

Appendix C

Total Suspended Solids and Turbidity Analytical Data

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ANALYTICAL REPORT

Prepared for:

Battelle

Duxbury Operations

397 Washington Street

Duxbury, MA 02332

Project: New Bedford Harbor

ETR: 0806024

Report Date: June 16, 2008

Certifications and Accreditations

Massachusetts M-MA030

Connecticut PH-0141

New Hampshire 2206

Rhode Island LAO00289

New Jersey MA015

Maine MA0030

New York 11627

Louisiana 03090

Florida E87814

Pennsylvania 68-02089

Army Corps of Engineers

Department of the Navy

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CASE NARRATIVE

Alpha Analytical

ETR: 0806024

Project: New Bedford Harbor

All analyses were performed according to Alpha Analytical quality assurance program and documented Standard Operating Procedures (SOPs). The analytical results contained in this report were performed within holding time, and with appropriate quality control measures, except where noted. All soil/sediment results are reported on a dry weight basis unless otherwise noted. A summary of all state and federal accreditations is provided within this report. Blank correction of results is not performed in the laboratory for any parameter. Alpha Analytical certifies that the test results within meet all of the requirements of NELAC, for all NELAC accredited parameters.

The enclosed results of analyses are representative of the samples as received by the laboratory. Alpha Analytical makes no representations or certifications as to the method of sample collection, sample identification, or transporting/handling procedures used prior to the receipt of samples by Alpha Analytical. To the best of my knowledge, the information contained in this report is accurate and complete. For any questions regarding this report, please contact the signatory below at 508-822-9300.

Approved by: Nancy a Rose Title: Project Manager Date: 6/16/08
Nancy Rose Project Manager

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Sample ID Cross Reference



Client: **Battelle**
Project: **New Bedford Harbor**

Lab Code: **MA00030**
ETR: **0806024**

Lab Sample ID	Client Sample ID
<u>0806024-01</u>	<u>WQ-TUR/TSS-001-060508</u>
<u>0806024-02</u>	<u>WQ-TUR/TSS-002-060508</u>
<u>0806024-03</u>	<u>WQ-TUR/TSS-003-060508</u>
<u>0806024-04</u>	<u>WQ-TUR/TSS-004-060508</u>
<u>0806024-05</u>	<u>WQ-TUR/TSS-005-060508</u>
<u>0806024-06</u>	<u>WQ-TUR/TSS-006-060508</u>

Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-TUR/TSS-001-060508**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0806024**
Lab ID: **0806024-01**
Date Collected: **06/05/08**
Date Received: **06/05/08**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	7.30		1.00	1	06/12/08	mg/L	160.2	NAR
Turbidity - 180.1	1.62		0.400	1	06/05/08	NTU	180.1	ES

N/A - Not Applicable

Duplicate Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-TUR/TSS-001-060508**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0806024**
Lab ID: **0806024-01 D**
Date Collected: **06/05/08**
Date Received: **06/05/08**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	8.00		1.00	1	06/12/08	mg/L	160.2	NAR

TSS Duplicate Report not included
with lab submission.
Original sample = 7.3 mg/L (pg 4 of 21)
Duplicate = 8.0 mg/L (pg 5 of 21)
RPD = 9.2%
DTDahlen 2/6/09

N/A - Not Applicable

Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-TUR/TSS-002-060508**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0806024**
Lab ID: **0806024-02**
Date Collected: **06/05/08**
Date Received: **06/05/08**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	15.4		1.00	1	06/12/08	mg/L	160.2	NAR
Turbidity - 180.1	1.92		0.400	1	06/05/08	NTU	180.1	ES

N/A - Not Applicable

Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-TUR/TSS-003-060508**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0806024**
Lab ID: **0806024-03**
Date Collected: **06/05/08**
Date Received: **06/05/08**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	5.10		1.00	1	06/12/08	mg/L	160.2	NAR
Turbidity - 180.1	1.68		0.400	1	06/05/08	NTU	180.1	ES

N/A - Not Applicable

Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-TUR/TSS-004-060508**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0806024**
Lab ID: **0806024-04**
Date Collected: **06/05/08**
Date Received: **06/05/08**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	6.10		1.00	1	06/12/08	mg/L	160.2	NAR
Turbidity - 180.1	1.45		0.400	1	06/05/08	NTU	180.1	ES

N/A - Not Applicable

Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-TUR/TSS-005-060508**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0806024**
Lab ID: **0806024-05**
Date Collected: **06/05/08**
Date Received: **06/05/08**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	13.5		1.00	1	06/12/08	mg/L	160.2	NAR
Turbidity - 180.1	1.60		0.400	1	06/05/08	NTU	180.1	ES

N/A - Not Applicable

Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-TUR/TSS-006-060508**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0806024**
Lab ID: **0806024-06**
Date Collected: **06/05/08**
Date Received: **06/05/08**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	5.60		1.00	1	06/12/08	mg/L	160.2	NAR
Turbidity - 180.1	1.52		0.400	1	06/05/08	NTU	180.1	ES

N/A - Not Applicable

Duplicate Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-TUR/TSS-006-060508**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0806024**
Lab ID: **0806024-06 D**
Date Collected: **06/05/08**
Date Received: **06/05/08**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
Turbidity - 180.1	1.62		0.400	1	06/05/08	NTU	180.1	ES

N/A - Not Applicable

Blank Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **Blank**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0806024**
Lab ID: **WW061208B16**
Date Collected: **N/A**
Date Received: **N/A**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
Turbidity - 180.1	0.400	U	0.400	1	06/05/08	NTU	180.1	ES

N/A - Not Applicable

U - The analyte was analyzed for but not detected at the sample specific level reported.

Blank Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **Blank**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0806024**
Lab ID: **WW061208B18**
Date Collected: **N/A**
Date Received: **N/A**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	1.00	U	1.00	1	06/12/08	mg/L	160.2	NAR

N/A - Not Applicable

U - The analyte was analyzed for but not detected at the sample specific level reported.

Laboratory Control Sample Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **Laboratory Control Sample**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0806024**
Lab ID: **WW061208L01**
Date Collected: **N/A**
Date Received: **N/A**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
Turbidity - 180.1	19.1	S	0.400	1	06/05/08	NTU	180.1	ES

N/A - Not Applicable
S - Spike compound.

Laboratory Control Sample Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **Laboratory Control Sample**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0806024**
Lab ID: **WW061208L02**
Date Collected: **N/A**
Date Received: **N/A**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	425	S	1.00	1	06/12/08	mg/L	160.2	NAR

N/A - Not Applicable
S - Spike compound.

Duplicate Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-TUR/TSS-006-060508**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0806024**
Lab ID: **0806024-06 D**
Date Collected: **06/05/08**
Date Received: **06/05/08**

Parameter	Sample Result	Duplicate Result	Unit	Percent RPD	RPD Limit
Turbidity - 180.1	1.52	1.62	NTU	6	20

N/A - Not Applicable

Concentrations reported as calculated values, which includes rounding for significant figures. RPD values are reported based on the unrounded calculated result.

Laboratory Control Sample Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **Laboratory Control Sample**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0806024**
Lab ID: **WW061208L01**
Date Collected: **N/A**
Date Received: **N/A**

Parameter	Conc.	% Recovery	% Recovery Limits
Turbidity - 180.1	19.1	96	80-120

N/A - Not Applicable

Concentrations reported as calculated values, which includes rounding for significant figures. Percent recoveries and RPD values are calculated from the unrounded results.

Laboratory Control Sample Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **Laboratory Control Sample**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0806024**
Lab ID: **WW061208L02**
Date Collected: **N/A**
Date Received: **N/A**

Parameter	Conc.	% Recovery	% Recovery Limits
TSS - Membrane	425	85	80-120

N/A - Not Applicable

Concentrations reported as calculated values, which includes rounding for significant figures. Percent recoveries and RPD values are calculated from the unrounded results.

Sample Receipt Checklist

Client: <u>BATDUX</u>	Receipt Date: <u>6/5/08</u>
Project: <u>New Bedford</u>	Log-in Date: <u>7</u>
ETR #: <u>0806024</u>	Inspection by: <u>W</u> Login by: <u>h</u>

ALL SECTIONS BELOW MUST BE COMPLETED

Comments / Notes

Were samples shipped? Yes, FedEx / UPS / Other: _____ No, Alpha Analytical Courier pick-up <u>Hand delivered</u>	Sample storage refrigerator #: <u>12</u>
Is bill of lading retained? Yes, Tracking #: _____ No, Unavailable / <u>NA</u>	Sample storage freezer #: _____
Number of coolers received for this project delivery: <u>2</u>	Cooler 2: <u>3°/3°</u> Cooler 3: _____
Indicate cooler temperature upon opening (if multiple coolers, record <u>all</u> temps): Note: If <u>all</u> coolers are 2-6°C, use one checklist, if NOT, use separate checklists and note <u>all</u> samples received <u>above</u> 6°C.	Cooler 4: _____ Cooler 5: _____
Cooler 1: Temperature(s) taken from: <u>3°</u> IR Gun, (Circle one) SN 460647143 or 94031 <u>3°</u> Temp. Blank, / NA	Cooler 6: _____ Cooler 7: _____
Were samples received on ice? <u>Yes</u> / No	More: _____
Chain-of-Custody present? <u>Yes</u> / No Complete? <u>Yes</u> / No	
Custody seals present on Cooler? Yes / <u>No</u> on Bottles? Yes / <u>No</u> Intact? Yes / No / <u>NA</u>	
Note: Affix custody seals to back of this page.	
Were sample containers intact? <u>Yes</u> / No If No, list samples: →	
Did VOA/VPH waters contain headspace (>5mm)? Yes / No / <u>NA</u> If Yes, list samples: →	
Were 5035 VOA soils, or VPH soils, covered with MeOH? Yes / No / <u>NA</u> If No, list samples: →	
Was a sufficient amount of sample received for each test indicated on the COC? <u>Yes</u> / No If No, list samples: →	
If chemical preservation is appropriate - Were samples field preserved? Yes / No / <u>NA</u> <input type="checkbox"/> C=HCl <input type="checkbox"/> M=MeOH <input type="checkbox"/> S=H ₂ SO ₄ <input type="checkbox"/> H=NaOH <input type="checkbox"/> N=HNO ₃ <input type="checkbox"/> Other: _____ <input type="checkbox"/> U= Unknown	Chemical preservation OK for ALL samples? Yes / No / <u>NA</u> If No, list samples below:
Preservation (pH) verified at lab for <u>EVERY</u> bottle? (Not: VOA / VPH / Sulfide) YES: <2 or >12 (CN) or NO <u>NA</u> If No, why?:	
Were samples received within hold time? <u>Yes</u> / No If No, list samples: →	
Discrepancy between samples rec'd & COC? Yes / <u>No</u> If Yes, list samples: →	
Was the Project Manager notified of any other problems? Yes / No / NA	
Project Manager Acknowledgement: _____ Date: _____	Please use back for any additional notes!

Battelle

The Business of Innovation

Chain of Custody

397 Washington Street
Duxbury, MA 02332
Phone: 781-952-5200
Fax: 781-934-2124

0806024

Proj. No
G606422

Proj. Name
New Bedford Harbor

SAMPLERS: Signature
Mike Walsh

Matt Kozpatrick

DATE	TIME	BATTLELLE ID	CLIENT ID	SAMPLE DESCRIPTION	ANALYSIS REQUESTED "NUMBER OF CONTAINERS"	PEST	PCB	TPH FINGERPRINT	PAH	VOA	TBT	METALS TSS	OTHER TSS	ACIDIFIED	PRESERVED	Total Number of Containers
6/5/08	0933	WA-TUR-001-060508		Center of Dredge area Flood Tide (2.2)	NTU											
	0957	-001-060508		300' North (.8 NTU)												
	1007	-003-060508		600' North (1.0 NTU)												
	1120	-004-060508		Center of Dredge area ebb tide (3.2 NTU)												
	1135	-005-060508		300' South (.9 NTU)												
	1150	-006-060508		600' South (9 NTU)												
	0933	WA-TSS-001-060508		Center of Dredge area Flood Tide (2.2 NTU)												
	0957	-002-060508		300' North (.8 NTU)												
	1007	-003-060508		600' North (1.0 NTU)												
	1120	-004-060508		Center of Dredge area ebb tide (3.2 NTU)												
	1135	-005-060508		300' South (.9 NTU)												
	1150	-006-060508		600' South (9 NTU)												

Relinquished by: **Mike Walsh** Date/Time: **6/5/08 1450**

Received by: *[Signature]* Date/Time: **6/5/08 1450**

Relinquished by: _____ Date/Time: _____

Received by: _____ Date/Time: _____

Comments:

Baseline water quality samples



ANALYTICAL REPORT

Prepared for:
Battelle
Duxbury Operations
397 Washington Street
Duxbury, MA 02332

Project: New Bedford Harbor
ETR: 0808106
Report Date: August 26, 2008

Certifications and Accreditations

Massachusetts M-MA030
Connecticut PH-0141
New Hampshire 2206
Rhode Island LAO00289
New Jersey MA015
Maine MA0030
New York 11627
Louisiana 03090
Florida E87814
Pennsylvania 68-02089
Army Corps of Engineers
Department of the Navy

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Sample ID Cross Reference

Client: **Battelle**
Project: **New Bedford Harbor**

Lab Code: **MA00030**
ETR: **0808106**



Lab Sample ID	Client Sample ID
0808106-01	WQ-01-082108
0808106-02	WQ-02-082108
0808106-03	WQ-03-082108

CASE NARRATIVE

Alpha Analytical

ETR: 0808106

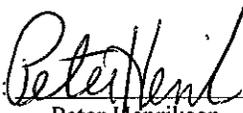
Project: New Bedford Harbor Project

All analyses were performed according to Alpha Analytical quality assurance program and documented Standard Operating Procedures (SOPs). The analytical results contained in this report were performed within holding time, and with appropriate quality control measures, except where noted. All soil/sediment results are reported on a dry weight basis unless otherwise noted. A summary of all state and federal accreditations is provided within this report. Blank correction of results is not performed in the laboratory for any parameter. Alpha Analytical certifies that the test results within meet all of the requirements of NELAC, for all NELAC accredited parameters.

Wet Chemistry:

No problems were encountered during the analysis of TSS and Turbidity

The enclosed results of analyses are representative of the samples as received by the laboratory. Alpha Analytical makes no representations or certifications as to the method of sample collection, sample identification, or transporting/handling procedures used prior to the receipt of samples by Alpha Analytical. To the best of my knowledge, the information contained in this report is accurate and complete. For any questions regarding this report, please contact the signatory below at 508-822-9300.

Approved by:  _____ Title: Project Manager Date: 8/26/08
Peter Henriksen

Wet Chemistry

Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-01-082108**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0808106**
Lab ID: **0808106-01**
Date Collected: **08/21/08**
Date Received: **08/21/08**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	36.0		1.00	1	08/25/08	mg/L	160.2	ES
Turbidity - 180.1	26.5		0.400	1	08/25/08	NTU	180.1	ES

N/A - Not Applicable

Duplicate Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-01-082108**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0808106**
Lab ID: **0808106-01 D**
Date Collected: **08/21/08**
Date Received: **08/21/08**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	35.7		1.00	1	08/25/08	mg/L	160.2	ES

N/A - Not Applicable

Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-02-082108**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0808106**
Lab ID: **0808106-02**
Date Collected: **08/21/08**
Date Received: **08/21/08**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	29.7		1.00	1	08/25/08	mg/L	160.2	ES
Turbidity - 180.1	20.1		0.400	1	08/25/08	NTU	180.1	ES

N/A - Not Applicable

Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-03-082108**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0808106**
Lab ID: **0808106-03**
Date Collected: **08/21/08**
Date Received: **08/21/08**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	6.50		1.00	1	08/25/08	mg/L	160.2	ES
Turbidity - 180.1	2.44		0.400	1	08/25/08	NTU	180.1	ES

N/A - Not Applicable

Duplicate Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-03-082108**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0808106**
Lab ID: **0808106-03 D**
Date Collected: **08/21/08**
Date Received: **08/21/08**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
Turbidity - 180.1	2.35		0.400	1	08/25/08	NTU	180.1	ES

N/A - Not Applicable

Blank Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **Blank**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0808106**
Lab ID: **WW082508B16**
Date Collected: **N/A**
Date Received: **N/A**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
Turbidity - 180.1	0.400	U	0.400	1	08/25/08	NTU	180.1	ES

N/A - Not Applicable

U - The analyte was analyzed for but not detected at the sample specific level reported.

Blank Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **Blank**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0808106**

Lab ID: **WW082508B17**
Date Collected: **N/A**
Date Received: **N/A**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	1.00	U	1.00	1	08/25/08	mg/L	160.2	ES

N/A - Not Applicable

U - The analyte was analyzed for but not detected at the sample specific level reported.

Laboratory Control Sample Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **Laboratory Control Sample**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0808106**
Lab ID: **WW082508L07**
Date Collected: **N/A**
Date Received: **N/A**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
Turbidity - 180.1	21.6	S	0.400	1	08/25/08	NTU	180.1	ES

N/A - Not Applicable
S - Spike compound.

Laboratory Control Sample Inorganics



Client: **Battelle**
 Project: **New Bedford Harbor**
 Case: **N/A** SDG: **N/A**
 Client ID: **Laboratory Control Sample**
 Matrix: **Water**

Lab Code: **MA00030**
 ETR: **0808106**
 Lab ID: **WW082508L08**
 Date Collected: **N/A**
 Date Received: **N/A**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	469	S	1.00	1	08/25/08	mg/L	160.2	ES

N/A - Not Applicable
 S - Spike compound.

Duplicate Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-01-082108**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0808106**
Lab ID: **0808106-01 D**
Date Collected: **08/21/08**
Date Received: **08/21/08**

Parameter	Sample Result	Duplicate Result	Unit	Percent RPD	RPD Limit
TSS - Membrane	36.0	35.7	mg/L	200 ^a	20

RPD value incorrect.
Should be 0.84%
DTDahlen 2/6/2009

N/A - Not Applicable

^a - Value outside of QC Limits.

Concentrations reported as calculated values, which includes rounding for significant figures. RPD values are reported based on the unrounded calculated result.

08/26/08 06:43

Duplicate Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-03-082108**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0808106**
Lab ID: **0808106-03 D**
Date Collected: **08/21/08**
Date Received: **08/21/08**

Parameter	Sample Result	Duplicate Result	Unit	Percent RPD	RPD Limit
Turbidity - 180.1	2.44	2.35	NTU	4	20

N/A - Not Applicable

Concentrations reported as calculated values, which includes rounding for significant figures. RPD values are reported based on the unrounded calculated result.

08/26/08 06:43

Laboratory Control Sample Inorganics



Client: **Battelle**
 Project: **New Bedford Harbor**
 Case: **N/A** SDG: **N/A**
 Client ID: **Laboratory Control Sample**
 Matrix: **Water**

Lab Code: **MA00030**
 ETR: **0808106**
 Lab ID: **WW082508L07**
 Date Collected: **N/A**
 Date Received: **N/A**

Parameter	Conc.	% Recovery	% Recovery Limits
Turbidity - 180.1	21.6	108	80-120

N/A - Not Applicable

Concentrations reported as calculated values, which includes rounding for significant figures. Percent recoveries and RPD values are calculated from the unrounded results.

08/26/08 06:43

Laboratory Control Sample Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **Laboratory Control Sample**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0808106**
Lab ID: **WW082508L08**
Date Collected: **N/A**
Date Received: **N/A**

Parameter	Conc.	% Recovery	% Recovery Limits
TSS - Membrane	469	94	80-120

N/A - Not Applicable

Concentrations reported as calculated values, which includes rounding for significant figures. Percent recoveries and RPD values are calculated from the unrounded results.

08/26/08 06:43

Chain of Custody Records

Sample Receipt Checklist

Client: <u>BATDUX</u>	Receipt Date: <u>8/21/08</u>
Project: <u>NBH</u>	Log-in Date: <u>8/22/08</u>
ETR #: <u>0808106</u>	Inspection by: <u>ur</u> Login by: <u>ur</u>

ALL SECTIONS BELOW MUST BE COMPLETED

Comments / Notes

Were samples shipped? Yes, FedEx / UPS / Other: _____ No, Alpha Analytical Courier pick-up <u>Hand delivered</u>	Sample storage refrigerator #: <u>03</u>
Is bill of lading retained? Yes, Tracking #: _____ No, Unavailable <u>NA</u>	Sample storage freezer #: _____
Number of coolers received for this project delivery: <u>1</u>	Cooler 2: _____ Cooler 3: _____ Cooler 4: _____ Cooler 5: _____ Cooler 6: _____ Cooler 7: _____ More: _____
Indicate cooler temperature upon opening (if multiple coolers, record <u>all</u> temps): Note: If <u>all</u> coolers are 2-6°C, use one checklist, if NOT, use separate checklists and note <u>all</u> samples received <u>above</u> 6°C. Cooler 1: Temperature(s) taken from: <u>15</u> IR Gun, (Circle one) SN 460647143 or 94031 _____ Temp. Blank, / NA	Cooler 2: _____ Cooler 3: _____ Cooler 4: _____ Cooler 5: _____ Cooler 6: _____ Cooler 7: _____ More: _____
Were samples received on ice? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	More: _____
Chain-of-Custody present? <input checked="" type="checkbox"/> Yes / No Complete? <input checked="" type="checkbox"/> Yes / No	Chemical preservation OK for ALL samples? Yes / No / <input checked="" type="checkbox"/> N/A If No, list samples below:
Custody seals present on Cooler? Yes / <input checked="" type="checkbox"/> No on Bottles? Yes / <input checked="" type="checkbox"/> No Intact? Yes / No / <input checked="" type="checkbox"/> NA Note: Affix custody seals to back of this page.	If No, list samples below:
Were sample containers intact? <input checked="" type="checkbox"/> Yes / No If No, list samples: →	If No, list samples below:
Did VOA/VPH waters contain headspace (>5mm)? Yes / No <input checked="" type="checkbox"/> NA If Yes, list samples: →	If No, list samples below:
Were 5035 VOA soils, or VPH soils, covered with MeOH? Yes / No / <input checked="" type="checkbox"/> NA If No, list samples: →	If No, list samples below:
Was a sufficient amount of sample received for each test indicated on the COC? <input checked="" type="checkbox"/> Yes / No If No, list samples: →	If No, list samples below:
If chemical preservation is appropriate - Were samples field preserved? Yes / No / <input checked="" type="checkbox"/> NA <input type="checkbox"/> C=HCl <input type="checkbox"/> M=MeOH <input type="checkbox"/> S=H ₂ SO ₄ <input type="checkbox"/> H=NaOH <input type="checkbox"/> N=HNO ₃ <input type="checkbox"/> Other: _____ <input type="checkbox"/> U= Unknown	If No, list samples below:
Preservation (pH) verified at lab for EVERY bottle? (Not: VOA / VPH / Sulfide) YES: <2 or >12 (CN) or NO <input checked="" type="checkbox"/> NA If No, why?:	If No, list samples below:
Were samples received within hold time? <input checked="" type="checkbox"/> Yes / No If No, list samples: →	If No, list samples below:
Discrepancy between samples rec'd & COC? Yes / <input checked="" type="checkbox"/> No If Yes, list samples: →	If No, list samples below:
Was the Project Manager notified of any other problems? Yes / No / NA	If No, list samples below:
Project Manager Acknowledgement: _____ Date: _____	Please use back for any additional notes!

Certificate/Approval Program Summary



Method numbers assume the most recent EPA revisions. For a complete listing of analytes for the referenced methods please contact your Alpha Woods Hole Lab Project Manager or the Quality Assurance Manager.

Connecticut Department of Public Health Certificate/Lab ID : PH-0141 - *Wastewater* (General Chemistry: EPA 120.1, 150.1, 160.1, 160.2, 180.1, 300.0, 310.1, 335.2; Metals: 200.8, 245.1; Organics: 608-PCB, ETPH)
Solid Waste/Soil (General Chemistry: 1010, 9010/9014, 9045, 9060; Metals: 6020, 7470, 7471; Organics: 8081, 8082, 8260, 8270, ETPH).

Florida Department of Health Certificate/Lab ID : E87814 - Primary NELAP Accreditation Authority for Air & Emissions. Secondary NELAP Accreditation for Wastewater and Solid & Hazardous Waste. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 335.2, SM2320B, SM2340B, SM2540G, SM4500NH₃; Metals: 245.1; Organics: 608-PCB). *Solid and Hazardous Waste* (General Chemistry: 9010/9014, 9045, 9050, 9056, 9065, Reactivity 7.3; Metals: 6020, 7470, 7471; Organics: 8081, 8082, 8260, 8270). *Air & Emissions* (Organics: EPA TO-15).

Louisiana Department of Environmental Quality Certificate/Lab ID : 03090 - Primary NELAP Accrediting Authority for Wastewater, Solid & Hazardous Waste. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 376.2, 9010/9014, 9056, SM2540G; Metals: 200.8, 245.1, 6020; Organics: 608-PCB, 8015-DRO, 8081, 8082, 8260, 8270). *Solid and Hazardous Waste* (General Chemistry: 1010, 1311, 9010/9014, 9040, 9045, 9056, 9060, Reactivity 7.3; Metals: 6020, 7196, 7470, 7471; Organics: 8015-DRO, 8081, 8082, 8260, 8270).

Maine Department of Human Services Certificate/Lab ID : MA0030 - *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 335.2; Metals: EPA 245.1; Organics: 608-PCB).

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030 - *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 335.2; Metals: EPA 245.1; Organics: EPA 608-PCB).

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206 - Secondary NELAP Accreditation. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 376.2, SM2540G; Metals: 200.8, 245.4; Organics: 608-PCB).

New Jersey Department of Environmental Protection Certificate/Lab ID : MA015 - Secondary NELAP Accreditation. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 376.2, 9010/9014, 9056, SM2540G; Metals: 200.8, 245.1 6020; Organics: 608-PCB, 8081, 8082, 8260, 8270). *Solid & Hazardous Waste* (General Chemistry: EPA 1010, 1311, 9010/9014, 9040, 9045, 9056, 9060; Metals: 6020, 7196, 7470, 7471; Organics: 8015-DRO, 8081, 8082, 8260, 8270). *Air & Emissions* (Organics: EPA TO-15).

New York Department of Health Certificate/Lab ID : 11627 - Secondary NELAP Accreditation. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 376.2; Metals: 200.8, 245.1; Organics: 608-PCB). *Solid and Hazardous Waste* (General Chemistry: EPA 1010, 1311; : 200.8; 8020, 7041; Organics: 8081, 8082, 8260, 8270). *Air & Emissions* (Organics: EPA TO-15).

Rhode Island Department of Health Certificate/Lab ID : LAO00289 - Chemistry: *Organic and Inorganic in Non-Portable Water, Wastewater/Sewage and Soil* (Refer to LADEQ and MADEP certificates for method numbers.)

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-02089 - Registered laboratory

U.S. Army Corps of Engineers

Department of the Navy

Certificate/Approval Program Summary



Method numbers assume the most recent EPA revisions. For a complete listing of analytes for the referenced methods please contact your Alpha Woods Hole Lab Project Manager or the Quality Assurance Manager.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141 - *Wastewater* (General Chemistry: EPA 120.1, 150.1, 160.1, 160.2, 180.1, 300.0, 310.1, 335.2, 365.2; Metals: 200.8, 245.1; Organics: 608, 624, 625, ETPH) *Solid Waste/Soil* (General Chemistry: 1010, 9010/9014, 9045, 9060; Metals: 6020, 7470, 7471; Organics: 8081, 8082, 8260, 8270, ETPH).

Florida Department of Health Certificate/Lab ID: E87814 - Primary NELAP Accreditation Authority for Air & Emissions. Secondary NELAP Accreditation for Wastewater and Solid & Hazardous Waste. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 335.2, 365.2, SM2320B, SM2340B, SM2540G, SM4500NH₃; Metals: 245.1; Organics: 608, 624, 625). *Solid and Hazardous Waste* (General Chemistry: 9010/9014, 9045, 9050, 9056, 9065, Reactivity 7.3; Metals: 6020, 7470, 7471; Organics: 8081, 8082, 8260, 8270). *Air & Emissions* (Organics: EPA TO-15).

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090 - Primary NELAP Accrediting Authority for Wastewater, Solid & Hazardous Waste. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 365.2, 376.2, 9010/9014, 9056, SM2540G; Metals: 200.8, 245.1, 6020; Organics: 608, 624, 625, 8015-DRO/GRO, 8081, 8082, 8260, 8270). *Solid and Hazardous Waste* (General Chemistry: 1010, 1311, 9010/9014, 9040, 9045, 9056, 9060, Reactivity 7.3; Metals: 6020, 7196, 7470, 7471; Organics: 8015-DRO/GRO, 8081, 8082, 8260, 8270).

Maine Department of Human Services Certificate/Lab ID: MA0030 - *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 335.2, 365.2; Metals: EPA 245.1; Organics: 608, 624).

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030 - *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 335.2, 365.2; Metals: EPA 245.1; Organics: EPA 608, 624).

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206 - Secondary NELAP Accreditation. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 365.2, 376.2, SM2540G; Metals: 200.8, 245.4; Organics: 608, 624, 625).

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015 - Secondary NELAP Accreditation. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 376.2, 9010/9014, 9056, SM2540G; Metals: 200.8, 245.1 6020; Organics: 608, 624, 625, 8081, 8082, 8260, 8270). *Solid & Hazardous Waste* (General Chemistry: EPA 1010, 1311, 9010/9014, 9040, 9045, 9056, 9060; Metals: 6020, 7196, 7470, 7471; Organics: 8015-DRO/GRO, 8081, 8082, 8260, 8270). *Air & Emissions* (Organics: EPA TO-15).

New York Department of Health Certificate/Lab ID: 11627 - Secondary NELAP Accreditation. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 365.2, 376.2; Metals: 245.1; Organics: 608, 624, 625). *Solid and Hazardous Waste* (General Chemistry: EPA 1010, 1311; : 245.1; 6020, 7041; Organics: 8081, 8082, 8260, 8270). *Air & Emissions* (Organics: EPA TO-15).

Rhode Island Department of Health Certificate/Lab ID: LAO00289 - Chemistry: *Organic and Inorganic in Non-Poratable Water, Wastewater/Sewage and Soil* (Refer to LADEQ and MADEP certificates for method numbers.)

Pennsylvania Department of Environmental Protection Certificate/Lab ID: 68-02089 - Registered laboratory

U.S. Army Corps of Engineers

Department of the Navy



ANALYTICAL REPORT

Prepared for:

Battelle

Duxbury Operations

397 Washington Street

Duxbury, MA 02332

Project: New Bedford Harbor

ETR: 0810006

Report Date: October 02, 2008

Certifications and Accreditations

Massachusetts M-MA030

Connecticut PH-0141

New Hampshire 2206

Rhode Island LAO00289

New Jersey MA015

Maine MA0030

New York 11627

Louisiana 03090

Florida E87814

Pennsylvania 68-02089

Army Corps of Engineers

Department of the Navy

This report shall not be reproduced except in full, without written approval from the laboratory.



CASE NARRATIVE

Alpha Analytical

ETR: 0810006

Project: New Bedford Harbor

All analyses were performed according to Alpha Analytical quality assurance program and documented Standard Operating Procedures (SOPs). The analytical results contained in this report were performed within holding time, and with appropriate quality control measures, except where noted. All soil/sediment results are reported on a dry weight basis unless otherwise noted. A summary of all state and federal accreditations is provided within this report. Blank correction of results is not performed in the laboratory for any parameter. Alpha Analytical certifies that the test results within meet all of the requirements of NELAC, for all NELAC accredited parameters.

The enclosed results of analyses are representative of the samples as received by the laboratory. Alpha Analytical makes no representations or certifications as to the method of sample collection, sample identification, or transporting/handling procedures used prior to the receipt of samples by Alpha Analytical. To the best of my knowledge, the information contained in this report is accurate and complete. For any questions regarding this report, please contact the signatory below at 508-822-9300.

Approved by:  Title: PROJECT MANAGER Date: 10/2/08
Pete Henriksen **Project Manager**

Sample ID Cross Reference

Client: **Battelle**
Project: **New Bedford Harbor**

Lab Code: **MA00030**
ETR: **0810006**



Lab Sample ID	Client Sample ID
0810006-01	WQ-001-100108
0810006-02	WQ-001-100108-REP
0810006-03	WQ-002-100108
0810006-04	WQ-003-100108

Wet Chemistry

Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-001-100108**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0810006**
Lab ID: **0810006-01**
Date Collected: **10/01/08**
Date Received: **10/01/08**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	76.5		1.00	1	10/01/08	mg/L	160.2	ES
Turbidity - 180.1	32.5		0.400	1	10/01/08	NTU	180.1	ES

N/A - Not Applicable

Duplicate Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-001-100108**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0810006**
Lab ID: **0810006-01 D**
Date Collected: **10/01/08**
Date Received: **10/01/08**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	71.0		1.00	1	10/01/08	mg/L	160.2	ES
Turbidity - 180.1	32.4		0.400	1	10/01/08	NTU	180.1	ES

N/A - Not Applicable

Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-001-100108-REP**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0810006**
Lab ID: **0810006-02**
Date Collected: **10/01/08**
Date Received: **10/01/08**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	61.2		1.00	1	10/01/08	mg/L	160.2	ES
Turbidity - 180.1	29.8		0.400	1	10/01/08	NTU	180.1	ES

N/A - Not Applicable

Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-002-100108**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0810006**
Lab ID: **0810006-03**
Date Collected: **10/01/08**
Date Received: **10/01/08**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	55.2		1.00	1	10/01/08	mg/L	160.2	ES
Turbidity - 180.1	28.1		0.400	1	10/01/08	NTU	180.1	ES

N/A - Not Applicable

Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-003-100108**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0810006**
Lab ID: **0810006-04**
Date Collected: **10/01/08**
Date Received: **10/01/08**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	33.4		1.00	1	10/01/08	mg/L	160.2	ES
Turbidity - 180.1	2.21		0.400	1	10/01/08	NTU	180.1	ES

N/A - Not Applicable

Blank Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **Blank**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0810006**
Lab ID: **WW100108B23**
Date Collected: **N/A**
Date Received: **N/A**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	1.00	U	1.00	1	10/01/08	mg/L	160.2	ES

N/A - Not Applicable

U - The analyte was analyzed for but not detected at the sample specific level reported.

Blank Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **Blank**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0810006**
Lab ID: **WW100108B24**
Date Collected: **N/A**
Date Received: **N/A**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
Turbidity - 180.1	0.400	U	0.400	1	10/01/08	NTU	180.1	ES

N/A - Not Applicable

U - The analyte was analyzed for but not detected at the sample specific level reported.

Laboratory Control Sample Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **Laboratory Control Sample**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0810006**
Lab ID: **WW100108L07**
Date Collected: **N/A**
Date Received: **N/A**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
TSS - Membrane	546	S	1.00	1	10/01/08	mg/L	160.2	ES

N/A - Not Applicable
S - Spike compound.

Laboratory Control Sample Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **Laboratory Control Sample**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0810006**
Lab ID: **WW100108L08**
Date Collected: **N/A**
Date Received: **N/A**

Parameter	Result	Qualifier	Reporting Limit	Dilution	Date Analyzed	Unit	Analytical Method	Analyst
Turbidity - 180.1	20.3	S	0.400	1	10/01/08	NTU	180.1	ES

N/A - Not Applicable
S - Spike compound.

Duplicate Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **WQ-001-100108**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0810006**
Lab ID: **0810006-01 D**
Date Collected: **10/01/08**
Date Received: **10/01/08**

Parameter	Sample Result	Duplicate Result	Unit	Percent RPD	RPD Limit
TSS - Membrane	76.5	71.0	mg/L	7	20
Turbidity - 180.1	32.5	32.4	NTU	0	20

N/A - Not Applicable

Concentrations reported as calculated values, which includes rounding for significant figures. RPD values are reported based on the unrounded calculated result.

Laboratory Control Sample Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **Laboratory Control Sample**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0810006**
Lab ID: **WW100108L07**
Date Collected: **N/A**
Date Received: **N/A**

Parameter	Conc.	% Recovery	% Recovery Limits
TSS - Membrane	546	109	80-120

N/A - Not Applicable

Concentrations reported as calculated values, which includes rounding for significant figures. Percent recoveries and RPD values are calculated from the unrounded results.

Laboratory Control Sample Inorganics



Client: **Battelle**
Project: **New Bedford Harbor**
Case: **N/A** SDG: **N/A**
Client ID: **Laboratory Control Sample**
Matrix: **Water**

Lab Code: **MA00030**
ETR: **0810006**
Lab ID: **WW100108L08**
Date Collected: **N/A**
Date Received: **N/A**

Parameter	Conc.	% Recovery	% Recovery Limits
Turbidity - 180.1	20.3	101	80-120

N/A - Not Applicable

Concentrations reported as calculated values, which includes rounding for significant figures. Percent recoveries and RPD values are calculated from the unrounded results.

Chain of Custody Records

AI/Prac

0510004

Proj. No		Proj. Name		ANALYSIS REQUESTED → "NUMBER OF CONTAINERS"	SAMPLE DESCRIPTION	PRESST	PCB	TPH FINGERPRINT	PAH	VOA	TBT	OTHER TESTS	ACIDIFIED	PRESERVED	Total Number of Containers
6606402	New Bedford Harbor Water Quality														
DATE	TIME	Field BATTLE ID	Lab CLIENT ID												
10/1/08	11:23	WQ-TSS-001-100108		50-65 NTU station ID: 57 NTU											1
		WQ-TSS-001-100108-REP													1
		WQ-TUR-001-100108													1
		WQ-TUR-001-100108-REP													1
10/1/08	11:50	WQ-TSS-002-100108		19-27 NTU station ID: 24 NTU											1
		WQ-TUR-002-100108													1
		WQ-TSS-003-100108		3.8 NTU station ID: NREF											1
		WQ-TUR-003-100108													1
Relinquished by: <i>Annie Murphy</i>															
Date/Time		Date/Time		Received by:											
10/1/08 15:50				<i>Annie Murphy</i>											
Relinquished by:															
Date/Time		Date/Time		Received by:											

Sample Receipt Checklist

Client: <u>BATDOX</u>	Receipt Date: <u>10/1/08</u>
Project: <u>New Bedford Harbor</u>	Log-in Date: <u>↓</u>
ETR #: <u>0810006</u>	Inspection by: <u>W</u> Login by: <u>W</u>

ALL SECTIONS BELOW MUST BE COMPLETED

Comments / Notes

Were samples shipped? Yes, FedEx / UPS / Other: _____ No, Alpha Analytical Courier pick-up / <u>Hand delivered</u>	Sample storage refrigerator #: <u>01</u>
Is bill of lading retained? Yes, Tracking #: _____ No, Unavailable / <u>NA</u>	Sample storage freezer #: _____
Number of coolers received for this project delivery: <u>1</u>	Cooler 2: _____ Cooler 3: _____ Cooler 4: _____ Cooler 5: _____ Cooler 6: _____ Cooler 7: _____ More: _____
Indicate cooler temperature upon opening (if multiple coolers, record <u>all</u> temps): Note: If <u>all</u> coolers are 2-6°C, use one checklist, if NOT, use separate checklists and note <u>all</u> samples received <u>above</u> 6°C. Cooler 1: Temperature(s) taken from: <u>3</u> IR Gun, (Circle one) SN 460647143 or <u>94031</u> <u>2.5</u> Temp. Blank, / NA	
Were samples received on ice? <u>Yes</u> / No	
Chain-of-Custody present? <u>Yes</u> / No Complete? <u>Yes</u> / No	
Custody seals present on Cooler? Yes / <u>No</u> on Bottles? Yes / <u>No</u> Intact? Yes / No / <u>NA</u>	
<i>Note: Affix custody seals to back of this page.</i>	
Were sample containers intact? <u>Yes</u> / No If No, list samples: →	
Did VOA/VPH waters contain headspace (>5mm)? Yes / No <u>NA</u> If Yes, list samples: →	
Were 5035 VOA soils, or VPH soils, covered with MeOH? Yes / No / <u>NA</u> If No, list samples: →	
Was a <u>sufficient</u> amount of sample received for each test indicated on the COC? <u>Yes</u> / No If No, list samples: →	
If chemical preservation is appropriate - Were samples field preserved? Yes / No / <u>NA</u> <input type="checkbox"/> C=HCl <input type="checkbox"/> M=MeOH <input type="checkbox"/> S=H ₂ SO ₄ <input type="checkbox"/> H=NaOH <input type="checkbox"/> N=HNO ₃ <input type="checkbox"/> Other: _____ <input type="checkbox"/> U= Unknown	Chemical preservation OK for ALL samples? Yes / No / <u>N/A</u>
Preservation (pH) verified at lab for <i>EVERY</i> bottle? (Not: VOA / VPH / Sulfide) YES: <2 or >12 (CN) or NO <u>NA</u> If No, why?:	If No, list samples below:
Were samples received within hold time? <u>Yes</u> No If No, list samples: →	
Discrepancy between samples rec'd & COC? Yes <u>No</u> If Yes, list samples: →	
Was the Project Manager notified of any other problems? Yes / No / NA	
Project Manager Acknowledgement: _____ Date: _____	Please use back for any additional notes!

Certificate/Approval Program Summary



Method numbers assume the most recent EPA revisions. For a complete listing of analytes for the referenced methods please contact your Alpha Woods Hole Lab Project Manager or the Quality Assurance Manager.

Connecticut Department of Public Health Certificate/Lab ID : PH-0141 - *Wastewater* (General Chemistry: EPA 120.1, 150.1, 160.1, 160.2, 180.1, 300.0, 310.1, 335.2; Metals: 200.8, 245.1; Organics: 608-PCB, ETPH) *Solid Waste/Soil* (General Chemistry: 1010, 9010/9014, 9045, 9060; Metals: 6020, 7470, 7471; Organics: 8081, 8082, 8260, 8270, ETPH).

Florida Department of Health Certificate/Lab ID : E87814 - Primary NELAP Accreditation Authority for Air & Emissions. Secondary NELAP Accreditation for Wastewater and Solid & Hazardous Waste. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 335.2, SM2320B, SM2340B, SM2540G, SM4500NH3; Metals: 245.1; Organics: 608-PCB). *Solid and Hazardous Waste* (General Chemistry: 9010/9014, 9045, 9050, 9056, 9065, Reactivity 7.3; Metals: 6020, 7470, 7471; Organics: 8081, 8082, 8260, 8270). *Air & Emissions* (Organics: EPA TO-15).

Louisiana Department of Environmental Quality Certificate/Lab ID : 03090 - Primary NELAP Accrediting Authority for Wastewater, Solid & Hazardous Waste. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 376.2, 9010/9014, 9056, SM2540G; Metals: 200.8, 245.1, 6020; Organics: 608-PCB, 8015-DRO, 8081, 8082, 8260, 8270). *Solid and Hazardous Waste* (General Chemistry: 1010, 1311, 9010/9014, 9040, 9045, 9056, 9060, Reactivity 7.3; Metals: 6020, 7196, 7470, 7471; Organics: 8015-DRO, 8081, 8082, 8260, 8270).

Maine Department of Human Services Certificate/Lab ID : MA0030 - *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 335.2; Metals: EPA 245.1; Organics: 608-PCB).

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA030 - *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 335.2; Metals: EPA 245.1; Organics: EPA 608-PCB).

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206 - Secondary NELAP Accreditation. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 376.2, SM2540G; Metals: 200.8, 245.4; Organics: 608-PCB).

New Jersey Department of Environmental Protection Certificate/Lab ID : MA015 - Secondary NELAP Accreditation. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 376.2, 9010/9014, 9056, SM2540G; Metals: 200.8, 245.1 6020; Organics: 608-PCB, 8081, 8082, 8260, 8270). *Solid & Hazardous Waste* (General Chemistry: EPA 1010, 1311, 9010/9014, 9040, 9045, 9056, 9060; Metals: 6020, 7196, 7470, 7471; Organics: 8015-DRO, 8081, 8082, 8260, 8270). *Air & Emissions* (Organics: EPA TO-15).

New York Department of Health Certificate/Lab ID : 11627 - Secondary NELAP Accreditation. *Wastewater* (General Chemistry: EPA 120.1/SM2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 300.0, 310.1/SM2320B, 376.2; Metals: 200.8, 245.1; Organics: 608-PCB). *Solid and Hazardous Waste* (General Chemistry: EPA 1010, 1311; Metals: 200.8, 6020, 7041; Organics: 8081, 8082, 8260, 8270). *Air & Emissions* (Organics: EPA TO-15).

Rhode Island Department of Health Certificate/Lab ID : LAO00289 - Chemistry: *Organic and Inorganic in Non-Portable Water, Wastewater/Sewage and Soil* (Refer to LADEQ and MADEP certificates for method numbers.)

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-02089 - Registered laboratory

U.S. Army Corps of Engineers

Department of the Navy