TETRA TECH

PITT-10-9-080

October 30, 2009

Project Number 112G02195

NAVFAC MID-ATLANTIC, Northeast IPT
Attn: Mr. Jim Gravette (Code OPTE3-1)
Bldg Z-144
9742 Maryland Avenue
Norfolk, Virginia 23511-3095

Reference: CLEAN Contract No. N62470-08-D-1001
Contract Task Order WE24

Subject: Summary of Field Work and Results of Thames River Pre-Design Sediment Sampling at Inner Pier 1
Naval Submarine Base-New London, Groton, Connecticut

Dear Mr. Gravette:

Tetra Tech completed the subject sediment sampling effort under Naval Facilities Engineering Command (NAVFAC) Mid-Atlantic Contract Number N62467-08-D-1001, Contract Task Order WE24 on October 6, 2009. The field work was conducted in accordance with the Final Unified Federal Policy (UFP)-Sampling and Analysis Plan (SAP) for Thames River Pre-Design Sediment Sampling at Inner Pier 1 (Tetra Tech, September 2009) and Health and Safety Plan (Tetra Tech, May 2009). The focus of the effort was to collect and analyze sediment samples from Inner Pier 1 to characterize the sediment for disposal in support of the upcoming Non-Time Critical Removal Action (NTCRA). A description of the field work and resulting analytical data are provided in this letter report.

Field Work

Tetra Tech mobilized to Naval Submarine Base – New London (NSB-NLON) on October 5, 2009. The Tetra Tech Field Operations Leader (FOL) picked up necessary field supplies and sample bottleware and met with the Base Point of Contact (Mr. Richard Conant).

On October 6, 2009, the FOL facilitated site access issues with the boat subcontractor (TG&B) and Navy-required training. After training, the FOL and the subcontractor proceeded to Inner Pier 1. The subcontractor launched their boat into the Thames River from the boat ramp adjacent to Pier 1 and commenced sediment sampling at approximately 10:30 AM. The subcontractor collected sediment cores using a pneumatically driven vibracore sampling device at the seven locations identified in the SAP. Multiple attempts were made to collect cores to 4 feet below the sediment surface (bss) at locations TRP1-SD-011 through TRP1-SD-013, but refusal was encountered because of shallow bedrock at approximately 3.5 feet bss. Therefore, the subcontractor collected cores to approximately 3.5 feet bss at these three locations. The remaining core samples were collected at locations TRP1-SD-014 through TRP1-SD-017 without encountering refusal. Information (e.g., time, water depths, and core penetration depths) collected during the coring process at the seven locations is provided in Table 1 in Attachment 1. Actual sample locations deviated slightly from the proposed locations because the subcontractor had to move locations in an attempt to reach the desired sample depths and the subcontractor was not able to navigate to the exact coordinates of the proposed sample location. The subcontractor recorded actual

Tetra Tech NUS, Inc.
661 Andersen Drive, Pittsburgh, PA 15220
Tel 412.921.8746 Fax 412.921.4040 www.ttnus.com

sample locations using a differential Global Positioning System (GPS) mounted on the boat. Figure 1 in Attachment 1 shows the actual sample locations and a summary table of the coordinates for the samples.

Upon removal from the core-barrel, each core was contained in an acetate liner that was capped on each end. The sample information was documented on the cap or acetate liner of each core sample. The subcontractor provided the core samples to the Tetra Tech FOL shore-side for sampling. A total of 10 sediment samples were collected from the seven cores in accordance with the SAP. Sediment samples from 0 to 1 foot bss were collected from all seven cores. Samples from 2 to approximately 3.5 feet bss were collected from cores from locations TRP1-SD-011 through TRP1-SD-013. Table 2 in Attachment 1 summarizes sample information and the analyses to be performed on the samples.

A brief description of each sediment core was captured on the sample logsheets included in Attachment 2. Photographs of a majority of the samples were taken during the sampling effort and they are also included in Attachment 2. A chain of custody was completed to track the samples from time of collection until delivery to the analytical laboratory and the chain is provided in Attachment 2. After collection, the samples were packaged in a cooler on ice and delivered to the project laboratory (Mitkem) in Warwick, Rhode Island.

At the completion of sampling activities, all residual sediments were deposited back into Inner Pier 1. Disposable equipment (e.g., gloves, paper towels and plastic sheeting) used during sampling were placed in garbage bags and disposed in a dumpster located on site.

Analytical Results

The project laboratory provided the analytical data package to Tetra Tech on October 21, 2009. In contrast to the SAP, Tetra Tech performed a cursory validation versus full validation of the data. The cursory validation procedure was appropriate because the data was being used to characterize the sediment for disposal and not for use in a risk assessment. The cursory validation process included verification of the electronic data deliverable against the data forms received from the laboratory, consideration of blank contamination to remove false positives, modification or removal of laboratory qualifiers for consistency with the National Functional Guidelines for data validation, and selection of appropriate results when multiple dilutions and multiple analyses were performed. A Field Task Modification Request for this change was prepared and submitted to the Navy. The request is provided in Attachment 3.

A summary of the analytical data is provided in Table 3 in Attachment 1. Only one polychlorinated biphenyl (PCB), Aroclor-1254, was detected in the sediment samples. Aroclor-1254 concentrations ranged from 510 µg/kg (TRP1-SD-013-0001) to 6,300 µg/kg (TRP1-SD-011-0001). Total PCB concentrations were calculated using detected concentrations and one-half the detection limits for non-detect results. The resulting Total PCB concentrations ranged from 526 µg/kg to 6,700 µg/kg. The project action limit for Total PCBs for identifying Toxic Substance Control Act (TSCA) waste is 50,000 µg/kg and all of the Total PCB concentrations are significantly less than the action limit.

The sediment samples were also analyzed for Toxicity Characteristic Leaching Procedure (TCLP) metals and the results are summarized in Table 3. Maximum detected TCLP concentrations of arsenic (14.7 µg/L), cadmium (0.72 µg/L), chromium (78 µg/L), lead (27.5 µg/L), mercury (0.097 µg/L), and selenium (21.6 µg/L) were all significantly less than their respective project action limits for identifying characteristic hazardous waste. TCLP barium and silver were not detected in any of the samples and their respective detection limits were less than their action limits.

Conclusions

Tetra Tech successfully completed the Pre-Design Investigation of the Inner Pier 1 sediments. The goal of the investigation was to characterize the sediment for disposal in support of the upcoming NTCRA. The analytical results indicate that in-situ, Inner Pier 1 sediment is a solid waste and not a TSCA or characteristic hazardous waste.

If you have any questions regarding the field work or analytical results related to this project, please contact me at (412) 921-8984.

Sincerely,

Corey A. Rich, P.E.
New London Base Coordinator/Project Manager

Attachment(s)

c: Ms. Kymberlee Keckler, EPA Region 1 (electronic copy)
Mr. Mark Lewis, CTDEP (electronic copy)
Mr. Ken Finkelstein, NOAA (electronic copy)
Mr. Richard Conant, NSB-NLON (electronic copy)
Mr. Peter Golonka, Gannett Fleming (electronic copy)
Mr. Dan Sullivan, Tetra Tech ECI (electronic copy)
Ms. Roxanne Clark, Tetra Tech ECI (electronic copy)
Mr. John Trepanowski, Tetra Tech-KOP (electronic copy)
Mr. Glenn Wagner, Tetra Tech-PITT (electronic copy)
CTO WE24 – File Copy (1 copy)

ATTACHMENT 1

TABLES AND FIGURES

TABLE 1

SUMMARY OF DATA COLLECTED DURING CORING
INNER PIER 1 PRE-DESIGN SEDIMENT SAMPLING
NSB-NLON, GROTON, CONNECTICUT

Location	Time Core Collected	Water Depth (Feet)	Penetration Depth (Feet)
TRP1-SD-011	11:40 AM	6.6	3.5
TRP1-SD-012	11:54 AM	8.0	3.4
TRP1-SD-013	1:16 PM	6.9	3.5
TRP1-SD-014	10:50 AM	6.6	8.0
TRP1-SD-015	10:58 AM	5.9	1.3
TRP1-SD-016	10:40 AM	11.0	2.0
TRP1-SD-017	10:24 AM	11.7	1.3

TABLE 2

SUMMARY OF SAMPLES AND ANALYTICAL PROGRAM
INNER PIER 1 PRE-DESIGN SEDIMENT SAMPLING
NSB-NLON, GROTON, CONNECTICUT

Sample Number	Depth Below Sediment Surface (feet)	Analysis
TRP1-SD-011-0001	0 to 1	PCBs
TRP1-SD-011-0204	2 to 3.5	PCBs and TCLP Metals
TRP1-SD-012-0001	0 to 1	PCBs
TRP1-SD-012-0204	2 to 3.4	PCBs and TCLP Metals
TRP1-SD-013-0001	0 to 1	PCBs
TRP1-SD-013-0204	2 to 3.5	PCBs and TCLP Metals
TRP1-SD-014-0001	0 to 1	TCLP Metals
TRP1-SD-015-0001	0 to 1	TCLP Metals
TRP1-SD-016-0001	0 to 1	TCLP Metals
TRP1-SD-017-0001	0 to 1	TCLP Metals

PCBs – Polychlorinated Biphenyls (Aroclors)
TCLP Metals – Toxicity Characteristic Leaching Procedure (arsenic, barium, cadmium, chromium, lead, mercury, silver, and selenium).

TABLE 3

SUMMARY OF SEDIMENT ANALYTICAL DATA
INNER PIER 1 PRE-DESIGN SEDIMENT SAMPLING
NSB-NLON, GROTON, CONNECTICUT

LOCATION	Project Action Limit (1)	TRP1-SD-011	TRP1-SD-011	TRP1-SD-012	TRP1-SD-012	TRP1-SD-013
SAMPLE ID		TRP1-SD-011-0001	TRP1-SD-011-0204	TRP1-SD-012-0001	TRP1-SD-012-0204	TRP1-SD-013-0001
SAMPLE DATE		20091006	20091006	20091006	20091006	20091006
MATRIX		SD	SD	SD	SD	SD
TOP DEPTH		0	2	0	2	0
BOTTOM DEPTH		1	3.5	1	3.4	1
PESTICIDES/PCBS (UG/KG)						
AROCLOR-1016	NA	94 U	81 U	38 U	49 U	3.3 U
AROCLOR-1221	NA	450 U	390 U	180 U	240 U	16 U
AROCLOR-1232	NA	72 U	61 U	29 U	38 U	2.5 U
AROCLOR-1242	NA	64 U	55 U	26 U	34 U	2.2 U
AROCLOR-1248	NA	140 U	120 U	58 U	75 U	5 U
AROCLOR-1254	NA	6300	5300	2100	3800	510
AROCLOR-1260	NA	79 U	68 U	32 U	41 U	2.8 U
TOTAL AROCLORS	50000	6749.5	5687.5	2281.5	4038.5	525.9
TCLP METALS (UG/L)						
ARSENIC	5000	NA	12.1	NA	3.4	NA
BARIUM	100000	NA	523 U	NA	311 U	NA
CADMIUM	1000	NA	0.72	NA	0.5 U	NA
CHROMIUM	5000	NA	78	NA	57.8	NA
LEAD	5000	NA	2.3	NA	2.1 U	NA
MERCURY	200	NA	0.056 U	NA	0.056 U	NA
SELENIUM	1000	NA	21.6	NA	10 U	NA
SILVER	5000	NA	2.4 U	NA	2.4 U	NA

(1) Action limits defined in final UFP-SAP (September 2009).

NA - Not applicable or not analyzed.

U - Undetected at the indicated detection limit.

TABLE 3

SUMMARY OF SEDIMENT ANALYTICAL DATA
INNER PIER 1 PRE-DESIGN SEDIMENT SAMPLING
NSB-NLON, GROTON, CONNECTICUT

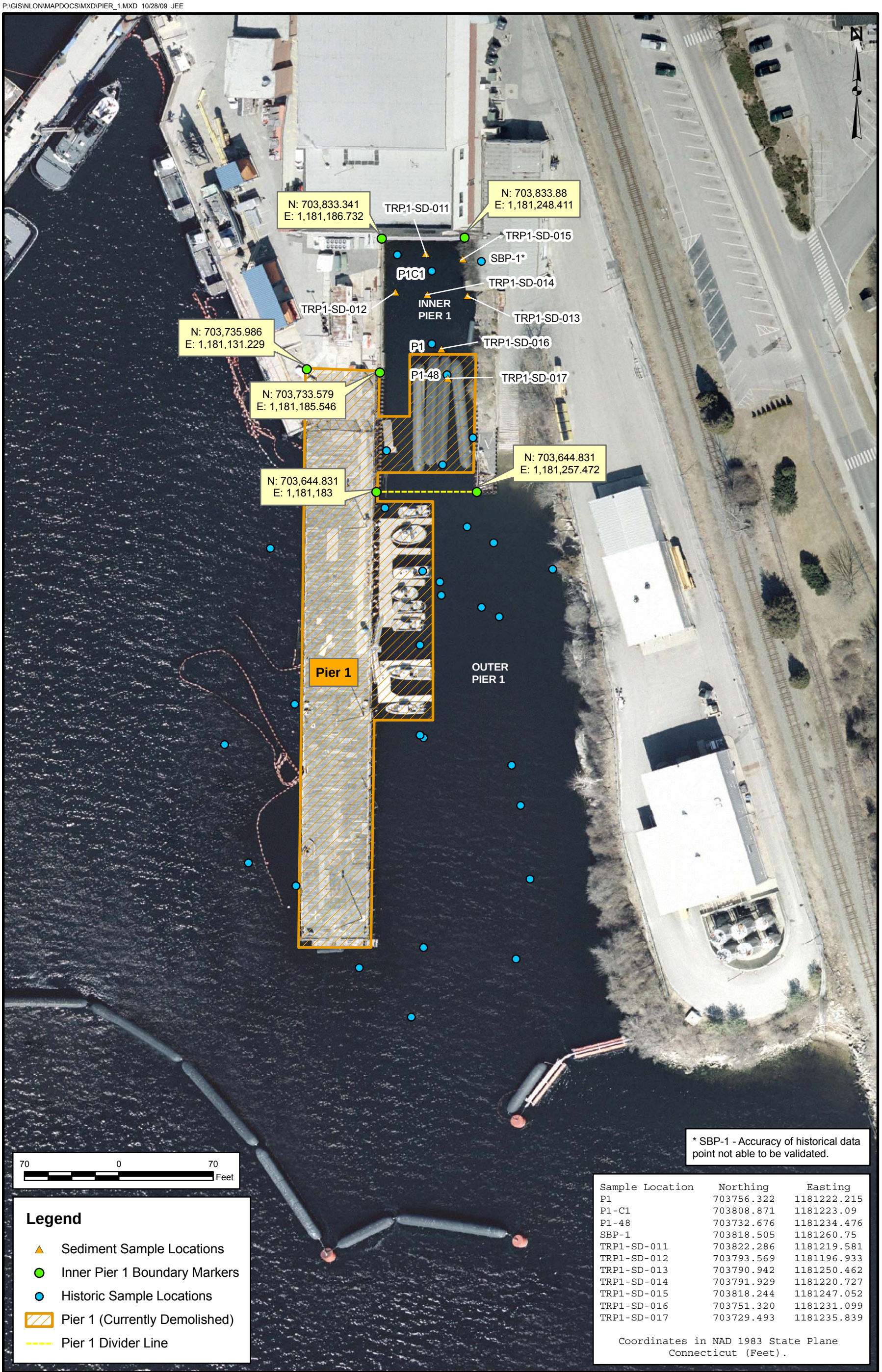
LOCATION	Project Action Limit (1)	TRP1-SD-013	TRP1-SD-014	TRP1-SD-015	TRP1-SD-016	TRP1-SD-017
SAMPLE ID		TRP1-SD-013-0204	TRP1-SD-014-0001	TRP1-SD-015-0001	TRP1-SD-016-0001	TRP1-SD-017-0001
SAMPLE DATE		20091006	20091006	20091006	20091006	20091006
MATRIX		SD	SD	SD	SD	SD
TOP DEPTH		2	0	0	0	0
BOTTOM DEPTH		3.5	1	1	1	1
PESTICIDES/PCBS (UG/KG)						
AROCLOR-1016	NA	44 U	NA	NA	NA	NA
AROCLOR-1221	NA	210 U	NA	NA	NA	NA
AROCLOR-1232	NA	34 U	NA	NA	NA	NA
AROCLOR-1242	NA	30 U	NA	NA	NA	NA
AROCLOR-1248	NA	67 U	NA	NA	NA	NA
AROCLOR-1254	NA	2500	NA	NA	NA	NA
AROCLOR-1260	NA	37 U	NA	NA	NA	NA
TOTAL AROCLORS	50000	2711	NA	NA	NA	NA
TCLP METALS (UG/L)						
ARSENIC	5000	9.9	10.9	14.7	7.1	7.9
BARIUM	100000	474 U	265 U	282 U	251 U	225 U
CADMIUM	1000	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
CHROMIUM	5000	56.7	8.3	0.5 U	28.1	31.9
LEAD	5000	2.1 U	2.1 U	27.5	5.9	3.5
MERCURY	200	0.097	0.056 U	0.056 U	0.056 U	0.056 U
SELENIUM	1000	25.7	24.4	10 U	16.8	23.1
SILVER	5000	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U

(1) Action limits defined in final UFP-SAP (Septeml

NA - Not applicable or not analyzed.

U - Undetected at the indicated detection limit.

P:\GIS\NLON\MAPDOCS\MXD\PIER_1.MXD 10/28/09 JEE



Sample Location	Northing	Easting
P1	703756.322	1181222.215
P1-C1	703808.871	1181223.09
P1-48	703732.676	1181234.476
SBP-1	703818.505	1181260.75
TRP1-SD-011	703822.286	1181219.581
TRP1-SD-012	703793.569	1181196.933
TRP1-SD-013	703790.942	1181250.462
TRP1-SD-014	703791.929	1181220.727
TRP1-SD-015	703818.244	1181247.052
TRP1-SD-016	703751.320	1181231.099
TRP1-SD-017	703729.493	1181235.839

Coordinates in NAD 1983 State Plane Connecticut (Feet).

DRAWN BY	DATE
T. WHEATON	08/31/09
CHECKED BY	DATE
C. RICH	10/28/09
REVISED BY	DATE
___	___
SCALE	
AS NOTED	

NAVFAC

SAMPLE LOCATION MAP

INNER PIER 1 - OCTOBER 6, 2009 SAMPLING EFFORT

NSB-NLON, GROTON, CONNECTICUT

CONTRACT NUMBER	
WE24	
APPROVED BY	DATE
___	___
APPROVED BY	DATE
___	___
FIGURE NO.	REV
FIGURE 1	0

ATTACHMENT 2

FIELD FORMS AND PICTURES

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: New London - Inner Pier I
Project No.: 112G02195

[] Surface Soil
[] Subsurface Soil
[X] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: TRP1-SD-011-0001
Sample Location: TRP1-SD-011
Sampled By: MLM
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 10-6-09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1140	0-1	BLACK	Medium sand, trace silt, and fine gravel.
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PCBS	8 oz. glass	✓	
~~TCLP~~	~~8 oz. glass~~		

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Mark L. Mengel

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: New London - Inner Pier I
Project No.: 112G02195

[] Surface Soil
[] Subsurface Soil
[X] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: TRP1-SD-011-0204
Sample Location: TRP1-SD-011
Sampled By: MLM
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10-6-09 Time: 1145 Method: Monitor Reading (ppm):	2-3.5	BLACK	Medium grained sand, TRACE silt and gravel

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PCBS, TCLP	8 oz. glass	✓	
~~TCLP~~	~~8 oz. glass~~		

OBSERVATIONS / NOTES:

Subcontractor was only able to advance to 3.5 feet due to refusal.

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Mark L. Mengel

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: New London - Inner Pier I
Project No.: 112G02195

[] Surface Soil
[] Subsurface Soil
[X] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: TRP1-SD-012-0001
Sample Location: TRP1-SD-012
Sampled By: MLM
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10-6-09 Time: 1220 Method: Monitor Reading (ppm):	0-1	BLACK	SILTY, SAND, TRACE GRAVEL ORGANIC MATTER, WATERY

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PCBS	8 oz. glass	✓	
[redacted]	~~8 oz. glass~~		

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Mark L. Mingel

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: New London - Inner Pier I
Project No.: 112G02195

[] Surface Soil
[] Subsurface Soil
[X] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: TRPI-SD-012-0204
Sample Location: TRPI-SD-012
Sampled By: MLM
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10-6-09 Time: 1225 Method: Monitor Reading (ppm):	2 - 3.4	BLACK	Medium grained sand, trace silt and fine gravel

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PCBS, TCLP	8 oz. glass	✓	
[redacted]	~~8 oz. glass~~		

OBSERVATIONS / NOTES:

Subcontractor was only able to advance to 3.4 feet due to refusal.

Collected sufficient volume to run MS/MSD. Sent sample to lab in double ziplock bag.

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
✓	

Signature(s): Mark A. Mengel

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: New London - Inner Pier I
Project No.: 112G02195

[] Surface Soil
[] Subsurface Soil
[X] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: TRPI-SD-013-0001
Sample Location: TRPI-SD-013
Sampled By: MLM
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10-6-09 Time: 1300 Method: Monitor Reading (ppm):	0-1	BLACK	Fine grained sand + silt, trace gravel

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PCBS	8 oz. glass	✓	
~~TOC~~	~~8 oz. glass~~		

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Mark L. Mengel

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Project Site Name: New London - Inner Pier I
Project No.: 112G02195

[] Surface Soil
[] Subsurface Soil
[X] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: TRP1-SD-013-0204
Sample Location: TRP1-SD-013
Sampled By: MLM
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10-6-09 Time: 1320 Method: Monitor Reading (ppm):	2-3.5	BLACK	Fine grained sand, trace silt, trace gravel

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
PCBS, TCLP	8 oz. glass	✓	
~~TCLP~~	~~8 oz. glass~~		

OBSERVATIONS / NOTES:

Subcontractor was only able to advance to 3.5 feet due to refusal.

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Mark L. Mengel

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: New London - Inner Pier I
Project No.: 112G02195

[] Surface Soil
[] Subsurface Soil
[X] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: TRP1-SD-014-0001
Sample Location: TRP1-SD-014
Sampled By: MLM
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 10-6-09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1105	0-1	BLACK	ORGANIC ODOR, SILTY fine SANDY, TRACE PLANT MATTER
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
~~RCBS~~	~~8 oz. glass~~		
TCLP	8 oz. glass	✓	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Mark L. Mungel

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: New London - Inner Pier I
Project No.: 112G02195

[] Surface Soil
[] Subsurface Soil
[X] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: TRP1-SD-015-0001
Sample Location: TRP1-SD-015
Sampled By: MLM
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

Date: 10-6-09	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Time: 1115	0-1	BLACK	Sand, some silt, some pebbles
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
~~PCBs~~	~~2 oz. glass~~		
TCLP	8 oz. glass	✓	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Mark L. Mungel

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: New London - Inner Pier I
Project No.: 112G02195

[] Surface Soil
[] Subsurface Soil
[X] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: TRP1-SD-016-0001
Sample Location: TRP1-SD-016
Sampled By: MLM
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10-6-09	0-1	BLACK	FINE SILTY SAND
Time: 1050			
Method:			
Monitor Reading (ppm):			

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
~~PPDS~~	~~8 oz glass~~		
TCLP	8 oz. glass	✓	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Mark L. Mingel

Tetra Tech NUS, Inc.

SOIL & SEDIMENT SAMPLE LOG SHEET

Page___ of ___

Project Site Name: New London - Inner Pier I
Project No.: 112G02195

[] Surface Soil
[] Subsurface Soil
[X] Sediment
[] Other:
[] QA Sample Type:

Sample ID No.: TRPI-SD-017-0001
Sample Location: TRPI-SD-017
Sampled By: MLM
C.O.C. No.:

Type of Sample:
[X] Low Concentration
[] High Concentration

GRAB SAMPLE DATA:

	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Date: 10-6-09 Time: 1040 Method: Monitor Reading (ppm):	0-1	BLACK	WET SANDY SILT, fine

COMPOSITE SAMPLE DATA:

Date:	Time	Depth Interval	Color	Description (Sand, Silt, Clay, Moisture, etc.)
Method:				
Monitor Readings (Range in ppm):				

SAMPLE COLLECTION INFORMATION:

Analysis	Container Requirements	Collected	Other
~~TPDS~~	~~8 oz. glass~~		
TCLP	8 oz. glass	✓	

OBSERVATIONS / NOTES:

MAP:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Mark H. Mingel

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER 27217 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112602195	NSB-NLON	CORCY RICH	412 921-8984	MITKEM - ED LAWLER
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
Mark L. Mengel		MARK MENGEL	724 777-0035	175 METRO CENTER BLVD
		CARRIER/WAYBILL NUMBER		CITY, STATE
				WARWICK, RI 02886

STANDARD TAT ☐
RUSH TAT ☒
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☒ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G

PRESERVATIVE USED

TYPE OF ANALYSIS

DATE YEAR 2009	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	PCB's	PCBs / TCLP	ZIPLOCK BAG RUN ANALYSIS FOR TCLP AND PCBS, RUN MS/MSD ON PCBs	TCLP			COMMENTS
10/6	1140	TRP1-SD-011-0001		00	01	SD	G	1	1						
10/6	1145	TRP1-SD-011-0204		02	3.5	SD	G	1		1					NOTE: ALL SAMPLES
10/6	1220	TRP1-SD-012-0001		00	01	SD	G	1	1						to be Analyzed
10/6	1225	TRP1-SD-012-0204		02	3.4	SD	G	1			1				for 14-DAY
10/6	1360	TRP1-SD-013-0001		00	01	SD	G	1	1						QUICK TURNAROUND
10/6	1320	TRP1-SD-013-0204		02	3.5	SD	G	1		1					
10/6	1105	TRP1-SD-014-0001		00	01	SD	G	1					1		
10/6	1115	TRP1-SD-015-0001		00	01	SD	G	1					1		
10/6	1050	TRP1-SD-016-0001		00	01	SD	G	1					1		
10/6	1040	TRP1-SD-017-0001		00	01	SD	G	1					1		

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY Mark L. Mengel	10-16-09	1530	1. RECEIVED BY [signature] NS	10/6/09	15:30
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

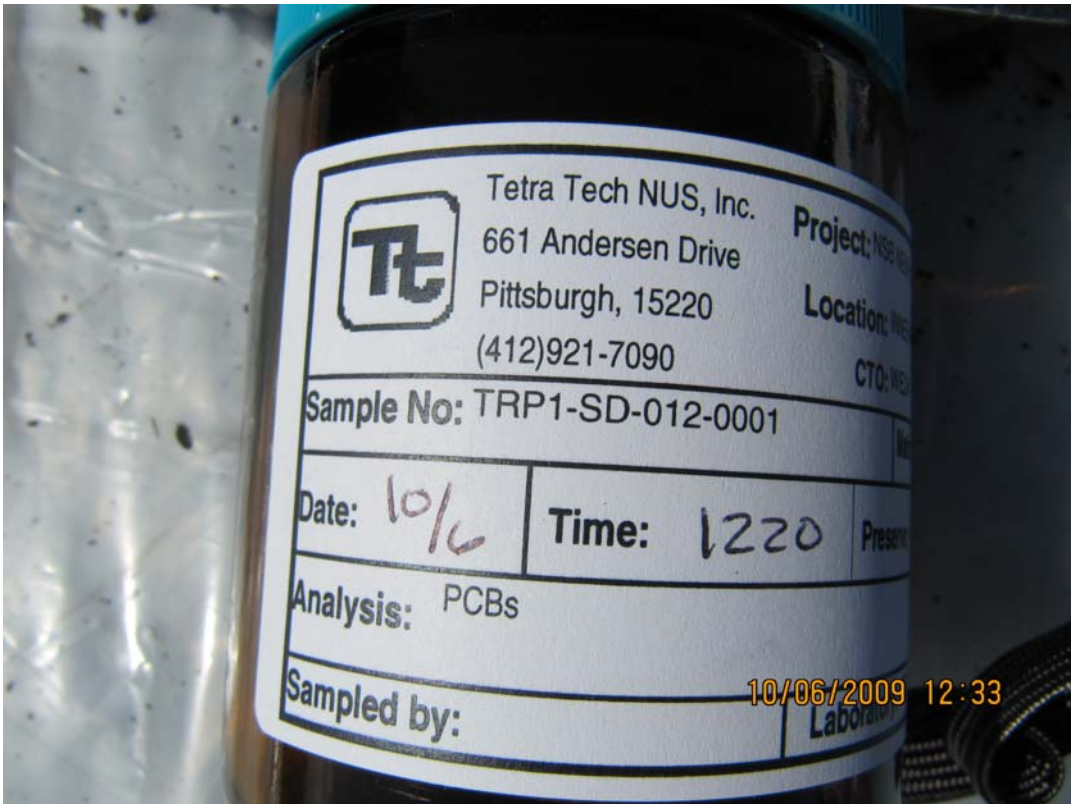
DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

Thames River Pre-Design Sediment Sampling at Inner Pier 1

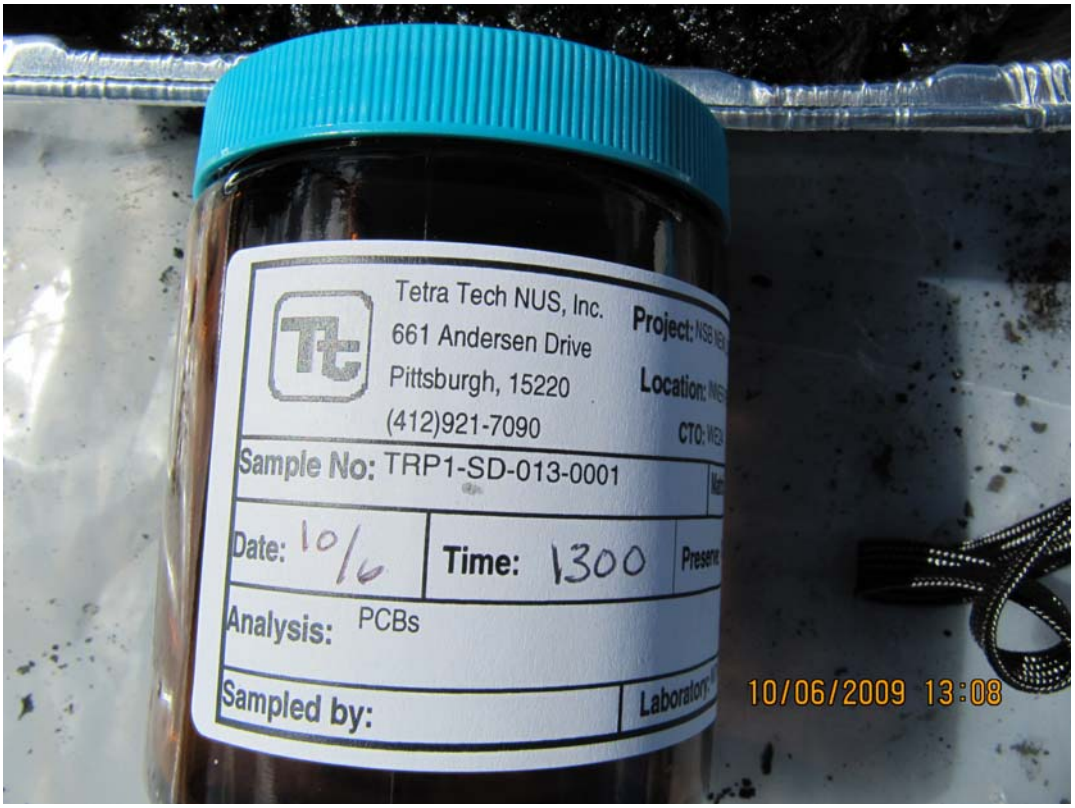
Thames River Pre-Design Sediment Sampling at Inner Pier 1

Thames River Pre-Design Sediment Sampling at Inner Pier 1
TRP1-SD-012-0001



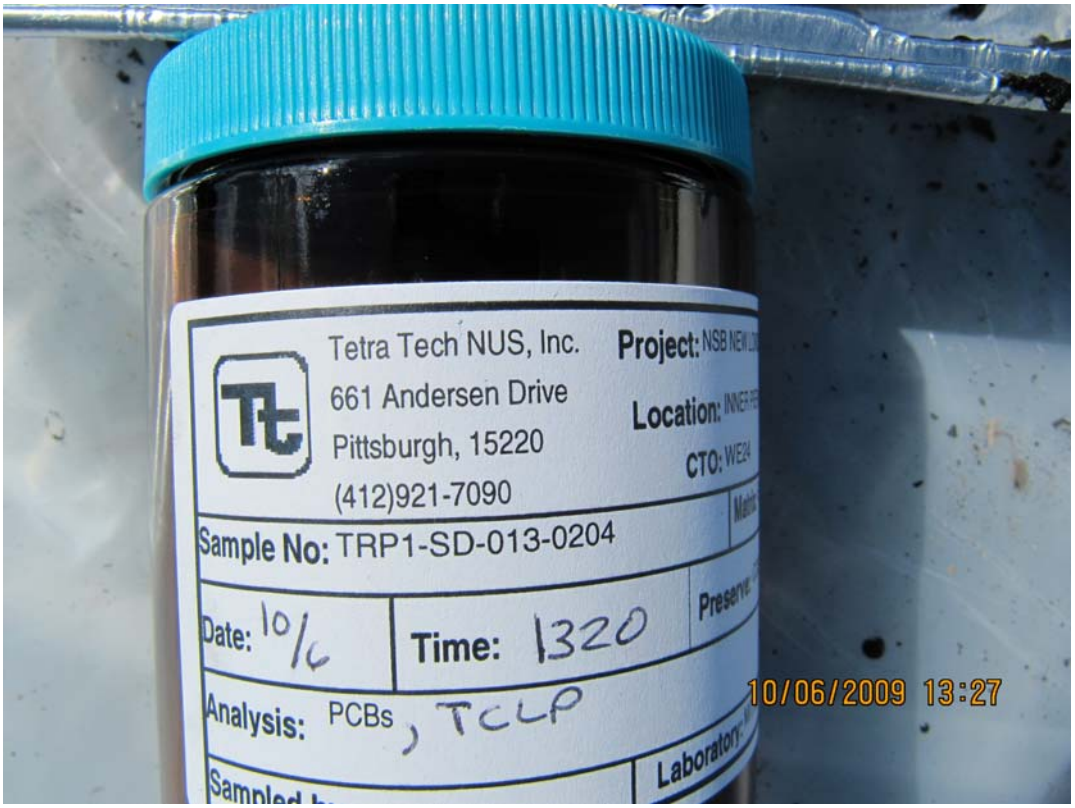
Thames River Pre-Design Sediment Sampling at Inner Pier 1
TRP1-SD-012-0001

Thames River Pre-Design Sediment Sampling at Inner Pier 1
TRP1-SD-013-0001



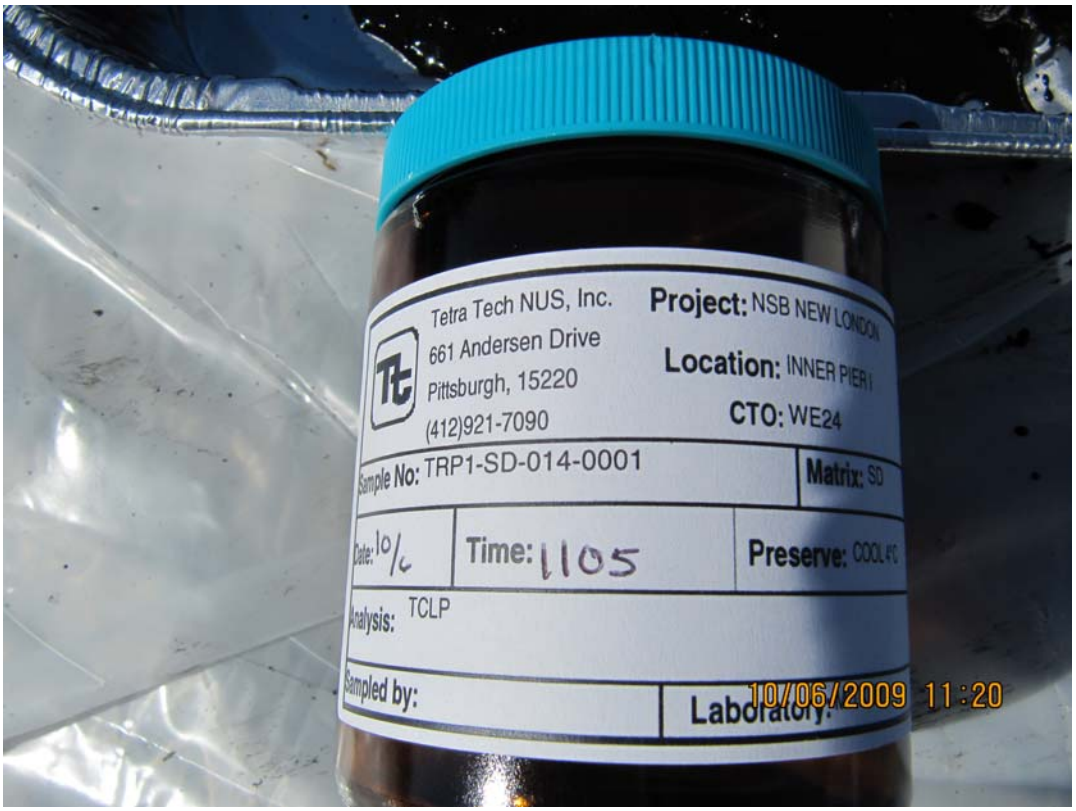
Thames River Pre-Design Sediment Sampling at Inner Pier 1
TRP1-SD-013-0001

Thames River Pre-Design Sediment Sampling at Inner Pier 1
TRP1-SD-013-0204



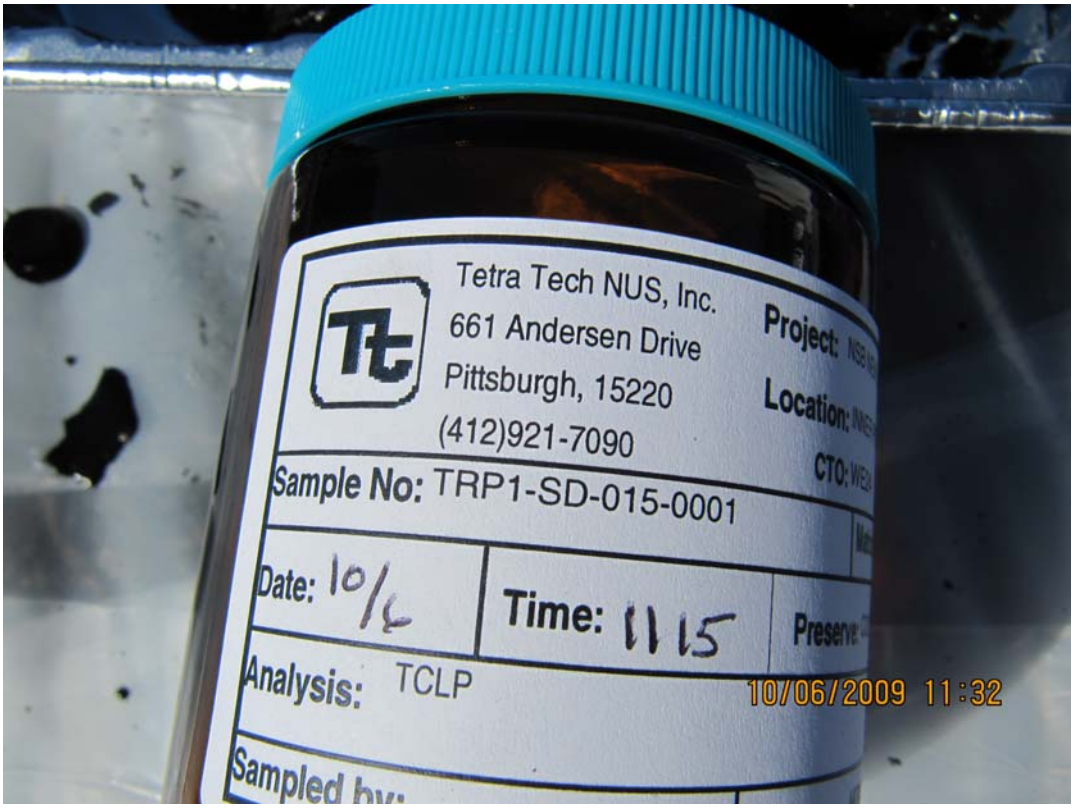
Thames River Pre-Design Sediment Sampling at Inner Pier 1
TRP1-SD-013-0204

Thames River Pre-Design Sediment Sampling at Inner Pier 1
TRP1-SD-014-0001



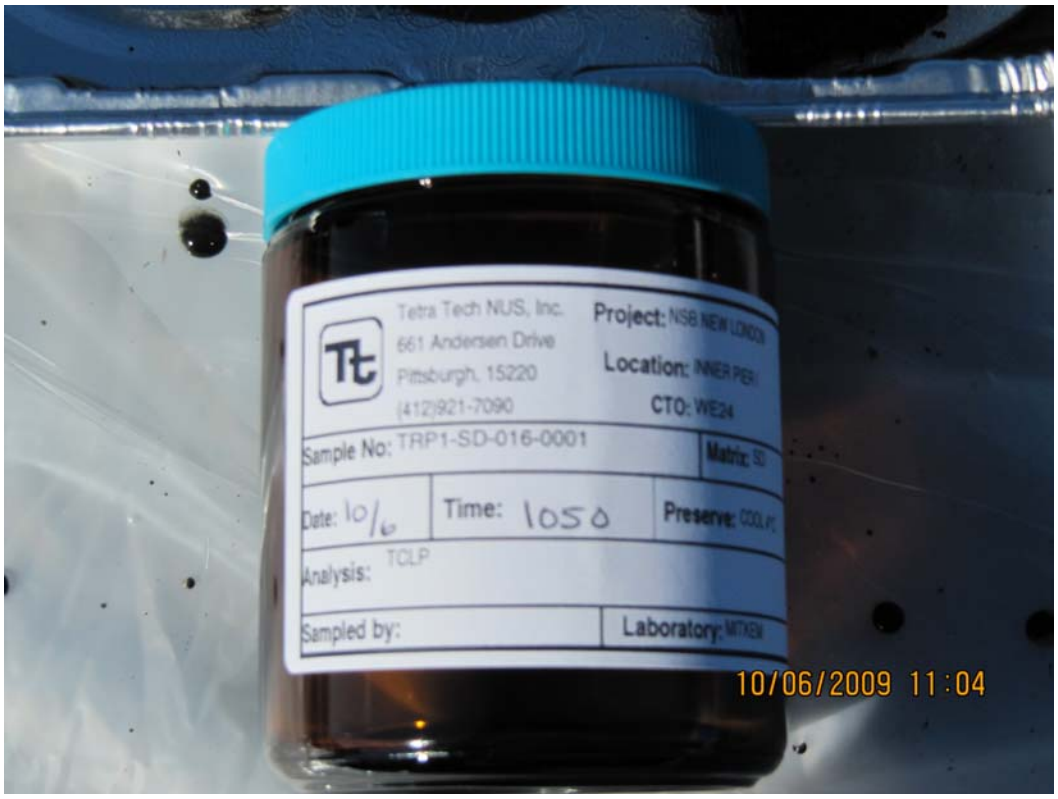
Thames River Pre-Design Sediment Sampling at Inner Pier 1
TRP1-SD-014-0001

Thames River Pre-Design Sediment Sampling at Inner Pier 1
TRP1-SD-015-0001



Thames River Pre-Design Sediment Sampling at Inner Pier 1
TRP1-SD-015-0001

Thames River Pre-Design Sediment Sampling at Inner Pier 1
TRP1-SD-016-0001



Thames River Pre-Design Sediment Sampling at Inner Pier 1
TRP1-SD-016-0001

Thames River Pre-Design Sediment Sampling at Inner Pier 1
Work Area

ATTACHMENT 3

FIELD TASK MODIFICATION REQUEST FORM

TETRA TECH NUS
FIELD TASK MODIFICATION REQUEST FORM

NEW LONDON	CTO WE24 / 112G02195	
Project/Installation Name	**CTO & Project Number**	**Task Mod. Number**
PROCEDURE FOR DATA VALIDATION	OCTOBER 6 SEDIMENT SAMPLES TAKEN AT INNER PIER 1	10/22/09
Modification To (e.g. Work Plan)	**Site/Sample Location**	**Date**

Activity Description: FINAL UFP-SAP WP (9/10/09) INDICATES A FULL VALIDATION OF DATA SHOULD BE COMPLETED FOLLOWING EPA REGION 1 TEIR III.

Reason for Change: CONDUCTING FULL VALIDATION ON DATA IS NOT NECESSARY FOR THE SEVEN SEDIMENT SAMPLES. DATA WILL BE USED TO DETERMINE WASTE DISPOSAL REQUIREMENTS, NOT FOR RISK ASSESSMENTS.

Recommended Disposition: PERFORM CURSORY VALIDATION OF DATA SET VERSUS FULL VALIDATION. THIS LEVEL OF VALIDATION IS SUFFICIENT FOR DATA TO BE USED FOR WASTE CHARACTERIZATION. THE CHANGE IN APPROACH WILL MINIMIZE THE LEVEL OF EFFORT REQUIRED FOR VALIDATION.

~~Field Operations Leader~~ (Signature) — Date: 10-22-09

DATA VALIDATION GROUP MANAGER

Approved Disposition:

A CURSORY-LEVEL VALIDATION WILL BE COMPLETED ON THE SEVEN SEDIMENT SAMPLES COLLECTED ON OCTOBER 6, 2009.

Project/Task Order Manager (Signature) — Date: 10/22/09

Distribution:

Program/Project File – CTO WE24 (112G02195)
Project/Task Order Manager – C. RICH
~~Field Operations Leader~~ – J. SAMCHUCK
DATA VALIDATION GROUP MANAGER

Other: JIM GRAVETTE – NAVFAC
TOM JOHNSTON – TENUS