	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	ARSENIC	0.698		0.044	0.52	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	BARIUM	4.85		0.016	0.32	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	BERYLLIUM	0.167	J	0.0044	0.32	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	BORON	0.371	J,B	0.032	3.2	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	CADMIUM	0.022	J	0.0051	0.32	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	CALCIUM	824		1.2	6.5	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	CHROMIUM, TOTAL	3.73		0.017	0.65	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	COBALT	1.32		0.019	0.65	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	COPPER	12.4		0.1	1.6	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	IRON	3440		0.91	6.5	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	LEAD	7.67		0.056	0.32	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	MAGNESIUM	839		0.44	6.5	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	MANGANESE	53.2		0.1	0.32	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	NICKEL	4		0.029	0.65	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	POTASSIUM	264		1.9	65	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	SELENIUM	ND	U	0.11	0.65	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	SILVER	0.024	J,B	0.018	0.65	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	SODIUM	23.6	J	0.97	65	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	THALLIUM	ND	U	0.056	0.97	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	VANADIUM	7.34		0.024	0.65	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW6010C	SO	ZINC	32.6		0.11	1.3	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW7471B	SO	MERCURY	ND	U	0.0046	0.03	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	ALDRIN	ND	U	0.25	1.5	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	ALPHA BHC (ALPHA HEXACHLOROCYCLOHEX	ND	U	0.31	1.5	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	ALPHA ENDOSULFAN	ND	U	0.22	1.5	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	ALPHA-CHLORDANE	ND	U	0.19	1.5	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	BETA BHC (BETA HEXACHLOROCYCLOHEXAN	ND	U	0.3	1.5	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	BETA ENDOSULFAN	ND	U	0.31	3	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	DELTA BHC (DELTA HEXACHLOROCYCLOHEX	ND	U	0.29	1.5	ug/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	DIELDRIN	ND	U	0.2	3	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	ENDOSULFAN SULFATE	ND	U	0.52	3	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	ENDRIN	ND	U	0.77	3	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	ENDRIN ALDEHYDE	ND	U	0.44	3	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	ENDRIN KETONE	ND	U	0.36	3	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	GAMMA BHC (LINDANE)	ND	U	0.24	1.5	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	GAMMA-CHLORDANE	ND	U	0.21	1.5	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	HEPTACHLOR	ND	U	0.26	1.5	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	HEPTACHLOR EPOXIDE	ND	U	0.2	1.5	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	METHOXYCHLOR	ND	U	0.45	15	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	P,P'-DDD	ND	U	0.18	3	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	P,P'-DDE	0.7	J	0.17	3	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	P,P'-DDT	2.1	JJ	0.28	3	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8081B	SO	TOXAPHENE	ND	U	6.3	30	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8082A	SO	PCB-1016 (AROCLOR 1016)	ND	U	6.1	15	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8082A	SO	PCB-1221 (AROCLOR 1221)	ND	U	8	15	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8082A	SO	PCB-1232 (AROCLOR 1232)	ND	U	9.5	15	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8082A	SO	PCB-1242 (AROCLOR 1242)	ND	U	5.9	15	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8082A	SO	PCB-1248 (AROCLOR 1248)	ND	U	6.2	15	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8082A	SO	PCB-1254 (AROCLOR 1254)	ND	U	4.8	15	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8082A	SO	PCB-1260 (AROCLOR 1260)	ND	U	6.1	15	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,1,1,2-TETRACHLOROETHANE	ND	U	0.64	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,1,1-TRICHLOROETHANE	ND	U	0.38	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,1,2,2-TETRACHLOROETHANE	ND	U	0.76	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,1,2-TRICHLOROETHANE	ND	U	0.88	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,1-DICHLOROETHANE	ND	U	1.5	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,1-DICHLOROETHENE	ND	U	0.85	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,1-DICHLOROPROPENE	ND	U	0.83	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,2,3-TRICHLOROBENZENE	ND	U	0.69	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,2,3-TRICHLOROPROPANE	ND	U	1.1	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,2,4-TRICHLOROBENZENE	ND	U	0.72	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,2,4-TRIMETHYLBENZENE	ND	U	0.79	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,2-DIBROMO-3-CHLOROPROPANE	ND	U	1.4	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,2-DIBROMOETHANE (EDB)	ND	U	1.1	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,2-DICHLOROBENZENE	ND	U	0.71	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,2-DICHLOROETHANE	ND	U	0.91	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,2-DICHLOROPROPANE	ND	U	1.3	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,3,5-TRICHLOROBENZENE	ND	U	0.79	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,3,5-TRIMETHYLBENZENE (MESITYLENE)	ND	U	0.61	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,3-DICHLOROBENZENE	ND	U	0.56	4.6	ug/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,3-DICHLOROPROPANE	ND	U	0.86	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,4-DICHLOROBENZENE	ND	U	0.4	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	1,4-DIOXANE (P-DIOXANE)	ND	U	30	460	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	2,2-DICHLOROPROPANE	ND	U	0.46	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	2-CHLOROTOLUENE	ND	U	1	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	2-HEXANONE	31	J	4.4	23	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	4-CHLOROTOLUENE	ND	U	0.44	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	ACETONE	83	J,B	4.6	23	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	BENZENE	ND	U	0.84	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	BROMOBENZENE	ND	U	0.67	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	BROMOCHLOROMETHANE	ND	U	0.83	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	BROMODICHLOROMETHANE	ND	U	0.55	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	BROMOFORM	ND	U	0.64	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	BROMOMETHANE	ND	U	1	9.1	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	CARBON DISULFIDE	ND	U	0.71	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	CARBON TETRACHLORIDE	ND	U	1.2	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	CHLOROBENZENE	ND	U	0.46	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	CHLOROETHANE	ND	U	1.2	9.1	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	CHLOROFORM	ND	U	0.32	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	CHLOROMETHANE	ND	UJ	1.3	9.1	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	CIS-1,2-DICHLOROETHENE	ND	U	0.83	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	CIS-1,3-DICHLOROPROPENE	ND	U	0.66	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	DIBROMOCHLOROMETHANE	ND	U	0.91	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	DIBROMOMETHANE	ND	U	0.46	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	DICHLORODIFLUOROMETHANE	ND	UJ	0.84	9.1	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	DIETHYL ETHER (ETHYL ETHER)	ND	U	0.73	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	ETHYLBENZENE	ND	U	0.59	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	HEXACHLOROBUTADIENE	ND	U	0.67	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	ISOPROPYLBENZENE (CUMENE)	ND	U	0.84	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	M,P-XYLENE (SUM OF ISOMERS)	ND	U	1.5	9.1	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	METHYL ETHYL KETONE (2-BUTANONE)	ND	U	5.4	23	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	METHYL ISOBUTYL KETONE (4-METHYL-2-	ND	U	5.4	23	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	METHYL TERT-BUTYL ETHER (MTBE)	ND	U	1	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	METHYLENE CHLORIDE	ND	U	7.2	23	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	NAPHTHALENE	ND	U	0.8	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	N-BUTYLBENZENE	ND	U	0.84	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	N-PROPYLBENZENE	ND	U	0.76	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	O-XYLENE (1,2-DIMETHYLBENZENE)	ND	U	1.2	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	P-CYMENE (P-ISOPROPYLTOLUENE)	ND	U	0.69	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	SEC-BUTYLBENZENE	ND	U	0.83	4.6	ug/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	STYRENE	ND	U	0.46	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	T-BUTYLBENZENE	ND	U	0.82	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	TETRACHLOROETHENE(PCE)	ND	U	1.1	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	TETRAHYDROFURAN	ND	U	4.1	46	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	TOLUENE	ND	U	1.3	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	TOTAL 1,2-DICHLOROETHENE	ND	U	0.65	9.1	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	TRANS-1,2-DICHLOROETHENE	ND	U	0.65	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	TRANS-1,3-DICHLOROPROPENE	ND	U	0.78	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	TRICHLOROETHENE(TCE)	ND	U	0.54	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	TRICHLOROFLUOROMETHANE	ND	U	0.83	9.1	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	VINYL ACETATE	ND	U	0.86	4.6	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	VINYL CHLORIDE	ND	UJ	0.79	9.1	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8260C	SO	XYLENES, TOTAL	ND	U	1.2	14	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	1,2,4-TRICHLOROBENZENE	ND	U	72	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	1,2-DICHLOROBENZENE	ND	U	79	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	1,2-DIPHENYLHYDRAZINE	ND	U	130	590	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	1,3-DICHLOROBENZENE	ND	U	70	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	1,4-DICHLOROBENZENE	ND	U	77	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	2,2'-OXYBIS(1-CHLORO)PROPANE	ND	U	80	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	2,4,5-TRICHLOROPHENOL	ND	U	140	730	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	2,4,6-TRICHLOROPHENOL	ND	U	140	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	2,4-DICHLOROPHENOL	ND	U	130	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	2,4-DIMETHYLPHENOL	ND	U	150	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	2,4-DINITROPHENOL	ND	U	340	730	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	2,4-DINITROTOLUENE	ND	U	76	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	2,6-DINITROTOLUENE	ND	U	71	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	2-CHLORONAPHTHALENE	ND	U	78	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	2-CHLOROPHENOL	ND	U	150	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	2-METHYLNAPHTHALENE	ND	U	82	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	2-METHYLPHENOL (O-CRESOL)	ND	U	180	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	2-NITROANILINE	ND	U	67	730	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	2-NITROPHENOL	ND	U	150	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	3,3'-DICHLOROBENZIDINE	ND	U	100	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	3-NITROANILINE	ND	U	84	730	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	4,6-DINITRO-2-METHYLPHENOL	ND	U	300	730	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	4-BROMOPHENYL PHENYL ETHER	ND	U	76	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	4-CHLORO-3-METHYLPHENOL	ND	U	150	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	4-CHLOROANILINE	ND	U	110	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	4-CHLOROPHENYL PHENYL ETHER	ND	U	70	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	4-NITROANILINE	ND	U	120	730	ug/Kg

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Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	4-NITROPHENOL	ND	U	280	730	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	ACENAPHTHENE	ND	U	58	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	ACENAPHTHYLENE	ND	U	63	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	ANTHRACENE	ND	U	75	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	BENZIDINE	ND	U	89	1300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	BENZO(A)ANTHRACENE	ND	U	77	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	BENZO(A)PYRENE	ND	U	83	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	BENZO(B)FLUORANTHENE	ND	U	120	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	BENZO(G,H,I)PERYLENE	ND	U	93	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	BENZO(K)FLUORANTHENE	ND	U	74	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	BENZYL BUTYL PHTHALATE	ND	U	83	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	BIPHENYL (DIPHENYL)	ND	U	65	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	BIS(2-CHLOROETHOXY) METHANE	ND	U	86	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	BIS(2-CHLOROETHYL) ETHER (2-CHLORO	ND	U	72	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	BIS(2-ETHYLHEXYL) PHTHALATE	ND	U	88	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	CARBAZOLE	ND	U	99	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	CHRYSENE	ND	U	85	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	CRESOLS, M & P	ND	U	170	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	DIBENZ(A,H)ANTHRACENE	ND	U	110	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	DIBENZOFURAN	ND	U	71	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	DIETHYL PHTHALATE	ND	U	72	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	DIMETHYL PHTHALATE	ND	U	70	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	DI-N-BUTYL PHTHALATE	ND	U	90	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	DI-N-OCTYLPHTHALATE	ND	U	190	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	FLUORANTHENE	ND	U	95	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	FLUORENE	ND	U	72	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	HEXACHLOROBENZENE	ND	U	73	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	HEXACHLOROBUTADIENE	ND	U	74	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	HEXACHLOROCYCLOPENTADIENE	ND	U	73	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	HEXACHLOROETHANE	ND	U	86	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	INDENO(1,2,3-C,D)PYRENE	ND	U	110	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	ISOPHORONE	ND	U	67	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	NAPHTHALENE	ND	U	78	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	NITROBENZENE	ND	U	81	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	N-NITROSODIMETHYLAMINE	ND	U	78	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	N-NITROSODI-N-PROPYLAMINE	ND	U	74	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	N-NITROSODIPHENYLAMINE	ND	U	200	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	PENTACHLOROPHENOL	ND	U	210	730	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	PHENANTHRENE	ND	U	74	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	PHENOL	ND	U	140	300	ug/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW8270D	SO	PYRENE	ND	U	90	300	ug/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	SW9012B	SO	CYANIDE	ND	U	0.072	0.24	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	VPHMA	SO	BENZENE	ND	U	0.027	0.23	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	VPHMA	SO	C5-C8 ALIPHATIC HYDROCARBONS	ND	U	12	23	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	VPHMA	SO	C5-C8 ALIPHATIC HYDROCARBONS	ND	U	12	23	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	VPHMA	SO	C9-C10 AROMATIC HYDROCARBONS	ND	U	12	23	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	VPHMA	SO	C9-C12 ALIPHATIC HYDROCARBONS	ND	U	12	23	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	VPHMA	SO	C9-C12 ALIPHATIC HYDROCARBONS	ND	U	12	23	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	VPHMA	SO	ETHYLBENZENE	ND	U	0.035	0.23	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	VPHMA	SO	M,P-XYLENE (SUM OF ISOMERS)	ND	U	0.083	0.46	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	VPHMA	SO	METHYL TERT-BUTYL ETHER (MTBE)	ND	U	0.077	0.23	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	VPHMA	SO	NAPHTHALENE	ND	U	0.053	1.2	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	VPHMA	SO	O-XYLENE (1,2-DIMETHYLBENZENE)	ND	U	0.028	0.23	mg/Kg
MIBP	9/1/2017	11:35	N1	MIBP01-090117-FD	VPHMA	SO	TOLUENE	ND	U	0.1	0.23	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	A209A	SO	SOLIDS, PERCENT	97		1	1	PERCENT
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	2-METHYLNAPHTHALENE	ND	U	0.1	0.17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	ACENAPHTHENE	ND	U	0.15	0.17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	ACENAPHTHYLENE	ND	U	0.087	0.17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	ANTHRACENE	ND	U	0.1	0.17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	BENZO(A)ANTHRACENE	ND	U	0.1	0.17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	BENZO(A)PYRENE	ND	U	0.087	0.17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	BENZO(B)FLUORANTHENE	ND	U	0.076	0.17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	BENZO(G,H,I)PERYLENE	ND	U	0.1	0.17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	BENZO(K)FLUORANTHENE	ND	U	0.096	0.17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	C11-C22 AROMATIC HYDROCARBONS	ND	U	8.5	17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	C11-C22 AROMATIC HYDROCARBONS	ND	U	8.5	17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	C19-C36 ALIPHATIC HYDROCARBONS	ND	U	7	17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	C9-C18 ALIPHATIC HYDROCARBONS	ND	U	9.8	17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	CHRYSENE	ND	U	0.096	0.17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	DIBENZ(A,H)ANTHRACENE	ND	U	0.087	0.17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	FLUORANTHENE	ND	U	0.074	0.17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	FLUORENE	ND	U	0.059	0.17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	INDENO(1,2,3-C,D)PYRENE	ND	U	0.071	0.17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	NAPHTHALENE	ND	U	0.11	0.17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	PHENANTHRENE	ND	U	0.07	0.17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	EPHMA	SO	PYRENE	ND	U	0.074	0.17	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	ALUMINUM	2620		0.42	18	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	ANTIMONY	ND	U	0.042	0.47	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	ARSENIC	0.655		0.04	0.47	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	BARIUM	4.09		0.015	0.3	mg/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	BERYLLIUM	0.202	J	0.004	0.3	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	BORON	0.392	J,B	0.03	3	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	CADMIUM	ND	U	0.0047	0.3	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	CALCIUM	775		1.1	5.9	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	CHROMIUM, TOTAL	5.08		0.015	0.59	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	COBALT	1.8		0.017	0.59	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	COPPER	4.95		0.095	1.5	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	IRON	5140		0.83	5.9	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	LEAD	3.91		0.052	0.3	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	MAGNESIUM	1370		0.4	5.9	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	MANGANESE	88.4		0.095	0.3	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	NICKEL	4.06		0.026	0.59	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	POTASSIUM	285		1.7	59	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	SELENIUM	0.13	J	0.1	0.59	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	SILVER	ND	U	0.016	0.59	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	SODIUM	24.1	J	0.89	59	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	THALLIUM	ND	U	0.051	0.89	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	VANADIUM	7.73		0.022	0.59	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW6010C	SO	ZINC	21.9		0.1	1.2	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW7471B	SO	MERCURY	ND	U	0.005	0.032	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	ALDRIN	ND	U	0.25	1.5	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	ALPHA BHC (ALPHA HEXACHLOROCYCLOHEX	ND	U	0.3	1.5	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	ALPHA ENDOSULFAN	ND	U	0.21	1.5	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	ALPHA-CHLORDANE	ND	U	0.18	1.5	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	BETA BHC (BETA HEXACHLOROCYCLOHEXAN	ND	U	0.29	1.5	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	BETA ENDOSULFAN	ND	U	0.3	2.9	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	DELTA BHC (DELTA HEXACHLOROCYCLOHEX	ND	U	0.28	1.5	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	DIELDRIN	ND	U	0.19	2.9	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	ENDOSULFAN SULFATE	ND	U	0.51	2.9	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	ENDRIN	ND	U	0.75	2.9	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	ENDRIN ALDEHYDE	ND	U	0.43	2.9	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	ENDRIN KETONE	ND	U	0.35	2.9	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	GAMMA BHC (LINDANE)	ND	U	0.24	1.5	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	GAMMA-CHLORDANE	ND	U	0.2	1.5	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	HEPTACHLOR	ND	U	0.25	1.5	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	HEPTACHLOR EPOXIDE	ND	U	0.19	1.5	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	METHOXYCHLOR	ND	U	0.44	15	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	P,P'-DDD	ND	U	0.18	2.9	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	P,P'-DDE	0.24	J	0.17	2.9	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	P,P'-DDT	1.6	JJ	0.27	2.9	ug/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8081B	SO	TOXAPHENE	ND	U	6.2	29	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8082A	SO	PCB-1016 (AROCLOR 1016)	ND	U	6	15	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8082A	SO	PCB-1221 (AROCLOR 1221)	ND	U	7.8	15	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8082A	SO	PCB-1232 (AROCLOR 1232)	ND	U	9.3	15	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8082A	SO	PCB-1242 (AROCLOR 1242)	ND	U	5.8	15	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8082A	SO	PCB-1248 (AROCLOR 1248)	ND	U	6.1	15	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8082A	SO	PCB-1254 (AROCLOR 1254)	ND	U	4.6	15	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8082A	SO	PCB-1260 (AROCLOR 1260)	ND	U	6	15	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,1,1,2-TETRACHLOROETHANE	ND	U	0.64	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,1,1-TRICHLOROETHANE	ND	U	0.38	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,1,2,2-TETRACHLOROETHANE	ND	U	0.76	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,1,2-TRICHLOROETHANE	ND	U	0.88	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,1-DICHLOROETHANE	ND	U	1.5	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,1-DICHLOROETHENE	ND	U	0.85	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,1-DICHLOROPROPENE	ND	U	0.83	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,2,3-TRICHLOROBENZENE	ND	U	0.69	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,2,3-TRICHLOROPROPANE	ND	U	1.1	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,2,4-TRICHLOROBENZENE	ND	U	0.72	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,2,4-TRIMETHYLBENZENE	ND	U	0.79	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,2-DIBROMO-3-CHLOROPROPANE	ND	U	1.4	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,2-DIBROMOETHANE (EDB)	ND	U	1.1	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,2-DICHLOROBENZENE	ND	U	0.71	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,2-DICHLOROETHANE	ND	U	0.91	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,2-DICHLOROPROPANE	ND	U	1.3	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,3,5-TRICHLOROBENZENE	ND	U	0.79	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,3,5-TRIMETHYLBENZENE (MESITYLENE)	ND	U	0.61	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,3-DICHLOROBENZENE	ND	U	0.56	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,3-DICHLOROPROPANE	ND	U	0.86	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,4-DICHLOROBENZENE	ND	U	0.4	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	1,4-DIOXANE (P-DIOXANE)	ND	U	30	460	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	2,2-DICHLOROPROPANE	ND	U	0.46	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	2-CHLOROTOLUENE	ND	U	1	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	2-HEXANONE	9.8	J	4.4	23	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	4-CHLOROTOLUENE	ND	U	0.44	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	ACETONE	54	J,B	4.6	23	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	BENZENE	ND	U	0.84	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	BROMOBENZENE	ND	U	0.67	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	BROMOCHLOROMETHANE	ND	U	0.83	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	BROMODICHLOROMETHANE	ND	U	0.55	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	BROMOFORM	ND	U	0.64	4.6	ug/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	BROMOMETHANE	ND	U	1	9.1	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	CARBON DISULFIDE	ND	U	0.71	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	CARBON TETRACHLORIDE	ND	U	1.2	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	CHLOROBENZENE	ND	U	0.46	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	CHLOROETHANE	ND	U	1.2	9.1	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	CHLOROFORM	ND	U	0.32	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	CHLOROMETHANE	ND	UJ	1.3	9.1	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	CIS-1,2-DICHLOROETHENE	ND	U	0.83	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	CIS-1,3-DICHLOROPROPENE	ND	U	0.66	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	DIBROMOCHLOROMETHANE	ND	U	0.91	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	DIBROMOMETHANE	ND	U	0.46	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	DICHLORODIFLUOROMETHANE	ND	UJ	0.84	9.1	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	DIETHYL ETHER (ETHYL ETHER)	ND	U	0.73	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	ETHYLBENZENE	ND	U	0.59	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	HEXACHLOROBUTADIENE	ND	U	0.67	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	ISOPROPYLBENZENE (CUMENE)	ND	U	0.84	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	M,P-XYLENE (SUM OF ISOMERS)	ND	U	1.5	9.1	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	METHYL ETHYL KETONE (2-BUTANONE)	ND	U	5.4	23	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	METHYL ISOBUTYL KETONE (4-METHYL-2-	ND	U	5.4	23	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	METHYL TERT-BUTYL ETHER (MTBE)	ND	U	1	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	METHYLENE CHLORIDE	ND	U	7.2	23	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	NAPHTHALENE	ND	U	0.8	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	N-BUTYLBENZENE	ND	U	0.84	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	N-PROPYLBENZENE	ND	U	0.76	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	O-XYLENE (1,2-DIMETHYLBENZENE)	ND	U	1.2	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	P-CYMENE (P-ISOPROPYLTOLUENE)	ND	U	0.69	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	SEC-BUTYLBENZENE	ND	U	0.83	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	STYRENE	ND	U	0.46	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	T-BUTYLBENZENE	ND	U	0.82	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	TETRACHLOROETHENE(PCE)	ND	U	1.1	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	TETRAHYDROFURAN	ND	U	4.1	46	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	TOLUENE	ND	U	1.3	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	TOTAL 1,2-DICHLOROETHENE	ND	U	0.65	9.1	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	TRANS-1,2-DICHLOROETHENE	ND	U	0.65	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	TRANS-1,3-DICHLOROPROPENE	ND	U	0.78	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	TRICHLOROETHENE(TCE)	ND	U	0.54	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	TRICHLOROFLUOROMETHANE	ND	U	0.83	9.1	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	VINYL ACETATE	ND	U	0.86	4.6	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	VINYL CHLORIDE	ND	UJ	0.79	9.1	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8260C	SO	XYLENES, TOTAL	ND	U	1.2	14	ug/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	1,2,4-TRICHLOROBENZENE	ND	U	72	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	1,2-DICHLOROBENZENE	ND	U	79	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	1,2-DIPHENYLHYDRAZINE	ND	U	130	590	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	1,3-DICHLOROBENZENE	ND	U	70	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	1,4-DICHLOROBENZENE	ND	U	77	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	2,2'-OXYBIS(1-CHLORO)PROPANE	ND	U	80	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	2,4,5-TRICHLOROPHENOL	ND	U	140	730	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	2,4,6-TRICHLOROPHENOL	ND	U	140	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	2,4-DICHLOROPHENOL	ND	U	130	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	2,4-DIMETHYLPHENOL	ND	U	150	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	2,4-DINITROPHENOL	ND	U	340	730	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	2,4-DINITROTOLUENE	ND	U	76	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	2,6-DINITROTOLUENE	ND	U	71	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	2-CHLORONAPHTHALENE	ND	U	78	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	2-CHLOROPHENOL	ND	U	150	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	2-METHYLNAPHTHALENE	ND	U	82	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	2-METHYLPHENOL (O-CRESOL)	ND	U	180	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	2-NITROANILINE	ND	U	67	730	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	2-NITROPHENOL	ND	U	150	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	3,3'-DICHLOROBENZIDINE	ND	U	100	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	3-NITROANILINE	ND	U	84	730	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	4,6-DINITRO-2-METHYLPHENOL	ND	U	300	730	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	4-BROMOPHENYL PHENYL ETHER	ND	U	76	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	4-CHLORO-3-METHYLPHENOL	ND	U	150	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	4-CHLOROANILINE	ND	U	110	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	4-CHLOROPHENYL PHENYL ETHER	ND	U	70	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	4-NITROANILINE	ND	U	120	730	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	4-NITROPHENOL	ND	U	280	730	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	ACENAPHTHENE	ND	U	58	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	ACENAPHTHYLENE	ND	U	63	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	ANTHRACENE	ND	U	75	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	BENZIDINE	ND	U	89	1300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	BENZO(A)ANTHRACENE	ND	U	77	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	BENZO(A)PYRENE	ND	U	83	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	BENZO(B)FLUORANTHENE	ND	U	120	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	BENZO(G,H,I)PERYLENE	ND	U	93	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	BENZO(K)FLUORANTHENE	ND	U	74	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	BENZYL BUTYL PHTHALATE	ND	U	83	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	BIPHENYL (DIPHENYL)	ND	U	65	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	BIS(2-CHLOROETHOXY) METHANE	ND	U	86	300	ug/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	BIS(2-CHLOROETHYL) ETHER (2-CHLORO	ND	U	72	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	BIS(2-ETHYLHEXYL) PHTHALATE	ND	U	88	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	CARBAZOLE	ND	U	99	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	CHRYSENE	ND	U	85	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	CRESOLS, M & P	ND	U	170	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	DIBENZ(A,H)ANTHRACENE	ND	U	110	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	DIBENZOFURAN	ND	U	71	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	DIETHYL PHTHALATE	ND	U	72	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	DIMETHYL PHTHALATE	ND	U	70	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	DI-N-BUTYL PHTHALATE	ND	U	90	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	DI-N-OCTYLPHTHALATE	ND	U	190	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	FLUORANTHENE	ND	U	95	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	FLUORENE	ND	U	72	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	HEXACHLOROBENZENE	ND	U	73	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	HEXACHLOROBUTADIENE	ND	U	74	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	HEXACHLOROCYCLOPENTADIENE	ND	U	73	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	HEXACHLOROETHANE	ND	U	86	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	INDENO(1,2,3-C,D)PYRENE	ND	U	110	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	ISOPHORONE	ND	U	67	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	NAPHTHALENE	ND	U	78	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	NITROBENZENE	ND	U	81	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	N-NITROSODIMETHYLAMINE	ND	U	78	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	N-NITROSODI-N-PROPYLAMINE	ND	U	74	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	N-NITROSODIPHENYLAMINE	ND	U	200	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	PENTACHLOROPHENOL	ND	U	210	730	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	PHENANTHRENE	ND	U	74	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	PHENOL	ND	U	140	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW8270D	SO	PYRENE	ND	U	90	300	ug/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	SW9012B	SO	CYANIDE	ND	U	0.11	0.37	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	VPHMA	SO	BENZENE	ND	U	0.03	0.26	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	VPHMA	SO	C5-C8 ALIPHATIC HYDROCARBONS	ND	U	13	26	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	VPHMA	SO	C5-C8 ALIPHATIC HYDROCARBONS	ND	U	13	26	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	VPHMA	SO	C9-C10 AROMATIC HYDROCARBONS	ND	U	13	26	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	VPHMA	SO	C9-C12 ALIPHATIC HYDROCARBONS	ND	U	13	26	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	VPHMA	SO	C9-C12 ALIPHATIC HYDROCARBONS	ND	U	13	26	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	VPHMA	SO	ETHYLBENZENE	ND	U	0.04	0.26	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	VPHMA	SO	M,P-XYLENE (SUM OF ISOMERS)	ND	U	0.094	0.52	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	VPHMA	SO	METHYL TERT-BUTYL ETHER (MTBE)	ND	U	0.087	0.26	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	VPHMA	SO	NAPHTHALENE	ND	U	0.06	1.3	mg/Kg
MIBP	9/1/2017	12:05	N1	MIBP02-090117	VPHMA	SO	O-XYLENE (1,2-DIMETHYLBENZENE)	ND	U	0.032	0.26	mg/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	12:05	N1	MIBP02-090117	VPHMA	SO	TOLUENE	ND	U	0.11	0.26	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	A209A	SO	SOLIDS, PERCENT	96		1	1	PERCENT
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	2-METHYLNAPHTHALENE	ND	U	0.11	0.18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	ACENAPHTHENE	ND	U	0.16	0.18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	ACENAPHTHYLENE	ND	U	0.093	0.18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	ANTHRACENE	ND	U	0.11	0.18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	BENZO(A)ANTHRACENE	ND	U	0.11	0.18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	BENZO(A)PYRENE	ND	U	0.093	0.18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	BENZO(B)FLUORANTHENE	ND	U	0.082	0.18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	BENZO(G,H,I)PERYLENE	ND	U	0.11	0.18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	BENZO(K)FLUORANTHENE	ND	U	0.1	0.18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	C11-C22 AROMATIC HYDROCARBONS	ND	U	9.1	18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	C11-C22 AROMATIC HYDROCARBONS	ND	U	9.1	18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	C19-C36 ALIPHATIC HYDROCARBONS	ND	U	7.4	18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	C9-C18 ALIPHATIC HYDROCARBONS	ND	U	10	18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	CHRYSENE	ND	U	0.1	0.18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	DIBENZ(A,H)ANTHRACENE	ND	U	0.093	0.18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	FLUORANTHENE	ND	U	0.079	0.18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	FLUORENE	ND	U	0.063	0.18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	INDENO(1,2,3-C,D)PYRENE	ND	U	0.076	0.18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	NAPHTHALENE	ND	U	0.12	0.18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	PHENANTHRENE	ND	U	0.074	0.18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	EPHMA	SO	PYRENE	ND	U	0.079	0.18	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	ALUMINUM	1880		0.41	17	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	ANTIMONY	ND	U	0.04	0.46	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	ARSENIC	0.659		0.039	0.46	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	BARIUM	4.38		0.014	0.29	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	BERYLLIUM	0.152	J	0.0039	0.29	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	BORON	0.43	J,B	0.029	2.9	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	CADMIUM	ND	U	0.0046	0.29	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	CALCIUM	524		1	5.8	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	CHROMIUM, TOTAL	3.78		0.015	0.58	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	COBALT	1.21		0.017	0.58	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	COPPER	3.72		0.092	1.4	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	IRON	3510		0.81	5.8	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	LEAD	3.16		0.05	0.29	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	MAGNESIUM	758		0.39	5.8	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	MANGANESE	58.4		0.092	0.29	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	NICKEL	3.48		0.025	0.58	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	POTASSIUM	250		1.7	58	mg/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	SELENIUM	ND	U	0.098	0.58	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	SILVER	ND	U	0.016	0.58	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	SODIUM	18.5	J	0.86	58	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	THALLIUM	ND	U	0.05	0.86	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	VANADIUM	4.61		0.021	0.58	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW6010C	SO	ZINC	12.6		0.098	1.2	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW7471B	SO	MERCURY	ND	U	0.0042	0.027	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	ALDRIN	ND	U	0.26	1.6	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	ALPHA BHC (ALPHA HEXACHLOROCYCLOHEX	ND	U	0.32	1.6	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	ALPHA ENDOSULFAN	ND	U	0.22	1.6	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	ALPHA-CHLORDANE	ND	U	0.19	1.6	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	BETA BHC (BETA HEXACHLOROCYCLOHEXAN	ND	U	0.3	1.6	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	BETA ENDOSULFAN	ND	U	0.32	3	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	DELTA BHC (DELTA HEXACHLOROCYCLOHEX	ND	U	0.3	1.6	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	DIELDRIN	ND	U	0.2	3	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	ENDOSULFAN SULFATE	ND	U	0.54	3	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	ENDRIN	ND	U	0.79	3	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	ENDRIN ALDEHYDE	ND	U	0.45	3	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	ENDRIN KETONE	ND	U	0.37	3	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	GAMMA BHC (LINDANE)	ND	U	0.25	1.6	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	GAMMA-CHLORDANE	ND	U	0.21	1.6	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	HEPTACHLOR	ND	U	0.27	1.6	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	HEPTACHLOR EPOXIDE	ND	U	0.2	1.6	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	METHOXYCHLOR	ND	U	0.46	16	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	P,P'-DDD	ND	U	0.18	3	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	P,P'-DDE	ND	U	0.18	3	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	P,P'-DDT	ND	U	0.29	3	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8081B	SO	TOXAPHENE	ND	U	6.5	30	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8082A	SO	PCB-1016 (AROCLOR 1016)	ND	U	6	16	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8082A	SO	PCB-1221 (AROCLOR 1221)	ND	U	7.8	16	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8082A	SO	PCB-1232 (AROCLOR 1232)	ND	U	9.1	16	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8082A	SO	PCB-1242 (AROCLOR 1242)	ND	U	5.7	16	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8082A	SO	PCB-1248 (AROCLOR 1248)	ND	U	6	16	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8082A	SO	PCB-1254 (AROCLOR 1254)	ND	U	4.7	16	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8082A	SO	PCB-1260 (AROCLOR 1260)	ND	U	6	16	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,1,1,2-TETRACHLOROETHANE	ND	U	0.7	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,1,1-TRICHLOROETHANE	ND	U	0.42	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,1,2,2-TETRACHLOROETHANE	ND	U	0.84	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,1,2-TRICHLOROETHANE	ND	U	0.97	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,1-DICHLOROETHANE	ND	U	1.7	5	ug/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,1-DICHLOROETHENE	ND	U	0.93	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,1-DICHLOROPROPENE	ND	U	0.91	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,2,3-TRICHLOROBENZENE	ND	U	0.76	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,2,3-TRICHLOROPROPANE	ND	U	1.2	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,2,4-TRICHLOROBENZENE	ND	U	0.79	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,2,4-TRIMETHYLBENZENE	ND	U	0.87	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,2-DIBROMO-3-CHLOROPROPANE	ND	U	1.5	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,2-DIBROMOETHANE (EDB)	ND	U	1.2	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,2-DICHLOROBENZENE	ND	U	0.78	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,2-DICHLOROETHANE	ND	U	1	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,2-DICHLOROPROPANE	ND	U	1.4	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,3,5-TRICHLOROBENZENE	ND	U	0.87	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,3,5-TRIMETHYLBENZENE (MESITYLENE)	ND	U	0.67	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,3-DICHLOROBENZENE	ND	U	0.62	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,3-DICHLOROPROPANE	ND	U	0.94	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,4-DICHLOROBENZENE	ND	U	0.44	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	1,4-DIOXANE (P-DIOXANE)	ND	U	33	500	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	2,2-DICHLOROPROPANE	ND	U	0.5	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	2-CHLOROTOLUENE	ND	U	1.1	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	2-HEXANONE	ND	U	4.8	25	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	4-CHLOROTOLUENE	ND	U	0.49	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	ACETONE	59	J,B	5.1	25	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	BENZENE	ND	U	0.92	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	BROMOBENZENE	ND	U	0.74	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	BROMOCHLOROMETHANE	ND	U	0.91	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	BROMODICHLOROMETHANE	ND	U	0.6	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	BROMOFORM	ND	U	0.7	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	BROMOMETHANE	ND	U	1.1	10	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	CARBON DISULFIDE	ND	U	0.78	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	CARBON TETRACHLORIDE	ND	U	1.3	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	CHLOROBENZENE	ND	U	0.51	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	CHLOROETHANE	ND	U	1.3	10	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	CHLOROFORM	ND	U	0.35	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	CHLOROMETHANE	ND	UJ	1.4	10	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	CIS-1,2-DICHLOROETHENE	ND	U	0.91	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	CIS-1,3-DICHLOROPROPENE	ND	U	0.72	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	DIBROMOCHLOROMETHANE	ND	U	1	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	DIBROMOMETHANE	ND	U	0.51	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	DICHLORODIFLUOROMETHANE	ND	UJ	0.92	10	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	DIETHYL ETHER (ETHYL ETHER)	ND	U	0.8	5	ug/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	ETHYLBENZENE	ND	U	0.65	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	HEXACHLOROBUTADIENE	ND	U	0.74	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	ISOPROPYLBENZENE (CUMENE)	ND	U	0.92	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	M,P-XYLENE (SUM OF ISOMERS)	ND	U	1.7	10	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	METHYL ETHYL KETONE (2-BUTANONE)	ND	U	5.9	25	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	METHYL ISOBUTYL KETONE (4-METHYL-2-	ND	U	5.9	25	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	METHYL TERT-BUTYL ETHER (MTBE)	ND	U	1.1	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	METHYLENE CHLORIDE	ND	U	7.9	25	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	NAPHTHALENE	ND	U	0.88	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	N-BUTYLBENZENE	ND	U	0.92	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	N-PROPYLBENZENE	ND	U	0.83	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	O-XYLENE (1,2-DIMETHYLBENZENE)	ND	U	1.3	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	P-CYMENE (P-ISOPROPYLTOLUENE)	ND	U	0.76	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	SEC-BUTYLBENZENE	ND	U	0.91	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	STYRENE	ND	U	0.51	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	T-BUTYLBENZENE	ND	U	0.9	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	TETRACHLOROETHENE(PCE)	ND	U	1.2	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	TETRAHYDROFURAN	ND	U	4.5	50	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	TOLUENE	ND	U	1.4	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	TOTAL 1,2-DICHLOROETHENE	ND	U	0.71	10	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	TRANS-1,2-DICHLOROETHENE	ND	U	0.71	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	TRANS-1,3-DICHLOROPROPENE	ND	U	0.86	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	TRICHLOROETHENE(TCE)	ND	U	0.59	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	TRICHLOROFLUOROMETHANE	ND	U	0.91	10	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	VINYL ACETATE	ND	U	0.94	5	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	VINYL CHLORIDE	ND	UJ	0.87	10	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8260C	SO	XYLENES, TOTAL	ND	U	1.3	15	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	1,2,4-TRICHLOROBENZENE	ND	U	82	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	1,2-DICHLOROBENZENE	ND	U	89	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	1,2-DIPHENYLHYDRAZINE	ND	U	140	660	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	1,3-DICHLOROBENZENE	ND	U	78	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	1,4-DICHLOROBENZENE	ND	U	87	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	2,2'-OXYBIS(1-CHLORO)PROPANE	ND	U	90	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	2,4,5-TRICHLOROPHENOL	ND	U	160	830	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	2,4,6-TRICHLOROPHENOL	ND	U	160	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	2,4-DICHLOROPHENOL	ND	U	150	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	2,4-DIMETHYLPHENOL	ND	U	170	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	2,4-DINITROPHENOL	ND	U	380	830	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	2,4-DINITROTOLUENE	ND	U	86	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	2,6-DINITROTOLUENE	ND	U	80	330	ug/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	2-CHLORONAPHTHALENE	ND	U	88	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	2-CHLOROPHENOL	ND	U	160	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	2-METHYLNAPHTHALENE	ND	U	93	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	2-METHYLPHENOL (O-CRESOL)	ND	U	200	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	2-NITROANILINE	ND	U	76	830	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	2-NITROPHENOL	ND	U	170	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	3,3'-DICHLOROBENZIDINE	ND	U	110	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	3-NITROANILINE	ND	U	95	830	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	4,6-DINITRO-2-METHYLPHENOL	ND	U	340	830	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	4-BROMOPHENYL PHENYL ETHER	ND	U	86	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	4-CHLORO-3-METHYLPHENOL	ND	U	170	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	4-CHLOROANILINE	ND	U	120	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	4-CHLOROPHENYL PHENYL ETHER	ND	U	78	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	4-NITROANILINE	ND	U	140	830	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	4-NITROPHENOL	ND	U	310	830	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	ACENAPHTHENE	ND	U	65	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	ACENAPHTHYLENE	ND	U	70	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	ANTHRACENE	ND	U	85	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	BENZIDINE	ND	U	100	1500	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	BENZO(A)ANTHRACENE	ND	U	87	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	BENZO(A)PYRENE	ND	U	94	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	BENZO(B)FLUORANTHENE	ND	U	140	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	BENZO(G,H,I)PERYLENE	ND	U	100	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	BENZO(K)FLUORANTHENE	ND	U	84	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	BENZYL BUTYL PHTHALATE	ND	U	94	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	BIPHENYL (DIPHENYL)	ND	U	74	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	BIS(2-CHLOROETHOXY) METHANE	ND	U	97	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	BIS(2-CHLOROETHYL) ETHER (2-CHLORO	ND	U	82	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	BIS(2-ETHYLHEXYL) PHTHALATE	ND	U	99	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	CARBAZOLE	ND	U	110	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	CHRYSENE	ND	U	96	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	CRESOLS, M & P	ND	U	190	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	DIBENZ(A,H)ANTHRACENE	ND	U	130	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	DIBENZOFURAN	ND	U	80	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	DIETHYL PHTHALATE	ND	U	81	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	DIMETHYL PHTHALATE	ND	U	78	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	DI-N-BUTYL PHTHALATE	ND	U	100	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	DI-N-OCTYLPHTHALATE	ND	U	210	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	FLUORANTHENE	ND	U	110	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	FLUORENE	ND	U	82	330	ug/Kg

Attachment 1
Sampling Results from Marsh Island Borrow Area

Location	Date Sampled	Time Sampled	Sample Type	Sample ID	Analysis	Matrix	Analyte	Result	Qualifier	Detection Limit	Reporting Limit	Units
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	HEXACHLOROBENZENE	ND	U	83	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	HEXACHLOROBUTADIENE	ND	U	84	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	HEXACHLOROCYCLOPENTADIENE	ND	U	83	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	HEXACHLOROETHANE	ND	U	97	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	INDENO(1,2,3-C,D)PYRENE	ND	U	120	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	ISOPHORONE	ND	U	76	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	NAPHTHALENE	ND	U	88	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	NITROBENZENE	ND	U	92	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	N-NITROSODIMETHYLAMINE	ND	U	88	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	N-NITROSODI-N-PROPYLAMINE	ND	U	84	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	N-NITROSODIPHENYLAMINE	ND	U	220	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	PENTACHLOROPHENOL	ND	U	240	830	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	PHENANTHRENE	ND	U	84	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	PHENOL	ND	U	160	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW8270D	SO	PYRENE	ND	U	100	330	ug/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	SW9012B	SO	CYANIDE	ND	U	0.13	0.43	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	VPHMA	SO	BENZENE	ND	U	0.028	0.24	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	VPHMA	SO	C5-C8 ALIPHATIC HYDROCARBONS	ND	U	12	24	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	VPHMA	SO	C5-C8 ALIPHATIC HYDROCARBONS	ND	U	12	24	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	VPHMA	SO	C9-C10 AROMATIC HYDROCARBONS	ND	U	12	24	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	VPHMA	SO	C9-C12 ALIPHATIC HYDROCARBONS	ND	U	12	24	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	VPHMA	SO	C9-C12 ALIPHATIC HYDROCARBONS	ND	U	12	24	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	VPHMA	SO	ETHYLBENZENE	ND	U	0.036	0.24	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	VPHMA	SO	M,P-XYLENE (SUM OF ISOMERS)	ND	U	0.086	0.48	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	VPHMA	SO	METHYL TERT-BUTYL ETHER (MTBE)	ND	U	0.08	0.24	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	VPHMA	SO	NAPHTHALENE	ND	U	0.055	1.2	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	VPHMA	SO	O-XYLENE (1,2-DIMETHYLBENZENE)	ND	U	0.03	0.24	mg/Kg
MIBP	9/1/2017	12:20	N1	MIBP03-090117	VPHMA	SO	TOLUENE	ND	U	0.1	0.24	mg/Kg

Data Source: Jacobs, 11 November 2017, New Bedford Harbor Site Environmental Evaluation (SEE) Database

MIBP = Marsh Island Borrow Pit

SO = soil

ND = non-detect

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

Attachment 2

95% Upper Confidence Limit Calculation

95% Upper Confidence Limit (UCL) Calculation for the Marsh Island Intertidal Remediation Area
New Bedford Harbor Superfund Site
December 12, 2017

Study ID	Station ID	Sample Date	Northing	Easting	Depth-Weighted Average PCB Concentration, 0-1 foot interval[1] (mg/kg)	Comment
NBHMON2005	A19	10/6/2005	2698917	815447	10.1	
NBHMON2005	A20	10/6/2005	2698898	815445	0.416	
NBHMON2005	A21	10/6/2005	2698887	815432	0.01	Excavated and backfilled
NBHMON2005	A22	10/6/2005	2699050	815513	9.82	
NBHMON2005	A23	10/6/2005	2699031	815489	0.01	Excavated and backfilled
NBHMON2005	A24	10/6/2005	2699034	815467	5.59	
NBHMON2005	A25	10/6/2005	2699080	815489	0.01	Excavated and backfilled
NBHMON2005	A26	10/6/2005	2699083	815467	9.19	
NBHMON2005	B11	10/6/2005	2699120	815618	0.01	Excavated and backfilled
NBHMON2005	B13	10/6/2005	2699089	815717	0.01	Excavated and backfilled
NBHMON2005	C15	10/6/2005	2699013	815823	0.01	Excavated and backfilled
NBHMON2005	C16	10/6/2005	2698988	815799	0.01	Excavated and backfilled
NBHMON2005	C17	10/6/2005	2698963	815824	8.84	
NBHMON2005	C18	10/6/2005	2698988	815848	0.01	Excavated and backfilled
NBHMON2005	C19	10/6/2005	2698950	815873	0.01	Excavated and backfilled
NBHMON2005	C20	10/6/2005	2698940	815873	0.01	Excavated and backfilled
NBHMON2005	C21	10/6/2005	2698931	815873	0.01	Excavated and backfilled
NBHMON2005	C22	10/6/2005	2698958	815914	0.01	Excavated and backfilled
NBHMON2005	C23	10/6/2005	2698942	815929	0.01	Excavated and backfilled
NBHMON2005	C24	10/6/2005	2699009	815980	0.01	Excavated and backfilled
NBHMON2005	C25	10/6/2005	2699001	815988	0.01	Excavated and backfilled
NBHMON2005	C26	10/6/2005	2698992	815998	16.1	
NBHMON2005	D16	10/6/2005	2699118	816136	0.01	Excavated and backfilled
NBHMON2005	D17	10/6/2005	2699154	816133	8.61	
NBHMON2005	E18	10/6/2005	2699074	816067	0.0975	
NBHMON2005	E19	10/6/2005	2699062	816108	2.44	
NBHMON2005	E20	10/6/2005	2699082	816108	0.01	Excavated and backfilled
NBHMON2005	MIA1	12/8/2004	2698771	815293	0.627	
NBHMON2005	MIA2	12/8/2004	2698781	815289	0.997	
NBHMON2005	MIA3	12/9/2004	2698819	815261	0.785	
NBHMON2005	MIA4	12/8/2004	2698835	815326	0.950	
NBHMON2005	MIA5	12/9/2004	2698860	815309	1.74	
NBHMON2005	MIA6	1/8/2005	2698859	815395	0.306	
NBHMON2005	MIA7	12/8/2004	2698871	815371	1.29	
NBHMON2005	MIA8	12/8/2004	2698890	815424	0.01	Excavated and backfilled
NBHMON2005	MIA9	12/9/2004	2698890	815352	0.337	
NBHMON2005	MIA10	12/8/2004	2698929	815440	0.01	Excavated and backfilled
NBHMON2005	MIA11	12/9/2004	2698932	815403	9.84	
NBHMON2005	MIA12	12/9/2004	2698941	815380	1.91	
NBHMON2005	MIA13	12/8/2004	2698973	815450	11.0	
NBHMON2005	MIA14	12/8/2004	2698984	815445	2.67	
NBHMON2005	MIA15	12/9/2004	2699013	815416	4.78	
NBHMON2005	MIA16	12/9/2004	2699055	815490	0.01	Excavated and backfilled
NBHMON2005	MIA17	12/9/2004	2699059	815467	0.01	Excavated and backfilled
NBHMON2005	MIA18	12/9/2004	2699067	815439	2.28	
NBHMON2005	MIB1	1/10/2005	2699137	815466	1.08	
NBHMON2005	MIB2	1/10/2005	2699157	815440	0.845	
NBHMON2005	MIB3	12/9/2004	2699128	815578	1.76	
NBHMON2005	MIB4	12/9/2004	2699156	815574	5.33	
NBHMON2005	MIB5	12/9/2004	2699182	815574	2.54	
NBHMON2005	MIB6	12/9/2004	2699110	815642	0.01	Excavated and backfilled
NBHMON2005	MIB7	12/9/2004	2699152	815640	6.86	
NBHMON2005	MIB8	12/16/2004	2699188	815638	0.889	
NBHMON2005	MIB9	12/9/2004	2699095	815687	0.01	Excavated and backfilled
NBHMON2005	MIB10	12/14/2004	2699149	815713	1.74	
NBHMON2005	MIC1	12/14/2004	2699049	815714	0.01	Excavated and backfilled
NBHMON2005	MIC2	12/14/2004	2699088	815745	1.74	
NBHMON2005	MIC3	12/16/2004	2699116	815767	1.59	
NBHMON2005	MIC4	12/14/2004	2699027	815777	1.41	

95% Upper Confidence Limit (UCL) Calculation for the Marsh Island Intertidal Remediation Area
New Bedford Harbor Superfund Site
December 12, 2017

Study ID	Station ID	Sample Date	Northing	Easting	Depth-Weighted Average PCB Concentration, 0-1 foot interval[1] (mg/kg)	Comment
NBHMON2005	MIC5	12/22/2004	2698950	815922	0.01	Excavated and backfilled
NBHMON2005	MIC6	12/22/2004	2698939	815824	7.47	
NBHMON2005	MIC7	12/14/2004	2698988	815824	0.01	Excavated and backfilled
NBHMON2005	MIC8	12/14/2004	2699048	815826	8.03	
NBHMON2005	MIC10	12/14/2004	2699021	815905	0.865	
NBHMON2005	MIC12	12/14/2004	2699074	815980	0.478	
NBHMON2005	MIC13	12/16/2004	2699101	815960	0.162	
NBHMON2005	MIC14	12/16/2004	2699149	816018	0.390	
NBHMON2005	MID1	12/16/2004	2699171	816087	1.61	
NBHMON2005	MID4	12/22/2004	2699131	816156	0.01	Excavated and backfilled
NBHMON2005	MID6	12/22/2005	2699091	816270	0.0520	
NBHMON2005	MID7	12/22/2004	2699121	816189	9.88	
NBHMON2005	MID8	12/17/2004	2699152	816231	8.75	
NBHMON2005	MID10	1/10/2005	2699214	816234	0.01	Excavated and backfilled
NBHMON2005	MID13	1/10/2005	2699104	816262	0.351	
NBHMON2005	MID15	1/10/2005	2699214	816319	1.56	
NBHMON2005	MIE1	12/22/2004	2699060	816039	0.01	Excavated and backfilled
NBHMON2005	MIE3	12/22/2004	2699074	816108	0.01	Excavated and backfilled
NBHMON2005	MIE4	1/10/2005	2699074	816157	0.01	Excavated and backfilled
NBHMON2005	MIE5	1/10/2005	2699066	816230	0.255	
NBHMON2005	MIE6	12/21/2004	2699031	816124	12.1	
NBHMON2005	MIE7	1/10/2005	2699033	816138	0.01	Excavated and backfilled
NBHMON2005	MIE8	1/10/2005	2699032	816179	0.624	
NBHMON2005	MIE9	12/22/2005	2698991	816113	0.663	
NBHMON2005	MIE10	12/22/2004	2698987	816131	0.01	Excavated and backfilled
NBHMON2005	MIE11	12/21/2004	2698988	816149	0.01	Excavated and backfilled
NBHMON2005	MIE12	12/21/2004	2698975	816178	4.92	
NBHMON2005	MIE13	12/22/2004	2698945	816169	0.0991	
NBHMON2005	MIE14	12/21/2004	2698941	816209	1.91	
NBHMON2005	MIE15	12/21/2004	2698919	816255	0.01	Excavated and backfilled
NBHMON2005	MIE16	12/21/2004	2698908	816234	0.0793	
PHASEI	S-304	9/30/1999	2699225	816190	0.01	Excavated and backfilled
PHASEI	S-305	10/8/1999	2699070	816200	0.01	Excavated and backfilled
PHASEI	S-306	9/29/1999	2699140	816100	2.55	
PHASEI	S-307	10/8/1999	2699040	815900	0.117	
PHASEI	S-308	9/29/1999	2699112	815695	0.01	Excavated and backfilled
PHASEI	S-309	10/1/1999	2699170	815500	2.86	
PHASEI	S-310	9/30/1999	2698900	815415	0.01	Excavated and backfilled
PHASEII	S-881	11/1/2000	2699058	816199	0.01	Excavated and backfilled
PHASEII	S-882	11/1/2000	2698959	816171	0.01	Excavated and backfilled
PHASE3A	S-3169	9/7/2001	2699119	816232	0.01	Excavated and backfilled
Maximum					**16.1**	
Mean					**2.03**	
95% UCL[2]					**3.53**	

Notes:

[1] Total PCB is the sum of detected NOAA 18 congeners X 2.6 correction factor; a concentration of 0.01 mg/kg was assumed for backfilled areas. A depth-weighted average concentration was calculated if more than one sample was collected in the top 1 foot interval.

[2]Non-parametric, distribution-free UCL: 95% Chebyshev (Mean, Sd) UCL, calculated in ProUCL Version 5.0.00.

The following locations were subtidal after excavation: MID2, MID3, MID5, MID9, MID11, and MID-12.

Legend

- Final Excavation Areas
- Sampling Location

Note:

The following locations were subtidal after excavation:
MID2
MID3
MID5
MID9
MID11
MID12

Feet
0 50 100

N

Projected Coordinate System:
NAD83 UTM - Zone 19N - (Meters)

BATTELLE

Marsh Island Post-Remediation Sampling Locations

New Bedford Harbor Superfund Site

DATE: 11/14/2017	*ANALYST: HICKSJ*
REV. 0	*APPROVED: WHITE*

FILE: C:\GIS\New_Bedford_Harbor\Maps\Base_Marsh_Island_PCB_actual_dredge_r03.mxd

Attachment: ProUCL Output for Marsh Island Intertidal Post-Excavation Data

UCL Statistics for Uncensored Full Data Sets

User Selected Options

Date/Time of Computation	11/7/2017 6:52
From File	WorkSheet.xls
Full Precision	OFF
Confidence Coefficient	95%
Number of Bootstrap Operations	2000

tPCB (mg/kg)

General Statistics

Total Number of Observations	100	Number of Distinct Observations	56
		Number of Missing Observations	0
Minimum	0.01	Mean	2.027
Maximum	16.1	Median	0.322
SD	3.444	Std. Error of Mean	0.344
Coefficient of Variation	1.699	Skewness	2.005

Normal GOF Test

Shapiro Wilk Test Statistic	0.645	Shapiro Wilk GOF Test
5% Shapiro Wilk P Value	0	Data Not Normal at 5% Significance Level
Lilliefors Test Statistic	0.279	Lilliefors GOF Test
5% Lilliefors Critical Value	0.0886	Data Not Normal at 5% Significance Level
Data Not Normal at 5% Significance Level		

Assuming Normal Distribution

95% Normal UCL		95% UCLs (Adjusted for Skewness)	
95% Student's-t UCL	2.599	95% Adjusted-CLT UCL (Chen-1995)	2.667
		95% Modified-t UCL (Johnson-1978)	2.61

Gamma GOF Test

A-D Test Statistic	5.607	Anderson-Darling Gamma GOF Test
5% A-D Critical Value	0.872	Data Not Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.254	Kolmogrov-Smirnoff Gamma GOF Test
5% K-S Critical Value	0.0973	Data Not Gamma Distributed at 5% Significance Level
Data Not Gamma Distributed at 5% Significance Level		

Gamma Statistics

k hat (MLE)	0.291	k star (bias corrected MLE)	0.289
Theta hat (MLE)	6.966	Theta star (bias corrected MLE)	7.015
nu hat (MLE)	58.2	nu star (bias corrected)	57.79
MLE Mean (bias corrected)	2.027	MLE Sd (bias corrected)	3.771
		Approximate Chi Square Value (0.05)	41.31
Adjusted Level of Significance	0.0476	Adjusted Chi Square Value	41.11

Assuming Gamma Distribution

95% Approximate Gamma UCL (use when n>=50))	2.835	95% Adjusted Gamma UCL (use when n<50)	2.849

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.797	Shapiro Wilk Lognormal GOF Test
5% Shapiro Wilk P Value	0	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.278	Lilliefors Lognormal GOF Test
5% Lilliefors Critical Value	0.0886	Data Not Lognormal at 5% Significance Level
Data Not Lognormal at 5% Significance Level		

Lognormal Statistics

Minimum of Logged Data	-4.605	Mean of logged Data	-1.675
Maximum of Logged Data	2.779	SD of logged Data	2.74

Assuming Lognormal Distribution

95% H-UCL	26.92	90% Chebyshev (MVUE) UCL	16.86
95% Chebyshev (MVUE) UCL	21.42	97.5% Chebyshev (MVUE) UCL	27.75
99% Chebyshev (MVUE) UCL	40.18		

Nonparametric Distribution Free UCL Statistics

Data do not follow a Discernible Distribution (0.05)

Nonparametric Distribution Free UCLs

95% CLT UCL	2.593	95% Jackknife UCL	2.599
95% Standard Bootstrap UCL	2.594	95% Bootstrap-t UCL	2.696
95% Hall's Bootstrap UCL	2.709	95% Percentile Bootstrap UCL	2.589
95% BCA Bootstrap UCL	2.682		
90% Chebyshev(Mean, Sd) UCL	3.06	95% Chebyshev(Mean, Sd) UCL	3.528
97.5% Chebyshev(Mean, Sd) UCL	4.178	99% Chebyshev(Mean, Sd) UCL	5.454

Suggested UCL to Use

95% Chebyshev (Mean, Sd) UCL	3.528

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)
and Singh and Singh (2003). However, simulations results will not cover all Real World data sets.
For additional insight the user may want to consult a statistician.