



New Jersey Department of Environmental Protection  
Site Remediation Program

Report Certifications for RCRA GPRA 2020, CERCLA, and Federal Facility Sites

These certifications are to be used for reports submitted for RCRA GPRA 2020, CERCLA, and Federal Facility Sites. The Department has developed guidance for report certifications for RCRA GPRA 2020, CERCLA, and Federal Facility Sites under traditional oversight. The "Person Responsible for Conducting the Remediation Information and Certification" is required to be submitted with each report. For those sites that are required or opt to use a Licensed Site Remediation Professional (LSRP) the report must also be certified by the LSRP using the "Licensed Site Remediation Professional Information and Statement". For additional guidance regarding the requirement for LSRPs at RCRA GPRA 2020, CERCLA and Federal Facility Sites see [http://www.nj.gov/dep/srp/srra/training/matrix/quick\\_ref/rcra\\_cercla\\_fed\\_facility\\_sites.pdf](http://www.nj.gov/dep/srp/srra/training/matrix/quick_ref/rcra_cercla_fed_facility_sites.pdf).

Document: "Response to NJDEP Comments on Parcel 34- Revised LWPA"

PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation: William R. Colvin

Representative First Name: William Representative Last Name: Colvin

Title: BRAC Environmental Coordinator

Phone Number: (732) 380-7064 Ext: \_\_\_\_\_ Fax: \_\_\_\_\_

Mailing Address: P.O. Box 148

City/Town: Oceanport State: NJ Zip Code: 07757

Email Address: [william.r.colvin18.civ@mail.mil](mailto:william.r.colvin18.civ@mail.mil)

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

*I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.*

Signature: *William R. Colvin* Date: 8/04/2016

Name/Title: William R. Colvin / BRAC Environmental Coordinator



## DEPARTMENT OF THE ARMY

OFFICE OF ASSISTANT CHIEF OF STAFF FOR INSTALLATION MANAGEMENT  
U.S. ARMY FORT MONMOUTH  
P.O. 148  
OCEANPORT, NEW JERSEY 07757

August 4, 2016

Ms. Linda Range  
New Jersey Department of Environmental Protection  
Bureau of Case Management  
401 East State Street  
PO Box 420/Mail Code 401-05F  
Trenton, NJ 08625-0028

**SUBJECT: Revised Letter Work Plan Addendum for Parcel 34, Building 2567  
Fort Monmouth, New Jersey**

Dear Ms. Range:

The purpose of this Revised Letter Work Plan Addendum (RLWPA) is to address the NJDEP comments provided in your letter dated July 28, 2016 and to provide an overview of the revised LWPA for Parcel 34, Building 2567. As proposed in our July 7, 2016 LWPA, 4 additional borings (2 primary and 2 contingent) will be installed to support the supplemental environmental investigation of Parcel 34, Building 2567, located within Charles Wood Area (CWA) of Fort Monmouth (FTMM). Additional soil sampling as described in this LWPA will be performed to augment previous samples collected under the November 2015 Rev.1 Environmental Condition of Property (ECP) Work Plan Addendum (approved by NJDEP in Dec. 2015 letter). Additionally, grab groundwater samples will be collected to assess the groundwater condition in the western portion of the site if vadose zone soil samples indicate the need for groundwater sampling, as requested in your July 28, 2016 comment letter.

The ECP Work Plan Addendum (WPA) included four soil borings, PAR-34-SB-01, -SB-02, -SB-03, and -SB-04 collected at four of the highest soil benzene concentrations detected by Weston for a 1994 UST excavation as shown on **Figure B1**. Soil borings were advanced as described in the ECP-WPA. Based on the results, contaminants around the excavation area have been delineated both horizontally and vertically to the residential direct contact soil remediation standard (RDCSRS) with the exception of the northwestern corner near PAR-34-SB-01. PAR-34-SB-01 had a detection of benzene exceeding the RDCSRS at 6-6.5 feet below ground surface (bgs) (which is below the water table at this boring, as shown on the boring log provided in **Attachment 1**). In response to the NJDEP July 28, 2016 comments and to provide delineation of benzene, two primary soil borings (PAR-34-SB-05 and PAR-34-SB06) and three contingency borings (PAR-34-SB-07, PAR-34-SB08, and PAR-34-SB-09) are proposed and are shown on **Figure B1**. Up to 2 to 4 samples will be collected within each boring as described in **Table 1**. Primary samples will be run for VOC+TICs, and contingency samples will be extracted, held, and run for VOC+TICs pending results of the primary samples. Additionally, at borings PAR-34-SB-05 and PAR-34-SB06, grab groundwater samples will be collected using temporary wells.

Linda S. Range, NJDEP  
Revised Letter Work Plan Addendum  
Parcel 34, Building 2567  
August 4, 2016  
Page 2 of 2

Groundwater samples will be extracted, held, and run for VOCs+TICs pending results of the vadose zone soil samples.

We look forward to your review of this proposed RLWPA, and approval or additional comments. The technical Point of Contact (POC) for this matter is Cris Grill at (617) 449-1583 or by email at [cris.grill@parsons.com](mailto:cris.grill@parsons.com). Should you have any questions or require additional information, please contact me by phone at (732) 380-7064 or by email at [william.r.colvin18.civ@mail.mil](mailto:william.r.colvin18.civ@mail.mil).

Sincerely,



William R. Colvin, PMP, CHMM, PG  
BRAC Environmental Coordinator

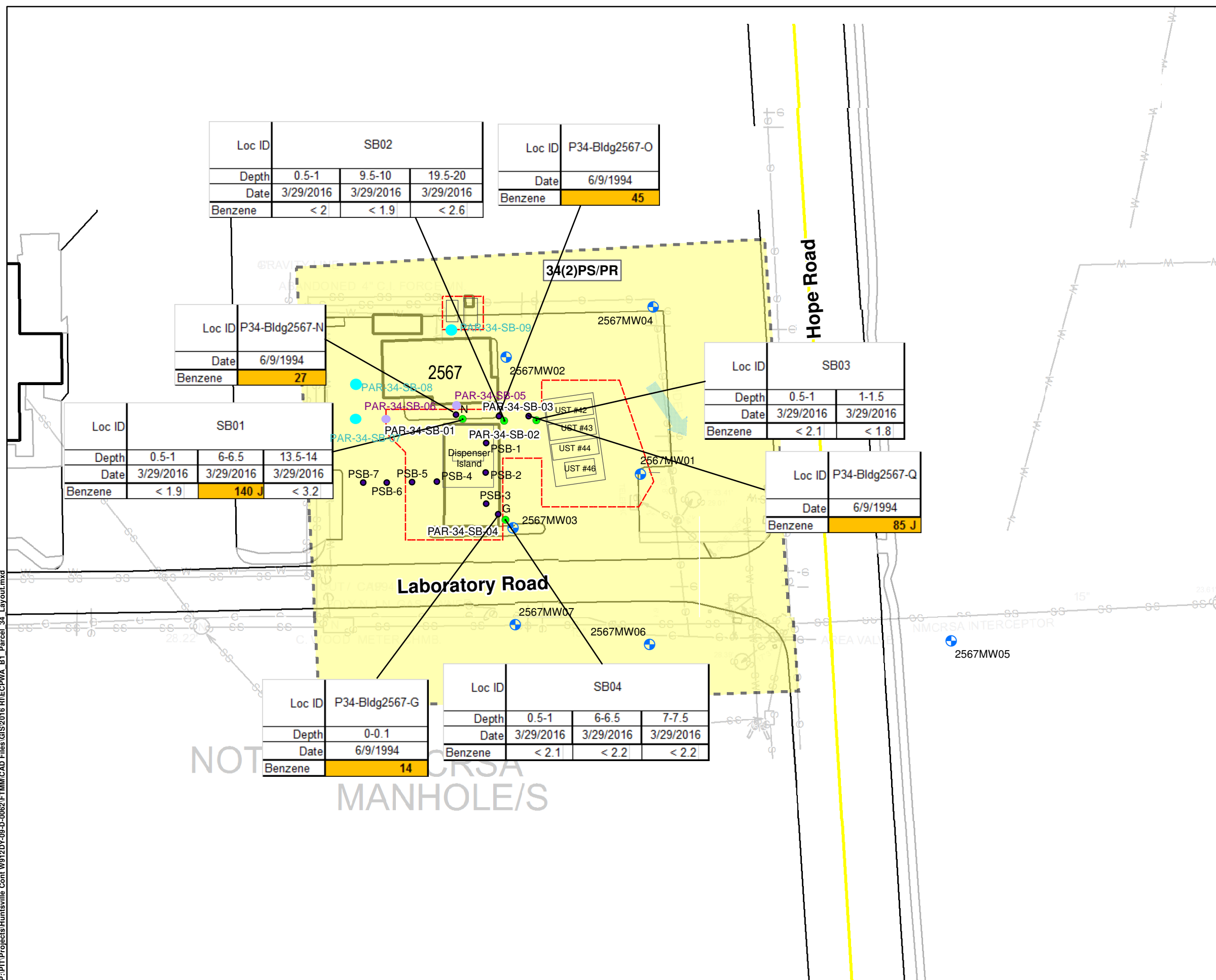
Attachments:

Figure B1 Layout of Parcel 34 (Building 2567) and Sampling Locations  
Table 1 Sampling Summary for Parcel 34 Revised Letter Work Plan Addendum  
Attachment 1 Boring Logs

cc: Linda Range, NJDEP (3 hard copies)  
Delight Balducci, HQDA ACSIM (e-mail)  
Joseph Pearson, Calibre (e-mail)  
James Moore, USACE (e-mail)  
Jim Kelly, USACE (e-mail)  
Cris Grill, Parsons (e-mail)

**FIGURE 1**  
**Layout of Parcel 34 (Building 2567) and Sampling Locations**

P:\PT\Projects\Huntsville Cont W912DY-09-D-0062\FTMM\CAD Files\GIS\2016 RIECPWA\_B1\_Parcel\_34\_Layout.mxd



**LEGEND:**

- Surface/Subsurface Soil Sample Location (for analysis of VOCs) (2016)
- Historical Soil Sample (1993, 2013)
- ▭ Parcel 34 Boundary
- ⊕ Shallow Monitoring Well
- ▭ Municipal Boundary
- w Water Line
- s Sanitary Sewer Line
- sw Storm Sewer Line
- G Gas Line
- - - Excavation
- ← Generalized Groundwater Flow Direction
- Proposed primary subsurface sampling location
- Proposed contingency subsurface sampling location

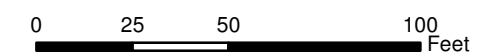
	NJ Residential Direct Contact SRS	NJ Non-Residential Direct Contact SRS
Benzene	2	5

BRAC Parcel Label Definitions

8(2)PS	HS - Hazardous Substance Storage
Contaminant Description	HR - Hazardous Substance Release
Category Number	PS - Petroleum Storage
Parcel Number	PR - Petroleum Release
	(P) - Possible Release or Disposal



1 inch = 50 feet



Source: FTMM Supplied CAD

<b>PARSONS</b> 401 Diamond Drive NW, Huntsville AL	<b>Fort Monmouth</b> New Jersey
<b>LAYOUT OF PARCEL 34 (BUILDING 2567) AND SAMPLING LOCATIONS</b>	
CREATED BY: <b>RR</b>	REVIEWED BY: <b>ME</b>
DATE: <b>MAY, 2016</b>	FIGURE NUMBER: <b>FIGURE B1</b>
PROJECT NUMBER: <b>748810-01000</b>	FILE: ECPWA_B1_Parcel_34_Layout.mxd

**TABLE 1**  
**Sampling Summary for Parcel 34 Revised Letter Work Plan Addendum**

**TABLE 1**  
**SAMPLING SUMMARY FOR PARCEL 34 REVISED LETTER WORK PLAN ADDENDUM**  
**FORT MONMOUTH, NEW JERSEY**

Site	Location	Field Meter Readings <sup>a/</sup>	VOC+IICs by EPA Method 8260C (including TBA)	Rationale
<b>Soil</b>				
Parcel 34	Primary Borings (Figure B1): 2 soil borings, 2-4 samples each.	2 borings	4-8	In borings PAR-34-SB-05 and PAR-34-SB06 (near borings PAR-34-SB-01 and Weston boring M respectively), samples will be collected at 1) the 6-6.5 feet interval (to correspond with contamination detected in PAR-34-SB-01), 2) the 6 inch interval above the water table, and if evidence of contamination is observed 3) at the most contaminated interval based on field observations/PID and 4) below any evidence of contamination
Parcel 34	Contingency Borings (Figure B1): 3 soil borings, 2-4 samples each.	3 borings	6-12	Samples will be collected from 1) the 6 inch interval above the water table, and 2) at 6-6.5 feet from the 3 contingency borings advanced outside of the excavation at locations PAR-34-SB-07 and PAR-34-SB08. Additionally, if evidence of contamination is observed when: 3) a sample will be collected at the most contaminated interval based on field observations/PID, and 4) a sample will be collected below any evidence of contamination.
<b>Groundwater</b>				
Parcel 34	Primary Borings (Figure B1): 2 temporary wells, 1 sample each.	2 borings/temporary wells	2	In borings PAR-34-SB-05 and PAR-34-SB06 (near borings PAR-34-SB-01 and Weston boring M respectively), grab groundwater samples will be collected.
<b>QA/QC samples (see SAP for additional details) <sup>b/</sup></b>				
Field Duplicates (5% Sampling Frequency per media)		NA	1	
Matrix Spike (5% Sampling Frequency per media)		NA	1	
Matrix Spike Duplicate (5% Sampling Frequency per media)		NA	1	
Trip Blank (1 per cooler of VOCs per media)		NA	1	
QA Split (5% per media)		NA	1	
Equipment Blank (5% Sampling Frequency per media)		NA	1	
<b>TOTAL</b>		<b>NA</b>	<b>18-28</b>	

**Notes:**

NA = not applicable.

<sup>a/</sup> Field meter readings include, in soil samples: photoionization detector (PID) readings along entire soil column; and in groundwater: PID headspace, pH, temperature, electrical conductivity, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity.

<sup>b/</sup> QA/QC = quality assurance/quality control; SAP = Sampling and Analysis Plan. The requirement for QA/QC samples may be fulfilled with samples from other parcels.

**ATTACHMENT 1  
BORING LOGS**

### Soil Boring Log

CLIENT: <u>USACE</u> PROJECT NAME: <u>FTMM - ECP</u> PROJECT LOCATION: <u>FTMM Parcel</u> PROJECT NUMBER: <u>748810-</u>	INSPECTOR: <u>CW, JM</u> DRILLER: <u>JOE</u> WEATHER: <u>45F clear</u> CONTRACTOR: <u>East Coast Drilling, Inc. (ECDI)</u>	BORINGWELL ID: <u>PAR-34-SB01</u> LOCATION DESCRIPTION: <u>PARCEL 34</u> LOCATION PLAN: <u>Oceanport, New Jersey</u>
GROUNDWATER OBSERVATIONS		
WATER LEVEL: <u>4</u> DATE: <u>3/29/16</u> TIME: <u>0955</u> MEAS. FROM: <u>BGS</u>	RIG TYPE: <u>Geoprobe(R) 7822DT</u> DATE/TIME START: <u>3/29/16 0450</u> DATE/TIME FINISH: <u>3/29/16 1005</u> WEIGHT OF HAMMER: <u>N/A</u> DROP OF HAMMER: <u>N/A</u> TYPE OF HAMMER: <u>N/A</u>	

DEPTH (feet)	SAMPLE I.D.	BLOWS per 6"	ADV/ REC.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0			80/20	20.8	0-2" concrete		
	0.5-1.0			22.9	2-20" grey/brown, moist, MF SAND and f gravel, trace silt		slight odor
1				12.6			
				N/A	20-60" no recovery		
2						II	
3							
4							
5			60/60	193	0-12" saturated, grey, loose, MF SAND, trace silt, trace f gravel		Strong odor
	6.0-6.5			211			
6				1601			
				975	12"-60" saturated, grey, loose MF SAND, little silt	II	
7				320			
				12.4			
8				9.7			
				15.2			
9				3.5			
				2.2			
10							

Remarks:

<b>Sample Types</b> S - Split-Spoon U - Undisturbed Tube C - Rock Core A - Auger Cuttings	<b>Consistency vs. Blowcount / Foot</b>	and - 35-50% some - 20-35% little - 10-20% trace - <10% moisture, density, color, gradation																
	<table border="0" style="width: 100%;"> <tr> <th colspan="2" style="text-align: left;">Granular (Sand &amp; Gravel)</th> <th colspan="2" style="text-align: left;">Fine Grained (Silt &amp; Clay)</th> </tr> <tr> <td>V. Loose: 0-4</td> <td>Dense: 30-50</td> <td>V. Soft: &lt;2</td> <td>Stiff: 8-15</td> </tr> <tr> <td>Loose: 4-10</td> <td>V. Dense: &gt;50</td> <td>Soft: 2-4</td> <td>V. Stiff: 15-30</td> </tr> <tr> <td>M. Dense: 10-30</td> <td></td> <td>M. Stiff: 4-8</td> <td>Hard: &gt;30</td> </tr> </table>	Granular (Sand & Gravel)		Fine Grained (Silt & Clay)		V. Loose: 0-4	Dense: 30-50	V. Soft: <2	Stiff: 8-15	Loose: 4-10	V. Dense: >50	Soft: 2-4	V. Stiff: 15-30	M. Dense: 10-30		M. Stiff: 4-8	Hard: >30	
Granular (Sand & Gravel)		Fine Grained (Silt & Clay)																
V. Loose: 0-4	Dense: 30-50	V. Soft: <2	Stiff: 8-15															
Loose: 4-10	V. Dense: >50	Soft: 2-4	V. Stiff: 15-30															
M. Dense: 10-30		M. Stiff: 4-8	Hard: >30															

### Soil Boring Log

CLIENT: USACE PROJECT NAME: FTMM - ECP PROJECT LOCATION: FTMM Parcel PROJECT NUMBER: 748810-	INSPECTOR: CW/BA DRILLER: JOE BARNAK WEATHER: 45°F CONTRACTOR: East Coast Drilling, Inc. (ECDI)	BORING/WELL ID: PA1-34-SB-01 LOCATION DESCRIPTION: Parcel 34
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GROUNDWATER OBSERVATIONS  WATER LEVEL: <u>  </u> DATE: <u>3/29/16</u> TIME: <u>0955</u> MEAS. FROM: <u>bas</u>	RIG TYPE: Geoprobe(R) 7822DT DATE/TIME START: <u>3/29/16 0950</u> DATE/TIME FINISH: <u>3/29/16 1005</u> WEIGHT OF HAMMER: N/A DROP OF HAMMER: N/A TYPE OF HAMMER: N/A	LOCATION PLAN Oceanport, New Jersey
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DEPTH (feet)	SAMPLE I.D.	BLOWS per 6"	ADV/ REC.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
10			60/50	32.1	0-10" No Recovery		Slight odor
				4.2	10"-33" wet, grey, loose, mf SAND, little silt		
11				2.1			
				9.8	33"-60" wet, dense, dark grey F SAND AND SILT, mica present	II	NO odor
12				3.6			
				2.1			
13				2.8			
	13.5-14			0			
14				0			
				0			
15					End of Boring @ 15'		
16							
17							
18							
19							
20							

Remarks:

Sample Types S - Split-Spoon U - Undisturbed Tube C - Rock Core A - Auger Cuttings	Consistency vs. Blowcount / Foot <table style="font-size: small;"> <tr> <th colspan="2">Granular (Sand &amp; Gravel)</th> <th colspan="2">Fine Grained (Silt &amp; Clay)</th> </tr> <tr> <td>V. Loose: 0-4</td> <td>Dense: 30-50</td> <td>V. Soft: &lt;2</td> <td>Stiff: 8-16</td> </tr> <tr> <td>Loose: 4-10</td> <td>V. Dense: &gt;50</td> <td>Soft: 2-4</td> <td>V. Stiff: 16-30</td> </tr> <tr> <td>M. Dense: 10-30</td> <td></td> <td>M. Stiff: 4-8</td> <td>Hard: &gt;30</td> </tr> </table>	Granular (Sand & Gravel)		Fine Grained (Silt & Clay)		V. Loose: 0-4	Dense: 30-50	V. Soft: <2	Stiff: 8-16	Loose: 4-10	V. Dense: >50	Soft: 2-4	V. Stiff: 16-30	M. Dense: 10-30		M. Stiff: 4-8	Hard: >30	and - 35-50% some - 20-35% little - 10-20% trace - <10% moisture, density, color, gradation
Granular (Sand & Gravel)		Fine Grained (Silt & Clay)																
V. Loose: 0-4	Dense: 30-50	V. Soft: <2	Stiff: 8-16															
Loose: 4-10	V. Dense: >50	Soft: 2-4	V. Stiff: 16-30															
M. Dense: 10-30		M. Stiff: 4-8	Hard: >30															

### Soil Boring Log

CLIENT: USACE PROJECT NAME: FTMM - ECP PROJECT LOCATION: FTMM Parcel PROJECT NUMBER: 748810-	INSPECTOR: CW/JM DRILLER: JOR WEATHER: 40°F clear CONTRACTOR: East Coast Drilling, Inc. (ECDI)	BORING/WELL ID: PAR-34-SB02 LOCATION DESCRIPTION: Parcel 34 LOCATION PLAN: Oceanport, New Jersey
GROUNDWATER OBSERVATIONS WATER LEVEL: ~4' BGS DATE: 3/21/16 TIME: 0845 MEAS. FROM: R-3		RIG TYPE: Geoprobe(R) 7822DT DATE/TIME START: 3/21/16 0835 DATE/TIME FINISH: 3/21/16 0930 WEIGHT OF HAMMER: N/A DROP OF HAMMER: N/A TYPE OF HAMMER: N/A

DEPTH (feet)	SAMPLE I.D.	BLOWS per 6"	ADV/ REC.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0	55-SB02-051.D		60/12"	0	<del>0-2"</del> 0-2" Concrete 2"-12" grey, moist, MF SAND and MF gravel, trace silt		Slight odor
1				N/A	12"-60" No Recovery		
2							
3							
4							
5				2.8 3.7	0-14" saturated, grey, loose, MF SAND trace silt, trace F gravel		Slight odor
6				24.6 68.7	14"-60" saturated, grey, loose, MF SAND, little silt	II	
7				211 236			
8				186 199			
9				236 835			
10	9.5-10.0						

Remarks:

Sample Types	Consistency vs. Blowcount / Foot			
	Granular (Sand & Gravel)		Fine Grained (Silt & Clay)	
S - Split-Spoon	V. Loose: 0-4	Dense: 30-50	V. Soft: <2	Stiff: 8-15
U - Undisturbed Tube	Loose: 4-10	V. Dense: >50	Soft: 2-4	V. Stiff: 15-30
C - Rock Core	M. Dense: 10-30		M. Stiff: 4-8	Hard: > 30
A - Auger Cuttings				end - 35-50% some - 20-35% little - 10-20% trace - <10% moisture, density, color, gradation

### Soil Boring Log

CLIENT: USACE PROJECT NAME: FTMM - ECP PROJECT LOCATION: FTMM Parcel PROJECT NUMBER: 748810	INSPECTOR: CW/JM DRILLER: Joe WEATHER: 45°F clear CONTRACTOR: East Coast Drilling, Inc. (ECDI)	BORING/WELL ID: PA1-34-5802 LOCATION DESCRIPTION: Parcel 34 LOCATION PLAN: Oceanport, New Jersey
GROUNDWATER OBSERVATIONS		
WATER LEVEL: ~4' Bgs DATE: 3/29/16 TIME: 0845 MEAS. FROM: Pgs	RIG TYPE: Geoprobe(R) 7822DT DATE/TIME START: 3/29/16 0835 DATE/TIME FINISH: 3/29/16 0938 WEIGHT OF HAMMER: N/A DROP OF HAMMER: N/A TYPE OF HAMMER: N/A	

DEPTH (feet)	SAMPLE I.D.	BLOWS per 6"	ADV/ REC.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
1.0			60/42	48	0-18" No Recovery		
1.1				386	18"-26" wet, grey, loose, Af SAND, little silt	II	Slight odor
1.2				569	26"-60" wet, dense, dark grey f SAND no SILT, much present		
1.3				464			
1.4				484			
1.5				501			
1.6				687			
1.7				202			
1.8				224			
1.5			60/48	200	0-12" No recovery	II	Slight odor
1.6				225	12-18" wet, dense, dark grey f SAND no SILT, much present		
1.7				186	18-48" wet, dense, black f SAND no SILT, much present		
1.8				147			
1.9				20.8			
1.8				37.2			
1.8				2.2			
1.8				8.7			
1.9				0			
2.0	19.5-20.0			0			
2.0					END OF BORING 201		

Remarks:

Sample Types	Consistency vs. Blowcount / Foot		and
S - Split-Spoon	Granular (Sand & Gravel)	Fine Grained (Silt & Clay)	35-50%
U - Undisturbed Tube	V. Loose: 0-4    Dense: 30-50	V. Soft: <2    Stiff: 8-15	some - 20-35%
C - Rock Core	Loose: 4-10    V. Dense: >50	Soft: 2-4    V. Stiff: 15-30	little - 10-20%
A - Auger Cuttings	M. Dense: 10-30	M. Stiff: 4-8    Hard: >30	trace - <10%
			moisture, density, color, gradation

### Soil Boring Log

CLIENT: <u>USACE</u> PROJECT NAME: <u>FTMM - ECP</u> PROJECT LOCATION: <u>FTMM Parcel</u> PROJECT NUMBER: <u>748810-</u>	INSPECTOR: <u>CW/JM</u> DRILLER: <u>JOE BARNAK</u> WEATHER: <u>45°F</u> CONTRACTOR: <u>East Coast Drilling, Inc. (ECDI)</u>	BORING/WELL ID: <u>PAR-34-5B-03</u> LOCATION DESCRIPTION: <u>PARCEL 34</u> LOCATION PLAN: <u>Oceanport, New Jersey</u>
GROUNDWATER OBSERVATIONS		
WATER LEVEL: <u>-1.5'</u> DATE: <u>3/29/16</u> TIME: <u>1028</u> MEAS. FROM: <u>BSS</u>	RIG TYPE: <u>Geoprobe(R) 7822DT</u> DATE/TIME START: <u>3/25/16 1020</u> DATE/TIME FINISH: <u>3/29/16 1040</u> WEIGHT OF HAMMER: <u>N/A</u> DROP OF HAMMER: <u>N/A</u> TYPE OF HAMMER: <u>N/A</u>	

DEPTH (feet)	SAMPLE I.D.	BLOWS per 6"	ADV/ REC.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0			60/54	0	0-3" Asphalt		
	0.5-1.0			0	3-18" <del>Wet</del> , medium Brown, MF SAND, some F gravel		
1	1.0-1.5			0	18"-38" saturated, grey F gravel, some MF sand	II	▽
2				0			
3				0			
4				0			
5			60/54	0	0-6" No recovery		
				0	6"-17" saturated, grey F gravel, some MF SAND		
6				0			
				0	17"-45" wet, grey, loose, MF SAND, little silt	II	
7				0			
				0	45"-60" wet, denser Black, F SAND and SILT, much present		
8				0			
9				0			
10				0			

Remarks:

Sample Types	Consistency vs. Blowcount / Foot		
S - Split-Spoon U - Undisturbed Tube C - Rock Core A - Auger Cuttings	Granular (Sand & Gravel) V. Loose: 0-4 Loose: 4-10 M. Dense: 10-30	Dense: 30-50 V. Dense: >50	Fine Grained (Silt & Clay) V. Soft: <2 Soft: 2-4 M. Stiff: 4-8 Stiff: 8-15 V. Stiff: 15-30 Hard: >30
			and - 35-50% some - 20-35% little - 10-20% trace - <10% moisture, density, color, gradation

### Soil Boring Log

CLIENT: USACE PROJECT NAME: FTMM - ECP PROJECT LOCATION: FTMM Parcel PROJECT NUMBER: 748810-	INSPECTOR: CW, JM DRILLER: JOE BARNABE WEATHER: 45°F clear CONTRACTOR: East Coast Drilling, Inc. (ECDI)	BORING/WELL ID: PAF-34-SB-04 PARCEL 34 LOCATION DESCRIPTION PARCEL 34 LOCATION PLAN Oceanport, New Jersey
GROUNDWATER OBSERVATIONS WATER LEVEL: <u>24.5'</u> DATE: <u>3/22/16</u> TIME: <u>1055</u> MEAS. FROM:		RIG TYPE: Geoprobe(R) 7822DT DATE/TIME START: <u>3/22/16 1050</u> DATE/TIME FINISH: <u>3/22/16 1110</u> WEIGHT OF HAMMER: N/A DROP OF HAMMER: N/A TYPE OF HAMMER: N/A

DEPTH (feet)	SAMPLE I.D.	BLOWS per 6"	ADV/ REC.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	STRATA	COMMENTS
0-0			48/60	0	0-3" Asphalt		
0-1	0.5-1.0			0	3"-16" Brown, moist, loose, MF SAND, trace of gravel		
0-2				0	16"-48" Moist, loose, gray, MF SAND, little silt	II	
0-3				0.8	wet @ 425"		
0-4				0.4	48-60" No recovery		
0-5				NA			
0-6	6-6.5			60/60	0-49" Saturated, gray, loose, MF SAND, little silt	II	
0-7	7-7.5			49.0	49"-60" Wet, dark gray, M. Dense Fine SAND and SILT, mica present		
0-8				0			
0-9				0			
0-10				0			
					END of Boring @ 10'		

Remarks:

Sample Types	Consistency vs. Blowcount / Foot			
	Granular (Sand & Gravel)		Fine Grained (Silt & Clay)	
S - Split-Spoon	V. Loose: 0-4	Dense: 30-50	V. Soft: <2	Stiff: 8-16
U - Undisturbed Tube	Loose: 4-10	V. Dense: >50	Soft: 2-4	V. Stiff: 15-30
C - Rock Core	M. Dense: 10-30		M. Stiff: 4-8	Hard: >30
A - Auger Cuttings	moisture, density, color, gradation			

end - 35-50%  
 some - 20-35%  
 little - 10-20%  
 trace - <10%