





## US ARMY CORPS OF ENGINEERS NEW ENGLAND DISTRICT

Total Environmental Restoration Contract USACE Contract Number: DACW33-03-D-0006 Task Order No. 0008

## 2009 DREDGE SEASON DATA SUBMITTAL NEW BEDFORD HARBOR REMEDIAL ACTION

New Bedford Harbor Superfund Site New Bedford, MA

April 2010

Prepared by Jacobs Engineering Group 6 Otis Park Drive Bourne, MA 02532-3870

ACE-J23-35BG0801-M17-0001

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE (Read instructions on the reverse side prior to initiating this form)				DATE 4/12/2010			TRANSMITTAL NO. 0350-7		
			OF THE FOLLOWING ITEMS	(		itiated by the			
103	TO:       NEW BEDFORD RESIDENT OFFICE       FROM:       Jacobs Engineering         103 Sawyer Street       56 Old Bedford Road       56 Old Bedford Road         New Bedford, MA 02746-2448       Lincoln, MA 01773			CONTRACT NO. DACW33-03-D-0006 0008			CHECK ONE: THIS IS A NEW TRANSMITTAL THIS IS A RESUBMITTAL OF TRANSMITTAL		
SPECIFIC transmittal	ATION SEC. NO. (Cover only one section with each ) 0350	PROJECT TITLE AND	LOCATION 01-Main Register TERC II - New Bedford Harbor	Superfund					
ITEM NO.	DESCRIPTION OF ITEM SUBMITTED (Type size, model number/etc.)		MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO.	NO. OF COPIES	DOCL SPEC.	REFERENCE JMENT DRAWING SHEET NO.	FOR CONTRACTOR USE CODE	VARIATION (See Instruction No. 6)	FOR CE USE CODE
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### DATA SUBMITTAL SUMMARY

The purpose of this 2009 Dredge Season Data Submittal is to provide documentation of key activities from the New Bedford Harbor Superfund Site 2009 field season. Since 2006, the U.S. Environmental Protection Agency (EPA) has requested that the Dredge Season Data Submittal be organized in a tabular or graphic format.

<u>Section 1</u> is a chronological summary of 2009 project activities, presented as Attachment A.

<u>Section 2</u> summarizes the 2009 hydraulic dredging activities conducted at the New Bedford Harbor Superfund Site. The following will explain the significance or intended use of the various tables, figures, and attachments that comprise Section 2.

Attachment B contains information used for planning and executing the dredging completed in 2009.

- Figure B-1 is the dredge plan used for Dredge Area M.
- Figure B-2 is the dredge plan used for Dredge Area G.
- Figure B-3 is the dredge plan used for Dredge Area J.
- Figure B-4 is the dredge plan used for Dredge Area L.
- Figure B-5 is a figure illustrating the routing of pipelines, booster pump stations, and ferric injection for the 2009 hydraulic dredge season.
- Figure B-6 is the final 2009 daily dredge tracking figure for Areas M and G. This figure graphically depicts dredge progress cumulatively and daily for the season. Throughout the dredge season the daily dredge tracking figure is updated daily using dredge operators' daily reports and GPS tracking data.
- Figure B-7 is the final 2009 daily dredge tracking figure for Area J. This figure graphically depicts dredge progress cumulatively and daily for the season. Throughout the dredge season the daily dredge tracking figure is updated daily using dredge operators' daily reports and GPS tracking data.
- Figure B-8 is the final 2009 daily dredge tracking figure for Area L. This figure graphically depicts dredge progress cumulatively and daily for the season. Throughout the dredge season the daily dredge tracking figure is updated daily using dredge operators' daily reports and GPS tracking data.

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- Figure B-9 displays post dredge sediment core data in Dredge Area M. The data includes analytical results of total PCB congeners as well as a measurement of remaining OL sediment.
- Figure B-10 displays progress and post dredge sediment core data in Dredge Area G. The data includes analytical results of total PCB congeners as well as a measurement of remaining OL sediment.
- Figure B-11 displays progress and post dredge sediment core data in Dredge Area J. The data includes analytical results of total PCB congeners as well as a measurement of remaining OL sediment.
- Figure B-12 displays progress and post dredge sediment core data in Dredge Area L. The data includes analytical results of total PCB congeners as well as a measurement of remaining OL sediment.
- Figure B-13 is a depiction of areas dredged through 2009 in New Bedford Harbor.
- Attachment B-1 is the Quality Control Report assessing 2009 dredge control accuracy.

Attachment C includes tabulated data collected throughout the dredging process.

- Table C-1 provides a summary of analytical data for the sand generated at the Sawyer Street desanding facility.
- Table C-2 is a summary of the grain size data for material generated at both Sawyer Street (sand) and Area D (filter cake).
- Table C-3 provides a summary of analytical data for the filter cake generated at the Area D dewatering facility.
- Table C-4 is a summary table of the analytical results for samples collected at the Area D waste water treatment facility.
- Table C-5 is a summary of waste water treatment plant effluent water quality data.
- Table C-6 is a summary of waste water treatment plant influent and midpoint water quality data.
- Table C-7 is a tabulation of filter cake percent solids analysis by Jacobs. Jacobs samples and analyzes for percent solids approximately 10 percent of filter press drops.

Attachment D contains Transportation and Disposal records.

• Table D-1 is a tabulated record of sand and oversize material transported from the Sawyer Street desanding facility to Area D for railcar disposal with filter cake.

- Table D-2 is a tabulated record of non-TSCA sand disposed of at an approved non-hazardous waste landfill.
- Table D-3 is a tabulated record of material shipped directly offsite for disposal in a TSCA landfill.
- Table D-4 is a tabulated record of filter cake transported by truck to rail transload facility.

Attachment E is a brief statement regarding results of personnel PCB monitoring conducted during the 2009 season.

Attachment F includes information from the ambient air monitoring program.

- Figure F-1 identifies ambient PCB air monitoring stations.
- Table F-1 summarizes results of ambient air monitoring for PCB homologues from the start of the project. The results are listed by date and sampling location. Locations may vary from year to year, resulting in some location results as "NS" for "not sampled during the sampling event." Table F-1 also includes duplicate sample results. Duplicate samples were collected during some of the events and for only a few of the locations. The locations not samples are indicated with "NA" for "not applicable."
- Attachment F-1 is the updated air sampling status reports (PETS Curves).

Attachment G contains data and calculations for mass balance of production.

- Table G-1 is the 2009 hydraulic dredging mass balance calculation and tabulation. It provides an accounting for process inputs and outputs.
- Table G-2 compares predicted production quantities to actual production quantities.
- Table G-3 provides a tabulation for all metered and estimated city water used during the 2009 hydraulic dredging season.
- Table G-4 is a calculation of the estimated mass of PCB Aroclors removed during the 2009 hydraulic dredging activities.
- Table G-5 is an estimate of the total amount of PCB Aroclors removed during 2004 through 2009 dredging activities.

Attachment H is the final Sevenson production report for 2009 hydraulic dredging activities.

Attachment I is a tabulated summary of 2009 Jacobs dredging, debris removal, water quality, and fish and wildlife monitoring efforts. The Jacobs monitoring efforts are supplemental to 2009 monitoring efforts by Woods Hole Group (WHG). Because WHG monitored twice a week, Jacobs' supplemental effort was performed to provide daily monitoring of dredging related activities. The monitoring data was submitted to NAE weekly.

Attachment J is a summarization of lessons learned or conclusions that made the project more efficient, safer, or simpler.

## ATTACHMENT A

# **Chronology of 2009 Field Activities**

Date	Activity	Summary			
	Revise/Submit Planning Documents				
Final July 2004, Addendum No. 1 May 2005, Addendum No. 2 April 2006, Addendum No. 3 March 2007, Addendum No. 4 March 2008, Addendum No. 5 April 2008, Addendum No. 6 May 2009	Prepare and submit revised plan.	Preparation and submittal of <i>Addendums No. 4 &amp; 5 to the Execution Plan</i> outlining the remediation of the New Bedford Harbor Superfund Site to be accomplished for the 2008 field season.			
Final September 2004, Revised August 2007, Addendum No. 7 March 2009	Prepare and submit task-specific addendum.	Prepare and submit <i>Addendum No. 7</i> to the <i>Site Specific Safety &amp; Health Plan</i> . Addendum titled "Sediment Sampling in Support of Confined Aquatic Disposal (CAD) Cell Modeling Effort."			
Final September 2005, Revised March 2009	Prepare and submit revised plan.	Preparation and submittal of Revised Construction Quality Control Plan.			
Final September 2004, Revised May 2005, Revised March 2009	Prepare and submit revised plan.	Preparation and submittal of Revised Quality Assurance Project Plan.			
Final September 2004, Revised August 2005 Revised December 2005, Revised June 2007, Revised March 2009	Prepare and submit revised plan.	Preparation and submittal of <i>Revised Field Sampling Plan</i> .			
	Submittal of Initial Task	Order/Subsequent Modifications			
December 12, 2008	Modification 007-02	Tasks under Modification 007-02 were for the following:2008 After Action DataReport; 2009 Execution Plan Addendum; Technical Assistance and EngineeringServices; EPA Feasibility Study Input; Sediment Sampling and Analysis supportingERDC CAD cell monitoring effort; Bulkhead Activities, Project Administration andManagement; and General Site Operations and Management (01-January-2009 through30-June-2009).Project 35BG0702 - Tasks 1, 2, 3, 4, 5, 6, 7, and 8A			
May 4, 2009	Modification 007-03	<b>Tasks under Modification 007-03 were for the following</b> : General Mobilization, and Startup/Shakedown and Demobilization/Winterization for the 2009 Dredging of the Upper Section of the Acushnet River (May and December 2009). Project 35BG0703 – Task 1			

Date	Activity	Summary
May 26, 2009	Modification 008-01	<b>Tasks under Modification 008-01 were for the following:</b> 2009 Dredging Activities Associated with the Upper Section of Acushnet River (120 days, June through December 2009). Project 35BG0801 - Tasks 1 through 4. ARRA funded.
May 28, 2009	Modification 007-04	Tasks under Modification 007-04 were for the following: Increase General SiteOperations and Management Funding for the Period of 01-July-2009 through31-December-2009. Project 35BG0702 - Task 8B
December 22, 2009	Modification 008-02	Tasks under Modification 008-02 were for the following:No cost Period ofPerformance extension to 31-May-2010.Project 35BG0801
	ERDC Sediment Sampling in S	Support of CAD Cell Modeling Effort
January - March 2009	Prepare/revise work plans	Prepare or revise SSHP, CQCP, FSP, and QAPP to support anticipated sample collection, processing, and analysis.
March - April 2009	Conduct field work	Collect sediment core samples. Subsample cores, composite, and submit for analysis.
April - July 2009	Prepare data report	Analyze, compile, and validate laboratory data on composited ERDC sediment core samples. Prepare ERDC Sampling Summary and Data Quality Report.
	Hydraulic Dredgin	g Mobilization Activities
May 11 - June 4, 2009	Mobilization of equipment and personnel associated with 2009 hydraulic dredging activities	2009 mobilization activities included the installation of sheet piles in Dredge Areas M, G, J, and L; mobilizing dredges, pipelines, boats, debris removal platform and scows; servicing pumps, inspecting electrical systems, and constructing a block wall in the Dewatering Building load out area.
May 11 - June 4, 2009	Booster pump and ferric system setup	2009 mobilization activities included the setup of booster pump stations at Manomet Street and Aerovox. Constructing the booster pump station included construction of a containment pad, setup of booster pumps and associated piping, and installation of the inline grinder. The Manomet Street station included the ferric sulfate injection system.
May 11 - June 4, 2009	Transportation and disposal preparation	2009 mobilization activities included mobilization of track mobile, railcars, and liners. Mobilization activities also included calibration of truck scales, check of rail scale, DOT training, rail worker training, and liner training.
June 2 - June 4, 2009	Hydraulic Dredging Shakedown	Hydraulic shakedown activities included service testing pipelines, pumps, and dredges. Three press drops completed.
June 16, 2009	Pipeline inspection	Divers inspect slurry transfer line from Area C to Area D. Two sections found that were reanchored.

Date	Activity	Summary
July 13, 2009	Pipeline Maintenance	Divers re-anchor slurry transfer pipeline at locations identified during inspection.
	Hydraulic Dredg	ging and Associated Activities
June 4, 2009	Debris Removal Activities	Begin debris removal activities in Dredge Area L.
June 6, 2009	Debris Removal Activities	Begin debris removal activities in Dredge Areas J and G.
June 4, 2009	Hydraulic Dredging	Begin hydraulic dredging in Dredge Area L.
June 7, 2009	Hydraulic Dredging	Begin hydraulic dredging in Dredge Area J.
June 16, 2009	Sediment core collection	Eight sediment cores collected from Dredge Area J in suspected high VOC areas. Data used to define "No Dredge Zone" and "Dredge with Caution Zone."
July 10, 2009	Hydraulic Dredging	Begin hydraulic dredging in Dredge Area G.
August 19, 2009	Hydraulic Dredging	Place additional oil boom at North and South ends of Dredge Area L at US Coast Guard request to help control oil sheen.
October 26, 2009	Debris Removal Activities	Begin debris removal activities in Dredge Area M.
October 26, 2009	Hydraulic Dredging	Begin hydraulic dredging in Dredge Area M.
November 18, 2009	Hydraulic Dredging	Cease dredging in Dredge Area M; majority of hydraulically dredgible material removed.
December 2, 2009	Debris Removal Activities	Complete debris removal activities for season.
December 2, 2009	Hydraulic Dredging	Complete hydraulic dredging activities for 2009 season. Dredge Area J completed with exception of high VOC "no dredge zone." Remaining targeted sediment in Areas G and L anticipated to be dredged in 2010.
	Transportat	tion and Disposal Activities
June 5, 2009	Dredged materials disposal	Begin loading railcars at Area D.
August 12, 2009	Dredged materials disposal	Collect TCLP samples to profile sand with less than 50 ppm PCB Aroclors (non-TSCA) for disposal in a non-hazardous waste landfill.
August 26, 2009	Dredged materials disposal	Begin to move sand with 50 ppm or greater PCB Aroclors (TSCA) and oversize to Area D for railcar disposal.
November 4, 2009	Dredged materials disposal	Begin to move non-TSCA sand to approved non-hazardous waste landfill.
November 30, 2009	Dredged materials disposal	Complete moving non-TSCA sand to approved non-hazardous waste landfill.
December 4, 2009	Dredged materials disposal	Complete moving TSCA sand to Area D for railcar disposal.
December 16, 2009	Dredged materials disposal	Load final railcar with debris and remaining filter cake.

Date	Activity	Summary
	Air Monitoring A	Activities, Ambient PCBs
Not conducted in 2009	Pre-dredge background sampling	In 2009 pre-dredge (hydraulic) air sampling activities were not conducted.
June 16, 2009	1st round monthly air sampling	Active hydraulic dredging. Air samples were collected from 10 locations.
July 13, 2009	2nd round monthly air sampling	Active hydraulic dredging. Air samples were collected from 10 locations.
August 13, 2009	3rd round monthly air sampling, post-dredge	Active hydraulic dredging. Air samples were collected from 10 locations.
September 17, 2009	4th round monthly air sampling	Active hydraulic dredging. Air samples were collected from 10 locations.
October 14, 2009	5th round monthly air sampling	Active hydraulic dredging. Air samples were collected from 10 locations.
November 9, 2009	6th round monthly air sampling	Active hydraulic dredging. Air samples were collected from 10 locations.
December 16, 2009	7th round monthly air sampling, post-dredge	Post-dredge. Air samples were collected from nine locations.
	Air Monitoring Activities	, Sawyer Street VOC monitoring
February 25, 2009	1st quarterly sampling round	Collect ambient air samples in areas around Sawyer Street facility for TO15 VOC analysis. Six locations sampled.
April 24, 2009	2nd quarterly sampling round	Collect ambient air samples in areas around Sawyer Street facility for TO15 VOC analysis. Six locations sampled.
July 14, 2009	3rd quarterly sampling round	Collect ambient air samples in areas around Sawyer Street facility for TO15 VOC analysis. Six locations sampled.
October 14, 2009	4th quarterly sampling round	Collect ambient air samples in areas around Sawyer Street facility for TO15 VOC analysis. Six locations sampled.
	Bathy	metric Survey
March 17 - March 18 & March 28, 2009	Pre dredge survey of 2009 dredge areas.	Survey Conducted by CR Environmental.
June 14, 2009	Dredge area L progress survey.	Survey Conducted by CR Environmental.
June 20, 2009	Dredge area J progress survey.	Survey Conducted by CR Environmental.
July 11, 2009	Dredge areas J & L progress survey.	Survey Conducted by CR Environmental.
July 25, 2009	Dredge areas G & J progress survey.	Survey Conducted by CR Environmental.
August 8, 2009	Dredge areas J & L progress survey.	Survey Conducted by CR Environmental.
August 22, 2009	Dredge areas J & L progress survey.	Survey Conducted by CR Environmental.
September 11, 2009	Dredge areas G & J progress survey.	Survey Conducted by CR Environmental.
September 26, 2009	Dredge area L progress survey.	Survey Conducted by CR Environmental.
October 10, 2009	Dredge areas G & J progress survey.	Survey Conducted by CR Environmental.
October 26, 2009	Dredge area L progress survey.	Survey Conducted by CR Environmental.

Date	Activity	Summary
November 18, 2009	Dredge area J progress survey.	Survey Conducted by CR Environmental.
December 8, 2009	Pre dredge survey of 2010 dredge areas.	Survey Conducted by CR Environmental.
December 14 - December 15, 2009	Post dredge survey of all 2009 dredge areas.	Survey Conducted by CR Environmental.
	Sunl	ken Vessel
July 8, 2009	Sunken vessel discovered	Sunken vessel discovered during debris removal activities in Dredge Area J. Portions of vessel recovered and placed in scow for transport to Sawyer Street facility. Approximate location of vessel surveyed with GPS. NAE notified.
July 16, 2009	Inspection of recovered vessel	Recovered remains of vessel inspected by NAE, EPA, Jacobs, Massachusetts Board of Underwater Archaeological Resources, and Fathom Research at Sawyer Street facility.
August 24, 2009	Survey performed in area of sunken vessel	Marine archeological survey conducted in area of sunken vessel, survey methods include sidescan sonar, magnetometer, and sub-bottom profiler.
November 5 - November 12, 2009	Recovery of remaining vessel and resumption of debris removal activities in area of sunken vessel	Debris removal crew recovered remaining portions of sunken vessel. Efforts made to preserve significant recovered items per direction of marine archaeologist. Oversight of recovery effort conducted by marine archaeologist.
July 8, 2009 - Ongoing	Documentation of recovered items	Recovered vessel wrapped in poly sheeting and stored at Sawyer Street facility. Marine archeologist currently investigating recovered items. Findings expected to be reported in 2010.
	Former Waste Water Treatment Pla	nt Conversion and Facilities Maintenance
September 5, 2009	Replace dock mats	Replace wood dock mats at Area C.
September 2009	Convert former WWTP to site offices	Repair floor in former WWTP.
September 16, 2009	Convert former WWTP to site offices	Begin installation of interior drywall, electrical, and plumbing.
October 13, 2009	Convert former WWTP to site offices	Install sewer line from building to city hook up.
October 21, 2009	Repair parking lot	Place dense grade and re-grade parking lot to promote drainage at Sawyer Street facility.
October 31, 2009	Convert former WWTP to site offices	Complete rough installation of drywall, electrical, and plumbing.
November 3, 2009	Removal of WWTP appurtenances	Remove sand from sand filter on north side of building.
December 7, 2009	Removal of WWTP appurtenances	Remove sand filter from north side of building.

Date	Activity	Summary		
December 22, 2009		Complete installation of flooring and plumbing. Verizon completed installation of com lines into mechanical room.		
Demobilization		d Winterization Activities		
December 4 - December 14, 2009	Demobilization and winterization	Demobilization activities included flushing lines, disassembly of dredge lines, stowing pipelines, removing dredge area cables, removing boats, dredges and scows from water, disassembly and demobilization, and storage of booster pump station equipment. Demobilization also include a general cleaning of dewatering and desanding plants. Select sheet piles were removed to allow navigation of river.		

Notes:

ARRA = American Reinvestment and Recovery Act

CAD = confined aquatic disposal

CQCP = Construction Quality Control Plan

EPA = U.S. Environmental Protection Agency

ERDC = Engineer Research and Development Center

FSP = Field Sampling Plan

GPS = global positioning system

NAE = U.S. Army Corps of Engineers - New England District

PCB = polychlorinated biphenyl

QAPP = Quality Assurance Project Plan

SSHP = Site-Specific Safety and Health Plan

TCLP = Toxicity Characteristic Leaching Procedure

TSCA = Toxic Substances Control Act

VOC = volatile organic compound

WWTP = Waste Water Treatment Plant

## ATTACHMENT B

# **Dredge Area Plans and Execution**











































## ATTACHMENT C

## Sample Analytical Summary Tables













## ATTACHMENT D

## **Transportation and Disposal Reports**





## ATTACHMENT E

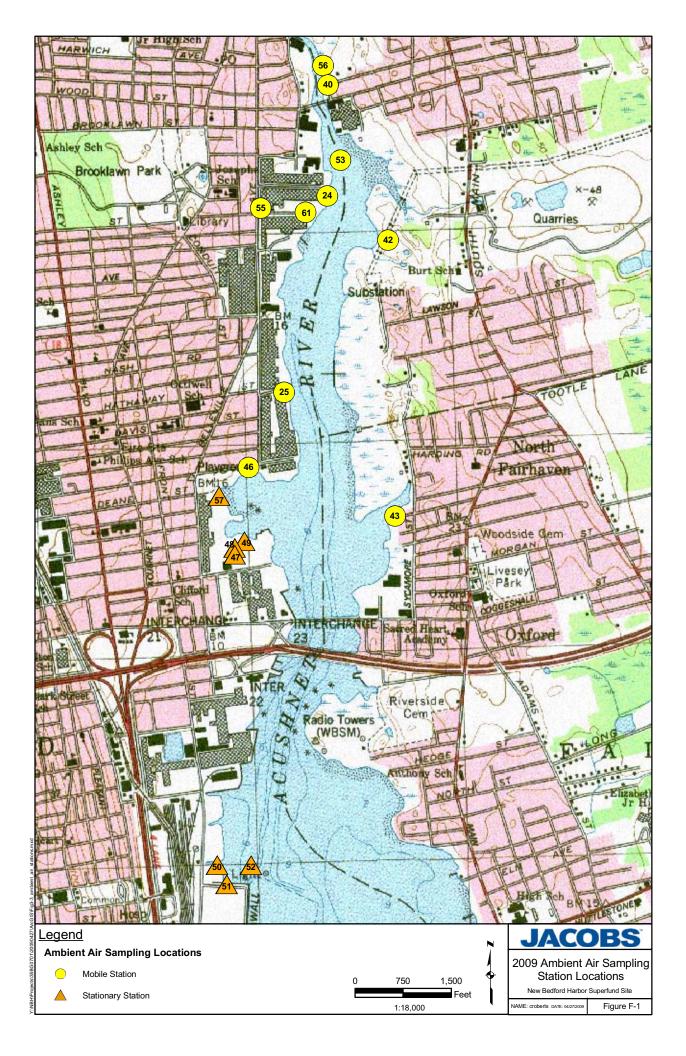
# NBH Occupational PCB Exposure Evaluation for the 2009 Season

### ATTACHMENT E NBH OCCUPATIONAL PCB EXPOSURE EVALUATION FOR THE 2009 SEASON

Personnel and work area monitoring show airborne PCBs and total dust concentrations remained well below OSHA limits once again for the 2009 season. The Jacobs Site Safety and Health Officer maintains results of monitoring events on site; results are available upon request.

# ATTACHMENT F

# **Ambient Air Monitoring Information**



# Table F-1 Ambient Air Monitoring Program - Total Detectable PCB Homologues New Bedford Harbor Superfund Site - 2009 Season

							F	CB Co	ncent	ation									
						(ng/m <sup>3</sup>	in 24	-hour ti	me-w	eighted	avera	ge)							
Sampling Date	24 Aerovox	25 Cliftex	42 NSTARN	43 Veranda	46 Coffin	47	48	49	50	51	52	55 Aerovox West	56 Acushnet Park	53 Dredge	57 Riverside Park	61 South Fence	Activity Period		
Sep-Nov 1999	67	22	24	NS	22	43	43	43	5.9	5.9	5.9	5.2	5.2	NS	NS	NS			
Dec 1999-Feb 2000	32	3.2	9.9	NS	3.2	89	89	89	3.4	3.4	3.4	NS	NS	NS	NS	NS	No Dredging Activities		
Mar-May 2000	76	35	29	NS	35	61	61	61	6.8	6.8	6.8	NS	NS	NS	NS	NS	Data from Foster-Wheeler		
Jun-Aug 1999	130	46	31	NS	46	33	33	33	12	12	12	NS	NS	NS	NS	NS			
06/29/04	2286	NS	NS	NS	NS	NS	NS	NS	NS	56	NS	NS	NS	NS	NS	NS	No Dredging Activities		
09/09/04	1024	167	NS	NS	145	28	37	56	20	16	47	NS	NS	723	NS	NS	Initial MU-2 Dredging During		
09/14/04	1449	229	NS	NS	48	64	64	86	38	39	61	NS	NS	98	NS	NS	Startup		
09/23/04	588	97	NS	NS	5	7	10	17	6	5	19	NS	NS	1212	NS	NS			
09/28/04	9557	423	NS	NS	342	35	165	207	80	75	115	NS	NS	2734	NS	NS	2004 Dradaina Operation		
10/19/04	559	259	NS	NS	36	47	48	66	17	74	100	NS	NS	704	NS	NS	2004 Dredging Operation		
11/05/04	578	61	73	NS	80	NS	NS	28	NS	NS	NS	28.42	39.08	351	NS	NS			
12/03/04	30	27	40	NS	15	22	NS	26	22	NS	31	9.33	1.52	NS	NS	NS	After 2004 Dredge Operation		
8/11/2005	216.0	103.0	25.9	NS	37.2	NS	NS	29.3	NS	NS	21.3	42.1	49.9	NS	NS	NS	Before 2005 Dredge Operation		
9/15/2005	1490.0	58.2	22.5	NS	99.8	NS	14.9	83.6	0.5	NS	NS	37.6	102.0	1280.0	NS	NS	<u> </u>		
9/23/2005	178.0	35.2	83.3	NS	115.0	NS	19.1	97.0	0.3	NS	NS	2.6	23.9	780.0	NS	NS			
9/29/2005	383.0	104.0	5.3	NS	124.0	NS	17.3	44.2	24.2	NS	NS	87.0	77.9	391.0	NS	NS			
10/6/2005	1822.0	251.0	119.0	NS	130.0	NS	60.1	114.0	81.7	NS	NS	222.0	180.0	6315.0	NS	NS	2005 Dredging Operation		
10/28/2005	15.4	NS	32.3	NS	2.1	NS	4.6	12.3	0.0	NS	NS	4.0	2.7	505.0	NS	NS			
11/18/2005	15.9	0.1	63.6	NS	0.1	NS	0.1	3.7	NS	NS	NS	0.1	3.8	913.0	NS	NS			
12/29/2005	83.2	10.9	21.4	NS	65.1	7.4	NS	NS	NS	2.2	NS	10.8	13.5	NS	NS	NS	After 2005 Dredge Operation		
8/31/2006	1,629	176	NS	NS	70.4	39.2	NS	NS	NS	67.3	NS	NS	NS	2336	NS	NS	5 1		
10/6/2006	2,357	451	NS	NS	108	NS	NS	157	NS	NS	197	NS	NS	13430	NS	NS	2006 Dredge Operation		
11/19/2006	41.1	0.14	NS	NS	4.05	NS	NS	81.4	2.6	NS	NS	NS	NS	NS	NS	NS	After 2006 Dredge Operation		
8/21/2007	282	147	19.2	NS	36.1	46.9	NS	NS	36.7	NS	NS	NS	NS	138	NS	NS	5 1		
9/18/2007	176	120	16.3	NS	21.4	57.1	NS	NS	48.7	NS	NS	NS	NS	130	NS	NS	2007 Dredge Operation		
11/9/2007	19.7	20.2	15.7	NS	1.86	9.29	NS	NS	NS	4.39	NS	NS	NS	NS	NS	NS	After 2007 Dredge Operation		
6/8/2008	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	25.9	NS	NS	NS	34.4			
6/12/2008	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.3	NS	NS	NS	43.1			
6/19/2008	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	8.9	NS	NS	NS	43.1 NS	2008 Land-based Excavation of		
6/25/2008	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.52	NS	NS	NS	NS	Shoreline at Aerovox		
7/8/2008	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	8.7	NS	NS	NS	26.1			
7/16/2008	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	68.6	NS	NS	NS	286.5			
8/21/2008	NS	NS	NS	31.66	121.9	NS	NS	123.4	NS	2.85	NS	00.0 NS	NS	178.0	37.46	200.5 NS	2008 Hydraulic Dredging		
8/21/2008	NA	NA	NA	NA	NA	NA	NA	123.4	NA	2.85 NA	NA	NA	NA	NA	37.40 NA	NA			
9/24/2008	NS	NS	NA	18	NS	NS	NS	42	NS	NS	NS	NA	NS	1.5	15.0	NS	2008 Hydraulic Dredging		
10/7/2008	NS	NS	NS	NS	5.2	NS	NS	42 NS	NS	NS	NS	NS	NS	NS	NS	NS	2008 Hydraulic Dredging 2008 Hydraulic Dredging		
11/10/2008	NS	NS	NS	15	5.2 1.3	NS	NS	6.2	NS	0.020U	-	NS	NS	NS NS	0.11	NS	After 2008 Dredge Operation		

# Table F-1 Ambient Air Monitoring Program - Total Detectable PCB Homologues New Bedford Harbor Superfund Site - 2009 Season

						(ng/m <sup>3</sup>		PCB Co -hour ti		ation eighted	avera	ge)						
Sampling Date	24 Aerovox	25 Cliftex	42 NSTARN	43 Veranda	46 Coffin	47	48	49	50	51	52	55 Aerovox West	56 Acushnet Park	53 Dredge	57 Riverside Park	61 South Fence	Activity Period	
6/16/2009	150	77	10	33	35	43	NS	NS	NS	32	NS	33	8.2	120	NS	NS	2009 Hydraulic Dredging	
7/13/2009	130	18	39	110	36	NS	NS	77	NS	5.3	NS	7.4	6	290	NS	NS	2009 Hydraulic Dredging	
7/13/2009	NA	NA	NA	NA	NA	NA	NA	76	NA	NA	NA	NA	NA	NA	NA	NA	Duplicate	
8/13/2009	130	21	14	49	14	NS	NS	32	NS	31	NS	28	20	130	NS	NS	2009 Hydraulic Dredging	
8/13/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30	NA	NA	NA	NA	Duplicate	
9/17/2009	160	24	2.2	51	13	NS	NS	35	NS	42	NS	14	10	180	NS	NS	2009 Hydraulic Dredging	
9/17/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.8	NA	NA	NA	Duplicate	
10/14/2009	48.79	11.77	17.92	10.01	8.80	NS	NS	13.26	NS	3.75	NS	10.00	2.62	0.13	NS	NS	2009 Hydraulic Dredging	
10/14/2009	NA	NA	NA	NA	6.07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Duplicate	
11/9/2009	45.2	20.4	25.3	55.2	32.8	NS	NS	51.8	NS	2.92	NS	8.31	17.2	205.1	NS	NS	2009 Hydraulic Dredging	
11/9/2009	NA	31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Duplicate	
12/16/2009	2.59	0	23.8	9.04	0	NS	NS	1.25	NS	0	NS	0	0.32	NS	NS	NS	After 2009 Dredge Operation	
12/16/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	NA	NA	NA	NA	Duplicate	

Notes:

NA = not applicable for the duplicate sample.

ng/m3 = nanograms per cubic meter

NS = location not sampled during event.

PCB = polychlorinated biphenyl

# **ATTACHMENT F-1**

# Air Sampling Status Reports (PETS Curves)

# **LOCATION 24 – AEROVOX**

New Bedford Harbor Superfund Site

Station #:	<u>24 Aerovox</u>
	Exposure Budget Slope (EBS) = 344 nanograms per cubic meter per day (ng/m <sup>3</sup> -day)
Collection Date:	<u>11/30/2008</u>

Construction Activity: The 2008 Excavation dredging activities were initiated on June 2, 2008 and completed on July 22, 2008.

This report summarizes sample results for the above referenced location and date. The samples were collected on polyurethane foam (PUF)/XAD sample media with a glass fiber pre-filter using a BGI, PQ-1 Low-Volume sampler. The samples were analyzed using high-resolution mass spectrometry (HRGCMS) for total PCB homologue groups. Results are evaluated relative to the Exposure Budget Tracking Process described in the Development of PCB Air Action Levels for the Protection of the Public, New Bedford Harbor Superfund Site, August 2001. Cumulative data for this reporting period are included on pages 4 and 5.

#### Summary of This Sampling Period:

The results from the Foster Wheeler, Baseline Ambient Air Sampling program (June 1999 through May 2000) were used to assign background concentrations for each air sampling location. For Station 24 Aerovox, the Foster Wheeler quarterly average ambient air PCB concentrations for the June 1999 through May 2000 baseline sampling were used as background concentrations. These background concentrations were used to project the PCB concentrations during for the inactive field times from 11/12/02 through 9/8/04, for the period from 12/4/04 through 8/10/05, from 12/28/05 through 8/15/06, and from 11/19/06 through 8/6/07 to close the recent inactive field season. In addition, to better simulate the 2006 dredging season, the ambient air concentrations from the August 31, 2006 sampling event were used as the concentrations detected at Station 24 Aerovox from August 16, 2006 (the start of dredging activities). To better simulate the 2007 dredging season, the ambient air concentrations from the August 21, 2007 sampling event were used as the concentration 24 Aerovox from August 21, 2007 (the start of dredging activities).

Coordinating the sampling date with the start of dredging better simulates the ambient air PCB concentrations present at Station 24 Aerovox during the active dredging season. For the first month of the 2004 and 2005 seasons, the sampling was conducted on a weekly basis. However, since monthly sampling was conducted in 2006, and the first 2006 sampling event was conducted two weeks after the start of dredging, this new variation of the PETs curve was used. Also, the background concentrations were projected to be at background levels at Station 24 Aerovox on October 19, 2006, which is the day after the 2006 dredging activities were completed. For the 2007 season, the PCB concentrations were projected to be at background levels at Station 24 Aerovox on October 13, 2007, which is the day after the 2007 dredging activities were completed. These changes in the background concentrations better match the actual 2006 and 2007 dredging activities. No triggers were identified, therefore, no action is required.

The 2008 season began with mechanical dredging (excavation) off Aerovox on June 2 and ending July 22, 2008. Station 24 was not sampled but Station number 61 (South Fence) was sampled through July 16, 2008. Due to the close proximity of the two stations, Station 61's sample results are inputted for this season. Hydraulic dredging occurred in the Pierce Mill Cove area starting on August 18, 2008. Station 24 was not sampled as dredging did not take place in this part of the Acushnet River, which ended on October 21, 2008. The 2009 dredging season began on June 5<sup>th</sup> in the northern portion of the Acushnet River. All dredging was done hydraulically until December 2<sup>nd</sup>. Due to low ambient concentrations of PCBs, no triggers were identified therefore, no action was required to control exposures.

New Bedford Harbor Superfund Site

Monitoring Station:		24 Aerovox
Exposure Budget Slope:	[ng/m <sup>3</sup> -day]	344
Work Start Date:	[mm/dd/yyyy]	11/12/2002
Projected Work End Date (Per EPA) :	[mm/dd/yyyy]	11/10/2028
Occupational Limit Used as Ceiling:	[ng/m <sup>3</sup> ]	500,000
TEL for Worker in Public:	[ng/m <sup>3</sup> ]	50,000
NTEL for Worker in Public:	[ng/m <sup>3</sup> ]	1,789
Minimum of TEL/NTEL:	[ng/m <sup>3</sup> ]	1,789
Baseline Average Concentration:	[ng/m <sup>3</sup> ]	75

Notes:

TEL = Threshold Effects Exposure Limit

NTEL = Non-Threshold Effects Exposure Limits

The EPA periodically assesses this Projected Work End Date, which is subject to change.

(A) Event	(B) Sampling Date	(C) Days Since Previous Sampling Event	(D) Work Effort Elapsed Time	(E) Estimated Work Effort Remaning	(F) PCB Concentration Result	(G) Average of Most Recent Two Concentration Results	(H) Weighted Average of Concentration Results	(I) Exposure Budget for the Period	(J) Cumulative Exposure Budget for Work Effort to Date	(K) Measured Exposure During the Period	(L) Calculated Cumulative Exposure for Work Effort to Date	(M) Exposure Budget Expended During the Period	(N) Cumulative Exposure Expended for Work Effort to Date
[#]	[month/day/year]	[days]	Running Sum of Column (C) to Date [days]	[days]	[ng/m³]	[ng/m³]	<u>Column (L)/</u> Column (D) [ng/m <sup>3</sup> ]	EBS <sup>1 *</sup> Column (C) [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (I</u> ) [ng/m <sup>3</sup> -days]	<u>Column (G)*</u> <u>Column (C)</u> [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (K</u> ) [ng/m <sup>3</sup> -days]	<u>Column</u> (K)/ Column (I) [%]	Column (L)/ Column (J) [%]
1	11/12/2002	0	0	9495	67	67.00	67.00	NC	NC	NC	NC	NC	NC
2	11/30/2002	18	18	9477	67	67.00	67.00	6192	6192	1206.0	1,206.0	19.5%	19.5%
3	12/1/2002	1	19	9476	32	49.50	66.08	344	6536	49.5	1,255.5	14.4%	19.2%
4	2/28/2003	89	108	9387	32	32.00	38.00	30616	37152	2848.0	4,103.5	9.3%	11.0%
5	5/31/2003 8/31/2003	92	200 292	9295 9203	76 130	54.00 103.00	45.36 63.52	31648 31648	68800 100448	4968.0 9476.0	9,071.5 18,547.5	15.7% 29.9%	13.2% 18.5%
6 7	11/30/2003	92 91	383	9203 9112	67	98.50	71.83	31648	131752	9476.0 8963.5	27,511.0	29.9%	20.9%
8	2/28/2004	90	473	9112	32	49.50	67.58	30960	162712	4455.0	31,966.0	14.4%	19.6%
9	5/31/2004	93	566	8929	76	54.00	65.35	31992	194704	5022.0	36,988.0	15.7%	19.0%
10	8/31/2004	92	658	8837	130	103.00	70.61	31648	226352	9476.0	46,464.0	29.9%	20.5%
11	9/8/2004	8	666	8829	67	98.50	70.95	2752	229104	788.0	47,252.0	28.6%	20.6%
12	9/9/2004	1	667	8828	1024	545.50	71.66	344	229448	545.5	47,797.5	158.6%	20.8%
13	9/14/2004	5	672	8823	1449	1236.50	80.33	1720	231168	6182.5	53,980.0	359.4%	23.4%
14	9/23/2004	9	681	8814	588	1018.50	92.73	3096	234264	9166.5	63,146.5	296.1%	27.0%
15	9/27/2004	4	685	8810	9557	5072.50	121.81	1376	235640	20290.0	83,436.5	1474.6%	35.4%
16	10/19/2004	22	707	8788	559	5058.00	275.41	7568	243208	111276.0	194,712.5	1470.3%	80.1%
17	11/5/2004	17	724	8771	578	568.50	282.29	5848	249056	9664.5	204,377.0	165.3%	82.1%
18	12/3/2004	28	752	8743	30	304.00	283.10	9632	258688	8512.0	212,889.0	88.4%	82.3%
19	2/28/2005	87	839	8656	32	31.00	256.96	29928	288616	2697.0	215,586.0	9.0%	74.7%
20 21	5/31/2005 8/10/2005	92 71	931 1002	8564 8493	76 130	54.00 103.00	236.90 227.41	31648 24424	320264 344688	4968.0 7313.0	220,554.0 227,867.0	15.7% 29.9%	68.9% 66.1%
21	8/10/2005	1	1002	8493	216	173.00	227.41	344	344688	173.0	227,867.0	29.9% 50.3%	66.1%
22	9/15/2005	35	1003	8457	1490	853.00	248.45	12040	357072	29855.0	257,895.0	248.0%	72.2%
24	9/23/2005	8	1046	8449	178	834.00	252.93	2752	359824	6672.0	264,567.0	242.4%	73.5%
25	9/29/2005	6	1052	8443	383	280.50	253.09	2064	361888	1683.0	266,250.0	81.5%	73.6%
26	10/6/2005	7	1059	8436	1822	1102.50	258.70	2408	364296	7717.5	273,967.5	320.5%	75.2%
27	10/28/2005	22	1081	8414	15.4	918.70	272.14	7568	371864	20211.4	294,178.9	267.1%	79.1%
28	11/18/2005	21	1102	8393	15.9	15.65	267.25	7224	379088	328.7	294,507.6	4.5%	77.7%
29	12/29/2005	41	1143	8352	83.2	49.55	259.44	14104	393192	2031.6	296,539.1	14.4%	75.4%
30	2/28/2006	61	1204	8291	32	57.60	249.21	20984	414176	3513.6	300,052.7	16.7%	72.4%
31	5/31/2006	92	1296	8199	76	54.00	235.36	31648	445824	4968.0	305,020.7	15.7%	68.4%
32	8/15/2006	76	1372	8123	130	103.00	228.02	26144	471968	7828.0	312,848.7	29.9%	66.3%
33	8/16/2006	1	1373	8122	1629	879.50	228.50	344	472312	879.5	313,728.2	255.7%	66.4%
34	8/31/2006	15 35	1388	8107	1629	1629.00	243.63	5160	477472	24435.0	338,163.2	473.5%	70.8%
35	10/5/2006	35	1423	8072	2357	1993.00	286.66	12040	489512	69755.0	407,918.2	579.4%	83.3%

(A) Event	(B) Sampling Date	(C) Days Since Previous Sampling Event	(D) Work Effort Elapsed Time	(E) Estimated Work Effort Remaning	(F) PCB Concentration Result	(G) Average of Most Recent Two Concentration Results	(H) Weighted Average of Concentration Results	(I) Exposure Budget for the Period	(J) Cumulative Exposure Budget for Work Effort to Date	(K) Measured Exposure During the Period	(L) Calculated Cumulative Exposure for Work Effort to Date	(M) Exposure Budget Expended During the Period	(N) Cumulative Exposure Expended for Work Effort to Date
[#]	[month/day/year]	[days]	Running Sum of Column (C) to Date [days]	[days]	[ng/m³]	[ng/m³]	<u>Column (L)/</u> <u>Column (D</u> ) [ng/m³]	EBS <sup>1</sup> * Column (C) [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (I</u> ) [ng/m³-days]	<u>Column (G)*</u> <u>Column (C)</u> [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (K</u> ) [ng/m <sup>3</sup> -days]	<u>Column</u> (K)/ Column (I) [%]	<u>Column (L)/</u> <u>Column (J</u> ) [%]
36	10/19/2006	14	1437	8058	41.1	1199.05	295.55	4816	494328	16786.7	424,704.9	348.6%	85.9%
37	11/19/2006	31	1468	8027	41.1	41.10	290.18	10664	504992	1274.1	425,979.0	11.9%	84.4%
38	11/30/2006	11	1479	8016	67	54.05	288.42	3784	508776	594.6	426,573.6	15.7%	83.8%
39	2/28/2007	90	1569	7926	32	49.50	274.72	30960	539736	4455.0	431,028.6	14.4%	79.9%
40	5/31/2007	92	1661	7834	76	54.00	262.49	31648	571384	4968.0	435,996.6	15.7%	76.3%
41	8/6/2007	67	1728	7767	130	103.00	256.31	23048	594432	6901.0	442,897.6	29.9%	74.5%
42	8/7/2007	1	1729	7766	282	206.00	256.28	344	594776	206.0	443,103.6	59.9%	74.5%
43	8/21/2007	14	1743	7752	282	282.00	256.48	4816	599592	3948.0	447,051.6	82.0%	74.6%
44	9/18/2007	28	1771	7724	176	229.00	256.05	9632	609224	6412.0	453,463.6	66.6%	74.4%
45	10/13/2007	25	1796	7699	67	121.50	254.18	8600	617824	3037.5	456,501.1	35.3%	73.9%
46	11/9/2007	27	1823	7672	19.7	43.35	251.05	9288	627112	1170.5	457,671.5	12.6%	73.0%
47	11/30/2007	21	1844	7651	67	43.35	248.69	7224	634336	910.4	458,581.9	12.6%	72.3%
48	2/28/2008	90	1934	7561	32	49.50	239.42	30960	665296	4455.0	463,036.9	14.4%	69.6%
49	5/31/2008	93	2027	7468	76	54.00	230.91	31992	697288	5022.0	468,058.9	15.7%	67.1%
50	6/8/2008	8	2035	7460	34.4	55.20	230.22	2752	700040	441.6	468,500.5	16.0%	66.9%
51	6/12/2008	4	2039	7456	43.1	38.75	229.85	1376	701416	155.0	468,655.5	11.3%	66.8%
52	7/8/2008	26	2065	7430	26	34.55	227.39	8944	710360	898.3	469,553.8	10.0%	66.1%
53	7/16/2008	8	2073	7422	290	158.00	227.12	2752	713112	1264.0	470,817.8	45.9%	66.0%
54	8/31/2008	46	2119	7376	130	210.00	226.75	15824	728936	9660.0	480,477.8	61.0%	65.9%
55	11/30/2008	91	2210	7285	67	98.50	221.47	31304	760240	8963.5	489,441.3	28.6%	64.4%
56	2/28/2009	90	2300	7195	32	49.50	214.74	30960	791200	4455.0	493,896.3	14.4%	62.4%
57	5/31/2009	92	2392	7103	76	54.00	208.56	31648	822848	4968.0	498,864.3	15.7%	60.6%
58	6/16/2009	16	2408	7087	150	113.00	207.92	5504	828352	1808.0	500,672.3	32.8%	60.4%
59	7/13/2009	27	2435	7060	126	138.00	207.15	9288	837640	3726.0	504,398.3	40.1%	60.2%
60	8/13/2009	31	2466	7029	126	126.00	206.13	10664	848304	3906.0	508,304.3	36.6%	59.9%
61	9/17/2009	35	2501	6994	163	144.50	205.26	12040	860344	5057.5	513,361.8	42.0%	59.7%
62	10/14/2009	27	2528	6967	48.8	105.90	204.20	9288	869632	2859.3	516,221.1	30.8%	59.4%
63	11/9/2009	26	2554	6941	45.2	47.00	202.60	8944	878576	1222.0	517,443.1	13.7%	58.9%
64	12/16/2009	37	2591	6904	2.59	23.90	200.05	12728	891304	884.1	518,327.2	6.9%	58.2%

Notes:

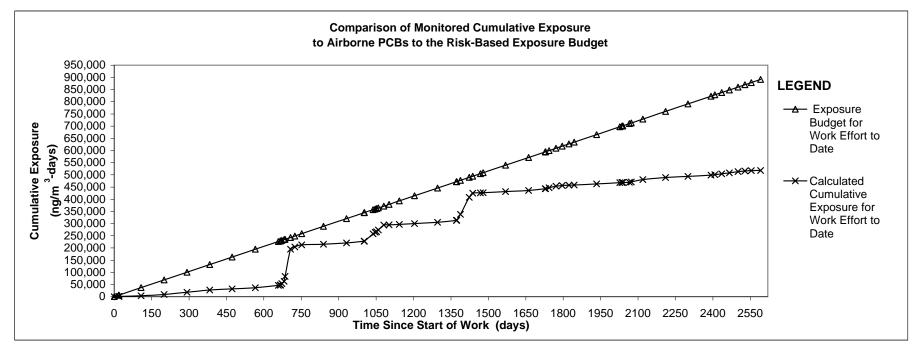
<sup>1</sup>EBS: Exposure Budget Slope = ng/m<sup>3</sup>-day

NC = not calculated

Shading represents actual sampling data. All other numbers represent projected PCB concentrations for that period.

Sample Station :	24 Aerovox
Collection Date:	12/16/2009
Measured PCB Concentration (ng/m <sup>3</sup> ):	2.59
Exposure Budget Expended During This Period:	6.9%
Cumulative Exposure Budget Expended to Date:	58.2%
Response Level:	No Triggers Identified
Response:	No Response Necessary

**Triggers:** 



#### Notes:

a) 2004 dredge season, including pre- and post-dredging sampling events, were from 667 to 752 days since start of work (September 9 through December 3, 2004).
b) 2005 dredge season, including pre-and post-dredging sampling events, were from 1003 to 1143 days since start of work (August 11 through December 29, 2005).
c) 2006 dredge season, which did not include a pre-dredge sampling event, was from 1388 to 1468 days since start of work (August 16 through October 18, 2006).
d) 2007 dredge season, which did not include a pre-dredge sampling event, was from 1729 to 1823 days since start of work (August 7 through November 9, 2007).
e) 2008 dredge season which did not include a pre-dredge sampling event was from 1934 to 2119 days since start of work (June 1 through November 5, 2008).
f) 2009 dredge season which did not include a pre-dredge sampling event, but did include a post-dredge sampling event was from 2393 to 2591 days since start of work

(June 5 through December 1, 2009).

# LOCATION 25 – CLIFTEX

New Bedford Harbor Superfund Site

Station #:25 CliftexExposure Budget Slope (EBS) = 202 nanograms per cubic meter per day (ng/m³-day)

Collection Date: <u>11/30/2008</u>

#### Construction Activity: The 2008 Aerovox excavation activities were initiated on June 2, 2008 and were completed on July 22, 2008.

This report summarizes sample results for the above referenced location and date. The samples were collected on polyurethane foam (PUF)/XAD sample media with a glass fiber pre-filter using a BGI, PQ-1 Low-Volume sampler. The samples were analyzed using high-resolution mass spectrometry (HRGCMS) for total PCB homologue groups. Results are evaluated relative to the Exposure Budget Tracking Process described in the Development of PCB Air Action Levels for the Protection of the Public, New Bedford Harbor Superfund Site, August 2001. Cumulative data for this reporting period are included on pages 4 and 5.

#### Summary of This Sampling Period:

The results from the Foster Wheeler Baseline Ambient Air Sampling program (June 1999 through May 2000) were used to assign background concentrations for each air sampling location. For Station 25 Cliftex, the quarterly average ambient air PCB concentrations were used as a background concentration, which represent the quarterly baseline averages for the period of June 1999 through May 2000. These background concentrations were used to project the PCB concentrations during the inactive field times from 11/12/02 through 9/8/04, for the period from 12/4/04 through 8/10/05, from 12/28/05 through 8/15/06, and from 11/19/06 through 8/6/07 to close the recent inactive field season. In addition, to better simulate the 2006 dredging season, the ambient air concentrations from the August 31, 2006 sampling event were used as the concentrations detected at Station 25 Cliftex from August 16, 2006 (the start of dredging activities). To better simulate the 2007 dredging season, the ambient air concentrations from the August 21, 2007 sampling event were used as the concentrations from the August 21, 2007 sampling event were used as the concentrations from the August 21, 2007 sampling event were used as the concentrations from the August 21, 2007 sampling event were used as the concentrations from the August 21, 2007 sampling event were used as the concentrations from the August 21, 2007 sampling event were used as the concentrations from the August 21, 2007 sampling event were used as the concentrations from the August 21, 2007 sampling event were used as the concentrations detected at Station 25 Cliftex from August 7, 2007 (the start of dredging activities).

Coordinating the sampling date with the start of dredging better simulates the ambient air PCB concentrations at Station 25 Cliftex during the active dredging season. For the first month of the 2004 and 2005 seasons, the sampling was conducted on a weekly basis. However, since monthly sampling was conducted in 2006, and the first 2006 sampling event was conducted two weeks after the start of dredging, this new variation of the PETs curve was used. Also, the concentrations were projected to be at background levels at Station 25 Cliftex on October 19, 2006, which is the day after the 2007 season, the PCB concentrations were projected to be at background levels at Station 25 Cliftex on October 13, 2007, which is the day after the 2007 dredging activities were completed. These changes in the background concentrations and associated active dredging concentrations better match the actual 2006 and 2007 dredging activities. No triggers were identifed, therefore, no action is required.

During the 2008 dredge season no samples were collected from this location. However, four rounds of quarterly background data were inputted to the Time Trend Sheet. The quarterly data is greater than the annual baseline background data thus giving an artificially elevated trigger. Recognizing this, no action is necessary.

The 2009 dredging season began on June 5th in the northern portion of the Acushnet River. All dredging was done hydraulically until December 2<sup>nd</sup>. Due to low ambient concentrations of PCBs, no triggers were identified therefore, no action was required to control exposures.

### Home Sheet

Monitoring Station:		25 Cliftex
Exposure Budget Slope:	[ng/m <sup>3</sup> -day]	202
Work Start Date:	[mm/dd/yyyy]	11/12/2002
Projected Work End Date (Per EPA):	[mm/dd/yyyy]	11/10/2028
Occupational Limit Used as Ceiling:	[ng/m <sup>3</sup> ]	500,000
TEL for Worker in Public:	[ng/m <sup>3</sup> ]	50,000
NTEL for Worker in Public:	[ng/m <sup>3</sup> ]	1,789
Minimum of TEL/NTEL:	[ng/m <sup>3</sup> ]	1,789
Baseline Average Concentration:	[ng/m <sup>3</sup> ]	23

Notes:

TEL = Threshold Effects Exposure Limit

NTEL = Non-Threshold Effects Exposure Limit

The EPA periodically assesses this Projected Work End Date, which is subject to change.

#### Sample Results, Calculated Budget and Exposure Values 25 Cliftex Location

(A) Event	(B) Sampling Date	(C) Days Since Previous Sampling Event	(D) Work Effort Elapsed Time	(E) Estimated Work Effort Remaning	(F) PCB Concentration Result	(G) Average of Most Recent Two Concentration Results	(H) Weighted Average of Concentration Results	(I) Exposure Budget for the Period	(J) Cumulative Exposure Budget for Work Effort to Date	(K) Measured Exposure During the Period	(L) Calculated Cumulative Exposure for Work Effort to Date	(M) Exposure Budget Expended During the Period	(N) Cumulative Exposure Expended for Work Effort to Date
[#]	[month/day/year]	[days]	<u>Running Sum</u> of Column (C) to Date [days]	[days]	[ng/m³]	[ng/m³]	<u>Column (L)/</u> Column (D) [ng/m <sup>3</sup> ]	EBS <sup>1 *</sup> Column (C) [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (I</u> ) [ng/m <sup>3</sup> -days]	<u>Column (G)*</u> <u>Column (C)</u> [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (K</u> ) [ng/m <sup>3</sup> -days]	<u>Column (K)/</u> <u>Column (I</u> ) [%]	<u>Column (L)/</u> <u>Column (J</u> ) [%]
1	11/12/2002	0	0	9495	22	22.00	22.00	NC	NC	NC	NC	NC	NC
2	11/30/2002	18	18	9477	22	22.00	22.00	3636	3636	396.0	396.0	10.9%	10.9%
3	12/1/2002	1	19	9476	3.2	12.60	21.51	202	3838	12.6	408.6	6.2%	10.6%
4	2/28/2003	89	108	9387	3.2	3.20	6.42	17978	21816	284.8	693.4	1.6%	3.2%
5	5/31/2003	92	200	9295	35	19.10	12.25	18584	40400	1757.2	2,450.6	9.5%	6.1%
6	8/31/2003	92	292	9203	46	40.50	21.15	18584	58984	3726.0	6,176.6	20.0%	10.5%
7	11/30/2003	91	383	9112	22	34.00	24.21	18382	77366	3094.0	9,270.6	16.8%	12.0%
8	2/28/2004	90	473	9022	3.2	12.60	22.00	18180	95546	1134.0	10,404.6	6.2%	10.9%
9	5/31/2004	93	566	8929	35	19.10	21.52	18786	114332	1776.3	12,180.9	9.5%	10.7%
10 11	8/31/2004 9/8/2004	92	658 666	8837 8829	46 22	40.50 34.00	24.17 24.29	18584 1616	132916 134532	3726.0 272.0	15,906.9 16,178.9	20.0% 16.8%	12.0% 12.0%
11	9/8/2004	8	667	8828	167	94.50	24.29	202	134532	94.5	16,178.9	46.8%	12.0%
12	9/14/2004	5	672	8823	229	198.00	25.69	1010	135744	990.0	17,263.4	98.0%	12.7%
14	9/23/2004	9	681	8814	97	163.00	27.50	1818	137562	1467.0	18,730.4	80.7%	13.6%
15	9/28/2004	5	686	8809	423	260.00	29.20	1010	138572	1300.0	20,030.4	128.7%	14.5%
16	10/19/2004	21	707	8788	259	341.00	38.46	4242	142814	7161.0	27,191.4	168.8%	19.0%
17	11/15/2004	27	734	8761	61	160.00	42.93	5454	148268	4320.0	31,511.4	79.2%	21.3%
18	12/3/2004	18	752	8743	27	44.00	42.96	3636	151904	792.0	32,303.4	21.8%	21.3%
19	2/28/2005	87	839	8656	3.2	15.10	40.07	17574	169478	1313.7	33,617.1	7.5%	19.8%
20	5/31/2005	92	931	8564	35	19.10	38.00	18584	188062	1757.2	35,374.3	9.5%	18.8%
21	8/10/2005	71	1002	8493	46	40.50	38.17	14342	202404	2875.5	38,249.8	20.0%	18.9%
22	8/11/2005	1	1003	8492	103	74.50	38.21	202	202606	74.5	38,324.3	36.9%	18.9%
23	9/15/2005	35	1038	8457	58.2	80.60	39.64	7070	209676	2821.0	41,145.3	39.9%	19.6%
24	9/23/2005	8	1046	8449	35.2	46.70	39.69	1616	211292	373.6	41,518.9	23.1%	19.7%
25	9/29/2005	6	1052	8443	104	69.60	39.86	1212	212504	417.6	41,936.5	34.5%	19.7%
26	10/6/2005	7	1059	8436	251	177.50	40.77	1414	213918	1242.5	43,179.0	87.9%	20.2%
27	11/18/2005	43	1102	8393	0.12	125.56	44.08	8686	222604	5399.1	48,578.1	62.2%	21.8%
28	12/29/2005	41	1143	8352	<u>10.9</u>	5.51	42.70	8282	230886	225.9	48,804.0	2.7%	21.1% 20.2%
29 30	2/28/2006 5/31/2006	61 92	1204 1296	8291 8199	3.2 35	7.05 19.10	40.89 39.35	12322 18584	243208 261792	430.1 1757.2	49,234.0 50,991.2	3.5% 9.5%	20.2%
30	8/15/2006	92 76	1296	8199	<u> </u>	40.50	39.35	15352	261792	3078.0	50,991.2	9.5%	19.5%
31	8/16/2006	1	1372	8123	176	111.00	39.41	202	277346	111.0	54,069.2 54,180.2	20.0% 55.0%	19.5%
33	8/31/2006	15	1373	8107	176	176.00	40.94	3030	280376	2640.0	56,820.2	87.1%	20.3%
34	10/5/2006	35	1423	8072	451	313.50	47.64	7070	287446	10972.5	67,792.7	155.2%	23.6%
35	10/19/2006	14	1437	8058	0.14	225.57	49.37	2828	290274	3158.0	70,950.7	111.7%	24.4%
36	11/19/2006	31	1468	8027	0.14	0.14	48.33	6262	296536	4.3	70,955.1	0.1%	23.9%

# Sample Results, Calculated Budget and Exposure Values 25 Cliftex Location

(A) Event	(B) Sampling Date	(C) Days Since Previous Sampling Event	(D) Work Effort Elapsed Time	(E) Estimated Work Effort Remaning	(F) PCB Concentration Result	(G) Average of Most Recent Two Concentration Results	(H) Weighted Average of Concentration Results	(I) Exposure Budget for the Period	(J) Cumulative Exposure Budget for Work Effort to Date	(K) Measured Exposure During the Period	(L) Calculated Cumulative Exposure for Work Effort to Date	(M) Exposure Budget Expended During the Period	(N) Cumulative Exposure Expended for Work Effort to Date
[#]	[month/day/year]	[days]	<u>Running Sum</u> of Column (C) to Date [days]	[days]	[ng/m <sup>3</sup> ]	[ng/m <sup>3</sup> ]	<u>Column (L)/</u> <u>Column (D</u> ) [ng/m <sup>3</sup> ]	EBS <sup>1 *</sup> Column (C) [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (I</u> ) [ng/m <sup>3</sup> -days]	<u>Column (G)*</u> <u>Column (C)</u> [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (K</u> ) [ng/m <sup>3</sup> -days]	<u>Column (K)/</u> <u>Column (I</u> ) [%]	<u>Column (L)/</u> <u>Column (J</u> ) [%]
37	11/30/2006	11	1479	8016	22	11.07	48.06	2222	298758	121.8	71,076.8	5.5%	23.8%
38	2/28/2007	90	1569	7926	3.2	12.60	46.02	18180	316938	1134.0	72,210.8	6.2%	22.8%
39	5/31/2007	92	1661	7834	35	19.10	44.53	18584	335522	1757.2	73,968.0	9.5%	22.0%
40	8/6/2007	67	1728	7767	46	40.50	44.38	13534	349056	2713.5	76,681.5	20.0%	22.0%
41	8/7/2007	1	1729	7766	147	96.50	44.41	202	349258	96.5	76,778.0	47.8%	22.0%
42	8/21/2007	14	1743	7752	147	147.00	45.23	2828	352086	2058.0	78,836.0	72.8%	22.4%
43	9/18/2007	28	1771	7724	120	133.50	46.63	5656	357742	3738.0	82,574.0	66.1%	23.1%
44	10/13/2007	25	1796	7699	22	71.00	46.96	5050	362792	1775.0	84,349.0	35.1%	23.2%
45	11/9/2007	27	1823	7672	20.2	21.10	46.58	5454	368246	569.7	84,918.7	10.4%	23.1%
46	11/30/2007	21	1844	7651	22	21.10	46.29	4242	372488	443.1	85,361.8	10.4%	22.9%
47	2/28/2008	90	1934	7561	3.2	12.60	44.72	18180	390668	1134.0	86,495.8	6.2%	22.1%
48	5/31/2008	93	2027	7468	35	19.10	43.55	18786	409454	1776.3	88,272.1	9.5%	21.6%
49	8/31/2008	92	2119	7376	46	40.50	43.42	18584	428038	3726.0	91,998.1	20.0%	21.5%
50	11/30/2008	91	2210	7285	22	34.00	43.03	18382	446420	3094.0	95,092.1	16.8%	21.3%
51	2/28/2009	90	2300	7195	3.2	12.60	41.84	18180	464600	1134.0	96,226.1	6.2%	20.7%
52	5/31/2009	92	2392	7103	35	19.10	40.96	18584	483184	1757.2	97,983.3	9.5%	20.3%
53	6/16/2009	16	2408	7087	76.7	55.85	41.06	3232	486416	893.6	98,876.9	27.6%	20.3%
54	7/13/2009	27	2435	7060	18.1	47.40	41.13	5454	491870	1279.8	100,156.7	23.5%	20.4%
55	8/13/2009	31	2466	7029	21.2	19.65	40.86	6262	498132	609.2	100,765.9	9.7%	20.2%
56	9/17/2009	35	2501	6994	24.3	22.75	40.61	7070	505202	796.3	101,562.1	11.3%	20.1%
57	10/14/2009	27	2528	6967	11.8	18.05	40.37	5454	510656	487.4	102,049.5	8.9%	20.0%
58	11/9/2009	26	2554	6941	20.4	16.10	40.12	5252	515908	418.6	102,468.1	8.0%	19.9%
59	12/16/2009	37	2591	6904	0	10.20	39.69	7474	523382	377.4	102,845.5	5.0%	19.7%

Notes:

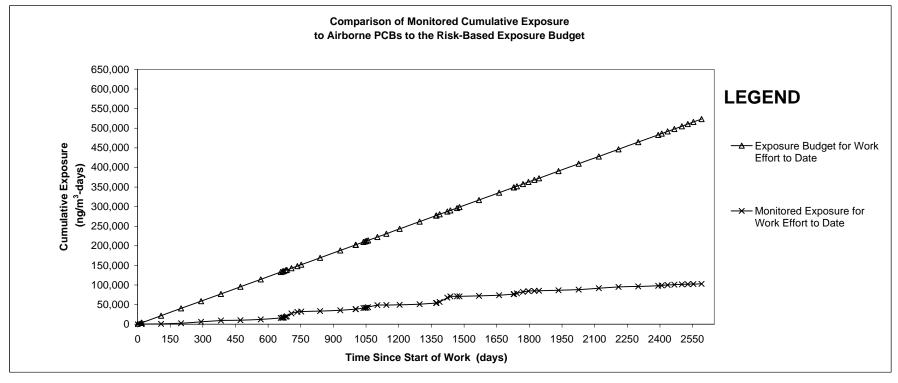
<sup>1</sup>EBS: Exposure Budget Slope = ng/m<sup>3</sup>-day

NC = not calculated

Shading represents actual sampling data. All other numbers represent projected PCB concentrations for that period.

Sample Station :	25 Cliftex
Collection Date:	12/16/2009
Measured PCB Concentration (ng/m <sup>3</sup> ):	0
Exposure Budget Expended During This Period:	5.0%
Cumulative Exposure Budget Expended to Date:	19.7%
Response Level:	No Triggers Identified
Response:	No Response Necessary

#### Triggers:



#### Notes:

a) 2004 dredge season, including pre- and post-dredging sampling events, were from 667 to 752 days since start of work (September 9 through December 3, 2004).

b) 2005 dredge season, including pre- and post-dredging sampling events, were from 1003 to 1143 days since start of work (August 11 through December 29, 2005).

c) 2006 dredge season, which did not include a pre-dredge sampling event, was from 1388 to 1468 days since start of work (August 16 through October 18, 2006).

d) 2007 dredge season, which did not include a pre-dredge sampling event, was from 1729 to 1823 days since start of work (August 7 through November 9, 2007).

e) 2008 dredge season, did not include any sampling events for this station. Background quarterly estimates were inputted for this station.

f) 2009 dredge season which did not include a pre-dredge sampling event, but did include a post-dredge sampling event was from 2393 to 2591 days since start of work (June 5 through

December 1, 2009).

# LOCATION 42 – NSTAR N

Station #:	<u>42 NSTAR N</u> Exposure Budget Slope (EBS) = 202 (ng/m <sup>3</sup> -day)
Collection Date:	<u>11/30/2008</u>
Construction Activity:	The hydraulic 2008 dredging activities were initiated on August 18, 2008 and demobilization activities were completed on October 21, 2008.

This report summarizes sample results for the above referenced location and date. The samples were collected on polyurethane foam (PUF)/XAD sample media with a glass fiber pre-filter using a BGI, PQ-1 Low-Volume sampler. The samples were analyzed using high-resolution mass spectrometry (HRGCMS) for total PCB homologue groups. Results are evaluated relative to the Exposure Budget Tracking Process described in the Development of PCB Air Action Levels for the Protection of the Public, New Bedford Harbor Superfund Site, August 2001. Cumulative data for this reporting period are included on pages 4 and 5.

#### Summary of This Sampling Period:

The results from the Foster Wheeler Baseline Ambient Air Sampling program (June 1999 through May 2000) were used to assign background concentrations for each air sampling location. For Station 42 NSTAR N, the quarterly average ambient air PCB concentrations were used as a background concentration, which represent the quarterly baseline averages from Station 23 - Achusnet Substation, for the period of June 1999 through May 2000. These background concentrations were used to project the PCB concentrations during the inactive field times from 11/12/02 through 9/8/04, for the period from 12/4/04 through 8/10/05, 12/28/05 through 8/15/07, and from 11/19/06 through 8/6/07 to close the recent inactive field season. In addition, to better simulate the 2007 dredging season, the ambient air concentrations from the August 21, 2007 sampling event were used as the concentrations detected at Station 42 NSTAR from August 7, 2007 (the start of dredging activities).

Coordinating the sampling date with the start of dredging better simulates the ambient air PCB concentrations present at Station 42 during the active dredging season. For the first month of the 2004 and 2005 seasons, the sampling was conducted on a weekly basis. However, since monthly sampling was conducted in 2006 and 2007, this new variation of the PETs curve was used for 2007. For the 2007 season, the PCB concentrations were projected to be at background levels at Station 42 NSTAR on October 13, 2007, which is the day after the 2007 dredging activities were completed. These changes in the background concentrations and associated active dredging concentrations better match the actual 2007 dredging activities. No triggers were identified, therefore, no action is necessary.

During the 2008 dredge season no samples were collected from this location. However, four rounds of quarterly background data were inputted to the Time Trend Sheet. No triggers were identified therefore, no action is necessary.

The 2009 dredging season began on June 5<sup>th</sup> in the northern portion of the Acushnet River. All dredging was done hydraulically until December 2<sup>nd</sup>. Due to low ambient concentrations of PCBs, no triggers were identified therefore, no action was required to control exposures.

Monitoring Station:		42 NSTAR N
Exposure Budget Slope:	[ng/m <sup>3</sup> -day]	202
Work Start Date:	[mm/dd/yyyy]	11/12/2002
Projected Work End Date:	[mm/dd/yyyy]	11/10/2028
Occupational Limit Used as Ceiling:	[ng/m <sup>3</sup> ]	500,000
TEL for Worker in Public:	[ng/m <sup>3</sup> ]	50,000
NTEL for Worker in Public:	[ng/m <sup>3</sup> ]	1,789
Minimum of TEL/NTEL:	[ng/m <sup>3</sup> ]	1,789
Baseline Average Concentration:	[ng/m <sup>3</sup> ]	23

(A) Event	(B) Sampling Date	(C) Days Since Previous Sampling Event	(D) Work Effort Elapsed Time	(E) Estimated Work Effort Remaning	(F) PCB Concentration Result	(G) Average of Most Recent Two Concentration Results	(H) Weighted Average of Concentration Results	(I) Exposure Budget for the Period	(J) Cumulative Exposure Budget for Work Effort to Date	(K) Measured Exposure During the Period	(L) Calculated Cumulative Exposure for Work Effort to Date	(M) Exposure Budget Expended During the Period	(N) Cumulative Exposure Expended for Work Effort to Date
[#]	[month/day/year]	[days]	Running Sum of Column (C) to Date [days]	[days]	[ng/m <sup>3</sup> ]	[ng/m <sup>3</sup> ]	<u>Column (L)/</u> <u>Column (D</u> ) [ng/m <sup>3</sup> ]	EBS <sup>1 *</sup> Column (C) [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (I</u> ) [ng/m <sup>3</sup> -days]	Column (G)* Column (C) [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (K</u> [ng/m <sup>3</sup> -days]	<u>Column (K)/</u> <u>Column (I</u> ) [%]	<u>Column (L)/</u> <u>Column (J</u> ) [%]
1	11/12/2002	0	0	9495	24	24.00	24.00	NC	NC	NC	NC	NC	NC
2	11/30/2002	18	18	9477	24	24.00	24.00	3636	3636	432.0	432.0	11.9%	11.9%
3	12/1/2002	1	19	9476	9.9	16.95	23.63	202	3838	17.0	449.0	8.4%	11.7%
4	2/28/2003	89	108	9387	9.9	9.90	12.32	17978	21816	881.1	1,330.1	4.9%	6.1%
5	5/31/2003	92	200	9295	29	19.45	15.60	18584	40400	1789.4	3,119.5	9.6%	7.7%
6	8/31/2003	92	292	9203	31	30.00	20.14	18584	58984	2760.0	5,879.5	14.9%	10.0%
7	11/30/2003	91	383	9112	24	27.50	21.88	18382	77366	2502.5	8,382.0	13.6%	10.8%
8	2/28/2004	90	473	9022	9.9	16.95	20.95	18180	95546	1525.5	9,907.5	8.4%	10.4%
9	5/31/2004	93	566	8929	29	19.45	20.70	18786	114332	1808.9	11,716.3	9.6%	10.2%
10	8/31/2004	92	658	8837	31	30.00	22.00	18584	132916	2760.0	14,476.3	14.9%	10.9%
11	11/4/2004	65	723	8772	24	27.50	22.49	13130	146046	1787.5	16,263.8	13.6%	11.1%
12	11/5/2004	1	724	8771	73	48.50	22.53	202	146248	48.5	16,312.3	24.0%	11.2%
13	12/3/2004	28	752	8743	40	56.50	23.80	5656	151904	1582.0	17,894.3	28.0%	11.8%
14	2/28/2005	87	839	8656	9.9	24.95	23.92	17574	169478	2170.7	20,065.0	12.4%	11.8%
15	5/31/2005	92	931	8564	29	19.45	23.47	18584	188062	1789.4	21,854.4	9.6%	11.6%
16	8/10/2005	71	1002	8493	31	30.00	23.94	14342	202404	2130.0	23,984.4	14.9%	11.8%
17	8/11/2005	1	1003	8492	25.9	28.45	23.94	202	202606	28.5	24,012.8	14.1%	11.9%
18 19	9/15/2005 9/23/2005	35 8	1038 1046	8457 8449	22.5 83.3	24.20 52.90	23.95 24.17	7070 1616	209676 211292	847.0 423.2	24,859.8 25,283.0	12.0% 26.2%	11.9% 12.0%
20	9/29/2005	6	1046	8449	5.28	52.90 44.29	24.17 24.29	1010	211292	423.2 265.7	25,283.0	26.2%	12.0%
20	9/29/2005	7	1052	8436	119	62.14	24.29	1212	212504	435.0	25,983.7	30.8%	12.0%
21	10/28/2005	22	1039	8414	32.3	75.65	25.58	4444	213918	1664.3	27,648.0	37.5%	12.7%
22	11/18/2005	22	1102	8393	64.1	48.20	26.01	4444 4242	222604	1004.3	28,660.2	23.9%	12.9%
24	12/29/2005	41	1143	8352	21.4	42.75	26.61	8282	230886	1752.8	30,413.0	21.2%	13.2%
25	2/28/2006	61	1204	8291	9.9	15.65	26.05	12322	243208	954.7	31,367.6	7.7%	12.9%
26	5/31/2006	92	1296	8199	29	19.45	25.58	18584	261792	1789.4	33,157.0	9.6%	12.7%
27	8/31/2006	92	1388	8107	31	30.00	25.88	18584	280376	2760.0	35,917.0	14.9%	12.8%
28	11/30/2006	91	1479	8016	24	27.50	25.98	18382	298758	2502.5	38,419.5	13.6%	12.9%
29	2/28/2007	90	1569	7926	9.9	16.95	25.46	18180	316938	1525.5	39,945.0	8.4%	12.6%
30	5/31/2007	92	1661	7834	29	19.45	25.13	18584	335522	1789.4	41,734.4	9.6%	12.4%
31	8/6/2007	67	1728	7767	31	30.00	25.32	13534	349056	2010.0	43,744.4	14.9%	12.5%
32	8/7/2007	1	1729	7766	19.2	25.10	25.31	202	349258	25.1	43,769.5	12.4%	12.5%
33	8/21/2007	14	1743	7752	19.2	19.20	25.27	2828	352086	268.8	44,038.3	9.5%	12.5%

(A) Event	(B) Sampling Date	(C) Days Since Previous Sampling Event	(D) Work Effort Elapsed Time	(E) Estimated Work Effort Remaning	(F) PCB Concentration Result	(G) Average of Most Recent Two Concentration Results	(H) Weighted Average of Concentration Results	(I) Exposure Budget for the Period	(J) Cumulative Exposure Budget for Work Effort to Date	(K) Measured Exposure During the Period	(L) Calculated Cumulative Exposure for Work Effort to Date	(M) Exposure Budget Expended During the Period	(N) Cumulative Exposure Expended for Work Effort to Date
[#]	[month/day/year]	[days]	Running Sum of Column (C) to Date [days]	[days]	[ng/m <sup>3</sup> ]	[ng/m <sup>3</sup> ]	<u>Column (L)/</u> <u>Column (D</u> ) [ng/m <sup>3</sup> ]	EBS <sup>1 *</sup> Column (C) [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (I</u> ) [ng/m <sup>3</sup> -days]	Column (G)* Column (C) [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (K</u> [ng/m <sup>3</sup> -days]	<u>Column (K)/</u> <u>Column (I</u> ) [%]	<u>Column (L)/</u> <u>Column (J</u> ) [%]
34	9/18/2007	28	1771	7724	16.3	17.75	25.15	5656	357742	497.0	44,535.3	8.8%	12.4%
35	10/13/2007	25	1796	7699	24	20.15	25.08	5050	362792	503.8	45,039.1	10.0%	12.4%
36	11/9/2007	27	1823	7672	15.7	19.85	25.00	5454	368246	536.0	45,575.0	9.8%	12.4%
37	11/30/2007	21	1844	7651	24	19.85	24.94	4242	372488	416.9	45,991.9	9.8%	12.3%
38	2/28/2008	90	1934	7561	9.9	16.95	24.57	18180	390668	1525.5	47,517.4	8.4%	12.2%
39	5/31/2008	92	2026	7469	29	19.45	24.34	18584	409252	1789.4	49,306.8	9.6%	12.0%
40	8/31/2008	92	2118	7377	31	30.00	24.58	18584	427836	2760.0	52,066.8	14.9%	12.2%
41	11/30/2008	91	2209	7286	24	27.50	24.70	18382	446218	2502.5	54,569.3	13.6%	12.2%
42	2/28/2009	90	2299	7196	29	26.50	24.77	18180	464398	2385.0	56,954.3	13.1%	12.3%
43	5/31/2009	92	2391	7104	31	30.00	24.97	18584	482982	2760.0	59,714.3	14.9%	12.4%
44	6/16/2009	16	2407	7088	10.2	20.60	24.95	3232	486214	329.6	60,043.9	10.2%	12.3%
45	7/13/2009	27	2434	7061	38.5	24.35	24.94	5454	491668	657.5	60,701.3	12.1%	12.3%
46	8/13/2009	31	2465	7030	13.6	26.05	24.95	6262	497930	807.6	61,508.9	12.9%	12.4%
47	9/17/2009	35	2500	6995	2.19	7.90	24.71	7070	505000	276.3	61,785.2	3.9%	12.2%
48	10/14/2009	27	2527	6968	17.9	10.05	24.56	5454	510454	271.2	62,056.4	5.0%	12.2%
49	11/9/2009	26	2553	6942	25.3	21.60	24.53	5252	515706	561.6	62,618.0	10.7%	12.1%
50	12/16/2009	37	2590	6905	23.8	24.55	24.53	7474	523180	908.4	63,526.4	12.2%	12.1%

Notes:

1EBS: Exposure Budget Slope = ng/m3-day NC = not calculated

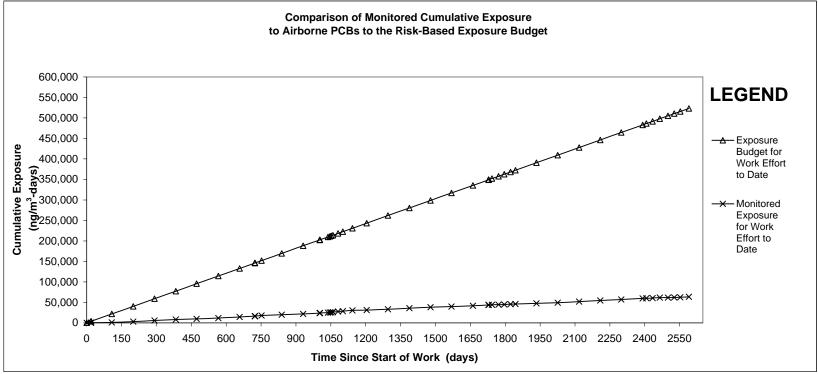
Shading represents actual sampling data. All other numbers represent projected PCB concentrations for that period.

### Air Sampling Status

New Bedford Harbor Superfund Site

Sample Station :	42 NSTAR N
Collection Date:	12/16/2009
Measured PCB Concentration (ng/m <sup>3</sup> ):	23.8
Exposure Budget Expended During This Period:	12.2%
Cumulative Exposure Budget Expended to Date:	12.1%
Response Level:	No Triggers Identified
Response:	No Response Necessary





Notes:

a) 2004 dredge season, including pre- and post-dredging sampling events, were from 667 to 752 days since start of work (September 9 through December 3, 2004).
b) 2005 dredge season, including pre- and post-dredging sampling events, were from 1003 to 1143 days since start of work (August 11 through December 29, 2005).
c) 2006 dredge season, which did not include a pre-dredge sampling event, was from 1388 to 1468 days since start of work (August 16 through October 18, 2006).
d) 2007 dredge season, which did not include a pre-dredge sampling event, was from 1729 to 1823 days since start of work (August 7 through November 9, 2007).
e) 2008 dredge season, did not include any sampling event; quarterly average background data was inputted for this season.

f) 2009 dredge season which did not include a pre-dredge sampling event, but did include a post-dredge sampling event was from 2393 to 2591 days since start of

work (June 5 through December 1, 2009).

# **LOCATION 46 – COFFIN AVENUE**

New Bedford Harbor Superfund Site

- Station #:
   46 Coffin Avenue Exposure Budget Slope (EBS) = 202 nanograms per cubic meter per day (ng/m³-day)

   Collection Date:
   11/30/2008
- **Construction Activity:** The 2008 dredging activities were initiated on August 18, 2008 and demobilization activities were completed on October 21, 2008.

This report summarizes sample results for the above referenced location and date. The samples were collected on polyurethane foam (PUF)/XAD sample media with a glass fiber pre-filter using a BGI, PQ-1 Low-Volume sampler. The samples were analyzed using high-resolution mass spectrometry (HRGCMS) for total PCB homologue groups. Results are evaluated relative to the Exposure Budget Tracking Process described in the Development of PCB Air Action Levels for the Protection of the Public, New Bedford Harbor Superfund Site, August 2001. Cumulative data for this reporting period are included on pages 3 and 4.

#### Summary of This Sampling Period:

The results from the Foster Wheeler Baseline Ambient Air Sampling program (June 1999 through May 2000) were used to assign background concentrations for each air sampling location. For Station 46 Coffin Ave., the quarterly ambient air PCB concentrations were used for background concentrations. These values represent the quarterly baseline averages from Stations 21 and 25 - Cliftex, for the period of June 1999 through May 2000. These background concentrations were used to project the PCB concentrations for the inactive field times from 11/12/02 through 9/8/04, for the period from 12/4/04 through 8/10/05, from 12/28/05 through 8/15/06, and from 11/19/06 through 8/6/07 to close the inactive field season. In addition, to better simulate the 2006 dredging season, the ambient air concentrations from the August 31, 2006 sampling event were used as the concentrations detected at Station 46 Coffin Ave from August 16, 2006 (the start of dredging activities). To better simulate the 2007 dredging season, the ambient air concentrations detected at Station 46 Coffin Avenue from August 7, 2007 (the concentrations at Station 46 Coffin Avenue during the active dredging season. For the first month of the 2004 and 2005 seasons, the sampling was conc conducted in 2006, and the first 2006 sampling even was conducted two weeks after the start of dredging, this new variation of the PETs curve was used. Also, the PCB concentrations were projected to be at background levels at Station 46 Coffin Avenue on October 19, 2006, which is the day after th after the 2007 dredging activities were completed. These changes in the background concentrations and associated active dredging concentrations better match the actual 2006 and 2007 dredging activities. No triggers were identified, therefore, no action is required.

The 2008 season began with mechanical dredging (excavation) of the Aerovox shoreline on June 2, 2008, which was completed on July 22, 2008. Station 46 was not sampled during the Aerovox activities as it is upwind of the work area with the summertime prevailing wind. Hydraulic dredging occurred in the Pierce Mill Cove are starting on August 18, 2008. No triggers were identified therefore, no action is required.

The 2009 dredging season began on June 5<sup>th</sup> in the northern portion of the Acushnet River. All dredging was done hydraulically until December 2<sup>nd</sup>. Due to low ambient concentrations of PCBs, no triggers were identified therefore, no action was required to control exposures.

Monitoring Station:		46 Coffin Ave
Exposure Budget Slope:	[ng/m <sup>3</sup> -day]	202
Work Start Date:	[mm/dd/yyyy]	11/12/2002
Projected Work End Date (Per EPA):	[mm/dd/yyyy]	11/10/2028
Occupational Limit Used as Ceiling:	[ng/m <sup>3</sup> ]	500,000
TEL for Worker in Public:	[ng/m <sup>3</sup> ]	50,000
NTEL for Worker in Public:	[ng/m <sup>3</sup> ]	1,789
Minimum of TEL/NTEL:	[ng/m <sup>3</sup> ]	1,789
Baseline Average Concentration:	[ng/m <sup>3</sup> ]	26.1

Notes:

TEL = Threshold Effects Exposure Limit

NTEL = Non-Threshold Effects Exposure Limit

The EPA periodically assesses this Projected Work End Date, which is subject to change.

Event \$	(B) Sampling Date	Days Since Previous Sampling Event	(D) Work Effort Elapsed Time	(E) Estimated Work Effort Remaning	PCB Concentration Result	(G) Average of Most Recent Two Concentration Results	(H) Weighted Average of Concentration Results	(I) Exposure Budget for the Period	(J) Cumulative Exposure Budget for Work Effort to Date	(K) Measured Exposure During the Period	(L) Calculated Cumulative Exposure for Work Effort to Date	(M) Exposure Budget Expended During the Period	(N) Cumulative Exposure Expended for Work Effort to Date
[#] [r	[month/day/year]	[days]	Running Sum of Column (C) to Date [days]	[days]	[ng/m³]	[ng/m <sup>3</sup> ]	<u>Column (L)</u> /Column (D) [ng/m <sup>3</sup> ]	EBS <sup>1</sup> * Column (C) [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (I</u> ) [ng/m <sup>3</sup> -days]	Column (G)* Column (C) [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (K</u> ) [ng/m <sup>3</sup> -days]	<u>Column (K)/</u> Column (I) [%]	<u>Column (L)/</u> <u>Column (J</u> ) [%]
1	11/12/2002	0	0	9495	22	22.00	22.00	NC	NC	NC	NC	NC	NC
2	11/30/2002	18	18	9477	22	22.00	22.00	3636	3636	396.0	396.0	10.9%	10.9%
3	12/1/2002	1	19	9476	3.2	12.60	21.51	202	3838	12.6	408.6	6.2%	10.6%
4	2/28/2003	89	108	9387	3.2	3.20	6.42	17978	21816	284.8	693.4	1.6%	3.2%
5 6	5/31/2003 8/31/2003	92 92	200 292	9295 9203	35	19.10 40.50	12.25 21.15	18584 18584	40400 58984	1757.2 3726.0	2,450.6 6,176.6	9.5% 20.0%	6.1% 10.5%
6	11/30/2003	92 91	383	9203 9112	46 22	34.00	24.21	18584	58984 77366	3726.0	9,270.6	20.0%	12.0%
8	2/28/2004	90	473	9112	3.2	12.60	24.21	18180	95546	1134.0	9,270.6	6.2%	12.0%
9	5/31/2004	93	566	8929	35	19.10	21.52	18786	114332	1776.3	12,180.9	9.5%	10.7%
10	8/31/2004	92	658	8837	46	40.50	24.17	18584	132916	3726.0	15,906.9	20.0%	12.0%
11	9/8/2004	8	666	8829	22	34.00	24.29	1616	134532	272.0	16,178.9	16.8%	12.0%
12	9/9/2004	1	667	8828	145	83.50	24.38	202	134734	83.5	16,262.4	41.3%	12.1%
13	9/14/2004	5	672	8823	48	96.50	24.92	1010	135744	482.5	16,744.9	47.8%	12.3%
14	9/23/2004	9	681	8814	5	26.50	24.94	1818	137562	238.5	16,983.4	13.1%	12.3%
15	9/28/2004	5	686	8809	342	173.50	26.02	1010	138572	867.5	17,850.9	85.9%	12.9%
16	10/19/2004	21	707	8788	36	189.00	30.86	4242	142814	3969.0	21,819.9	93.6%	15.3%
17	11/5/2004	17	724	8771	80	58.00	31.50	3434	146248	986.0	22,805.9	28.7%	15.6%
18	12/3/2004	28	752	8743	15	47.50	32.10	5656	151904	1330.0	24,135.9	23.5%	15.9%
19	2/28/2005	87	839	8656	3.2	9.10	29.71	17574	169478	791.7	24,927.6	4.5%	14.7%
20 21	5/31/2005 8/10/2005	92 71	931 1002	8564 8493	35 46	19.10 40.50	28.66 29.50	18584 14342	188062 202404	1757.2 2875.5	26,684.8 29,560.3	9.5% 20.0%	14.2% 14.6%
21	8/11/2005	1	1002	8493	37.2	40.50	29.50	202	202404 202606	41.6	29,560.3	20.0%	14.6%
23	9/15/2005	35	1003	8457	99.8	68.50	30.83	7070	202000	2397.5	31.999.4	33.9%	15.3%
24	9/23/2005	8	1046	8449	115	107.40	31.41	1616	211292	859.2	32,858.6	53.2%	15.6%
25	9/29/2005	6	1052	8443	124	119.50	31.92	1212	212504	717.0	33,575.6	59.2%	15.8%
26	10/6/2005	7	1059	8436	130	127.00	32.54	1414	213918	889.0	34,464.6	62.9%	16.1%
27	10/28/2005	22	1081	8414	2.06	66.03	33.23	4444	218362	1452.7	35,917.3	32.7%	16.4%
28	11/18/2005	21	1102	8393	0.14	1.10	32.61	4242	222604	23.1	35,940.4	0.5%	16.1%
29	12/29/2005	41	1143	8352	65.1	32.62	32.61	8282	230886	1337.4	37,277.8	16.1%	16.1%
30	2/28/2006	61	1204	8291	3.2	34.15	32.69	12322	243208	2083.2	39,360.9	16.9%	16.2%
31	5/31/2006	92	1296	8199	35	19.10	31.73	18584	261792	1757.2	41,118.1	9.5%	15.7%
32	8/15/2006	76	1372	8123	46	40.50	32.21	15352	277144	3078.0	44,196.1	20.0%	15.9%
33	8/16/2006	1	1373	8122	70.4	58.20	32.23	202	277346	58.2	44,254.3	28.8%	16.0%
34 35	8/31/2006	15	1388	8107	70.4 108	70.40	32.64	3030	280376	1056.0	45,310.3	34.9%	16.2%
35	10/5/2006 10/19/2006	35 14	1423 1437	8072 8058	4.05	89.20 56.03	34.04 34.25	7070 2828	287446 290274	3122.0 784.4	48,432.3 49,216.7	44.2% 27.7%	16.8% 17.0%
30	11/19/2006	31	1437	8038	4.05	4.05	33.61	6262	290274	125.6	49,216.7 49,342.2	21.1%	16.6%

(A) Event	(B) Sampling Date	(C) Days Since Previous Sampling Event	(D) Work Effort Elapsed Time	(E) Estimated Work Effort Remaning	(F) PCB Concentration Result	(G) Average of Most Recent Two Concentration Results	(H) Weighted Average of Concentration Results	(I) Exposure Budget for the Period	(J) Cumulative Exposure Budget for Work Effort to Date	(K) Measured Exposure During the Period	(L) Calculated Cumulative Exposure for Work Effort to Date	(M) Exposure Budget Expended During the Period	(N) Cumulative Exposure Expended for Work Effort to Date
[#]	[month/day/year]	[days]	Running Sum of Column (C) to Date [days]	[days]	[ng/m³]	[ng/m³]	<u>Column (L)</u> /Column (D) [ng/m <sup>3</sup> ]	EBS <sup>1 *</sup> Column (C) [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (I</u> ) [ng/m <sup>3</sup> -days]	Column (G)* Column (C) [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (K</u> ) [ng/m³-days]	<u>Column (K)/</u> <u>Column (I</u> ) [%]	<u>Column (L)/</u> <u>Column (J</u> ) [%]
38	11/30/2006	11	1479	8016	22	13.03	33.46	2222	298758	143.3	49,485.5	6.4%	16.6%
39	2/28/2007	90	1569	7926	3.2	12.60	32.26	18180	316938	1134.0	50,619.5	6.2%	16.0%
40	5/31/2007	92	1661	7834	35	19.10	31.53	18584	335522	1757.2	52,376.7	9.5%	15.6%
41	8/6/2007	67	1728	7767	46	40.50	31.88	13534	349056	2713.5	55,090.2	20.0%	15.8%
42	8/7/2007	1	1729	7766	36.1	41.05	31.89	202	349258	41.1	55,131.3	20.3%	15.8%
43	8/21/2007	14	1743	7752	36.1	36.10	31.92	2828	352086	505.4	55,636.7	17.9%	15.8%
44	9/18/2007	28	1771	7724	21.4	28.75	31.87	5656	357742	805.0	56,441.7	14.2%	15.8%
45	10/13/2007	25	1796	7699	22	21.70	31.73	5050	362792	542.5	56,984.2	10.7%	15.7%
46	11/9/2007	27	1823	7672	1.86	11.93	31.44	5454	368246	322.1	57,306.3	5.9%	15.6%
47	11/30/2007	21	1844	7651	22	11.93	31.21	4242	372488	250.5	57,556.8	5.9%	15.5%
48	2/28/2008	90	1934	7561	32	27.00	31.02	18180	390668	2430.0	59,986.8	13.4%	15.4%
49	5/31/2008	93	2027	7468	76	54.00	32.07	18786	409454	5022.0	65,008.8	26.7%	15.9%
50	8/18/2008	79	2106	7389	121.9	98.95	34.58	15958	425412	7817.1	72,825.8	49.0%	17.1%
51	8/21/2008	3	2109	7386	121.9	121.90	34.70	606	426018	365.7	73,191.5	60.3%	17.2%
52	10/7/2008	47	2156	7339	5.2	63.55	35.33	9494	435512	2986.9	76,178.4	31.5%	17.5%
53	11/10/2008	34	2190	7305	1.3	3.25	34.84	6868	442380	110.5	76,288.9	1.6%	17.2%
54	11/30/2008	20	2210	7285	22	11.65	34.63	4040	446420	233.0	76,521.9	5.8%	17.1%
55	2/28/2009	90	2300	7195	32	27.00	34.33	18180	464600	2430.0	78,951.9	13.4%	17.0%
56	5/31/2009	92	2392	7103	76	54.00	35.08	18584	483184	4968.0	83,919.9	26.7%	17.4%
57	6/16/2009	16	2408	7087	34.6	55.30	35.22	3232	486416	884.8	84,804.7	27.4%	17.4%
58	7/13/2009	27	2435	7060	36.4	35.50	35.22	5454	491870	958.5	85,763.2	17.6%	17.4%
59	8/13/2009	31	2466	7029	14.1	25.25	35.10	6262	498132	782.8	86,545.9	12.5%	17.4%
60	9/17/2009	35	2501	6994	12.9	13.50	34.79	7070	505202	472.5	87,018.4	6.7%	17.2%
61	10/14/2009	27	2528	6967	6.07	9.49	34.52	5454	510656	256.1	87,274.5	4.7%	17.1%
62	11/9/2009	26	2554	6941	32.8	19.44	34.37	5252	515908	505.3	87,779.9	9.6%	17.0%
63	12/16/2009	37	2591	6904	0	16.40	34.11	7474	523382	606.8	88,386.7	8.1%	16.9%

Notes:

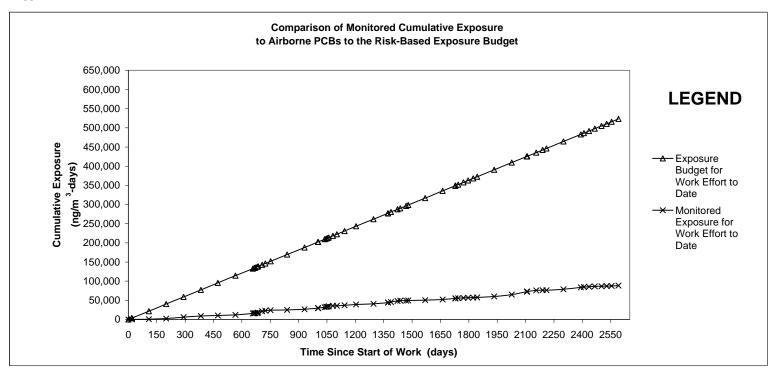
1EBS: Exposure Budget Slope = ng/m3-day NC = not calculated

Shading represents actual sampling data. All other numbers represent projected PCB concentrations for that period.

New Bedford Harbor Superfund Site

Sample Station :	46 Coffin Ave
Collection Date:	12/16/2009
Measured PCB Concentration (ng/m <sup>3</sup> ):	0
Exposure Budget Expended During This Period:	8.1%
Cumulative Exposure Budget Expended to Date:	16.9%
Response Level:	No Triggers Identified
Response:	No Response Necessary

Triggers:



#### Notes:

a) 2004 dredge season, including pre- and post-dredging sampling events, was from 667 to 752 days since start of work (September 9 through December 3, 2004).
b) 2005 dredge season, including pre- and post-dredging sampling events, was from 1003 to 1143 days since start of work (August 11 through December 29, 2005).
c) 2006 dredge season, which did not include a pre-dredge sampling event, was from 1388 to 1468 days since start of work (August 16 through October 18, 2006).
d) 2007 dredge season, which did not include a pre-dredge sampling event, was from 1729 to 1823 days since start of work (August 7 through November 9, 2007).
e) 2008 dredge season, which did not include a pre-dredge sampling event, was from 2106 to 2210 days since start of work (June 1 through November 5, 2008).
f) 2009 dredge season which did not include a pre-dredge sampling event, but did include a post-dredge sampling event was from 2393 to 2591 days since start of

work (June 5 through December 1, 2009).

# LOCATION 49 – AREA C DOWNWIND

# Station #:49 Area C DownwindExposure Budget Slope (EBS) = 202 nanograms per cubic meter per day (ng/m <sup>3</sup>-day)

Collection Date: <u>12/16/2009</u>

**Construction Activity:** The 2008 dredging activities were initiated on August 18, 2008 and demobilization activities were completed on October 21, 2008.

This report summarizes sample results for the above referenced location and date. The samples were collected on polyurethane foam (PUF)/XAD sample media with a glass fiber pre-filter using a BGI, PQ-1 Low-Volume sampler. The samples were analyzed using high-resolution mass spectrometry (HRGCMS) for total PCB homologue groups. Results are evaluated relative to the Exposure Budget Tracking Process described in the Development of PCB Air Action Levels for the Protection of the Public, New Bedford Harbor Superfund Site, August 2001. Cumulative data for this reporting period are included on pages 4 and 5.

The results from the Foster Wheeler Baseline Ambient Air Sampling program (June 1999 through May 2000) were used to assign background concentrations for each air sampling location. For Station 49 Area C Downwind, the quarterly average ambient air PCB concentrations were used for background. These represent the average quarterly baseline averages from Station 26 - Sawyer Street, for the period of June 1999 through May 2000. These background concentrations were used for the inactive field times from 11/12/02 through 9/8/04, for the period from 12/4/04 through 8/10/05, from 12/28/05 through 8/15/06, and from 11/19/06 through 8/6/07 to close the recent inactive field season. For the December 2005 sampling event, based on wind direction for that day, the results from Station 47 were used to represent Area C downgradient air PCB concentrations. In 2006 and 2007, during each sampling event, ambient air data was collected from only one air sampling station at Area C. The location was selected based upon the predicted wind direction for that sampling event and was placed along the downwind portion of Area C.

Please refer to Table F-1 for the Area C stations used during the 2006 and 2007 sampling events. For the first month of the 2004 and 2005 seasons, the sampling was conducted on a weekly basis. However, since 2006, the active field season sampling has been conducted on a monthly basis. In addition, since the 2006 and 2007 first sampling events were conducted about two weeks after the start of dredging, a new variation of the PETs curve was used. To better simulate the 2006 dredging season, the sambient air concentrations from the August 31, 2006 sampling event were used as the concentrations detected at Station 47 from August 16, 2006 (start of dredging activities). For the 2007 dredge season, the August 21, 2007 sampling event was used as the concentrations detected downwind at Area C from August 7, 2007 (the start of dredging activities). Also, the background concentrations were used as the PCB concentration at Area C on October 19, 2006, which is the day after the 2006 dredging activities were completed.

For the 2007 season, the concentrations were projected to be at background levels at Area C from October 13, 2007 (the day after dredging activities were completed). Coordinating the sampling date with the start of dredging better simulates the ambient air PCB concentrations at Area C during active dredging season. No triggers were identified, therefore, no action is necessary.

The 2008 season began with mechanical dredging (excavation) of the shoreline on June 1, 2008, which ended on July 22, 2008. Hydraulic dredging occurred in the Pierce Mill Cove area starting on August 18, 2008, ending November 5, 2008. No triggers were identified therefore, no action is necessary.

The 2009 dredging season began on June 5<sup>th</sup> in the northern portion of the Acushnet River. All dredging was done hydraulically until December 2<sup>nd</sup>. On 6/16/2009, Station 49 was not sampled but Station 51 was, due to the wind direction of the day. Station 51 still represents the down wind location for the desanding operation. Therefore, sample result of 32ng/m<sup>3</sup> was input for this location. Due to low ambient concentrations of PCBs, no triggers were identified therefore, no action was required to control exposures.

Monitoring Station:		49 Area C Downwind
Exposure Budget Slope:	[ng/m <sup>3</sup> -day]	202
Work Start Date:	[mm/dd/yyyy]	11/12/2002
Projected Work End Date (Per EPA):	[mm/dd/yyyy]	11/10/2028
Occupational Limit Used as Ceiling:	[ng/m <sup>3</sup> ]	500,000
TEL for Worker in Public:	[ng/m <sup>3</sup> ]	50,000
NTEL for Worker in Public:	[ng/m <sup>3</sup> ]	1,789
Minimum of TEL/NTEL:	[ng/m <sup>3</sup> ]	1,789
Baseline Average Concentration:	[ng/m <sup>3</sup> ]	56

Notes:

TEL = Threshold Effects Exposure Limit

NTEL = Non-Threshold Effects Exposure Limit

The EPA periodically assesses this Projected Work End Date, which is subject to change.

(A) Event	(B) Sampling Date	(C) Days Since Previous Sampling Event	(D) Work Effort Elapsed Time	(E) Estimated Work Effort Remaning	(F) PCB Concentration Result	(G) Average of Most Recent Two Concentration Results	(H) Weighted Average of Concentration Results	(I) Exposure Budget for the Period	(J) Cumulative Exposure Budget for Work Effort to Date	(K) Measured Exposure During the Period	(L) Calculated Cumulative Exposure for Work Effort to Date	(M) Exposure Budget Expended During the Period	(N) Cumulative Exposure Expended for Work Effort to Date
[#]	[month/day/year]	[days]	<u>Running Sum</u> of Column (C) to Date [days]	[days]	[ng/m³]	[ng/m³]	<u>Column (L)/</u> <u>Column (D</u> ) [ng/m <sup>3</sup> ]	EBS <sup>1 *</sup> Column (C) [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (I</u> ) [ng/m <sup>3</sup> -days]	<u>Column (G)*</u> <u>Column (C)</u> [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (K</u> ) [ng/m <sup>3</sup> -days]	<u>Column</u> (K)/ Column (I) [%]	<u>Column (L)/</u> <u>Column (J</u> ) [%]
1	11/12/2002	0	0	9495	43	43.00	43.00	NC	NC	NC	NC	NC	NC
2	11/30/2002	18	18	9477	43	43.00	43.00	3636	3636	774.0	774.0	21.3%	21.3%
3	12/1/2002	1	19	9476	89	66.00	44.21	202	3838	66.0	840.0	32.7%	21.9%
4	2/28/2003	89	108	9387	89	89.00	81.12	17978	21816	7921.0	8,761.0	44.1%	40.2%
5	5/31/2003	92	200	9295	61	75.00	78.31	18584	40400	6900.0	15,661.0	37.1%	38.8%
6	8/31/2003	92	292	9203	33	47.00	68.44	18584	58984	4324.0	19,985.0	23.3%	33.9%
7	11/30/2003	91	383	9112	43	38.00	61.21	18382	77366	3458.0	23,443.0	18.8%	30.3%
8	2/28/2004	90	473	9022	89	66.00	62.12	18180	95546	5940.0	29,383.0	32.7%	30.8%
9	5/31/2004	93	566	8929	61	75.00	64.24	18786	114332	6975.0	36,358.0	37.1%	31.8%
10	8/31/2004	92	658	8837	33	47.00	61.83	18584	132916	4324.0	40,682.0	23.3%	30.6%
11	9/8/2004	8	666	8829	43	38.00	61.54	1616	134532	304.0	40,986.0	18.8%	30.5%
12	9/9/2004	1	667	8828	56	49.50	61.52	202	134734	49.5	41,035.5	24.5%	30.5%
13	9/14/2004	5	672	8823	86	71.00	61.59	1010	135744	355.0	41,390.5	35.1%	30.5%
14	9/23/2004	9	681	8814	17	51.50	61.46	1818	137562	463.5	41,854.0	25.5%	30.4%
15	9/28/2004	5	686	8809	207	112.00	61.83	1010	138572	560.0	42,414.0	55.4%	30.6%
16	10/19/2004	21	707	8788	66	136.50	64.05	4242	142814	2866.5	45,280.5	67.6%	31.7%
17	11/5/2004	17	724	8771	28	47.00	63.65	3434	146248	799.0	46,079.5	23.3%	31.5%
18	12/3/2004	28	752	8743	26	27.00	62.28	5656	151904	756.0	46,835.5	13.4%	30.8%
19	2/28/2005	87	839	8656	89	57.50	61.79	17574	169478	5002.5	51,838.0	28.5%	30.6%
20	5/31/2005	92	931	8564	61	75.00	63.09	18584	188062	6900.0	58,738.0	37.1%	31.2%
21	8/10/2005	71	1002	8493	33	47.00	61.95	14342	202404	3337.0	62,075.0	23.3%	30.7%
22	8/11/2005	1	1003	8492	29.3	31.15	61.92	202	202606	31.2	62,106.2	15.4%	30.7%
23	9/15/2005	35	1038	8457	83.6	56.45	61.74	7070	209676	1975.8	64,081.9	27.9%	30.6%
24	9/23/2005	8	1046	8449	97	90.30	61.95	1616	211292	722.4	64,804.3	44.7%	30.7%
25	9/29/2005	6	1052	8443	44.2	70.60	62.00	1212	212504	423.6	65,227.9	35.0%	30.7%
26	10/6/2005	7	1059	8436	114	79.10	62.12	1414	213918	553.7	65,781.6	39.2%	30.8%
27	10/28/2005	22	1081	8414	12.3	63.15	62.14	4444	218362	1389.3	67,170.9	31.3%	30.8%
28	11/18/2005	21	1102	8393	3.71	8.01	61.11	4242	222604	168.1	67,339.0	4.0%	30.3%
29	12/29/2005	41	1143	8352	7.42	5.57	59.11	8282	230886	228.2	67,567.2	2.8%	29.3%
30	2/28/2006	61	1204	8291	89	48.21	58.56	12322	243208	2940.8	70,508.0	23.9%	29.0%
31	5/31/2006	92	1296	8199	61	75.00	59.73	18584	261792	6900.0	77,408.0	37.1%	29.6%
32	8/15/2006	76	1372	8123	31	46.00	58.97	15352	277144	3496.0	80,904.0	22.8%	29.2%
33	8/16/2006	1	1373	8122	39.2	35.10	58.95	202	277346	35.1	80,939.1	17.4%	29.2%
34	8/31/2006	15	1388	8107	39.2	39.20	58.74	3030	280376	588.0	81,527.1	19.4%	29.1%
35	10/5/2006	35	1423	8072	157	98.10	59.71	7070	287446	3433.5	84,960.6	48.6%	29.6%
36	10/19/2006	14	1437	8058	81.4	119.20	60.28	2828	290274	1668.8	86,629.4	59.0%	29.8%
37	11/19/2006	31	1468	8027	81.4	81.40	60.73	6262	296536	2523.4	89,152.8	40.3%	30.1%

(A) Event	(B) Sampling Date	(C) Days Since Previous Sampling Event	(D) Work Effort Elapsed Time	(E) Estimated Work Effort Remaning	(F) PCB Concentration Result	(G) Average of Most Recent Two Concentration Results	(H) Weighted Average of Concentration Results	(I) Exposure Budget for the Period	(J) Cumulative Exposure Budget for Work Effort to Date	(K) Measured Exposure During the Period	(L) Calculated Cumulative Exposure for Work Effort to Date	(M) Exposure Budget Expended During the Period	(N) Cumulative Exposure Expended for Work Effort to Date
[#]	[month/day/year]	[days]	<u>Running Sum</u> of Column (C) to Date [days]	[days]	[ng/m³]	[ng/m³]	<u>Column (L)/</u> <u>Column (D</u> ) [ng/m <sup>3</sup> ]	EBS <sup>1 *</sup> Column (C) [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (I</u> ) [ng/m <sup>3</sup> -days]	<u>Column (G)*</u> Column (C) [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (K</u> ) [ng/m <sup>3</sup> -days]	<u>Column</u> (K)/ Column (I) [%]	<u>Column (L)/</u> <u>Column (J</u> ) [%]
38	11/30/2006	11	1479	8016	43	62.20	60.74	2222	298758	684.2	89,837.0	30.8%	30.1%
39	2/28/2007	90	1569	7926	89	66.00	61.04	18180	316938	5940.0	95,777.0	32.7%	30.2%
40	5/31/2007	92	1661	7834	61	75.00	61.82	18584	335522	6900.0	102,677.0	37.1%	30.6%
41	8/6/2007	67	1728	7767	31	46.00	61.20	13534	349056	3082.0	105,759.0	22.8%	30.3%
42	8/7/2007	1	1729	7766	46.9	38.95	61.19	202	349258	39.0	105,797.9	19.3%	30.3%
43	9/18/2007	42	1771	7724	57.1	52.00	60.97	8484	357742	2184.0	107,981.9	25.7%	30.2%
44	10/13/2007	25	1796	7699	43	50.05	60.82	5050	362792	1251.3	109,233.2	24.8%	30.1%
45	11/9/2007	27	1823	7672	9.29	26.15	60.31	5454	368246	705.9	109,939.1	12.9%	29.9%
46	11/30/2007	21	1844	7651	43	26.15	59.92	4242	372488	549.0	110,488.1	12.9%	29.7%
47	2/28/2008	90	1934	7561	89	66.00	60.20	18180	390668	5940.0	116,428.1	32.7%	29.8%
48	5/31/2008	93	2027	7468	61	75.00	60.88	18786	409454	6975.0	123,403.1	37.1%	30.1%
49	8/18/2008	79	2106	7389	123.4	92.20	62.05	15958	425412	7283.8	130,686.9	45.6%	30.7%
50	8/21/2008	3	2109	7386	116.4	119.90	62.14	606	426018	359.7	131,046.6	59.4%	30.8%
51 52	9/24/2008 11/10/2008	34 47	2143 2190	7352 7305	42 6.2	79.20 24.10	62.41 61.59	6868 9494	432886 442380	2692.8 1132.7	133,739.4 134,872.1	39.2% 11.9%	30.9% 30.5%
52 53	2/28/2009	47	2190	7305	<u>6.2</u> 89	47.60	60.92	22220	442380	5236.0	134,872.1	23.6%	30.5%
53	5/31/2009	92	2300	7195	61	75.00	61.46	18584	483184	6900.0	140,108.1	37.1%	30.2%
54 55	6/16/2009	92	2392	7087	31.8	46.40	61.36	3232	486416	742.4	147,008.1	23.0%	30.4%
56	7/13/2009	27	2400	7060	76.5	54.15	61.28	5454	491870	1462.1	149,212.6	26.8%	30.3%
57	8/13/2009	31	2466	7000	31.5	54.00	61.19	6262	498132	1674.0	150,886.6	26.7%	30.3%
58	9/17/2009	35	2501	6994	35.3	33.40	60.80	7070	505202	1169.0	152,055.6	16.5%	30.1%
59	10/14/2009	27	2528	6967	13.3	24.30	60.41	5454	510656	656.1	152,711.7	12.0%	29.9%
60	11/9/2009	26	2554	6941	51.8	32.55	60.12	5252	515908	846.3	153,558.0	16.1%	29.8%
61	12/16/2009	37	2591	6904	1.25	26.53	59.64	7474	523382	981.4	154,539.4	13.1%	29.5%

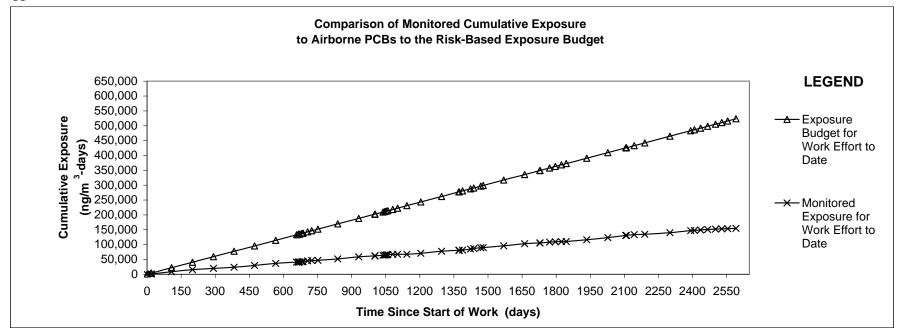
Notes:

<sup>1</sup>EBS: Exposure Budget Slope = ng/m<sup>3</sup>-day NC = not calculated

Shading represents actual sampling data. All other numbers represent projected PCB concentrations for that period.

Sample Station :	49 Area C Downwind
Collection Date:	12/16/2009
Measured PCB Concentration (ng/m <sup>3</sup> ):	1.25
Exposure Budget Expended During This Period:	13.1%
Cumulative Exposure Budget Expended to Date:	29.5%
Response Level:	No Triggers Identified
Response:	No Response Necessary

#### Triggers:



### Notes:

a) 2004 dredge season, including pre- and post-dredging sampling events, were from 667 to 752 days since start of work (September 9 through December 3, 2004).
b) 2005 dredge season, including pre- and post-dredging sampling events, were from 1003 to 1143 days since start of work (August 11 through December 29, 2005).
c) 2006 dredge season, which did not include a pre-dredge sampling event, was from 1388 to 1468 days since start of work (August 16 through October 18, 2006).
d) 2007 dredge season, which did not include a pre-dredge sampling event, was from 1729 to 1823 days since start of work (August 7 through November 9, 2007).
e) 2008 dredge season, which did not include a pre-dredge sampling event was from 2106 to 2109 days since start of work (August 18 through November 5, 2008).
f) 2009 dredge season, which did not include a pre-dredge sampling event, but did include a post-dredge sampling event was from 2393 to 2591 days since start of

work (June 5 through December 1, 2009).

## LOCATION 50 – AREA D DOWNWIND

New Bedford Harbor Superfund Site

Station #:	<u>50 Area D Downwind</u> Exposure Budget Slope (EBS) = 344 nanograms per cubic meter per day (ng/m <sup>3</sup> -day)
Collection Date:	<u>12/16/2009</u>
Construction Activity:	The 2008 dredging activities were initiated on August 18, 2007 and demobilization activities were completed on October 21, 2008.

This report summarizes sample results for the above referenced location and date. The samples were collected on polyurethane foam (PUF)/XAD sample media with a glass fiber pre-filter using a BGI, PQ-1 Low-Volume sampler. The samples were analyzed using high-resolution mass spectrometry (HRGCMS) for total PCB homologue groups. Results are evaluated relative to the Exposure Budget Tracking Process described in the Development of PCB Air Action Levels for the Protection of the Public, New Bedford Harbor Superfund Site, August 2001. Cumulative data for this reporting period are included on pages 4 and 5.

### Summary of This Sampling Period:

The results from the Foster Wheeler Baseline Ambient Air Sampling program (June 1999 through May 2000) were used to assign background concentrations for each air sampling location. However, for the August 2005 background sampling event, based on wind direction for that day, the results from Station 52 were used to represent Area D downgradient air PCB concentrations. For Station 50 Area D, the average quarterly air PCB concentrations were used as background concentrations, which represent the average quarterly from Station 21 - New Bedford Welding, for the period of June 1999 through May 2000. These background concentrations were used for the inactive field times from 11/12/02 to 9/8/04, from 12/4/04 to 8/10/05, from 12/28/05 to 8/15/06, and from 11/19/06 to 8/6/07 to close the recent inactive field season. For the December 2005 post-dredging sampling event, based on wind direction for the day, the results from Station 51 were used to represent Area D downwind air PCB concentrations. In 2006 and 2007, during each sampling event, ambient air data was collected from only one air sampling station, which was placed downwind of Area D, based upon the predicted wind direction for the sampling event.

Please refer to Table F-1 for the Area D stations used during the 2006 and 2007 sampling events. In 2004 and 2005, air sampling was conducted on a weekly basis during the first month. However, since 2006, during the active field season, sampling has been conducted on a monthly basis. Since the first 2006 and 2007 sampling events were conducted about two weeks after the start of dredging, a new variation of the PETs curve was used. Therefore, to better simulate the 2006 dredging season, the ambient air concentrations from the August 31, 2006 sampling event were used to as the concentrations detected at Station 50 from August 16, 2006 (the start of dredging activities). For the 2007 dredge season, the August 21, 2007 sampling event was used to project concentrations detected downwind at Area D on August 7, 2007 (the start of dredging activities). Also, the PCB concentrations were projected to be at background levels at Station 50 Area D on October 19, 2006, which is the day after the 2006 dredging activities were completed.

For the 2007 season, the concentrations were used as the background levels at Area D from October 13, 2007, (the day after dredging activities were completed). Coordinating the sampling date with the start of dredging better simulates the actual 2006 and 2007 dredging activities. No triggers were identified, therefore, no action is necessary.

The 2008 season began with mechanical dredging (excavation) of the Aerovox shoreline on June 1, 2008, which was completed on July 22, 2009. Station 50 was not sampled this season as the downwind location selected was Station 51. Station 51's data is inputted for this workbook. No triggers were identified therefore, no action is necessary.

The 2009 dredging season began on June 5<sup>th</sup> in the northern portion of the Acushnet River. All dredging was done hydraulically until December 2<sup>nd</sup>. Station 50 was not sampled this season as the downwind location selected was Station 51. Station 51's data is inputted for this workbook. Due to low ambient concentrations of PCBs, no triggers were identified therefore, no action was required to control exposures.

Monitoring Station:		50 Area D Downwind
Exposure Budget Slope:	[ng/m <sup>3</sup> -day]	344
Work Start Date:	[mm/dd/yyyy]	11/12/2002
Projected Work End Date (Per EPA):	[mm/dd/yyyy]	11/10/2028
Occupational Limit Used as Ceiling:	[ng/m <sup>3</sup> ]	500,000
TEL for Worker in Public:	[ng/m <sup>3</sup> ]	50,000
NTEL for Worker in Public:	[ng/m <sup>3</sup> ]	1,789
Minimum of TEL/NTEL:	[ng/m <sup>3</sup> ]	1,789
Baseline Average Concentration:	[ng/m <sup>3</sup> ]	16.7

Notes:

TEL = Threshold Effects Exposure Limit

NTEL = Non-Threshold Effects Exposure Limit

The EPA periodically assesses this Projected Work End Date, which is subject to change.

(A) Event	(B) Sampling Date	(C) Days Since Previous Sampling Event	(D) Work Effort Elapsed Time	(E) Estimated Work Effort Remaning	(F) PCB Concentration Result	(G) Average of Most Recent Two Concentration Results	(H) Weighted Average of Concentration Results	(I) Exposure Budget for the Period	(J) Cumulative Exposure Budget for Work Effort to Date	(K) Measured Exposure During the Period	(L) Calculated Cumulative Exposure for Work Effort to Date	(M) Exposure Budget Expended During the Period	(N) Cumulative Exposure Expended for Work Effort to Date
[#]	[month/day/year]	[days]	Running Sum of Column (C) to Date		[ng/m³]	[ng/m³]	<u>Column (L)/</u> <u>Column (D)</u>	EBS <sup>1</sup> * Column (C)	Sum of Column (I)	Column (G)* Column (C)	<u>Sum of</u> <u>Column (K</u> )	<u>Column</u> (K)/ Column (I)	<u>Column (L)/</u> <u>Column (J</u> ) [%]
			[days]				[ng/m <sup>3</sup> ]	[ng/m <sup>3</sup> -days]	[ng/m <sup>3</sup> -days]	[ng/m <sup>3</sup> -days]	[ng/m <sup>3</sup> -days]	[%]	
1	11/12/2002	0	0	9495	5.9	5.90	5.90	NC	NC	NC	NC	NC	NC
2	11/30/2002	18	18	9477	5.9	5.90	5.90	6192	6192	106.2	106.2	1.7%	1.7%
3	12/1/2002	1	19	9476	3.4	4.65	5.83	344	6536	4.7	110.9	1.4%	1.7%
4	2/28/2003	89	108	9387	3.4	3.40	3.83	30616	37152	302.6	413.5	1.0%	1.1%
5	5/31/2003	92	200	9295	6.8	5.10	4.41	31648	68800	469.2	882.7	1.5%	1.3%
6	8/31/2003	92	292	9203	12	9.40	5.98	31648	100448	864.8	1,747.5	2.7%	1.7%
7	11/30/2003	91	383	9112	5.9	8.95	6.69	31304	131752	814.5	2,561.9	2.6%	1.9%
8	2/28/2004	90	473	9022	3.4	4.65	6.30	30960	162712	418.5	2,980.4	1.4%	1.8%
9	5/31/2004	93	566	8929	6.8	5.10	6.10	31992	194704	474.3	3,454.7	1.5%	1.8%
10	8/31/2004	92	658	8837	12	9.40	6.56	31648 2752	226352	864.8	4,319.5	2.7%	1.9%
11	9/8/2004 9/9/2004	8	666 667	8829 8828	5.9 20	8.95 12.95	6.59 6.60	344	229104 229448	71.6 13.0	4,391.1	2.6% 3.8%	1.9% 1.9%
12 13	9/9/2004 9/14/2004	5	672	8823	38	29.00	6.77	344 1720	229448	145.0	4,404.1 4,549.1	3.8%	2.0%
13	9/14/2004 9/23/2004	9	681	8823	6	29.00	6.97	3096	231168	145.0	4,549.1 4,747.1	8.4% 6.4%	2.0%
14	9/28/2004	5	686	8809	80	43.00	7.23	1720	235984	215.0	4,962.1	12.5%	2.0%
16	10/19/2004	21	707	8788	17	43.00	8.46	7224	233984	1018.5	5,980.6	14.1%	2.1%
17	12/3/2004	45	752	8743	22	19.50	9.12	15480	258688	877.5	6,858.1	5.7%	2.7%
18	2/28/2005	87	839	8656	3.4	12.70	9.49	29928	288616	1104.9	7,963.0	3.7%	2.8%
19	5/31/2005	92	931	8564	6.8	5.10	9.06	31648	320264	469.2	8.432.2	1.5%	2.6%
20	8/10/2005	71	1002	8493	12	9.40	9.08	24424	344688	667.4	9,099.6	2.7%	2.6%
21	8/11/2005	1	1002	8492	21.3	16.65	9.09	344	345032	16.7	9.116.2	4.8%	2.6%
22	9/15/2005	35	1038	8457	0.52	10.91	9.15	12040	357072	381.9	9,498.1	3.2%	2.7%
23	9/23/2005	8	1046	8449	0.26	0.39	9.08	2752	359824	3.1	9,501.2	0.1%	2.6%
24	9/29/2005	6	1052	8443	24.2	12.23	9.10	2064	361888	73.4	9,574.6	3.6%	2.6%
25	10/6/2005	7	1059	8436	81.7	52.95	9.39	2408	364296	370.7	9,945.2	15.4%	2.7%
26	10/28/2005	22	1081	8414	0.01	40.86	10.03	7568	371864	898.8	10,844.0	11.9%	2.9%
27	12/29/2005	62	1143	8352	2.18	1.10	9.55	21328	393192	67.9	10,911.9	0.3%	2.8%
28	2/28/2006	61	1204	8291	3.4	2.79	9.20	20984	414176	170.2	11,082.1	0.8%	2.7%
29	5/31/2006	92	1296	8199	6.8	5.10	8.91	31648	445824	469.2	11,551.3	1.5%	2.6%
30	8/15/2006	76	1372	8123	12	9.40	8.94	26144	471968	714.4	12,265.7	2.7%	2.6%
31	8/16/2006	1	1373	8122	67.3	39.65	8.96	344	472312	39.7	12,305.3	11.5%	2.6%
32	8/31/2006	15	1388	8107	67.3	67.30	9.59	5160	477472	1009.5	13,314.8	19.6%	2.8%
33	10/5/2006	35	1423	8072	197	132.15	12.61	12040	489512	4625.3	17,940.1	38.4%	3.7%
34	10/19/2006	14	1437	8058	2.6	99.80	13.46	4816	494328	1397.2	19,337.3	29.0%	3.9%
35	11/19/2006	31	1468	8027	2.6	2.60	13.23	10664	504992	80.6	19,417.9	0.8%	3.8%
36	11/30/2006	11	1479	8016	5.9	4.25	13.16	3784	508776	46.8	19,464.6	1.2%	3.8%
37	2/28/2007	90	1569	7926	3.4	4.65	12.67	30960	539736	418.5	19,883.1	1.4%	3.7%

(A) Event	(B) Sampling Date	(C) Days Since Previous Sampling Event	(D) Work Effort Elapsed Time	(E) Estimated Work Effort Remaning	PCB Concentration Result	(G) Average of Most Recent Two Concentration Results	(H) Weighted Average of Concentration Results	(I) Exposure Budget for the Period	(J) Cumulative Exposure Budget for Work Effort to Date	(K) Measured Exposure During the Period	(L) Calculated Cumulative Exposure for Work Effort to Date		(N) Cumulative Exposure Expended for Work Effort to Date
[#]	[month/day/year]	[days]	<u>Running Sum</u> of Column (C) to Date [days]	[days]	[ng/m³]	[ng/m³]	<u>Column (L)/</u> <u>Column (D</u> ) [ng/m <sup>3</sup> ]	EBS <sup>1 *</sup> <u>Column (C)</u> [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (I)</u> [ng/m <sup>3</sup> -days]	<u>Column (G)*</u> <u>Column (C)</u> [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (K</u> ) [ng/m <sup>3</sup> -days]	<u>Column</u> (K)/ Column (I) [%]	Column (L)/ Column (J) [%]
38	5/31/2007	92	1661	7834	6.8	5.10	12.25	31648	571384	469.2	20,352.3	1.5%	3.6%
39	8/6/2007	67	1728	7767	31	18.90	12.51	23048	594432	1266.3	21,618.6	5.5%	3.6%
40	8/7/2007	1	1729	7766	36.7	33.85	12.52	344	594776	33.9	21,652.5	9.8%	3.6%
41	8/21/2007	14	1743	7752	36.7	36.70	12.72	4816	599592	513.8	22,166.3	10.7%	3.7%
42	9/18/2007	28	1771	7724	48.7	42.70	13.19	9632	609224	1195.6	23,361.9	12.4%	3.8%
43	10/13/2007	25	1796	7699	5.9	27.30	13.39	8600	617824	682.5	24,044.4	7.9%	3.9%
44	11/9/2007	27	1823	7672	4.39	5.15	13.27	9288	627112	138.9	24,183.3	1.5%	3.9%
45	11/30/2007	21	1844	7651	5.9	5.15	13.17	7224	634336	108.0	24,291.4	1.5%	3.8%
46	2/28/2008	90	1934	7561	3.4	4.65	12.78	30960	665296	418.5	24,709.9	1.4%	3.7%
47	5/31/2008	93	2027	7468	6.8	5.10	12.42	31992	697288	474.3	25,184.2	1.5%	3.6%
48	8/21/2008	82	2109	7386	2.85	4.83	12.13	28208	725496	395.7	25,579.8	1.4%	3.5%
49	11/30/2008	101	2210	7285	5.9	4.38	11.77	34744	760240	441.9	26,021.7	1.3%	3.4%
50	2/28/2009	90	2300	7195	3.4	4.65	11.50	30960	791200	418.5	26,440.2	1.4%	3.3%
51	5/31/2009	92	2392	7103	6.8	5.10	11.25	31648	822848	469.2	26,909.4	1.5%	3.3%
52	6/16/2009	16	2408	7087	31.8	19.30	11.30	5504	828352	308.8	27,218.2	5.6%	3.3%
53	7/13/2009	27	2435	7060	5.29	18.55	11.38	9288	837640	500.7	27,718.9	5.4%	3.3%
54	8/13/2009	31	2466	7029	31.2	18.25	11.47	10664	848304	565.6	28,284.5	5.3%	3.3%
55	9/17/2009	35	2501	6994	41.5	36.35	11.82	12040	860344	1272.3	29,556.7	10.6%	3.4%
56	10/14/2009	27	2528	6967	3.75	22.63	11.93	9288	869632	610.9	30,167.6	6.6%	3.5%
57	11/9/2009	26	2554	6941	2.92	3.34	11.85	8944	878576	86.7	30,254.3	1.0%	3.4%
58	12/16/2009	37	2591	6904	0	1.46	11.70	12728	891304	54.0	30,308.3	0.4%	3.4%

Notes:

<sup>1</sup>EBS: Exposure Budget Slope = ng/m<sup>3</sup>-day NC = not calculated

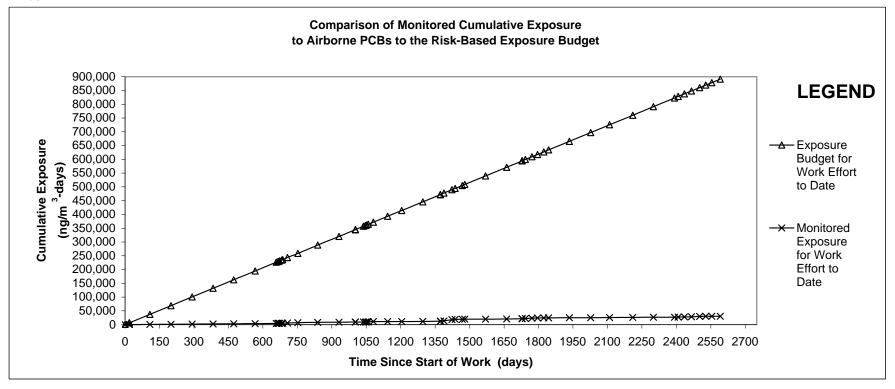
Shading represents actual sampling data. All other numbers represent projected PCB concentrations for that period.

New Bedford Harbor Superfund Site

Sample Station :	50 Area D Downwind
Collection Date:	12/16/2009
Measured PCB Concentration (ng/m <sup>3</sup> ):	0
Exposure Budget Expended During This Period:	0.4%
Cumulative Exposure Budget Expended to Date:	3.4%
Response Level:	No Triggers Identified
Response:	No Response Necess

4% 4% o Triggers Identified Response Necessary

Triggers:



## Notes:

a) 2004 dredge season, including pre- and post-dredging sampling events, were from 667 to 752 days since start of work (September 9 through December 3, 2004). b) 2005 dredge season, including pre- and post-dredging sampling events, were from 1003 to 1143 days since start of work (August 11 through December 29, 2005). c) 2006 dredge season, which did not include a pre-dredge sampling event, was from 1388 to 1468 days since start of work (August 16 through October 18, 2006). d) 2007 dredge season, which did not include a pre-dredge sampling event, was from 1729 to 1823 days since start of work (August 7 through November 9, 2007). e) 2008 dredge season, which did not include a pre-dredge sampling event was from 2109 to 2210 days since start of work (August 18 through November 5, 2008).

## LOCATION 55 – AEROVOX WEST

Station #:55 Aerovox WestExposure Budget Slope (EBS) = 174 (ng/m³-day)

Collection Date: <u>11/5/2004</u>

**Construction Activity:** The DMU-2 dredging activities were completed on November 9, 2004 and the winterization activities were completed on November 9, 2004 and the December 3, 2004 sampling event. Remediation activities were not conducted in this area until the 2008 Aerovox shoreline excavation.

This report summarizes sample results for the above referenced location and date. The samples were collected on polyurethane foam (PUF)/XAD sample media with a glass fiber pre-filter using a BGI, PQ-1 Low-Vol sampler. The samples were analyzed using high-resolution mass spectrometry (HRGCMS) for total PCB homologue groups. Results are evaluated relative to the Exposure Budget Tracking Process described in the Development of PCB Air Action Levels for the Protection of the Public, New Bedford Superfund Site, August 2001. Cumulative data for this reporting period is included on page 1. Sample Station information is summarized in attached Table 1 and illustrated on Figure 1. Air concentration trigger information is presented in attached Table 2.

## Summary of This Sampling Period:

This is a new sample location and the December 3, 2004 sample represented the second sampling event at this location. Due to elevated concentrations on the East side of the facility, this location was selected to demonstrate what a local resident receptor (child receptor) might be seeing during remedial work. The results from the Baseline Ambient Air Sampling program were used to assign background concentrations for each air sampling location. For Station 55 Aerovox West, the maximum baseline result of 5.2 ng/m<sup>3</sup> was used, which represents the maximum baseline result from Station 40 - Wood Street (Titleist), during the pre-construction sampling round on 11/18/02. These background concentrations were used for the inactive field times from 11/12/02 through 9/8/04 and for the period from 12/2/04 through 6/1/05 to close the inactive field season. The background concentrations were also used from 5/31/05 through 6/1/08, during which no activities were conducted in this area. No triggers identified, therefore, no action required.

The 2009 dredging season began on June 5<sup>th</sup> in the northern portion of the Acushnet River. All dredging was done hydraulically until December  $2^{nd}$ . Due to previously reported/estimated low ambient concentrations of PCBs, low triggers were identified during the 2009 season. These triggers indicate a rise in previous annual average by 200%. However, there were no activities in this area for a number of years so the previous data results are quite low. The exposure budget expended this season is 2.5% for the timeframe of work and the cumulative budget expended to date is 7.9% of the total budget. No action was required to control exposures.

Monitoring Station:		55 Aerovox West
Exposure Budget Slope:		174
Work Start Date:		11/12/2002
Projected Work End Date:		11/10/2028
Occupational Limit Used as Ceiling:	[ng/m <sup>3</sup> ]	500,000
TEL for Worker in Public:	[ng/m <sup>3</sup> ]	50,000
NTEL for Worker in Public:	[ng/m <sup>3</sup> ]	1,789
Miniumum of TEL/NTEL:	[ng/m <sup>3</sup> ]	1,789
Background Concentration:	[ng/m <sup>3</sup> ]	5.2

(A) Event	(B) Sampling Date	(C) Days Since Previous Sampling Event	(D) Work Effort Elapsed Time	(E) Estimated Work Effort Remaning	(F) PCB Concentration Result	(G) Average of Most Recent Two Concentration Results	(H) Weighted Average of Concentration Results	(I) Exposure Budget for the Period	(J) Cumulative Exposure Budget for Work Effort to Date	(K) Measured Exposure During the Period	(L) Calculated Cumulative Exposure for Work Effort to Date	(M) Exposure Budget Expended During the Period	(N) Cumulative Exposure Expended for Work Effort to Date
[#]	[month/day/year]	[days]	<u>Runnig Sum</u> of Column (C) to Date [days]	[days]	[ng/m³]	[ng/m³]	<u>Column (L)/</u> <u>Column (D</u> ) [ng/m <sup>3</sup> ]	EBS <sup>1 *</sup> Column (C) [ng/m³-days]	<u>Sum of</u> <u>Column (I</u> ) [ng/m³-days]	<u>Column (G)*</u> <u>Column (C)</u> [ng/m <sup>3</sup> -days]	<u>Sum of</u> <u>Column (K</u> ) [ng/m <sup>3</sup> -days]	<u>Column (K)/</u> <u>Column (I</u> ) [%]	<u>Column (L)/</u> <u>Column (J</u> ) [%]
1	11/12/2002	0	0	9495	5.2	5	5	NC	NC	NC	NC	NC	NC
2	11/4/2004	723	723	8772	5.2	5	5	125802	125802	3760	3760	3.0%	3.0%
3	11/5/2004	1	724	8771	28.4	17	5	174	125976	17	3776	9.7%	3.0%
4	12/3/2004	28	752	8743	9.33	19	6	4872	130848	528	4305	10.8%	3.3%
5	6/1/2005	180	932	8563	5	7	6	31320	162168	1308	5612	4.2%	3.5%
6	8/11/2005	71	1003	8492	42.1	24	7	12354	174522	1679	7291	13.6%	4.2%
7	9/15/2005	35	1038	8457	37.6	40	8	6090	180612	1395	8686	22.9%	4.8%
8	9/23/2005	8	1046	8449	2.6	20	8	1392	182004	161	8847	11.6%	4.9%
9	9/29/2005	6	1052	8443	87	45	9	1044	183048	269	9116	25.7%	5.0%
9	10/6/2005	7	1059	8436	222	155	10	1218	184266	1082	10197	88.8%	5.5%
10	10/28/2005	22	1081	8414	4	113	12	3828	188094	2486	12683	64.9%	6.7%
11	11/18/2005	21	1102	8393	0.1	2.05	11.55	3654	191748	43	12726	1.2%	6.6%
12	12/29/2005	41	1143	8352	10.8	5.45	11.33	7134	198882	223	12950	3.1%	6.5%
13	5/31/2008	884	2027	7468	5.2	8.00	9.88	153816	352698	7072	20022	4.6%	5.7%
14	6/1/2008	1	2028	7467	25.9	15.55	9.88	174	352872	16	20037	8.9%	5.7%
15	6/8/2008	7	2035	7460	25.9	25.90	9.94	1218	354090	181	20219	14.9%	5.7%
16	6/12/2008	4	2039	7456	7.3	16.60	9.95	696	354786	66	20285	9.5%	5.7%
17	6/19/2008	7	2046	7449	8.9	8.10	9.94	1218	356004	57	20342	4.7%	5.7%
18	6/25/2008	6	2052	7443	5.52	7.21	9.93	1044	357048	43	20385	4.1%	5.7%
19	7/8/2008	13	2065	7430	8.7	7.11	9.92	2262	359310	92	20477	4.1%	5.7%
20	7/16/2008	8	2073	7422	68.6	38.65	10.03	1392	360702	309	20787	22.2%	5.8%
21	6/15/2009	334	2407	7088	5.2	36.90	13.76	58116	418818	12325	33111	21.2%	7.9%
22	6/16/2009	1	2408	7087	32.8	19.00	13.76	174	418992	19	33130	10.9%	7.9%
23	7/13/2009	27	2435	7060	7.43	20.12	13.83	4698	423690	543	33673	11.6%	7.9%
24	8/13/2009	31	2466	7029	29.7	18.57	13.89	5394	429084	576	34249	10.7%	8.0%
25	9/17/2009	35	2501	6994	14.2	21.95	14.00	6090	435174	768	35017	12.6%	8.0%
26	10/14/2009	27	2528	6967	10	12.10	13.98	4698	439872	327	35344	7.0%	8.0%
27	11/9/2009	26	2554	6941	8.3	9.15	13.93	4524	444396	238	35582	5.3%	8.0%
28	12/16/2009	37	2591	6904	0	4.15	13.79	6438	450834	154	35735	2.4%	7.9%

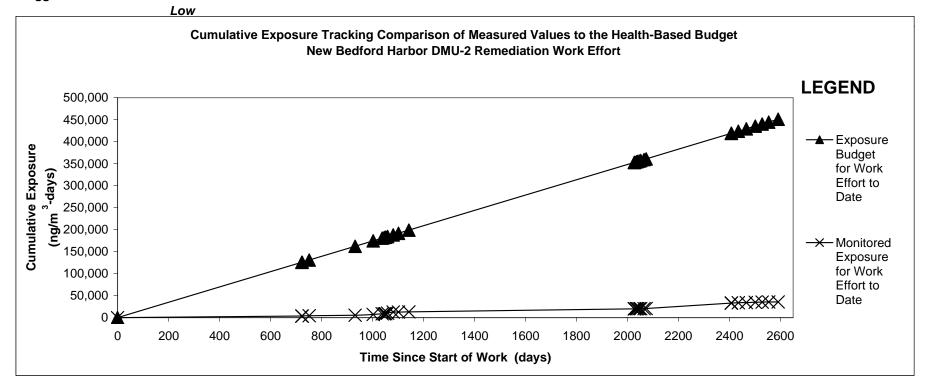
Notes:

<sup>1</sup>EBS: Exposure Budget Slope = ng/m<sup>3</sup>-day NC = not calculated

Shading represents actual sampling data. All other numbers represent projected PCB concentrations for that period.

Sample Station :	55 Aerovox West
Collection Date:	12/16/2009
Measured PCB Concentration (ng/m <sup>3</sup> ):	0
Exposure Budget Expended During This Period:	2.4%
Cumulative Exposure Budget Expended to Date:	7.9%
Response Level:	LOW
Response:	Evaluate the Cause and Significance of the Triggering Conditions

Triggers:



## ATTACHMENT G

## Jacobs Solids, Water Balance, and PCB Mass Removal Calculations















## ATTACHMENT H

## **Sevenson Operational Monitoring Data**













## ATTACHMENT I

## Water Quality and Wildlife Monitoring Summary

Date	Time	Dredge Area	Location <sup>(1)</sup>	Direction <sup>(2)</sup>	Event <sup>(3)</sup>	Depth BWS (ft)	Depth (relative)	Total Depth BWS (ft)	Tide	DO (mg/L)	Temperature (°C)	Turbidity (NTU)
6/25/2009	1550	L	Upstream	North	During	1	Shallow	4	Falling	7.1	21.33	NM
6/25/2009	1550	L	Upstream	North	During	3	Deep	4	Falling	4.45	18.62	NM
6/25/2009	1745	L	Upstream	South	After	1	Shallow	7.5	Rising	7.18	21.31	NM
6/25/2009	1745	L	Upstream	South	After	4	Mid	7.5	Rising	4.19	19.07	NM
6/25/2009	1745	L	Upstream	South	After	6.5	Deep	7.5	Rising	3.77	18.35	NM
6/25/2009	1530	L	Downstream	South	During	1	Shallow	4.6	Falling	6.65	20.23	NM
6/25/2009	1530	L	Downstream	South	During	3.6	Deep	4.6	Falling	4.78	18.83	NM
6/25/2009	1805	L	Downstream	North	After	1	Shallow	4.5	Rising	6.99	21.56	NM
6/25/2009	1805	L	Downstream	North	After	3.5	Deep	4.5	Rising	6.01	20.46	NM
6/25/2009	1540	L	In Situ	Next to	During	1	Shallow	4.2	Falling	6.78	21.13	NM
6/25/2009	1540	L	In Situ	Next to	During	3	Deep	4.2	Falling	5.26	18.86	NM
6/25/2009	1755	L	In Situ	Next to	After	1	Shallow	5	Rising	6.98	21.35	NM
6/25/2009	1755	L	In Situ	Next to	After	3	Mid	5	Rising	6.65	21.39	NM
6/25/2009	1755	L	In Situ	Next to	After	4	Deep	5	Rising	5.01	20.08	NM
6/25/2009	845	J	Upstream	South	During	1	Shallow	6.2	Rising	5.66	18.07	NM
6/25/2009	845	J	Upstream	South	During	2	Mid	6.2	Rising	5.52	18.19	NM
6/25/2009	845	J	Upstream	South	During	5	Deep	6.2	Rising	4.37	18.21	NM
6/25/2009	915	J	Downstream	North	During	1	Shallow	6.2	Rising	6.4	18.02	NM
6/25/2009	915	J	Downstream	North	During	2	Mid	6.2	Rising	5.12	18.26	NM
6/25/2009	915	J	Downstream	North	During	5	Deep	6.2	Rising	4.52	18.23	NM
6/25/2009	900	J	In Situ	North	During	1	Shallow	7.3	Rising	7.25	18.12	NM
6/25/2009	900	J	In Situ	North	During	2	Mid	7.3	Rising	5.09	18.23	NM
6/25/2009	900	J	In Situ	North	During	6	Deep	7.3	Rising	4.62	18.19	NM
6/26/2009	740	L	Upstream	South	During	1	Shallow	7.5	Rising	6.47	19.25	NM
6/26/2009	740	L	Upstream	South	During	4.5	Mid	7.5	Rising	4.47	18.77	NM
6/26/2009	740	L	Upstream	South	During	6.5	Deep	7.5	Rising	4.52	18.71	NM
6/26/2009	1735	L	Upstream	South	After	1	Shallow	7	Rising	6.21	20.55	NM
6/26/2009	1735	L	Upstream	South	After	4	Mid	7	Rising	4.34	18.87	NM
6/26/2009	1735	L	Upstream	South	After	5	Deep	7	Rising	4.32	18.75	NM
6/26/2009	715	L	Downstream	North	During	1	Shallow	4.3	Rising	7.22	18.79	NM
6/26/2009	715	L	Downstream	North	During	3.3	Deep	4.3	Rising	4.49	19.02	NM
6/26/2009	730	L	In Situ	Next to	During	1	Shallow	4.7	Rising	7.38	18.91	NM
6/26/2009	730	L	In Situ	Next to	During	3.7	Deep	4.7	Rising	4.48	18.84	NM

Date	Time	Dredge Area	Location <sup>(1)</sup>	Direction <sup>(2)</sup>	Event <sup>(3)</sup>	Depth BWS (ft)	Depth (relative)	Total Depth BWS (ft)	Tide	DO (mg/L)	Temperature (°C)	Turbidity (NTU)
6/26/2009	1745	L	In Situ	Next to	After	1	Shallow	5.5	Rising	6.16	20.82	NM
6/26/2009	1745	L	In Situ	Next to	After	4.5	Deep	5.5	Rising	4.55	18.84	NM
7/1/2009	715	L	Upstream	North	Before	1	Shallow	5.75	Falling	8.05	23.54	NM
7/1/2009	715	L	Upstream	North	Before	2	Mid	5.75	Falling	5.83	23.29	NM
7/1/2009	715	L	Upstream	North	Before	4.75	Deep	5.75	Falling	5.36	21.26	NM
7/1/2009	1215	L	Upstream	South	During	1	Shallow	6	Rising	8.45	22.59	NM
7/1/2009	1215	L	Upstream	South	During	5	Deep	6	Rising	4.77	21.23	NM
7/1/2009	705	L	Downstream	South	Before	1	Shallow	5.95	Falling	7.02	22.42	NM
7/1/2009	705	L	Downstream	South	Before	4.5	Deep	5.95	Falling	5.43	20.68	NM
7/1/2009	1150	L	Downstream	North	During	1	Shallow	5.5	Rising	7.71	22.55	NM
7/1/2009	1150	L	Downstream	North	During	4	Mid	5.5	Rising	6.94	22.06	NM
7/1/2009	1150	L	Downstream	North	During	4.5	Deep	5.5	Rising	5.52	21.58	NM
7/1/2009	645	L	In Situ	Next to	Before	1	Shallow	8	Falling	7.38	23.56	NM
7/1/2009	645	L	In Situ	Next to	Before	3	Mid	8	Falling	5.9	21.78	NM
7/1/2009	645	L	In Situ	Next to	Before	5	Mid	8	Falling	5.89	20.69	NM
7/1/2009	645	L	In Situ	Next to	Before	7	Deep	8	Falling	4.65	20.52	NM
7/1/2009	1230	L	In Situ	Next to	During	1	Shallow	8.5	Rising	7.15	22.2	NM
7/1/2009	1230	L	In Situ	Next to	During	3	Mid	8.5	Rising	5.5	22	NM
7/1/2009	1230	L	In Situ	Next to	During	5	Mid	8.5	Rising	4.8	21.79	NM
7/1/2009	1230	L	In Situ	Next to	During	7.5	Deep	8.5	Rising	4.71	21.34	NM
7/1/2009	735	J	Upstream	North	During	1	Shallow	4	Falling	6.51	22.82	NM
7/1/2009	735	J	Upstream	North	During	3	Deep	4	Falling	4.01	21.09	NM
7/1/2009	725	J	Downstream	South	During	1	Shallow	5.1	Falling	5.28	23.37	NM
7/1/2009	725	J	Downstream	South	During	3	Mid	5.1	Falling	5.27	21.33	NM
7/1/2009	725	J	Downstream	South	During	4.1	Deep	5.1	Falling	5.37	21.11	NM
7/1/2009	1120	J	In Situ	Next to	During	1	Shallow	3.9	Rising	8.17	22.34	NM
7/1/2009	1120	J	In Situ	Next to	During	2.9	Deep	3.9	Rising	4.16	21.75	NM
7/2/2009	1650	J	Upstream	South	During	1	Shallow	8.5	Rising	6.8	21.2	NM
7/2/2009	1650	J	Upstream	South	During	4	Mid	8.5	Rising	3.64	20.87	NM
7/2/2009	1650	J	Upstream	South	During	7.5	Deep	8.5	Rising	3.13	20.87	NM
7/2/2009	1700	J	Downstream	North	During	1	Shallow	7.1	Rising	7.07	20.44	NM
7/2/2009	1700	J	Downstream	North	During	4	Mid	7.1	Rising	4.33	20.76	NM
7/2/2009	1700	J	Downstream	North	During	6.1	Deep	7.1	Rising	3.45	20.81	NM

Date	Time	Dredge Area	Location <sup>(1)</sup>	Direction <sup>(2)</sup>	Event <sup>(3)</sup>	Depth BWS (ft)	Depth (relative)	Total Depth BWS (ft)	Tide	DO (mg/L)	Temperature (°C)	Turbidity (NTU)
7/2/2009	1720	J	In Situ	Next to	During	1	Shallow	7.3	Falling	7.04	20.54	NM
7/2/2009	1720	J	In Situ	Next to	During	4	Mid	7.3	Falling	3.85	20.79	NM
7/2/2009	1720	J	In Situ	Next to	During	6.3	Deep	7.3	Falling	3.15	20.87	NM
7/2/2009	945	L	Upstream	North	During	1	Shallow	5.5	Falling	6.11	19.59	NM
7/2/2009	945	L	Upstream	North	During	3	Mid	5.5	Falling	4.69	20.96	NM
7/2/2009	945	L	Upstream	North	During	4.5	Deep	5.5	Falling	4.57	21.01	NM
7/2/2009	1015	L	Downstream	South	During	1	Shallow	5.9	Falling	6.73	19.74	NM
7/2/2009	1015	L	Downstream	South	During	3	Mid	5.9	Falling	4.33	20.8	NM
7/2/2009	1015	L	Downstream	South	During	4.9	Deep	5.9	Falling	3.41	20.97	NM
7/2/2009	1000	L	In Situ	Next to	During	1	Shallow	5.7	Falling	6.08	19.88	NM
7/2/2009	1000	L	In Situ	Next to	During	3	Mid	5.7	Falling	4.46	20.61	NM
7/2/2009	1000	L	In Situ	Next to	During	4.7	Deep	5.7	Falling	3.54	20.94	NM
7/8/2009	1015	J	Upstream	North	During	1	Shallow	7.5	Falling	6.71	19.13	NM
7/8/2009	1015	J	Upstream	North	During	3	Mid	7.5	Falling	3.76	20.95	NM
7/8/2009	1015	J	Upstream	North	During	6.5	Deep	7.5	Falling	3.32	21.06	NM
7/8/2009	950	J	Downstream	South	During	1	Shallow	6.9	Falling	6.49	19.61	NM
7/8/2009	950	J	Downstream	South	During	3	Mid	6.9	Falling	4.36	20.95	NM
7/8/2009	950	J	Downstream	South	During	5.9	Deep	6.9	Falling	3.5	20.93	NM
7/8/2009	1000	J	In Situ	Next to	During	1	Shallow	5.8	Falling	6.81	19.31	NM
7/8/2009	1000	J	In Situ	Next to	During	3	Mid	5.8	Falling	4.23	20.91	NM
7/8/2009	1000	J	In Situ	Next to	During	4.8	Deep	5.8	Falling	3.09	21.13	NM
7/8/2009	1025	L	Upstream	North	During	1	Shallow	8.5	Falling	7.41	19.54	NM
7/8/2009	1025	L	Upstream	North	During	3	Mid	8.5	Falling	5.16	20.29	NM
7/8/2009	1025	L	Upstream	North	During	7.5	Deep	8.5	Falling	4.73	20.34	NM
7/8/2009	1050	L	Downstream	South	During	1	Shallow	8.9	Falling	7.46	19.85	NM
7/8/2009	1050	L	Downstream	South	During	4	Mid	8.9	Falling	4.96	20.4	NM
7/8/2009	1050	L	Downstream	South	During	7.9	Deep	8.9	Falling	3.92	20.54	NM
7/8/2009	1040	L	In Situ	Next to	During	1	Shallow	8.1	Falling	7.13	19.7	NM
7/8/2009	1040	L	In Situ	Next to	During	3	Mid	8.1	Falling	4.73	20.36	NM
7/8/2009	1040	L	In Situ	Next to	During	7.1	Deep	8.1	Falling	4.42	20.47	NM
7/10/2009	1425	J	Upstream	North	During	1	Shallow	3.3	Falling	7.53	24.64	NM
7/10/2009	1425	J	Upstream	North	During	2.3	Deep	3.3	Falling	9.11	23.46	NM
7/10/2009	1435	J	Downstream	South	During	1	Shallow	4.5	Falling	7.38	24.81	NM

Date	Time	Dredge Area	Location <sup>(1)</sup>	Direction <sup>(2)</sup>	Event <sup>(3)</sup>	Depth BWS (ft)	Depth (relative)	Total Depth BWS (ft)	Tide	DO (mg/L)	Temperature (°C)	Turbidity (NTU)
7/10/2009	1435	J	Downstream	South	During	3.5	Deep	4.5	Falling	5.41	21.9	NM
7/10/2009	1440	J	In Situ	Next to	During	1	Shallow	6.9	Falling	7.56	24.74	NM
7/10/2009	1440	J	In Situ	Next to	During	3	Mid	6.9	Falling	5.28	21.79	NM
7/10/2009	1440	J	In Situ	Next to	During	5.9	Deep	6.9	Falling	3.21	20.95	NM
7/10/2009	1515	L	Upstream	North	During	1	Shallow	3.8	Falling	7.13	23.88	NM
7/10/2009	1515	L	Upstream	North	During	2.8	Deep	3.8	Falling	7.14	23.98	NM
7/10/2009	1800	L	Upstream	South	During	1	Shallow	4.5	Rising	8.01	24.29	NM
7/10/2009	1800	L	Upstream	South	During	3.5	Deep	4.5	Rising	6.7	24.07	NM
7/10/2009	1535	L	Downstream	South	During	1	Shallow	2.4	Falling	6.8	23.47	NM
7/10/2009	1755	L	Downstream	North	During	1	Shallow	3.8	Rising	7.25	24.63	NM
7/10/2009	1755	L	Downstream	North	During	2.8	Deep	3.8	Rising	7.34	24.56	NM
7/10/2009	1525	L	In Situ	Next to	During	1	Shallow	4.4	Falling	6.72	23.91	NM
7/10/2009	1525	L	In Situ	Next to	During	3.4	Deep	4.4	Falling	5.97	22.73	NM
7/10/2009	1745	L	In Situ	Next to	During	1	Shallow	4.7	Rising	6.9	24.51	NM
7/10/2009	1745	L	In Situ	Next to	During	3.7	Deep	4.7	Rising	7.01	23.91	NM
7/13/2009	1540	L	Upstream	North	During	1	Shallow	6.9	Falling	10.86	24.06	NM
7/13/2009	1540	L	Upstream	North	During	3	Mid	6.9	Falling	8.27	23.01	NM
7/13/2009	1540	L	Upstream	North	During	5.9	Deep	6.9	Falling	5.05	22.05	NM
7/13/2009	800	L	Downstream	North	Before	1	Shallow	5	Rising	7.63	23.31	NM
7/13/2009	800	L	Downstream	North	Before	4	Deep	5	Rising	4.17	22.01	NM
7/13/2009	1600	L	Downstream	South	During	1	Shallow	4.6	Falling	11.52	24.3	NM
7/13/2009	1600	L	Downstream	South	During	2.5	Mid	4.6	Falling	10.43	24.12	NM
7/13/2009	1600	L	Downstream	South	During	3.6	Deep	4.6	Falling	8.53	23.49	NM
7/13/2009	1555	L	In Situ	Next to	During	1	Shallow	4	Falling	11.78	24.53	NM
7/13/2009	1555	L	In Situ	Next to	During	3	Deep	4	Falling	11.28	23.93	NM
7/13/2009	750	G	Upstream	South	During	1	Shallow	4	Rising	6.08	20.25	NM
7/13/2009	750	G	Upstream	South	During	3	Deep	4	Rising	3.89	21.99	NM
7/13/2009	745	G	In Situ	Next to	During	1	Shallow	3.4	Rising	4.64	20.65	NM
7/13/2009	745	G	In Situ	Next to	During	2.4	Deep	3.4	Rising	3.83	21.87	NM
7/13/2009	740	J	Upstream	South	During	1	Shallow	4.5	Rising	5.89	21.3	NM
7/13/2009	740	J	Upstream	South	During	3.5	Deep	4.5	Rising	3.77	21.79	NM
7/13/2009	730	J	Downstream	North	During	1	Shallow	3.8	Rising	5.94	20.00	NM
7/13/2009	730	J	Downstream	North	During	2.8	Deep	3.8	Rising	4.12	21.94	NM

Date	Time	Dredge Area	Location <sup>(1)</sup>	Direction <sup>(2)</sup>	Event <sup>(3)</sup>	Depth BWS (ft)	Depth (relative)	Total Depth BWS (ft)	Tide	DO (mg/L)	Temperature (°C)	Turbidity (NTU)
7/13/2009	715	J	In Situ	Next to	During	1	Shallow	3.9	Rising	6.01	19.57	NM
7/13/2009	715	J	In Situ	Next to	During	2.9	Deep	3.9	Rising	3.77	21.95	NM
7/20/2009	1705	G	Upstream	South	During	1	Shallow	4.2	Rising	11.9	27.45	12.2
7/20/2009	1705	G	Upstream	South	During	3.2	Deep	4.2	Rising	6.12	26.58	17.6
7/20/2009	1725	G	Downstream	North	During	1	Shallow	5.2	Rising	7.95	23.05	9.9
7/20/2009	1725	G	Downstream	North	During	2.5	Mid	5.2	Rising	10.37	27.17	43.3
7/20/2009	1725	G	Downstream	North	During	4.2	Deep	5.2	Rising	6.19	26.67	66.4
7/20/2009	1720	G	In Situ	Next to	During	1	Shallow	4.3	Rising	8.23	23.24	25.1
7/20/2009	1720	G	In Situ	Next to	During	3.3	Deep	4.3	Rising	8.27	26.74	25.3
7/20/2009	1645	J	Upstream	South	During	1	Shallow	6.2	Rising	11.21	27.07	5.5
7/20/2009	1645	J	Upstream	South	During	3	Mid	6.2	Rising	9.32	26.85	6.9
7/20/2009	1645	J	Upstream	South	During	5.2	Deep	6.2	Rising	3.72	25.19	10.5
7/20/2009	1705	J	Downstream	North	During	1	Shallow	4.2	Rising	11.9	27.45	12.2
7/20/2009	1705	J	Downstream	North	During	3.2	Deep	4.2	Rising	6.12	26.58	17.6
7/20/2009	1655	J	In Situ	Next to	During	1	Shallow	6.6	Rising	11.97	27.28	13.1
7/20/2009	1655	J	In Situ	Next to	During	3	Mid	6.6	Rising	5.94	26.72	258.2
7/20/2009	1655	J	In Situ	Next to	During	5.6	Deep	6.6	Rising	3.49	24.88	34.9
7/21/2009	1615	J	Upstream	South	During	1	Shallow	4.7	Rising	5.27	23.34	9.7
7/21/2009	1615	J	Upstream	South	During	3.7	Deep	4.7	Rising	3.45	23.32	12.5
7/21/2009	1150	J	Downstream	South	During	1	Shallow	3.7	Falling	3.37	23.19	30.5
7/21/2009	1150	J	Downstream	South	During	2.7	Deep	3.7	Falling	2.54	23.77	19.5
7/21/2009	1630	J	Downstream	North	During	1	Shallow	2.4	Rising	3.69	23.35	55.3
7/21/2009	1200	J	In Situ	Next to	During	1	Shallow	3.2	Falling	3.35	23.13	80
7/21/2009	1200	J	In Situ	Next to	During	2.2	Deep	3.2	Falling	2.82	23.49	105
7/21/2009	1625	J	In Situ	Next to	During	1	Shallow	5.3	Rising	4.48	23.27	91.8
7/21/2009	1625	J	In Situ	Next to	During	4.3	Deep	5.3	Rising	2.61	23.35	405.1
7/21/2009	1215	L	Upstream	North	Before	1	Shallow	5.5	Falling	4.01	23.35	16.5
7/21/2009	1215	L	Upstream	North	Before	3	Mid	5.5	Falling	3.91	23.25	17.4
7/21/2009	1215	L	Upstream	North	Before	4.5	Deep	5.5	Falling	3.98	23.08	16
7/21/2009	1225	L	Downstream	South	Before	1	Shallow	6	Falling	4.4	23.38	13.2
7/21/2009	1225	L	Downstream	South	Before	3	Mid	6	Falling	3.99	23.27	8.6
7/21/2009	1225	L	Downstream	South	Before	5	Deep	6	Falling	4.12	23.23	10
7/21/2009	1655	G	Downstream	North	During	1	Shallow	3.4	Rising	5.45	22.19	24.1

Date	Time	Dredge Area	Location <sup>(1)</sup>	Direction <sup>(2)</sup>	Event <sup>(3)</sup>	Depth BWS (ft)	Depth (relative)	Total Depth BWS (ft)	Tide	DO (mg/L)	Temperature (°C)	Turbidity (NTU)
7/21/2009	1655	G	Downstream	North	During	2.4	Deep	3.4	Rising	3.97	23.21	30.6
7/21/2009	1645	G	In Situ	Next to	During	1	Shallow	4	Rising	4.47	22.48	139.8
7/21/2009	1645	G	In Situ	Next to	During	3	Deep	4	Rising	3.68	23.11	177.1
7/23/2009	1040	G	Upstream	North	During	1	Shallow	5	Falling	2.83	22.85	8.2
7/23/2009	1040	G	Upstream	North	During	4	Deep	5	Falling	2.4	23.68	13.8
7/23/2009	1125	G	Downstream	South	During	1	Shallow	3.8	Falling	3.86	22.76	18.5
7/23/2009	1125	G	Downstream	South	During	2.8	Deep	3.8	Falling	2.86	23.62	9.2
7/23/2009	1055	G	In Situ	Next to	During	1	Shallow	5.6	Falling	2.98	23.45	75.1
7/23/2009	1055	G	In Situ	Next to	During	3	Mid	5.6	Falling	2.58	23.65	31.2
7/23/2009	1055	G	In Situ	Next to	During	4.6	Deep	5.6	Falling	2.69	23.65	7.7
7/23/2009	1410	L	Upstream	North	During	1	Shallow	4.8	Falling	3.04	23.69	6.5
7/23/2009	1410	L	Upstream	North	During	3.8	Deep	4.8	Falling	3.4	23.37	5.5
7/23/2009	1425	L	Downstream	South	During	1	Shallow	5.9	Falling	3.33	23.58	17.1
7/23/2009	1425	L	Downstream	South	During	3	Mid	5.9	Falling	3.03	23.54	16.5
7/23/2009	1425	L	Downstream	South	During	4.9	Deep	5.9	Falling	2.73	23.33	51.4
7/23/2009	1415	L	In Situ	Next to	During	1	Shallow	6.1	Falling	3.14	23.69	7.1
7/23/2009	1415	L	In Situ	Next to	During	3	Mid	6.1	Falling	3.34	23.3	9.9
7/23/2009	1415	L	In Situ	Next to	During	5.1	Deep	6.1	Falling	3.36	23.3	11.4
7/27/2009	1310	G	Upstream	North	During	1	Shallow	7.1	Falling	7.03	23.4	-2.9
7/27/2009	1310	G	Upstream	North	During	3	Mid	7.1	Falling	6.76	22.33	-2.1
7/27/2009	1310	G	Upstream	North	During	5	Mid	7.1	Falling	3.66	22.54	30.2
7/27/2009	1310	G	Upstream	North	During	6.1	Deep	7.1	Falling	2.13	22.63	21.6
7/27/2009	1330	G	Downstream	South	During	1	Shallow	5.5	Falling	6.88	23.3	1.4
7/27/2009	1330	G	Downstream	South	During	3	Mid	5.5	Falling	6.64	23.63	13
7/27/2009	1330	G	Downstream	South	During	4.5	Deep	5.5	Falling	2.33	22.86	3.9
7/27/2009	1320	G	In Situ	Next to	During	1	Shallow	6.4	Falling	6.75	23.02	3.3
7/27/2009	1320	G	In Situ	Next to	During	3	Mid	6.4	Falling	6.69	22.99	9
7/27/2009	1320	G	In Situ	Next to	During	5.4	Deep	6.4	Falling	2.33	22.73	3.8
7/28/2009	1755	L	Downstream	South	During	1	Shallow	7	Falling	9.17	27.95	0.5
7/28/2009	1755	L	Downstream	South	During	4.5	Mid	7	Falling	3.97	23.57	2.6
7/28/2009	1755	L	Downstream	South	During	6	Deep	7	Falling	3.21	23.34	3.8
7/28/2009	1730	L	Upstream	North	During	1	Shallow	6	Falling	8.85	27.81	0.2
7/28/2009	1730	L	Upstream	North	During	3	Mid	6	Falling	5.61	26.78	3.2

Date	Time	Dredge Area	Location <sup>(1)</sup>	Direction <sup>(2)</sup>	Event <sup>(3)</sup>	Depth BWS (ft)	Depth (relative)	Total Depth BWS (ft)	Tide	DO (mg/L)	Temperature (°C)	Turbidity (NTU)
7/28/2009	1730	L	Upstream	North	During	5	Deep	6	Falling	3.45	23.61	4.1
7/28/2009	1745	L	In Situ	Next to	During	1	Shallow	5	Falling	7.39	27.72	4.5
7/28/2009	1745	L	In Situ	Next to	During	3	Mid	5	Falling	3.2	24.14	4.3
7/28/2009	1745	L	In Situ	Next to	During	4	Deep	5	Falling	2.51	23.77	4.6
7/28/2009	1130	J	Upstream	South	After	1	Shallow	6	Rising	7.65	24.82	0.3
7/28/2009	1130	J	Upstream	South	After	3	Mid	6	Rising	3.3	23.71	3.1
7/28/2009	1130	J	Upstream	South	After	5	Deep	6	Rising	2.68	23.69	3.1
7/28/2009	1150	J	Downstream	North	After	1	Shallow	4.1	Rising	9.1	25.25	0.1
7/28/2009	1150	J	Downstream	North	After	3.1	Deep	4.1	Rising	3.5	23.87	7.3
7/28/2009	1140	J	In Situ	Next to	After	1	Shallow	7	Rising	8.48	25.14	1.4
7/28/2009	1140	J	In Situ	Next to	After	4	Mid	7	Rising	2.83	23.55	13.6
7/28/2009	1140	J	In Situ	Next to	After	6	Deep	7	Rising	2.26	23.56	27.2
7/30/2009	1430	G	Downstream	North	During	1	Shallow	5.2	Rising	8.4	25.7	0.3
7/30/2009	1430	G	Downstream	North	During	3	Mid	5.2	Rising	9.03	25.66	28.5
7/30/2009	1430	G	Downstream	North	During	4.2	Deep	5.2	Rising	7.63	25.55	34
7/30/2009	1450	G	Upstream	South	During	1	Shallow	4.4	Rising	8.25	26.18	15.9
7/30/2009	1450	G	Upstream	South	During	3.4	Deep	4.4	Rising	7.77	25.81	21
7/30/2009	1440	G	In Situ	Next to	During	1	Shallow	3.1	Rising	9.3	26.47	85
8/4/2009	1440	L	Upstream	South	During	1	Shallow	3.8	Rising	13.43	28.25	5.9
8/4/2009	1440	L	Upstream	South	During	2.8	Deep	3.8	Rising	13.75	28.19	3.2
8/4/2009	1500	L	Downstream	North	During	1	Shallow	6	Rising	12.76	28.31	11.6
8/4/2009	1500	L	Downstream	North	During	4	Mid	6	Rising	7.93	27.33	7
8/4/2009	1500	L	Downstream	North	During	5	Deep	6	Rising	3.43	26.34	7.5
8/4/2009	1450	L	In Situ	Next to	During	1	Shallow	7.5	Rising	12.84	28.21	17.1
8/4/2009	1450	L	In Situ	Next to	During	4	Mid	7.5	Rising	4.8	26.41	7.4
8/4/2009	1450	L	In Situ	Next to	During	6.5	Deep	7.5	Rising	3.14	25.9	8.1
8/5/2009	1530	L	Upstream	South	During	1	Shallow	3.8	Rising	12.18	27.76	14.9
8/5/2009	1530	L	Upstream	South	During	2.8	Deep	3.8	Rising	12.07	27.67	6.1
8/5/2009	1550	L	Downstream	North	During	1	Shallow	5.6	Rising	11.63	27.93	8.7
8/5/2009	1550	L	Downstream	North	During	3	Mid	5.6	Rising	10.96	27.69	12.2
8/5/2009	1550	L	Downstream	North	During	4.6	Deep	5.6	Rising	7.23	27.07	13.6
8/5/2009	1535	L	In Situ	Next to	During	1	Shallow	8.6	Rising	10.13	27.54	12.7
8/5/2009	1535	L	In Situ	Next to	During	3	Mid	8.6	Rising	9.15	27.35	19.6

Date	Time	Dredge Area	Location <sup>(1)</sup>	Direction <sup>(2)</sup>	Event <sup>(3)</sup>	Depth BWS (ft)	Depth (relative)	Total Depth BWS (ft)	Tide	DO (mg/L)	Temperature (°C)	Turbidity (NTU)
8/5/2009	1535	L	In Situ	Next to	During	5	Mid	8.6	Rising	6.12	26.75	22.6
8/5/2009	1535	L	In Situ	Next to	During	7.6	Deep	8.6	Rising	1.92	25.14	21.3
8/7/2009	1330	J	Upstream	North	During	1	Shallow	2.3	Rising	9.75	26.41	30.5
8/7/2009	1345	J	Downstream	South	During	1	Shallow	7.1	Rising	7.1	26.24	1
8/7/2009	1345	J	Downstream	South	During	3	Mid	7.1	Rising	4.91	24.75	2.5
8/7/2009	1345	J	Downstream	South	During	5	Mid	7.1	Rising	3.62	24.48	2.5
8/7/2009	1345	J	Downstream	South	During	6.1	Deep	7.1	Rising	3.31	24.93	1.9
8/11/2009	1645	L	Upstream	North	During	1	Shallow	5	Falling	3.92	27.17	NA
8/11/2009	1645	L	Upstream	North	During	4	Deep	5	Falling	2.98	24.61	NA
8/11/2009	1655	L	Downstream	South	During	1	Shallow	6.5	Falling	4.39	27.13	NA
8/11/2009	1655	L	Downstream	South	During	3.5	Mid	6.5	Falling	3.1	24.69	NA
8/11/2009	1655	L	Downstream	South	During	5.5	Deep	6.5	Falling	2.9	24.69	NA
8/12/2009	1740	J	Downstream	South	During	1	Shallow	4.3	Falling	4.06	24.59	17.3
8/12/2009	1740	J	Downstream	South	During	3.3	Deep	4.3	Falling	2.56	24.36	15.4
8/14/2009	1040	L	Upstream	South	During	1	Shallow	5.8	Rising	4.93	23.15	2.1
8/14/2009	1040	L	Upstream	South	During	3	Mid	5.8	Rising	4.35	22.92	2.3
8/14/2009	1040	L	Upstream	South	During	4.8	Deep	5.8	Rising	4.12	22.95	1.6
8/14/2009	1050	L	Downstream	North	During	1	Shallow	3.7	Rising	3.24	24.7	38.4
8/14/2009	1050	L	Downstream	North	During	2.7	Deep	3.7	Rising	4.03	23.47	7.2
8/14/2009	1515	L	Downstream	South	After	1	Shallow	5.8	Falling	8.98	24.52	2
8/14/2009	1515	L	Downstream	South	After	3	Mid	5.8	Falling	8.9	24.44	2.8
8/14/2009	1515	L	Downstream	South	After	4.8	Deep	5.8	Falling	5.81	23.52	6.4
8/14/2009	1100	J	Upstream	South	Before	1	Shallow	3.7	Rising	4.94	24.33	3.1
8/14/2009	1100	J	Upstream	South	Before	2.7	Deep	3.7	Rising	3.13	23.6	4.5
8/14/2009	1415	J	Upstream	South	During	1	Shallow	8.5	Rising	7.67	25.8	4
8/14/2009	1415	J	Upstream	South	During	4	Mid	8.5	Rising	7.8	25.1	4.3
8/14/2009	1415	J	Upstream	South	During	6	Mid	8.5	Rising	5.63	24.06	3.9
8/14/2009	1415	J	Upstream	South	During	7.5	Deep	8.5	Rising	4.26	23.81	9.3
8/14/2009	1430	J	Downstream	North	During	1	Shallow	5.3	Rising	7	27.3	1.7
8/14/2009	1430	J	Downstream	North	During	3	Mid	5.3	Rising	7.94	26	3.5
8/14/2009	1430	J	Downstream	North	During	4.3	Deep	5.3	Rising	8.17	24.94	5.3
8/14/2009	1500	J	Downstream	North	During	1	Shallow	4.4	Rising	8.54	27.83	3.5
8/14/2009	1500	J	Downstream	North	During	3.4	Deep	4.4	Rising	8.66	25.85	4.1

Date	Time	Dredge Area	Location <sup>(1)</sup>	Direction <sup>(2)</sup>	Event <sup>(3)</sup>	Depth BWS (ft)	Depth (relative)	Total Depth BWS (ft)	Tide	DO (mg/L)	Temperature (°C)	Turbidity (NTU)
8/14/2009	1120	G	Upstream	South	Before	1	Shallow	4.3	Rising	5.9	22.78	1.4
8/14/2009	1120	G	Upstream	South	Before	3.3	Deep	4.3	Rising	3.38	23.98	2.6
8/18/2009	1440	L	Upstream	South	During	1	Shallow	3.3	Rising	11.74	29.74	6.6
8/18/2009	1440	L	Upstream	South	During	2.3	Deep	3.3	Rising	10.68	28.47	7.4
8/18/2009	1420	L	Downstream	North	During	1	Shallow	5	Rising	12.92	29.66	5.3
8/18/2009	1420	L	Downstream	North	During	3	Mid	5	Rising	10.17	29	35
8/18/2009	1420	L	Downstream	North	During	4	Deep	5	Rising	6.18	26.71	15.3
8/18/2009	1620	J	Upstream	South	During	1	Shallow	5.2	Rising	13.5	30.65	7.2
8/18/2009	1620	J	Upstream	South	During	3	Mid	5.2	Rising	12.43	30.27	7.9
8/18/2009	1620	J	Upstream	South	During	4.2	Deep	5.2	Rising	11.57	29.58	6.5
8/18/2009	1635	J	Downstream	North	During	1	Shallow	3.8	Rising	13.54	31.05	13.4
8/18/2009	1635	J	Downstream	North	During	2.8	Deep	3.8	Rising	13.7	31.01	14.8
8/19/2009	805	G	Upstream	North	During	1	Shallow	6.2	Falling	4.6	24.64	2.7
8/19/2009	805	G	Upstream	North	During	3	Mid	6.2	Falling	5.39	26.72	6.2
8/19/2009	805	G	Upstream	North	During	5.2	Deep	6.2	Falling	4.55	26.74	6.7
8/19/2009	820	G	Downstream	South	During	1	Shallow	6	Falling	5.38	26.35	3.8
8/19/2009	820	G	Downstream	South	During	3	Mid	6	Falling	4.96	26.86	5.2
8/19/2009	820	G	Downstream	South	During	5	Deep	6	Falling	4.2	26.36	4.8
8/19/2009	850	G	Downstream	South	During	1	Shallow	4.3	Falling	6.85	26.28	8
8/19/2009	850	G	Downstream	South	During	3.3	Deep	4.3	Falling	4.48	26.77	5.2
8/19/2009	915	L	Upstream	North	During	1	Shallow	8	Falling	7.4	26.92	4
8/19/2009	915	L	Upstream	North	During	3	Mid	8	Falling	4.75	26.42	3.4
8/19/2009	915	L	Upstream	North	During	5	Mid	8	Falling	5.5	25.54	2.2
8/19/2009	915	L	Upstream	North	During	7	Deep	8	Falling	5.31	25.48	4.2
8/19/2009	930	L	Downstream	South	During	1	Shallow	6.5	Falling	7.55	26.8	3.8
8/19/2009	930	L	Downstream	South	During	3	Mid	6.5	Falling	5.44	25.62	2.3
8/19/2009	930	L	Downstream	South	During	5.5	Deep	6.5	Falling	5.33	25.51	3.5
8/21/2009	1200	G	Upstream	North	During	1	Shallow	6	Falling	2.91	26.34	0.7
8/21/2009	1200	G	Upstream	North	During	3	Mid	6	Falling	2.2	27.49	1.8
8/21/2009	1200	G	Upstream	North	During	5	Deep	6	Falling	2.5	27.45	2.3
8/21/2009	1100	G	Downstream	South	During	1	Shallow	6.5	Falling	7.09	26.97	2.9
8/21/2009	1100	G	Downstream	South	During	3	Mid	6.5	Falling	5.4	27.34	2.2
8/21/2009	1100	G	Downstream	South	During	5.5	Deep	6.5	Falling	4.3	27.1	1.4

Date	Time	Dredge Area	Location <sup>(1)</sup>	Direction <sup>(2)</sup>	Event <sup>(3)</sup>	Depth BWS (ft)	Depth (relative)	Total Depth BWS (ft)	Tide	DO (mg/L)	Temperature (°C)	Turbidity (NTU)
8/21/2009	1720	L	Upstream	South	During	1	Shallow	3	Rising	6.4	28.49	4.8
8/21/2009	1720	L	Upstream	South	During	2	Deep	3	Rising	6.36	28.49	4
8/21/2009	1705	L	Downstream	North	During	1	Shallow	5.7	Rising	6.11	28.5	8.1
8/21/2009	1705	L	Downstream	North	During	3	Mid	5.7	Rising	5.9	28.47	10.2
8/21/2009	1705	L	Downstream	North	During	4.7	Deep	5.7	Rising	5.75	28.4	11
8/25/2009	1755	L	Upstream	North	During	1	Shallow	6	Falling	11.06	28.33	5
8/25/2009	1755	L	Upstream	North	During	3	Mid	6	Falling	11.17	28.27	4.4
8/25/2009	1755	L	Upstream	North	During	5	Deep	6	Falling	5.3	27.07	9.8
8/25/2009	1745	L	Downstream	South	During	1	Shallow	3.8	Falling	12.36	28.25	5.7
8/25/2009	1745	L	Downstream	South	During	2.8	Deep	3.8	Falling	12.3	28.27	5.9
8/25/2009	1110	G	Upstream	South	During	1	Shallow	5.7	Rising	6.43	26.14	2.2
8/25/2009	1110	G	Upstream	South	During	3	Mid	5.7	Rising	4.08	26.72	1.4
8/25/2009	1110	G	Upstream	South	During	4.7	Deep	5.7	Rising	3.28	26.56	1.7
8/25/2009	1130	G	Downstream	North	During	1	Shallow	7.7	Rising	5.21	24.27	3
8/25/2009	1130	G	Downstream	North	During	3	Mid	7.7	Rising	3.44	26.46	7.5
8/25/2009	1130	G	Downstream	North	During	5	Mid	7.7	Rising	2.2	26.69	32.8
8/25/2009	1130	G	Downstream	North	During	6.7	Deep	7.7	Rising	1.91	26.68	6.2
8/26/2009	1420	G	Upstream	North	During	1	Shallow	6.9	Falling	6.77	25.87	0.6
8/26/2009	1420	G	Upstream	North	During	3	Mid	6.9	Falling	5.29	25.05	0
8/26/2009	1420	G	Upstream	North	During	5.9	Deep	6.9	Falling	1.27	26.4	2.3
8/26/2009	1440	G	Downstream	South	During	1	Shallow	5.5	Falling	6.65	26.23	2.4
8/26/2009	1440	G	Downstream	South	During	3	Mid	5.5	Falling	4.45	25.42	7.2
8/26/2009	1440	G	Downstream	South	During	4.5	Deep	5.5	Falling	2.01	26.36	2.5
8/26/2009	1450	G	Downstream	South	During	1	Shallow	5.4	Falling	7.46	27.17	10.8
8/26/2009	1450	G	Downstream	South	During	3	Mid	5.4	Falling	2.98	26.29	9.2
8/26/2009	1450	G	Downstream	South	During	4.5	Deep	5.4	Falling	7.39	27.08	43.6
8/26/2009	910	L	Upstream	South	During	1	Shallow	4.8	Rising	7.26	25.87	4.7
8/26/2009	910	L	Upstream	South	During	3.8	Deep	4.8	Rising	4.68	26.34	1.2
8/26/2009	920	L	Downstream	North	During	1	Shallow	9.2	Rising	7.88	25.36	3.5
8/26/2009	920	L	Downstream	North	During	3	Mid	9.2	Rising	5.09	25.9	8.7
8/26/2009	920	L	Downstream	North	During	5	Mid	9.2	Rising	2.88	26.21	5.5
8/26/2009	920	L	Downstream	North	During	8.2	Deep	9.2	Rising	2.57	26.15	23
8/28/2009	1055	J	Upstream	South	During	1	Shallow	3.8	Rising	9.94	26.58	5.3

Date	Time	Dredge Area	Location <sup>(1)</sup>	Direction <sup>(2)</sup>	Event <sup>(3)</sup>	Depth BWS (ft)	Depth (relative)	Total Depth BWS (ft)	Tide	DO (mg/L)	Temperature (°C)	Turbidity (NTU)
8/28/2009	1055	J	Upstream	South	During	2.8	Deep	3.8	Rising	5.16	26.37	3
8/28/2009	1105	J	Downstream	North	During	1	Shallow	3.2	Rising	8.11	26.36	8
8/28/2009	1105	J	Downstream	North	During	2.2	Deep	3.2	Rising	6.24	26.75	4.4
8/28/2009	1140	L	Upstream	South	During	1	Shallow	4.4	Rising	9.98	25.49	3.1
8/28/2009	1140	L	Upstream	South	During	3.4	Deep	4.4	Rising	7.18	25.65	2.8
8/28/2009	1125	L	Downstream	North	During	1	Shallow	9.1	Rising	9.05	25.68	6.7
8/28/2009	1125	L	Downstream	North	During	3	Mid	9.1	Rising	4.53	25.53	19.6
8/28/2009	1125	L	Downstream	North	During	5	Mid	9.1	Rising	3.55	25.63	11.6
8/28/2009	1125	L	Downstream	North	During	8.1	Deep	9.1	Rising	2.62	25.5	10.6
8/28/2009	1400	L	Downstream	North	During	1	Shallow	7.4	Rising	9.52	24.9	2.8
8/28/2009	1400	L	Downstream	North	During	3	Mid	7.4	Rising	4.86	25.65	4.9
8/28/2009	1400	L	Downstream	North	During	5	Mid	7.4	Rising	3.65	25.57	4.8
8/28/2009	1400	L	Downstream	North	During	6.4	Deep	7.4	Rising	3.5	25.46	3.9
9/1/2009	1335	J	Upstream	South	During	1	Shallow	6.5	Rising	3.5	22.46	3.7
9/1/2009	1335	J	Upstream	South	During	3	Mid	6.5	Rising	1.52	22.78	1.1
9/1/2009	1335	J	Upstream	South	During	5.5	Deep	6.5	Rising	0.58	22.95	0.5
9/1/2009	1700	J	Upstream	South	During	1	Shallow	5.7	Rising	7.3	20.94	0.3
9/1/2009	1700	J	Upstream	South	During	3	Mid	5.7	Rising	2.48	22.83	1.3
9/1/2009	1700	J	Upstream	South	During	4.7	Deep	5.7	Rising	0.86	22.76	1.5
9/1/2009	1410	J	Downstream	North	During	1	Shallow	3.6	Rising	5.07	21.22	20.2
9/1/2009	1410	J	Downstream	North	During	2.6	Deep	3.6	Rising	1.69	22.56	49.2
9/1/2009	1715	J	Downstream	North	During	1	Shallow	5.5	Rising	6.87	21.19	1.5
9/1/2009	1715	J	Downstream	North	During	3	Mid	5.5	Rising	2.25	22.4	7.8
9/1/2009	1715	J	Downstream	North	During	4.5	Deep	5.5	Rising	1.2	22.55	9.1
9/2/2009	930	G	Upstream	North	During	1	Shallow	6.3	Falling	5.7	18.76	0.9
9/2/2009	930	G	Upstream	North	During	3	Mid	6.3	Falling	0.95	22.39	12.1
9/2/2009	930	G	Upstream	North	During	5.3	Deep	6.3	Falling	0.45	22.61	11.2
9/2/2009	950	G	Downstream	South	During	1	Shallow	3.9	Falling	4.43	19.91	0.9
9/2/2009	950	G	Downstream	South	During	2.9	Deep	3.9	Falling	0.85	22.57	7.1
9/2/2009	1230	L	Upstream	North	During	1	Shallow	7.2	Falling	5.07	23.49	1
9/2/2009	1230	L	Upstream	North	During	3	Mid	7.2	Falling	1.58	22.69	8.1
9/2/2009	1230	L	Upstream	North	During	6.2	Deep	7.2	Falling	0.97	22.82	43.5
9/2/2009	1510	L	Upstream	South	During	1	Shallow	3.9	Rising	4.88	23.57	0.5

Date	Time	Dredge Area	Location <sup>(1)</sup>	Direction <sup>(2)</sup>	Event <sup>(3)</sup>	Depth BWS (ft)	Depth (relative)	Total Depth BWS (ft)	Tide	DO (mg/L)	Temperature (°C)	Turbidity (NTU)
9/2/2009	1510	L	Upstream	South	During	2.9	Deep	3.9	Rising	4.02	23.48	2.8
9/2/2009	1215	L	Downstream	South	During	1	Shallow	3	Falling	5.08	23.26	0.2
9/2/2009	1215	L	Downstream	South	During	2	Deep	3	Falling	3.46	22.23	1.5
9/2/2009	1450	L	Downstream	North	During	1	Shallow	6.5	Rising	4.83	23.61	3.8
9/2/2009	1450	L	Downstream	North	During	3	Mid	6.5	Rising	3.2	23.35	3.7
9/2/2009	1450	L	Downstream	North	During	5.5	Deep	6.5	Rising	1.42	22.98	6.1
9/4/2009	1100	L	Upstream	North	During	1	Shallow	9.4	Falling	5.85	22.3	1
9/4/2009	1100	L	Upstream	North	During	3	Mid	9.4	Falling	1.85	22.73	0.5
9/4/2009	1100	L	Upstream	North	During	5	Mid	9.4	Falling	1.78	22.47	0.3
9/4/2009	1100	L	Upstream	North	During	8.4	Deep	9.4	Falling	2.1	22.31	0.3
9/4/2009	1110	L	Downstream	South	During	1	Shallow	3.7	Falling	5.56	22.32	15.2
9/4/2009	1110	L	Downstream	South	During	2.7	Deep	3.7	Falling	3.14	22.58	4.4
9/11/2009	830	L	Upstream	South	During	1	Shallow	3.5	Rising	4.31	20.25	3.8
9/11/2009	830	L	Upstream	South	During	2.5	Deep	3.5	Rising	4.33	20.39	1
9/11/2009	840	L	Downstream	North	During	1	Shallow	9.5	Rising	4.85	20.15	1.6
9/11/2009	840	L	Downstream	North	During	3	Mid	9.5	Rising	4.76	20.26	3
9/11/2009	840	L	Downstream	North	During	5	Mid	9.5	Rising	4.49	20.71	5
9/11/2009	840	L	Downstream	North	During	7	Mid	9.5	Rising	4.4	20.9	9.9
9/11/2009	840	L	Downstream	North	During	8.5	Deep	9.5	Rising	4.24	20.88	8.8
9/15/2009	1455	G	Upstream	South	During	1	Shallow	7.1	Rising	8.81	23.66	3.7
9/15/2009	1455	G	Upstream	South	During	3	Mid	7.1	Rising	5.41	21.49	1.2
9/15/2009	1455	G	Upstream	South	During	6.1	Deep	7.1	Rising	4.36	20.91	0
9/15/2009	1610	G	Downstream	North	During	1	Shallow	5	Rising	8.66	21.96	1.8
9/15/2009	1610	G	Downstream	North	During	4	Deep	5	Rising	5.64	22.25	1.4
9/15/2009	1455	L	Upstream	South	During	1	Shallow	7.1	Rising	8.81	23.66	3.7
9/15/2009	1455	L	Upstream	South	During	3	Mid	7.1	Rising	5.41	21.49	1.2
9/15/2009	1455	L	Upstream	South	During	6.1	Deep	7.1	Rising	4.36	20.91	0
9/15/2009	1510	L	Downstream	North	During	1	Shallow	6.4	Rising	9.11	24.3	2.9
9/15/2009	1510	L	Downstream	North	During	3	Mid	6.4	Rising	3.94	21.65	5.8
9/15/2009	1510	L	Downstream	North	During	5.4	Deep	6.4	Rising	2.82	21	5.7
9/16/2009	920	L	Upstream	North	During	1	Shallow	5.5	Falling	7.11	19.72	1.1
9/16/2009	920	L	Upstream	North	During	3	Mid	5.5	Falling	2.48	21.67	2.9
9/16/2009	920	L	Upstream	North	During	4.5	Deep	5.5	Falling	2.01	21.55	2.8

Date	Time	Dredge Area	Location <sup>(1)</sup>	Direction <sup>(2)</sup>	Event <sup>(3)</sup>	Depth BWS (ft)	Depth (relative)	Total Depth BWS (ft)	Tide	DO (mg/L)	Temperature (°C)	Turbidity (NTU)
9/16/2009	945	L	Downstream	South	During	1	Shallow	3.5	Falling	5.64	20.99	7.7
9/16/2009	945	L	Downstream	South	During	2.5	Deep	3.5	Falling	3.45	21.21	4.9
9/16/2009	920	G	Upstream	North	During	1	Shallow	5.5	Falling	7.11	19.72	1.1
9/16/2009	920	G	Upstream	North	During	3	Mid	5.5	Falling	2.48	21.67	2.9
9/16/2009	920	G	Upstream	North	During	4.5	Deep	5.5	Falling	2.01	21.55	2.8
9/16/2009	930	G	Downstream	South	During	1	Shallow	3.3	Falling	3.67	21.54	53.1
9/16/2009	930	G	Downstream	South	During	2.3	Deep	3.3	Falling	2.55	21.49	15.5
9/18/2009	1155	L	Upstream	North	During	1	Shallow	6.2	Falling	4.6	19.95	2
9/18/2009	1155	L	Upstream	North	During	3	Mid	6.2	Falling	4.56	20	2.2
9/18/2009	1155	L	Upstream	North	During	5.2	Deep	6.2	Falling	3.3	19.93	2.7
9/18/2009	1650	L	Upstream	South	During	1	Shallow	4.9	Rising	NM	20.74	0.6
9/18/2009	1650	L	Upstream	South	During	3	Mid	4.9	Rising	NM	20.74	0.2
9/18/2009	1650	L	Upstream	South	During	3.9	Deep	4.9	Rising	NM	20.66	0.9
9/18/2009	1210	L	Downstream	South	During	1	Shallow	3.2	Falling	6.67	20.11	2.7
9/18/2009	1210	L	Downstream	South	During	2.2	Deep	3.2	Falling	6.1	19.93	5.5
9/18/2009	1640	L	Downstream	North	During	1	Shallow	5.7	Rising	NM	20.88	25
9/18/2009	1640	L	Downstream	North	During	3	Mid	5.7	Rising	NM	20.69	5.8
9/18/2009	1640	L	Downstream	North	During	4.7	Deep	5.7	Rising	NM	20.54	5.9
9/22/2009	1435	J	Upstream	North	During	1	Shallow	2.1	Falling	NM	21.26	3.6
9/22/2009	1445	J	Downstream	South	During	1	Shallow	4.6	Falling	NM	21.35	5.8
9/22/2009	1445	J	Downstream	South	During	3.6	Deep	4.6	Falling	NM	20.51	20.1
9/22/2009	1620	J	Downstream	South	During	1	Shallow	3	Falling	9.85	21.51	7.5
9/22/2009	1620	J	Downstream	South	During	2	Deep	3	Falling	9.05	21.3	15.9
9/23/2009	1030	J	Upstream	South	During	1	Shallow	6.8	Rising	9.48	20.33	4.3
9/23/2009	1030	J	Upstream	South	During	3	Mid	6.8	Rising	7.55	20.29	2.9
9/23/2009	1030	J	Upstream	South	During	5.8	Deep	6.8	Rising	7.6	20.32	2.6
9/23/2009	1435	J	Upstream	North	During	1	Shallow	5.2	Falling	10.07	21.21	3.7
9/23/2009	1435	J	Upstream	North	During	3	Mid	5.2	Falling	7.89	20.43	7.7
9/23/2009	1435	J	Upstream	North	During	4.2	Deep	5.2	Falling	6.12	20.47	15
9/23/2009	1045	J	Downstream	North	During	1	Shallow	8.9	Rising	8.24	19.91	7.3
9/23/2009	1045	J	Downstream	North	During	3	Mid	8.9	Rising	6.74	20.32	12.3
9/23/2009	1045	J	Downstream	North	During	5	Mid	8.9	Rising	6.47	20.38	9.6
9/23/2009	1045	J	Downstream	North	During	7.9	Deep	8.9	Rising	5.56	20.55	2.4

Date	Time	Dredge Area	Location <sup>(1)</sup>	Direction <sup>(2)</sup>	Event <sup>(3)</sup>	Depth BWS (ft)	Depth (relative)	Total Depth BWS (ft)	Tide	DO (mg/L)	Temperature (°C)	Turbidity (NTU)
9/23/2009	1500	J	Downstream	South	During	1	Shallow	5.7	Falling	10.68	21.23	5.2
9/23/2009	1500	J	Downstream	South	During	3	Mid	5.7	Falling	9.07	20.91	5.9
9/23/2009	1500	J	Downstream	South	During	4.7	Deep	5.7	Falling	6.93	20.48	21.4
9/25/2009	1455	G	Upstream	North	During	1	Shallow	7.2	Falling	9.04	20.91	10.7
9/25/2009	1455	G	Upstream	North	During	3	Mid	7.2	Falling	6.42	20.68	7.5
9/25/2009	1455	G	Upstream	North	During	5	Mid	7.2	Falling	4.76	20.86	5.5
9/25/2009	1455	G	Upstream	North	During	6.2	Deep	7.2	Falling	3.9	21.08	6.8
9/25/2009	1515	G	Downstream	South	During	1	Shallow	3.7	Falling	7.22	20.79	14.9
9/25/2009	1515	G	Downstream	South	During	2.7	Deep	3.7	Falling	6.99	20.64	5.5
9/29/2009	1335	J	Upstream	South	During	1	Shallow	5	Rising	7.81	19.83	6
9/29/2009	1335	J	Upstream	South	During	3	Mid	5	Rising	7.69	19.91	4.1
9/29/2009	1335	J	Upstream	South	During	4	Deep	5	Rising	3.66	19.82	2.7
9/29/2009	1320	J	Downstream	North	During	1	Shallow	5.5	Rising	7.87	19.56	6.6
9/29/2009	1320	J	Downstream	North	During	3	Mid	5.5	Rising	7.81	19.61	13.1
9/29/2009	1320	J	Downstream	North	During	4.5	Deep	5.5	Rising	3.91	19.83	5.4
9/30/2009	1515	G	Upstream	South	During	1	Shallow	4.9	Rising	5.91	19.8	5.4
9/30/2009	1515	G	Upstream	South	During	3	Mid	4.9	Rising	NM	19.4	1.2
9/30/2009	1515	G	Upstream	South	During	3.9	Deep	4.9	Rising	NM	19.35	1.7
9/30/2009	1730	G	Downstream	North	During	1	Shallow	7.2	Rising	6.86	19.03	51.2
9/30/2009	1730	G	Downstream	North	During	3	Mid	7.2	Rising	5.97	19.91	6.6
9/30/2009	1730	G	Downstream	North	During	6.2	Deep	7.2	Rising	4.99	19.83	4.2
9/30/2009	1515	L	Upstream	South	During	1	Shallow	4.9	Rising	NM	19.8	5.4
9/30/2009	1515	L	Upstream	South	During	3	Mid	4.9	Rising	NM	19.4	1.2
9/30/2009	1515	L	Upstream	South	During	3.9	Deep	4.9	Rising	NM	19.35	1.7
9/30/2009	1530	L	Downstream	North	During	1	Shallow	9.5	Rising	NM	20.01	12.6
9/30/2009	1530	L	Downstream	North	During	3	Mid	9.5	Rising	NM	19.49	2.4
9/30/2009	1530	L	Downstream	North	During	5	Mid	9.5	Rising	NM	19.41	1.2
9/30/2009	1530	L	Downstream	North	During	7	Mid	9.5	Rising	NM	19.32	1.7
9/30/2009	1530	L	Downstream	North	During	8.5	Deep	9.5	Rising	NM	19.28	2.8
10/2/2009	1350	L	Upstream	South	During	1	Shallow	2.9	Rising	8.26	19.37	17.5
10/2/2009	1350	L	Upstream	South	During	1.9	Deep	2.9	Rising	7.11	18.91	22.5
10/2/2009	1335	L	Downstream	North	During	1	Shallow	8.2	Rising	9.91	20.12	13.9
10/2/2009	1335	L	Downstream	North	During	3	Mid	8.2	Rising	9.22	19.48	14.3

Date	Time	Dredge Area	Location <sup>(1)</sup>	Direction <sup>(2)</sup>	Event <sup>(3)</sup>	Depth BWS (ft)	Depth (relative)	Total Depth BWS (ft)	Tide	DO (mg/L)	Temperature (°C)	Turbidity (NTU)
10/2/2009	1335	L	Downstream	North	During	5	Mid	8.2	Rising	8.57	19.18	7.1
10/2/2009	1335	L	Downstream	North	During	7.2	Deep	8.2	Rising	7.06	18.94	4
10/2/2009	1010	G	Upstream	North	During	1	Shallow	3.6	Falling	4.95	19.42	6.9
10/2/2009	1010	G	Upstream	North	During	2.6	Deep	3.6	Falling	4.22	19.46	5.2
10/2/2009	1000	G	Downstream	South	During	1	Shallow	3.5	Falling	5.25	18.26	19.1
10/2/2009	1000	G	Downstream	South	During	2.5	Deep	3.5	Falling	5.08	18.99	24.7
10/6/2009	1400	L	Upstream	North	During	1	Shallow	5.7	Falling	12.39	19.61	4.2
10/6/2009	1400	L	Upstream	North	During	3	Mid	5.7	Falling	4.86	17.5	1.6
10/6/2009	1400	L	Upstream	North	During	4.7	Deep	5.7	Falling	5.22	17.78	2.6
10/6/2009	1350	L	Downstream	South	During	1	Shallow	4.3	Falling	6.87	18.44	41.6
10/6/2009	1350	L	Downstream	South	During	3.3	Deep	4.3	Falling	5.19	17.69	4.1
10/6/2009	1615	J	Upstream	South	During	1	Shallow	5.8	Rising	9.02	19.21	4.3
10/6/2009	1615	J	Upstream	South	During	3	Mid	5.8	Rising	3.88	17.94	4.3
10/6/2009	1615	J	Upstream	South	During	4.8	Deep	5.8	Rising	3.8	17.88	3.9
10/6/2009	1640	J	Downstream	North	During	1	Shallow	5.6	Rising	8.49	18.68	11.1
10/6/2009	1640	J	Downstream	North	During	3	Mid	5.6	Rising	3.58	17.99	5.6
10/6/2009	1640	J	Downstream	North	During	4.6	Deep	5.6	Rising	3.45	17.86	1.2
10/7/2009	1540	J	Upstream	North	During	1	Shallow	5.9	Falling	6.79	17.29	12.5
10/7/2009	1540	J	Upstream	North	During	3	Mid	5.9	Falling	3.4	17.56	8.7
10/7/2009	1540	J	Upstream	North	During	4.9	Deep	5.9	Falling	3.14	17.6	12.6
10/7/2009	1555	J	Downstream	South	During	1	Shallow	4	Falling	8.21	17.62	8.3
10/7/2009	1555	J	Downstream	South	During	3	Deep	4	Falling	4.95	17.43	5
10/9/2009	1125	L	Upstream	South	During	1	Shallow	8.7	Rising	7.86	16.7	0.6
10/9/2009	1125	L	Upstream	South	During	3	Mid	8.7	Rising	7.22	16.78	0.9
10/9/2009	1125	L	Upstream	South	During	5	Mid	8.7	Rising	7.15	16.76	0.8
10/9/2009	1125	L	Upstream	South	During	7.7	Deep	8.7	Rising	6.82	16.79	0.8
10/9/2009	1145	L	Downstream	North	During	1	Shallow	9.8	Rising	7.93	16.76	2.2
10/9/2009	1145	L	Downstream	North	During	3	Mid	9.8	Rising	7.21	16.69	4.5
10/9/2009	1145	L	Downstream	North	During	5	Mid	9.8	Rising	6.67	16.85	3.2
10/9/2009	1145	L	Downstream	North	During	8.8	Deep	9.8	Rising	6.29	16.88	1.6
10/9/2009	1505	G	Upstream	North	During	1	Shallow	5.2	Falling	10.6	14.11	1
10/9/2009	1505	G	Upstream	North	During	3	Mid	5.2	Falling	8.17	16.58	9
10/9/2009	1505	G	Upstream	North	During	4.2	Deep	5.2	Falling	4.87	17	4.5

Date	Time	Dredge Area	Location <sup>(1)</sup>	Direction <sup>(2)</sup>	Event <sup>(3)</sup>	Depth BWS (ft)	Depth (relative)	Total Depth BWS (ft)	Tide	DO (mg/L)	Temperature (°C)	Turbidity (NTU)
10/9/2009	1535	G	Downstream	South	During	1	Shallow	5.5	Falling	11.32	15.34	5.9
10/9/2009	1535	G	Downstream	South	During	3	Mid	5.5	Falling	8.75	16.39	4.1
10/9/2009	1535	G	Downstream	South	During	4.5	Deep	5.5	Falling	5.79	16.85	7.9
10/12/2009	1545	J	Upstream	North	During	1	Shallow	6.2	Falling	18.66	17.26	6.8
10/12/2009	1545	J	Upstream	North	During	3	Mid	6.2	Falling	17.94	16.91	4.6
10/12/2009	1545	J	Upstream	North	During	5.2	Deep	6.2	Falling	12.23	16.44	7.1
10/12/2009	1600	J	Downstream	South	During	1	Shallow	7.7	Falling	21.6	16.48	4.5
10/12/2009	1600	J	Downstream	South	During	3	Mid	7.7	Falling	19.95	16.48	3.4
10/12/2009	1600	J	Downstream	South	During	5	Mid	7.7	Falling	15.3	16.12	2.4
10/12/2009	1600	J	Downstream	South	During	6.7	Deep	7.7	Falling	12.59	16.09	2.9
10/14/2009	1545	L	Upstream	South	During	1	Shallow	8.5	Rising	8.14	14.57	1.9
10/14/2009	1545	L	Upstream	South	During	3	Mid	8.5	Rising	7.27	14.6	1.8
10/14/2009	1545	L	Upstream	South	During	5	Mid	8.5	Rising	5.7	14.74	0.9
10/14/2009	1545	L	Upstream	South	During	7.5	Deep	8.5	Rising	5.46	14.74	1.3
10/14/2009	1530	L	Downstream	North	During	1	Shallow	8	Rising	11.72	14.69	5.5
10/14/2009	1530	L	Downstream	North	During	3	Mid	8	Rising	9.64	14.63	4.8
10/14/2009	1530	L	Downstream	North	During	5	Mid	8	Rising	6.98	14.49	30.1
10/14/2009	1530	L	Downstream	North	During	7	Deep	8	Rising	6.22	14.46	20.9
10/20/2009	1210	G	Upstream	North	During	1	Shallow	5.9	Falling	7.45	9.03	1.2
10/20/2009	1210	G	Upstream	North	During	3	Mid	5.9	Falling	7.09	11.38	2.8
10/20/2009	1210	G	Upstream	North	During	4.9	Deep	5.9	Falling	6.75	11.53	3.1
10/20/2009	1140	G	Downstream	South	During	1	Shallow	8.9	Falling	10.9	10.45	10.9
10/20/2009	1140	G	Downstream	South	During	3	Mid	8.9	Falling	9.82	11.29	12.4
10/20/2009	1140	G	Downstream	South	During	5	Mid	8.9	Falling	8.25	11.51	6
10/20/2009	1140	G	Downstream	South	During	7.9	Deep	8.9	Falling	7.82	11.6	5.5
10/21/2009	1545	L	Upstream	North	During	1	Shallow	5.9	Falling	10.01	14.69	4.2
10/21/2009	1545	L	Upstream	North	During	3	Mid	5.9	Falling	9.09	12.69	6.1
10/21/2009	1545	L	Upstream	North	During	4.9	Deep	5.9	Falling	8.42	11.98	8.7
10/21/2009	1535	L	Downstream	South	During	1	Shallow	4	Falling	10.61	14.83	1.7
10/21/2009	1535	L	Downstream	South	During	3	Deep	4	Falling	10.71	14.07	7.8
10/21/2009	1705	J	Upstream	South	During	1	Shallow	4	Rising	10.38	14.28	4
10/21/2009	1705	J	Upstream	South	During	3	Deep	4	Rising	10.54	14.8	39.3
10/21/2009	1715	J	Downstream	North	During	1	Shallow	4	Rising	11.99	13.35	2.9

Date	Time	Dredge Area	Location <sup>(1)</sup>	Direction <sup>(2)</sup>	Event <sup>(3)</sup>	Depth BWS (ft)	Depth (relative)	Total Depth BWS (ft)	Tide	DO (mg/L)	Temperature (°C)	Turbidity (NTU)
10/21/2009	1715	J	Downstream	North	During	3	Deep	4	Rising	16.38	12.26	6.7
10/27/2009	1225	G	Upstream	South	During	1	Shallow	5.6	Rising	8.83	12.8	3.6
10/27/2009	1225	G	Upstream	South	During	3	Mid	5.6	Rising	8.27	13.42	1
10/27/2009	1225	G	Upstream	South	During	4.6	Deep	5.6	Rising	6.76	13.67	6.1
10/27/2009	1210	G	Downstream	North	During	1	Shallow	5.8	Rising	8.38	10.92	1.5
10/27/2009	1210	G	Downstream	North	During	3	Mid	5.8	Rising	5.35	13.94	2.7
10/27/2009	1210	G	Downstream	North	During	4.8	Deep	5.8	Rising	4.27	13.86	18
10/27/2009	1510	G	Downstream	North	During	1	Shallow	7.1	Rising	9.18	10.31	1.6
10/27/2009	1510	G	Downstream	North	During	3	Mid	7.1	Rising	8.05	11.44	75.5
10/27/2009	1510	G	Downstream	North	During	6.1	Deep	7.1	Rising	4.76	13.78	13.1
10/28/2009	1540	G	Upstream	South	During	1	Shallow	7.5	Rising	7.47	12.75	4.6
10/28/2009	1540	G	Upstream	South	During	3	Mid	7.5	Rising	7.14	12.74	2.6
10/28/2009	1540	G	Upstream	South	During	6.5	Deep	7.5	Rising	6.51	12.74	4.5
10/28/2009	1455	G	Downstream	North	During	1	Shallow	7	Rising	7.47	11.88	2.6
10/28/2009	1455	G	Downstream	North	During	3	Mid	7	Rising	5.05	13.18	4.1
10/28/2009	1455	G	Downstream	North	During	6	Deep	7	Rising	5	13.17	4.1
10/28/2009	1540	J	Upstream	South	During	1	Shallow	7.5	Rising	7.47	12.75	4.6
10/28/2009	1540	J	Upstream	South	During	3	Mid	7.5	Rising	7.14	12.74	2.6
10/28/2009	1540	J	Upstream	South	During	6.5	Deep	7.5	Rising	6.51	12.74	4.5
10/28/2009	1520	J	Downstream	North	During	1	Shallow	7.8	Rising	7.35	12.59	5.1
10/28/2009	1520	J	Downstream	North	During	3	Mid	7.8	Rising	6.59	12.79	24
10/28/2009	1520	J	Downstream	North	During	5	Mid	7.8	Rising	6.46	12.84	10.5
10/28/2009	1520	J	Downstream	North	During	6.8	Deep	7.8	Rising	6.39	12.87	5.4
10/30/2009	1550	G	Upstream	South	During	1	Shallow	5	Rising	8.35	13.17	4.7
10/30/2009	1550	G	Upstream	South	During	3	Mid	5	Rising	8.31	12.51	2.5
10/30/2009	1550	G	Upstream	South	During	4	Deep	5	Rising	6.12	12.33	2.5
10/30/2009	1625	G	Downstream	North	During	1	Shallow	6	Rising	8.81	11.17	4.8
10/30/2009	1625	G	Downstream	North	During	3	Mid	6	Rising	8.1	12.6	45.1
10/30/2009	1625	G	Downstream	North	During	5	Deep	6	Rising	5.22	12.48	18.1
11/3/2009	1405	J	Upstream	South	During	1	Shallow	5.1	Rising	7.68	13.42	12.5
11/3/2009	1405	J	Upstream	South	During	3	Mid	5.1	Rising	7.1	12.8	2.6
11/3/2009	1405	J	Upstream	South	During	4.1	Deep	5.1	Rising	7.07	12.79	2.3
11/3/2009	1350	J	Downstream	North	During	1	Shallow	6	Rising	7.59	13.39	30.6

Date	Time	Dredge Area	Location <sup>(1)</sup>	Direction <sup>(2)</sup>	Event <sup>(3)</sup>	Depth BWS (ft)	Depth (relative)	Total Depth BWS (ft)	Tide	DO (mg/L)	Temperature (°C)	Turbidity (NTU)
11/3/2009	1350	J	Downstream	North	During	3	Mid	6	Rising	7.42	12.85	27.3
11/3/2009	1350	J	Downstream	North	During	5	Deep	6	Rising	7.21	12.81	24.2
11/4/2009	745	G	Upstream	South	During	1	Shallow	5.9	Rising	7.5	11.68	8.9
11/4/2009	745	G	Upstream	South	During	3	Mid	5.9	Rising	7.1	12.31	2.6
11/4/2009	745	G	Upstream	South	During	4.9	Deep	5.9	Rising	6.8	12.6	1.5
11/4/2009	720	G	Downstream	North	During	1	Shallow	6	Rising	8.44	10.23	10.1
11/4/2009	720	G	Downstream	North	During	3	Mid	6	Rising	6.45	12.36	34.7
11/4/2009	720	G	Downstream	North	During	5	Deep	6	Rising	6.47	12.7	16.9
11/4/2009	1525	J	Upstream	South	During	1	Shallow	6.9	Rising	6.47	13.06	7.1
11/4/2009	1525	J	Upstream	South	During	3	Mid	6.9	Rising	6.29	12.84	5.1
11/4/2009	1525	J	Upstream	South	During	5.9	Deep	6.9	Rising	6.08	12.79	4.8
11/4/2009	1625	J	Downstream	North	During	1	Shallow	5.5	Rising	6.94	13.08	11.9
11/4/2009	1625	J	Downstream	North	During	3	Mid	5.5	Rising	6.84	12.76	16.5
11/4/2009	1625	J	Downstream	North	During	4.5	Deep	5.5	Rising	6.67	12.76	19
11/6/2009	1105	G	Upstream	North	During	1	Shallow	7.3	Falling	7.62	10.3	2
11/6/2009	1105	G	Upstream	North	During	3	Mid	7.3	Falling	5.85	11.64	6.7
11/6/2009	1105	G	Upstream	North	During	6.3	Deep	7.3	Falling	5.83	11.63	8
11/6/2009	1045	G	Downstream	South	During	1	Shallow	7.2	Falling	6.19	11.34	8
11/6/2009	1045	G	Downstream	South	During	3	Mid	7.2	Falling	6.03	11.33	9
11/6/2009	1045	G	Downstream	South	During	6.2	Deep	7.2	Falling	6.04	11.32	6.4
11/6/2009	1105	J	Upstream	North	During	1	Shallow	7.3	Falling	7.62	10.3	2
11/6/2009	1105	J	Upstream	North	During	3	Mid	7.3	Falling	5.85	11.64	6.7
11/6/2009	1105	J	Upstream	North	During	6.3	Deep	7.3	Falling	5.83	11.63	8
11/6/2009	1030	J	Downstream	South	During	1	Shallow	8.1	Falling	7.15	10.92	5.3
11/6/2009	1030	J	Downstream	South	During	3	Mid	8.1	Falling	6.87	11	5
11/6/2009	1030	J	Downstream	South	During	5	Mid	8.1	Falling	6.78	11.17	2
11/6/2009	1030	J	Downstream	South	During	7.1	Deep	8.1	Falling	6.69	11.2	1.6
11/10/2009	1445	J	Upstream	North	During	1	Shallow	5.8	Falling	6.95	11.64	6.6
11/10/2009	1445	J	Upstream	North	During	3	Mid	5.8	Falling	6.91	11.72	9.8
11/10/2009	1445	J	Upstream	North	During	4.8	Deep	5.8	Falling	6.6	11.74	5.5
11/10/2009	1520	J	Downstream	South	During	1	Shallow	6.7	Falling	7.13	11.92	47.3
11/10/2009	1520	J	Downstream	South	During	3	Mid	6.7	Falling	7.01	11.73	7.2
11/10/2009	1520	J	Downstream	South	During	5.7	Deep	6.7	Falling	7.04	11.65	7.8

Date	Time	Dredge Area	Location <sup>(1)</sup>	Direction <sup>(2)</sup>	Event <sup>(3)</sup>	Depth BWS (ft)	Depth (relative)	Total Depth BWS (ft)	Tide	DO (mg/L)	Temperature (°C)	Turbidity (NTU)
11/10/2009	1445	G	Upstream	North	During	1	Shallow	5.8	Falling	6.95	11.64	6.6
11/10/2009	1445	G	Upstream	North	During	3	Mid	5.8	Falling	6.91	11.72	9.8
11/10/2009	1445	G	Upstream	North	During	4.8	Deep	5.8	Falling	6.6	11.74	5.5
11/10/2009	1500	G	Downstream	South	During	1	Shallow	6.7	Falling	6.7	11.75	19.8
11/10/2009	1500	G	Downstream	South	During	3	Mid	6.7	Falling	6.44	11.75	8.4
11/10/2009	1500	G	Downstream	South	During	5.7	Deep	6.7	Falling	6.65	11.71	8.8
11/11/2009	1650	G	Upstream	North	During	1	Shallow	5.9	Falling	7.57	10.64	2
11/11/2009	1650	G	Upstream	North	During	3	Mid	5.9	Falling	6.82	11.9	6
11/11/2009	1650	G	Upstream	North	During	4.9	Deep	5.9	Falling	6.01	11.99	5.1
11/11/2009	1705	G	Downstream	South	During	1	Shallow	5.2	Falling	7.81	10.97	10.1
11/11/2009	1705	G	Downstream	South	During	4.2	Deep	5.2	Falling	7.4	11.44	9.1
11/17/2009	1505	J	Upstream	South	During	1	Shallow	3.1	Rising	9.66	11.4	3.2
11/17/2009	1505	J	Upstream	South	During	2.1	Deep	3.1	Rising	8.42	11.7	1.6
11/17/2009	1515	J	Downstream	North	During	1	Shallow	4	Rising	8.96	11.49	7
11/17/2009	1515	J	Downstream	North	During	3	Deep	4	Rising	8.23	11.49	15
11/18/2009	1145	J	Upstream	North	During	1	Shallow	4.9	Falling	10.49	9.48	1.2
11/18/2009	1145	J	Upstream	North	During	3.9	Deep	4.9	Falling	7.7	11.41	0.3
11/18/2009	1200	J	Downstream	South	During	1	Shallow	6	Falling	7.82	11.42	2.8
11/18/2009	1200	J	Downstream	South	During	3	Mid	6	Falling	7.76	11.17	10.7
11/18/2009	1200	J	Downstream	South	During	5	Deep	6	Falling	7.81	11.12	12.6
11/18/2009	1145	G	Upstream	North	During	1	Shallow	4.9	Falling	10.49	9.48	1.2
11/18/2009	1145	G	Upstream	North	During	3.9	Deep	4.9	Falling	7.7	11.41	0.3
11/18/2009	1130	G	Downstream	South	During	1	Shallow	3.1	Falling	8.87	11.12	46.3
11/18/2009	1130	G	Downstream	South	During	2.1	Deep	3.1	Falling	8.6	11.25	14.4
11/20/2009	1410	J	Upstream	North	During	1	Shallow	3.7	Falling	10.91	13.01	4.1
11/20/2009	1410	J	Upstream	North	During	2.7	Deep	3.7	Falling	6.61	11.64	3.9
11/20/2009	1435	J	Downstream	South	During	1	Shallow	7.3	Falling	9.19	13.06	3.5
11/20/2009	1435	J	Downstream	South	During	3	Mid	7.3	Falling	6.49	11.69	9.8
11/20/2009	1435	J	Downstream	South	During	5.3	Deep	7.3	Falling	5.89	11.6	5.8
12/1/2009	1100	L	Upstream	North	During	1	Shallow	5.7	Falling	7.18	9.61	-1.1
12/1/2009	1100	L	Upstream	North	During	3	Mid	5.7	Falling	8.08	9.64	-0.9
12/1/2009	1100	L	Upstream	North	During	4.7	Deep	5.7	Falling	7.98	9.62	0.1
12/1/2009	1600	L	Upstream	South	During	1	Shallow	8.2	Rising	8.05	8.88	0.2

Date	Time	Dredge Area	Location <sup>(1)</sup>	Direction <sup>(2)</sup>	Event <sup>(3)</sup>	Depth BWS (ft)	Depth (relative)	Total Depth BWS (ft)	Tide	DO (mg/L)	Temperature (°C)	Turbidity (NTU)
12/1/2009	1600	L	Upstream	South	During	3	Mid	8.2	Rising	7.8	9.76	1.1
12/1/2009	1600	L	Upstream	South	During	5	Mid	8.2	Rising	7.53	9.8	2.1
12/1/2009	1600	L	Upstream	South	During	7.2	Deep	8.2	Rising	7.54	9.69	12.9
12/1/2009	1110	L	Downstream	South	During	1	Shallow	7.3	Falling	7.26	9.55	4.9
12/1/2009	1110	L	Downstream	South	During	3	Mid	7.3	Falling	7.18	9.59	0.6
12/1/2009	1110	L	Downstream	South	During	6.3	Deep	7.3	Falling	7.09	9.55	-0.1
12/1/2009	1610	L	Downstream	North	During	1	Shallow	8.1	Rising	8.25	9.06	0.7
12/1/2009	1610	L	Downstream	North	During	3	Mid	8.1	Rising	8.06	9.7	1.7
12/1/2009	1610	L	Downstream	North	During	5	Mid	8.1	Rising	7.83	9.86	6.4
12/1/2009	1610	L	Downstream	North	During	7.1	Deep	8.1	Rising	7.51	9.86	6.4

Notes:

BWS = below water surface

DO = dissolved oxygen

ft = feet

mg/L = milligrams per liter

NTU = nephelometric turbidity units

NM = not measured

°C = degrees celsius

<sup>(1)</sup>Location - Upstream or downstream of dredging activity relative to tidal flow.

<sup>(2)</sup> Direction - Orientation of sample position relative to dredge area.

<sup>(3)</sup> Event during or after active dredging within the day

### ATTACHMENT J

### **2009 Lessons Learned**

# CBI

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