3.17 Parcel 70 – Bldg 551 – Former Photoprocessing

3.17.1 Site Description

Parcel 70, Bldg 551, is located in the central portion of the MP on Todd Avenue, directly north of Oceanport Creek. The building formerly housed a classroom and photoprocessing operation, which was located in the western portion of the building (22). Bldg 551 is currently utilized for administrative and classroom activities. Chemicals documented to have been utilized included carbon tetrachloride and photographic chemicals. Additional information pertaining to this parcel can be found in Section 4.3.2.1.6 and Section 5.13.6 of the Phase I ECP (1).

3.17.2 Previous Investigations

One former UST associated with Bldg 551 was removed under the FTMM UST Management Program and is summarized within the FTMM Phase I ECP Report (1). No previous investigations have been conducted in relation to former operations in Bldg 551.

3.17.3 Site Investigation Sampling

A review of historical site plans, sanitary plans, and stormwater management plans was conducted to evaluate potential discharge locations throughout the parcel, and a site reconnaissance was conducted in spring 2007 to evaluate potential discharge locations. Two cast-iron pipe outfalls were identified south of Bldg 551 along the north bank of Oceanport Creek during the 2007 site reconnaissance. In order to determine the absence/presence of contamination from potential releases to the environment, the following surface soil and sediment sampling was conducted in Parcel 70.

Surface Soil Investigation

Surface soil sampling was conducted in December 2007 and January 2008 within Parcel 70. One surface soil sample was collected from one hand augered location outside the exterior door to the former photoprocessing facility in the courtyard of Bldg 551 (**Figure 3.17-1**). This sample was collected to determine if any contamination exists from former photoprocessing operations. The surface soil sample for non-VO analysis was collected from the 0- to 6-inch interval bgs. The surface soil sample collected for VO analysis was collected from the 18- to 24-inch bgs interval. No visual or olfactory evidence of soil contamination was noted.

Sediment Investigation

Sediment samples were collected in December 2007 and January 2008 in Parcel 70. A total of four sediment samples were collected from two distinct hand augered borings located along the north bank of Oceanport Creek adjacent to Bldg 551 (**Figure 3.17-1**). Samples were collected at potential outfall locations to investigate any potential historic discharges from Bldg 551. Sediment samples for non-VO and VO analysis were

collected from the 0- to 6-inch interval bgs and the 18- to 24-inch interval bgs, respectively. No visual or olfactory evidence of sediment contamination was noted.

Table 3.17-1 presents a summary of all field activities, and all sample locations are provided on **Figure 3.17-1**. A summary of sampling activities, including sample IDs, collection dates, and analytical parameters, is provided in **Table 3.17-2.**

Table 3.17-1
Parcel 70 Sampling Location, Rationale and Analytical

Sample Location	Sample Media	Sample Location Rationale	Analytical Suite
70SS-1, 70SD-1, 70SD-1D (3 sample)	Surface soil	A soil sample was collected from the 0- to 6-inch bgs interval to investigate potential discharges associated with former photoprocessing operations at Bldg 551. The sample was located at the exterior door to the former photoprocessing facility in the courtyard of the building.	TCL+30 (w/o pesticides), TAL Metals
70SD-1 and 2 (1 samples)	Sediment	Sediment samples were collected from the 0- to 6-inch bgs interval to investigate potential discharges from Bldg 551. Samples are located at the outfalls of 4-inch cast iron pipes present along the north bank of Oceanport Creek.	TCL+30 (w/o pesticides), TAL Metals
70SD-1D and 2D (1 samples)	Sediment	Sediment samples were collected from the 18- to 24-inch interval bgs to investigate potential discharges from Bldg 551.	TCL+30 (w/o pesticides), TAL Metals

3.17.4 Site Investigation Results

Soil Investigation Results

The soil sample was analyzed for TCL+30 (minus pesticides) and TAL metals. In addition to surface soil sample P70-SS1, samples P70-SD2 and P70-SD2D, which were originally intended to be sediment samples, were characterized as soil samples due to the lack of surface water at the sample location, the low moisture content of the samples, and the lack of recent depositional characteristics at the sample location. These two samples were also analyzed for TCL+30 (without pesticides) and TAL metals. As presented in **Table 3.17-3**, eight B/Ns, 17 metals, and one Aroclor were detected in the three samples.

B/Ns and Aroclor 1260 were not detected at concentrations above the NJDEP NRDCSCC. Of the 17 metals detected, arsenic was detected above the NRDCSCC of 20 mg/kg at a concentration of 26.3 mg/kg in sample P70-SD2. Sample P70-SD2 was collected from the 0- to 6-inch interval. The deeper sample P70-SD2D, collected from the 12- to 18-inch interval had an arsenic concentration below the NRDCSCC.

There are several factors both natural and anthropogenic that can have an influence on arsenic levels in the soil at FTMM. The primary natural influence on the chemical concentrations in the soil at FTMM is parent material. The parent material at FTMM is glauconitic soil of the Tinton and Red Bank sands and their fluvially- and tidally-reworked equivalents (47). Total arsenic levels in glauconite-bearing soils in New Jersey have been reported to range up to 131 mg/kg, with a median of 30 mg/kg (21). Anthropogenic influences on arsenic levels in the soil include the use of pesticides and herbicides. Arsenic was a common constituent of herbicides and pesticides in the past. As a result of these natural and anthropogenic influences, arsenic is not considered a COC in the soil. No COCs were identified in soil at Parcel 70.

Sediment Investigation Results

Sediment samples were analyzed for TCL+30 (without pesticides) and TAL metals. Oceanport Creek is a tidally influenced water body in this portion of the facility; therefore, sediment analytical results were evaluated in relation to the Marine/Estuarine Sediment Screening Guidelines-ER-L.

As presented in **Table 3.17-4**, a total of six B/Ns and 17 metals were detected in Parcel 70 sediment samples. The six B/Ns and 17 metals were detected at concentrations below the ER-L.

No COCs have been identified in sediment at Parcel 70.

3.17.5 Summary and Conclusions

No COCs were identified above applicable NJDEP criteria in surface soil. NFA is recommended for soil within Parcel 70.

No COCs were detected in sediment at concentrations greater than the NJDEP Marine/Estuarine Sediment Screening Guidelines-ER-L. NFA is recommended for sediment within Parcel 70.

Table 3.17-2
Parcel 70 Sample and Analytical Summary

Media	Type	Field Sample #	Sample Date	Sample Time	Begin Depth	End Depth	TPHC	VO+15	B\N+15	PCBs	TAL Metals	Cyanide	Mercury	Ammonia/ Nitrate/ Nitrite	COMMENTS/VARIANCES
SD	HAND AUGER	DUPLICATE-SD	12/20/07	11:10	1.0	1.5									Cancelled by lab. Recollected 01/08/08.
SOIL	HAND AUGER	P70-SS1	12/20/07	10:50	0.0	0.5									Cancelled by lab. Recollected 01/08/08.
SD	HAND AUGER	P70-SD1	12/20/07	11:00	0.0	0.5									Cancelled by lab. Recollected 01/08/08.
SD	HAND AUGER	P70-SD1D	12/20/07	11:10	1.0	1.5									Cancelled by lab. Recollected 01/08/08.
SD	HAND AUGER	P70-SD2	12/20/07	11:30	0.0	0.5									Cancelled by lab. Recollected 01/08/08.
SD	HAND AUGER	P70-SD2D	12/20/07	11:40	1.0	1.5									Cancelled by lab. Recollected 01/08/08.
SOIL	HAND AUGER	P70SS-1	12/27/07	11:50	1.5	2		X							Associated trip blank collected with Parcel 27. No field blank or duplicate collected 12/27/07.
SOIL	HAND AUGER	P70SS-1	01/08/08	15:30	0.0	0.5		X	X	X	X				VOCs not needed. 12/27 VOCs collected at correct depth. Associated field and trip blanks collected with Parcel 27.
SD	HAND AUGER	P70-SD1	01/08/08	14:45	0.0	0.5		X	X	X	X				Associated field and trip blanks collected with Parcel 27.
SD	HAND AUGER	P70-SD1D	01/08/08	15:00	1.0	1.5		X	X	X	X				Associated field and trip blanks collected with Parcel 27.
SOIL	HAND AUGER	P70-SD2	01/08/08	15:10	0.0	0.5		X	X	X	X				Associated field and trip blanks collected with Parcel 27. Sample determined to be classified as soil, not sediment.
SOIL	HAND AUGER	P70-SD2D	01/08/08	15:30	1.0	1.5		X	X	X	X				Associated field and trip blanks collected with Parcel 27. Sample determined to be classified as soil, not sediment.

X = Sample analyzed for the indicated analytical parameter suite

Table 3.17-3
Fort Monmouth Phase II Site Investigation, Parcel 70
Summary of Analytical Parameters Detected in Soil (mg/kg)

			Analytical Results		
		Sample ID:	P70-SS1	P70-SD2	P70-SD2D
		Lab ID:	8000905	8000903	8000904
		Date Sampled:	01/08/2008	01/08/2008	01/08/2008
		Depth (ft. bgs):	0.0-0.5	0.0-0.5	1.0-1.5
Chemical	NRDCSCC[2]	IGWSCC[3]	Result	Result	Result
Semi-Volatiles					
Benzo[a]anthracene	4	500	1.100 U	**0.400 J**	4.500 U
Benzo[b]fluoranthene	4	50	1.100 U	**0.760 J**	4.500 U
Benzoic acid	NLE	NLE	1.100 U	3.200 U	4.500 U
bis(2-Ethylhexyl)phthalate	210	100	**0.300 J**	3.200 U	4.500 U
Chrysene	40	500	1.100 U	**0.620 J**	4.500 U
Di-n-butylphthalate	10000	100	**1.100 B**	**1.200 JB**	**6.000 B**
Fluoranthene	10000	100	1.100 U	**0.840 J**	4.500 U
Phenanthrene	NLE	NLE	1.100 U	**0.440 J**	4.500 U
Pyrene	10000	100	1.100 U	**1.200 J**	4.500 U
Aroclor 1260	2	50	**0.86**	0.0041 U	0.0041 U
Aluminum	NLE	NLE	**9420 B**	**44500 B**	**20400 B**
Arsenic	20	NLE	**4.13**	**26.3**	**11.0**
Barium	47000	NLE	**39.7 B**	**218 B**	**93.4 B**
Beryllium	140	NLE	**0.315**	**5.10**	**2.22**
Cadmium	100	NLE	**1.28**	**3.19**	**0.742**
Calcium	NLE	NLE	**917 B**	**3510 B**	**7440 B**
Chromium (Total)	NLE	NLE	**21.7**	**232**	**114**
Cobalt	NLE	NLE	**1.97**	**10.0**	**1.99**
Copper	45000	NLE	**87.9 B**	**54.2 B**	**22.1 B**
Iron	NLE	NLE	**17300**	**62000**	**25200**
Lead	800	NLE	**40.8**	**115**	**10.6**
Magnesium	NLE	NLE	**951**	**7670**	**3400**
Manganese	NLE	NLE	**84.9**	**107**	**87.7**
Nickel (Soluble Salts)	2400	NLE	**9.39**	**48.8**	**26.7**
Potassium	NLE	NLE	**1610**	**12200**	**6160**
Vanadium	7100	NLE	**30.5**	**162**	**79.4**
Zinc	1500	NLE	**136 B**	**328 B**	**180 B**

[1] NJDEP Residential Direct Contact Soil Cleanup Criteria per NJAC 7:26D, 1999. Beryllium, Copper and Lead criteria per NJAC 7:26D, 2008.

[2] NJDEP Non-Residential Direct Contact Soil Cleanup Criteria per NJAC 7:26D, 1999. Beryllium, Copper and Lead criteria per NJAC 7:26D, 2008.

[3] NJDEP Impact to Groundwater Soil Cleanup Criteria per NJAC 7:26D, 1999.

DUP = Duplicate Sample.

ft. bgs = Feet below ground surface.

B = The compound was found in the associated method blank as well as in the sample.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

U = The compound was analyzed for but not detected.

NT = Not tested.

NLE = No limit established.

mg/kg = milligram per kilogram.

Bold = Analyte was detected.

Shaded = Concentration exceeds level of concern.
(Surface soil compared to NRDCSCC. Subsurface soil compared to IGWSCC when available, otherwise compared to NRDCSCC).

Table 3.17-4
Fort Monmouth Phase II Site Investigation, Parcel 70
Summary of Analytical Parameters Detected in Sediment (mg/kg)

			Analytical Results	
		Sample ID:	P70-SD1	P70-SD1D
		Lab ID:	8000901	8000902
		Date Sampled:	01/08/2008	01/08/2008
		Depth (ft. bgs):	0.0-0.5	1.0-1.5
Chemical	ER-L[1]	ER-M[2]	Result	Result
Semi-Volatiles				
Benzoic acid	NLE	NLE	**3.100**	1.400 U
bis(2-Ethylhexyl)phthalate	NLE	NLE	**0.170 J**	1.400 U
Chrysene	0.384	2.8	**0.120 J**	1.400 U
Di-n-butylphthalate	NLE	NLE	**1.500 B**	**1.600 B**
Fluoranthene	0.600	5.1	**0.120 J**	1.400 U
Pyrene	0.665	2.6	**0.170 J**	1.400 U
Metals				
Aluminum	NLE	NLE	**4140 B**	**6640 B**
Arsenic	8.2	70	**3.43**	**3.17**
Barium	NLE	NLE	**12.4 B**	**28.2 B**
Beryllium	NLE	NLE	**0.432**	**0.591**
Cadmium	1.2	9.6	**0.197**	**0.184**
Calcium	NLE	NLE	**861 B**	**1110 B**
Chromium (Total)	81	370	**43.9**	**51.2**
Cobalt	NLE	NLE	**0.472**	0.394 U
Copper	34	270	**15.9 B**	**11.3 B**
Iron	NLE	NLE	**13200**	**11000**
Lead	47	218	**14.8**	**8.92**
Magnesium	NLE	NLE	**1460**	**1590**
Manganese	NLE	NLE	**33.5**	**24.2**
Nickel (Soluble Salts)	21	52	**4.26**	**4.25**
Potassium	NLE	NLE	**3000**	**3170**
Vanadium	NLE	NLE	**29.0**	**31.4**
Zinc	150	410	**76.4 B**	**100 B**

[1] NJDEP Marine/Estuarine Sediment Screening Guidelines, Effects Range - Low, 1998.

[2] NJDEP Marine/Estuarine Sediment Screening Guidelines, Effects Range - Medium, 1998.

DUP = Duplicate Sample.

ft. bgs = Feet below ground surface.

B = The compound was found in the associated method blank as well as in the sample.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

U = The compound was analyzed for but not detected.

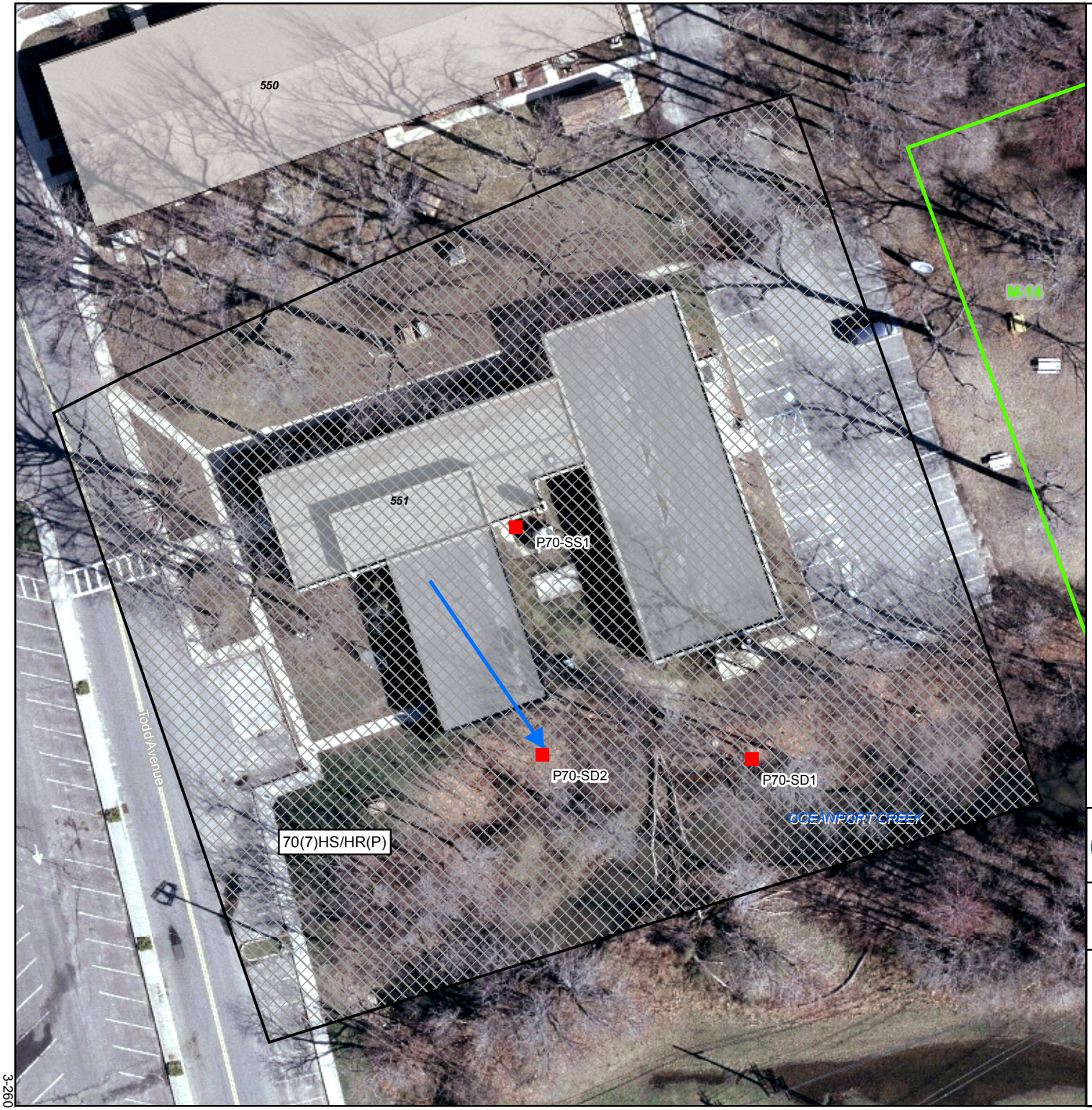
NT = Not tested.

NLE = No limit established.

mg/kg = milligram per kilogram.

Bold = Analyte detected.

Shaded = Concentration exceeds ER-L.



LEGEND

- Surface and Subsurface Soil Sample Location
- Direction of Generalized Groundwater Flow derived from qualitative evaluation of surface topography, surface water features, and pre-existing IRP site groundwater potentiometric maps where available.
- Building
- IRP Site Boundary
- Installation Boundary

ECP PARCEL CATEGORY DEFINITIONS

7 Areas that are not evaluated or require additional evaluation.

BRAC PARCEL LABEL DEFINITIONS

8(2)PS
- CONTAMINATION DESCRIPTION
  - HS - Hazardous Substance Storage
  - HR - Hazardous Substance Release
  - PS - Petroleum Storage
  - PR - Petroleum Release
  - (P) - Possible Release or Disposal
- CATEGORY NUMBER
- PARCEL NUMBER

N

SCALE:

0 25 50 100 Feet

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

Shaw® Shaw Environmental, Inc.

FIGURE 3.17-1

FORT MONMOUTH ECP
SITE INVESTIGATION
PARCEL 70 SAMPLE LOCATIONS

MAIN POST
FORT MONMOUTH
NEW JERSEY

ArcGIS File: MP_Fig3_17-1_SI_P70_SampleLocations.mxd (7/14/2008 4:22:11 PM)

3.18 Parcel 76 – 200 Area, 300 Area – Former Barracks

3.18.1 Site Description

Parcel 76 is located in the northern portion of the MP and encompasses the former 300 Area barracks and current residential housing within the 200 series of buildings. Plan No. 506, "Gas and Fuel Storage Tanks Distribution System" dated January 22, 1956, was reviewed for the MP as part of the Phase I ECP. The plan depicts numerous fuel oil USTs that existed within Parcel 76 in 1956 in association with the former barracks and current residential housing. Additional information pertaining to this parcel can be found in Section 5.4 and Appendix G of the Phase I ECP (1).

3.18.2 Previous Investigations

Numerous USTs associated with current residential buildings within the 200 Area have been removed under the FTMM UST program and are summarized within the FTMM Phase I ECP Report (1).

3.18.3 Site Investigation Sampling

A review of documented UST removal locations versus the location of former buildings and associated USTs within Parcel 76 was conducted. Based on this review, it was determined that no UST removals have been documented at the locations of numerous fuel oil USTs identified on Plan No. 506, "Gas and Fuel Storage Tanks Distribution System" dated January 22, 1956. This includes fuel oil USTs associated with former 300 Area barracks (currently an open maintained grass area) and existing Bldg 230. In order to determine the absence/presence of formerly utilized USTs and their potential releases to the environment, the following geophysical surveys, soil sampling, and groundwater sampling were conducted throughout Parcel 76.

Geophysical Survey Investigation

An EM survey was conducted over the former barracks area and also by Bldg 230 to determine if USTs are present. Follow-up GPR surveys were conducted at anomalies identified from the EM surveys.

Geoprobe® Investigation

Soil and groundwater samples were collected in November 2007 in Parcel 76 in order to determine if contamination exists from potential historical UST releases. A total of 29 surface soil samples and 35 subsurface soil samples (including five duplicate samples) were collected from 29 distinct Geoprobe® borings (**Figure 3.18-1**). Boring locations were conducted on approximate 100-ft centers in an open field that was once a barracks area. Two additional boring locations were placed near Bldg 230 in January 2008 to investigate a potential heating oil tank. Surface soil samples for non-VO analysis were collected from the 0- to 6-inch interval bgs. For borings located in paved areas, non-VO surface soil samples were collected from the 0- to 6-inch interval directly below the pavement sub-base. Surface soil samples collected for VO analysis were

collected from the 18- to 24-inch interval bgs. Subsurface soil samples were collected from the 6-inch interval directly above the water table. Field screening of the core was conducted using a PID/FID meter. Visual staining and olfactory evidence of impacted soil was noted at the 6-inch interval directly above the water table at boring location P76-B7. Visual staining and olfactory evidence of impacted soil was also noted at boring location P76-C4. One additional subsurface sample, P76-C4-D, was collected based on elevated results from field screening tests that were performed on the soil core at boring location P76-C4.

A total of six groundwater samples (including one duplicate sample) were collected from five distinct temporary wells that were installed with the Geoprobe® rig (**Figure 3.18-1**). Temporary wells were installed along the downgradient (northern) boundary of the soil grid. Two groundwater samples, 76GW-1 (including one duplicate), were also collected from a temporary well installed downgradient of Bldg 230 to investigate possible contamination from a potential heating oil tank that was associated with this building. Temporary wells were constructed of PVC and 5 to 10 ft of factory-slotted screen.

Table 3.18-1 presents a summary of all field activities, and all sample locations are provided on **Figure 3.18-1**. A summary of sampling activities, including sample IDs, collection dates, and analytical parameters, is provided in **Table 3.18-2**.

Table 3.18-1
Parcel 76 Sampling Location, Rationale and Analytical

Sample Location	Sample Media	Sample Location Rationale	Analytical Suite
225-ft x 825-ft former barracks area	A geophysical survey was conducted over the 225-ft x 825-ft former barracks area and a 80-ft x 80-ft area associated with the former UST associated with Bldg 230. The geophysical investigation consisted of an EM survey throughout the areas followed by targeted GPR scanning of anomalies identified by the EM survey.		
76SS-A1 through 76SS-C9 (27 samples)	Surface soil	Soil samples were collected from the 0- to 6-inch bgs interval from Geoprobe® soil borings in a grid configuration (conducted on 100-ft centers) to investigate the potential release from former heating oil USTs associated with the former barracks. If the sample location was paved, the sample was collected from the 0- to 6-inch interval below the pavement sub-base.	TPHC, VO+10 (25% of TPHC > 1,000 mg/kg)
76SB-A1 through 76SB-C9 (32 samples – includes 4 duplicate samples)	Subsurface soil	Soil samples were collected from the 6-inch interval directly above the water table (ranging from 2.5 to 12 ft bgs) from each Geoprobe® soil boring in the grid (conducted on 100-ft centers) to investigate the potential release from former heating oil USTs associated with the former barracks. Field screening of the entire Geoprobe® soil core was conducted using PID/FID meters.	TPHC, VO+10 (25% of TPHC > 1,000 mg/kg)

Sample Location	Sample Media	Sample Location Rationale	Analytical Suite
76GW-A1, A3, A5, A7, A9 (6 samples – includes 1 duplicate sample)	Groundwater	Groundwater samples were collected from the specified Geoprobe® soil borings in the grid to investigate the potential release from former heating oil USTs associated with the former barracks. Groundwater samples were collected on 200-ft centers in the downgradient portion of the sampling grid.	VO+10, B/N+15
76SS-1 and 2 (2 samples)	Surface soil	Soil samples were collected from the 0- to 6-inch bgs interval from Geoprobe® soil borings to investigate the potential release from a former heating oil UST associated with existing Bldg 230.	TPHC, VO+10 (25% of TPHC > 1,000 mg/kg)
76SB-1 and 2 (3 samples – includes 1 duplicate sample)	Subsurface soil	Soil samples were collected from the 6-inch interval directly above the water table (3.5 to 4.0 ft bgs) from each Geoprobe® soil boring to investigate the potential release from a former heating oil UST associated with existing Bldg 230. Field screening of the entire Geoprobe® soil core was conducted using PID/FID meters.	TPHC, VO+10 (25% of TPHC > 1,000 mg/kg)
76GW-1 (2 samples – includes 1 duplicate sample)	Groundwater	A groundwater sample was collected from the specified Geoprobe® soil boring to investigate the potential release from a former heating oil UST associated with Bldg 230.	VO+10, B/N+15

3.18.4 Site Investigation Results

Geophysical Survey Results

The geophysical survey identified a total of 24 target EM anomalies. The survey areas are presented on **Figure 3.18-2**. This parcel of FTMM has been previously developed and the land surface reworked multiple times throughout its history. The findings of the geophysical survey (the density and small size of anomalies) are consistent with the site history. Seven suspected USTs were identified in the 300 Area; the locations of the suspected USTs are presented on **Figure 3.18-2**. No suspected USTs were identified in the area of Bldg 230. The results of the GPR/TW-6 follow-up scanning are listed in **Table 3.18-3**, and full results of the geophysical surveys are included in **Appendix A**. In summary, GPR scanning of the 24 targets revealed:

- Fourteen targets that were associated with surface metal/debris (previously unaccounted for).
- Three targets with moderate-amplitude scattered reflections, possible small pieces of scattered metal debris.

- Seven targets with high-amplitude parabolic reflections indicative of a possible UST. The suspected USTs match up with former Bldgs 537, 538, 539, 541, 542, 543, and 544. Said buildings served as barracks officers quarters, housing structures, until the end of their life cycles. Supporting real property records are included in **Appendix I**.

Geoprobe® Investigation Results

Surface and subsurface soil samples were analyzed for TPHC. Corresponding surface and subsurface soil samples were collected for contingent VO+10 analysis. Groundwater samples were analyzed for VO+10 and B/N+15.

Soil

Three additional subsurface soil samples, P76-B7-C, P76-C4-D and P76-C4-D-Duplicate, were collected for TPHC and contingency VO analysis based on elevated field screening measurements with a PID. Sample P76-B7-C had a PID reading of 50 ppm, and samples P76-C4-D and P76-C4-D-Duplicate had a PID reading of 55 ppm. As shown in **Table 3.18-4**, TPHC was detected in six of the 29 surface soil samples and in three of the 35 subsurface soil samples. No surface soil TPHC results exceeded 1,000 mg/kg; therefore, no VO analysis was conducted for surface soil. TPHC results exceeded 1,000 mg/kg in three subsurface soil samples (P76-B7-C contained 6,163 mg/kg TPHC, P76-C4-D contained 1,998 mg/kg TPHC, and P76-C4-D-Duplicate contained 1,498 mg/kg TPHC) and contingent VO analysis was conducted. As shown in **Table 3.18-5**, one VO (acetone) was detected at concentrations below the NJDEP NRDCSCC. No COCs were identified in soil at Parcel 76.

Groundwater

Three VOs were detected in Parcel 76 groundwater samples (**Table 3.18-6**). Acetone, chloroform, and toluene were detected at concentrations below the NJDEP GWQC.

Four B/Ns were detected in Parcel 76 groundwater samples. Of the four B/Ns detected, bis(2-ethylhexyl)phthalate was detected at concentrations above the NJDEP GWQC. A commonly used plasticizer, bis(2-ethylhexyl)phthalate, is present in a wide variety of plastic products, is commonly detected in field and laboratory QC samples, and was detected in the field and method blanks associated the Parcel 76 groundwater samples. Thus, no COCs were identified in groundwater at Parcel 76.

3.18.5 Summary and Conclusions

A total of seven targets indicative of suspected USTs were identified by the geophysical investigation. No constituents were identified above applicable NJDEP NRDCSCC or RDCSCC in surface or subsurface soil, and no constituents were identified above NJDEP GWQC in groundwater.

Soil and groundwater analytical results suggest that a release has not occurred. In light of the absence of evidence of a release to the environment, NFA for soil, groundwater, and the suspected USTs in Parcel 76 is recommended.

Table 3.18-2
Parcel 76 Sample and Analytical Summary

Media	Type	Field Sample #	Sample Date	Sample Time	Begin Depth	End Depth	TPHC	VO+15	B\N+15	PCBs	TAL Metals	Cyanide	Mercury	Ammonia/ Nitrate/ Nitrite	COMMENTS/VARIANCES
BLANK	TRIP	TRIP BLANK-SO	11/21/07	-	--	--	NA								
SOIL	GEOPROBE	P76-B1-A	11/21/07	10:10	0.0	0.5	X								
SOIL	GEOPROBE	P76-B1-B	11/21/07	10:10	1.5	2.0	NA								
SOIL	GEOPROBE	P76-B1-C	11/21/07	10:30	5.0	5.5	X								
SOIL	GEOPROBE	P76-B2-A	11/21/07	10:50	0.0	0.5	X								
SOIL	GEOPROBE	P76-B2-B	11/21/07	10:50	1.5	2.0	NA								
SOIL	GEOPROBE	P76-B2-C	11/21/07	11:00	5.0	5.5	X								
SOIL	GEOPROBE	P76-B3-A	11/21/07	11:15	0.0	0.5	X								
SOIL	GEOPROBE	P76-B3-B	11/21/07	11:15	1.5	2.0	NA								
SOIL	GEOPROBE	P76-B3-C	11/21/07	11:20	2.5	3.0	X								
SOIL	GEOPROBE	P76-B3-C DUPLICATE	11/21/07	11:20	2.5	3.0	X								
SOIL	GEOPROBE	P76-B4-A	11/21/07	11:50	0.0	0.5	X								
SOIL	GEOPROBE	P76-B4-B	11/21/07	11:50	1.5	2.0	NA								
SOIL	GEOPROBE	P76-B4-C	11/21/07	11:55	2.5	3.0	X								
BLANK	FIELD	FIELD BLANK-SO	11/21/07	12:00	--	--	X								
BLANK	TRIP	TRIP BLANK	11/26/07	-	--	--		X							
SOIL	GEOPROBE	P76-B5-A	11/26/07	10:05	0.0	0.5	X								
SOIL	GEOPROBE	P76-B5-B	11/26/07	10:05	1.5	2.0	NA								
SOIL	GEOPROBE	P76-B5-C	11/26/07	11:05	3.0	3.5	X								
SOIL	GEOPROBE	P76-B6-A	11/26/07	11:25	0.0	0.5	X								
SOIL	GEOPROBE	P76-B6-B	11/26/07	11:25	1.5	2.0	NA								
SOIL	GEOPROBE	P76-B6-C	11/26/07	11:35	7.0	7.5	X								
SOIL	GEOPROBE	P76-B7-A	11/26/07	11:50	0.0	0.5	X								
SOIL	GEOPROBE	P76-B7-B	11/26/07	11:50	1.5	2.0	NA								
SOIL	GEOPROBE	P76-B7-C	11/26/07	12:00	3.0	3.5	X	X							
SOIL	GEOPROBE	P76-B8-A	11/26/07	13:25	0.0	0.5	X								
SOIL	GEOPROBE	P76-B8-B	11/26/07	13:25	1.5	2.0	NA								

Table 3.18-2
Parcel 76 Sample and Analytical Summary

Media	Type	Field Sample #	Sample Date	Sample Time	Begin Depth	End Depth	TPHC	VO+15	B\N+15	PCBs	TAL Metals	Cyanide	Mercury	Ammonia/ Nitrate/ Nitrite	COMMENTS/VARIANCES
SOIL	GEOPROBE	P76-B8-C	11/26/07	13:40	7.0	7.5	X								
SOIL	GEOPROBE	P76-B9-A	11/26/07	14:00	0.0	0.5	X								
SOIL	GEOPROBE	P76-B9-B	11/26/07	14:00	1.5	2.0	NA								
SOIL	GEOPROBE	P76-B9-C	11/26/07	14:10	5.5	6.0	X								
SOIL	GEOPROBE	P76-A8-A	11/26/07	14:25	0.0	0.5	X								
SOIL	GEOPROBE	P76-A8-B	11/26/07	14:25	1.5	2.0	NA								
SOIL	GEOPROBE	P76-A8-C	11/26/07	14:25	3.0	3.5	X								
SOIL	GEOPROBE	P76-A6-A	11/26/07	14:45	0.0	0.5	X								
SOIL	GEOPROBE	P76-A6-B	11/26/07	14:45	1.5	2.0	NA								
SOIL	GEOPROBE	P76-A6-C	11/26/07	14:50	5.5	6.0	X								
SOIL	GEOPROBE	P76-A6-C DUPLICATE	11/26/07	14:50	5.5	6.0	X								
BLANK	FIELD	FIELD BLANK	11/26/07	15:00	--	--	X	X							
BLANK	TRIP	TRIP BLANK	11/27/07	-	--	--	NA								
SOIL	GEOPROBE	P76-A1-A	11/27/07	8:35	0.0	0.5	X								
SOIL	GEOPROBE	P76-A1-B	11/27/07	8:35	1.5	2.0	NA								
SOIL	GEOPROBE	P76-A1-C	11/27/07	9:05	11.5	12.0	X								
SOIL	GEOPROBE	P76-A2-A	11/27/07	10:10	0.0	0.5	X								
SOIL	GEOPROBE	P76-A2-B	11/27/07	10:10	1.5	2.0	NA								
SOIL	GEOPROBE	P76-A2-C	11/27/07	10:15	6.5	7.0	X								
SOIL	GEOPROBE	P76-A3-A	11/27/07	10:30	0.0	0.5	X								
SOIL	GEOPROBE	P76-A3-B	11/27/07	10:30	1.5	2.0	NA								
SOIL	GEOPROBE	P76-A3-C	11/27/07	11:00	11.5	12.0	X								
SOIL	GEOPROBE	P76-A4-A	11/27/07	11:15	0.0	0.5	X								
SOIL	GEOPROBE	P76-A4-B	11/27/07	11:15	1.5	2.0	NA								
SOIL	GEOPROBE	P76-A4-C	11/27/07	11:35	7.5	8.0	X								
BLANK	FIELD	FIELD BLANK	11/27/07	13:30	--	--	X								
SOIL	GEOPROBE	P76-A5-A	11/27/07	13:40	0.0	0.5	X								

Table 3.18-2
Parcel 76 Sample and Analytical Summary

Media	Type	Field Sample #	Sample Date	Sample Time	Begin Depth	End Depth	TPHC	VO+15	B\N+15	PCBs	TAL Metals	Cyanide	Mercury	Ammonia/ Nitrate/ Nitrite	COMMENTS/VARIANCES
SOIL	GEOPROBE	P76-A5-B	11/27/07	13:40	1.5	2.0	NA								
SOIL	GEOPROBE	P76-A5-C	11/27/07	14:00	5.0	5.5	X								
SOIL	GEOPROBE	P76-A5-C DUPLICATE	11/27/07	14:00	5.0	5.5	X								
SOIL	GEOPROBE	P76-A7-A	11/27/07	14:20	0.0	0.5	X								
SOIL	GEOPROBE	P76-A7-B	11/27/07	14:20	1.5	2.0	NA								
SOIL	GEOPROBE	P76-A7-C	11/27/07	14:40	7.5	8.0	X								
SOIL	GEOPROBE	P76-A9-A	11/27/07	15:00	0.0	0.5	X								
SOIL	GEOPROBE	P76-A9-B	11/27/07	15:00	1.5	2.0	NA								
SOIL	GEOPROBE	P76-A9-C	11/27/07	15:35	11.5	12.0	X								
BLANK	TRIP	TRIP BLANK-SO	11/28/07	-	--	--		X							
SOIL	GEOPROBE	P76-C1-A	11/28/07	8:40	0.0	0.5	X								
SOIL	GEOPROBE	P76-C1-B	11/28/07	8:40	1.5	2.0	NA								
SOIL	GEOPROBE	P76-C1-C	11/28/07	9:00	5.0	5.5	X								
SOIL	GEOPROBE	P76-C2-A	11/28/07	9:15	0.0	0.5	X								
SOIL	GEOPROBE	P76-C2-B	11/28/07	9:15	1.5	2.0	NA								
SOIL	GEOPROBE	P76-C2-C	11/28/07	9:30	7.0	7.5	X								
SOIL	GEOPROBE	P76-C3-A	11/28/07	9:55	0.0	0.5	X								
SOIL	GEOPROBE	P76-C3-B	11/28/07	9:55	1.5	2.0	NA								
SOIL	GEOPROBE	P76-C3-C	11/28/07	10:05	3.5	4.0	X								
SOIL	GEOPROBE	P76-C4-A	11/28/07	10:15	0.0	0.5	X								
SOIL	GEOPROBE	P76-C4-B	11/28/07	10:15	1.5	2.0	NA								
SOIL	GEOPROBE	P76-C4-C	11/28/07	10:25	3.5	4.0	X								
SOIL	GEOPROBE	P76-C4-D	11/28/07	10:40	7.5	8.5	X	X							TPHC collected due to elevated field screening results.
SOIL	GEOPROBE	P76-C4-D DUPLICATE	11/28/07	10:40	7.5	8.5	X	X							
SOIL	GEOPROBE	P76-C5-A	11/28/07	11:00	0.0	0.5	X								
SOIL	GEOPROBE	P76-C5-B	11/28/07	11:00	1.5	2.0	NA								
SOIL	GEOPROBE	P76-C5-C	11/28/07	11:10	3.0	3.5	X								

Table 3.18-2
Parcel 76 Sample and Analytical Summary

Media	Type	Field Sample #	Sample Date	Sample Time	Begin Depth	End Depth	TPHC	VO+15	B\N+15	PCBs	TAL Metals	Cyanide	Mercury	Ammonia/ Nitrate/ Nitrite	COMMENTS/VARIANCES
SOIL	GEOPROBE	P76-C6-A	11/28/07	11:25	0.0	0.5	X								
SOIL	GEOPROBE	P76-C6-B	11/28/07	11:25	1.5	2.0	NA								
SOIL	GEOPROBE	P76-C6-C	11/28/07	11:30	2.5	3.0	X								
SOIL	GEOPROBE	P76-C7-A	11/28/07	11:40	0.0	0.5	X								
SOIL	GEOPROBE	P76-C7-B	11/28/07	11:40	1.5	2.0	NA								
SOIL	GEOPROBE	P76-C7-C	11/28/07	11:45	3.0	3.5	X								
SOIL	GEOPROBE	P76-C8-A	11/28/07	14:05	0.0	0.5	X								
SOIL	GEOPROBE	P76-C8-B	11/28/07	14:05	1.5	2.0	NA								
SOIL	GEOPROBE	P76-C8-C	11/28/07	14:10	2.5	3.0	X								
SOIL	GEOPROBE	P76-C9-A	11/28/07	14:20	0.0	0.5	X								
SOIL	GEOPROBE	P76-C9-B	11/28/07	14:20	1.5	2.0	NA								
SOIL	GEOPROBE	P76-C9-C	11/28/07	14:30	5.0	5.5	X								
BLANK	FIELD	RINSE BLANK-SO	11/28/07	13:45	--	--	X	X							
BLANK	TRIP	TRIP BLANK-AQ	11/28/07	9:30	--	--		X							
BLANK	FIELD	FIELD BLANK-AQ	11/28/07	12:45	--	--		X	X						
GW	GEOPROBE	P76-A1	11/28/07	13:00	11.0	16.0		X	X						
GW	GEOPROBE	P76-A1 DUPLICATE	11/28/07	13:00	11.0	16.0		X	X						
GW	GEOPROBE	P76-A3	11/28/07	13:30	11.0	16.0		X	X						
GW	GEOPROBE	P76-A5	11/28/07	14:00	7.0	12.0		X	X						
GW	GEOPROBE	P76-A7	11/28/07	14:30	7.0	12.0		X	X						
GW	GEOPROBE	P76-A9	11/28/07	15:00	11.0	16.0		X	X						
BLANK	TRIP	TRIP BLANK	01/17/08	-	--	--	NA								
BLANK	FIELD	FIELD BLANK	01/17/08	11:45	--	--	X								
SOIL	GEOPROBE	P76SS-2A	01/17/08	10:45	0.0	0.5	X								
SOIL	GEOPROBE	P76SS-2B	01/17/08	10:45	1.5	2.0	NA								
SOIL	GEOPROBE	P76SS-2C	01/17/08	11:00	3.5	4.0	X								
SOIL	GEOPROBE	P76SS-1A	01/17/08	11:25	0.0	0.5	X								

Table 3.18-2
Parcel 76 Sample and Analytical Summary

Media	Type	Field Sample #	Sample Date	Sample Time	Begin Depth	End Depth	TPHC	VO+15	B\N+15	PCBs	TAL Metals	Cyanide	Mercury	Ammonia/ Nitrate/ Nitrite	COMMENTS/VARIANCES
SOIL	GEOPROBE	P76SS-1B	01/17/08	11:25	1.5	2.0	NA								
SOIL	GEOPROBE	P76SS-1C	01/17/08	11:35	3.5	4.0	X								
SOIL	GEOPROBE	P76SS-1C DUPLICATE	01/17/08	11:35	3.5	4.0	X								
BLANK	TRIP	TRIP BLANK	01/17/08	13:00	--	--		X							
BLANK	FIELD	FIELD BLANK	01/18/08	8:30	--	--		X	X						
GW	GEOPROBE	P76GW-1 DUPLICATE	01/18/08	9:00	4.0	9.0		X	X						
GW	GEOPROBE	P76GW-1	01/18/08	9:00	4.0	9.0		X	X						

NA = Not Analyzed. Sample was collected for VOC analysis in the event TPHC results in the 0.0-0.5 ft bgs interval exceeded 1,000 mg/kg. TPHC results were less than 1,000 mg/kg in the 0.0-0.5 ft bgs interval, therefore no VOC analysis was required.
X = Sample analyzed for the indicated analytical parameter suite

Table 3.18-3
Parcel 76 - Ground Penetrating Radar and Metal Detection Follow-up Survey Results

Anomaly	Anomaly Type: Inphase, Conductivity, Both	Anomaly Re-Acquired by Small Area Metal Detection	Metal Detection (MD) Anomaly Size (feet)	GPR Anomaly Size (feet)	Description	Easting	Northing
P76_1	Both	N/A	N/A	N/A	Surface metal.	619701	541088
P76_2	Both	N/A	N/A	N/A	Surface metal.	619706	541022
P76_3	Both	N/A	N/A	N/A	Surface metal.	619734	541123
P76_4	Inphase	Yes	7 x 12	4 x 11	High-amplitude anomaly indicative of a UST.	619762	541086
P76_5	Conductivtiy	N/A	N/A	N/A	Surface metal.	619773	541088
P76_6	Inphase	N/A	N/A	N/A	Surface metal.	619809	541136
P76_7	Inphase	N/A	N/A	N/A	Surface metal.	619828	541107
P76_8	Conductivtiy	Yes	7 x 12	4 x 11	High-amplitude anomaly indicative of a UST.	619873	541158
P76_9	Inphase	Yes	7 x 12	4 x 10	High-amplitude anomaly indicative of a UST.	619942	541136
P76_10	Both	N/A	N/A	N/A	Surface metal.	619972	541165
P76_11	Both	N/A	N/A	N/A	Surface metal.	620013	541140
P76_12	Both	Yes	7 x 13	4 x 11	High-amplitude anomaly indicative of a UST.	620046	541205
P76_13	Both	Yes	8 x 12	4 x 11	High-amplitude anomaly indicative of a UST.	620110	541182
P76_14	Both	Yes	< 3 x 3	< 3 x 3	Moderate-amplitude point target/anomaly, possible debris.	620158	541290
P76_15	Inphase	N/A	N/A	N/A	Surface metal.	620182	541241
P76_16	Both	Yes	8 x 10	4 x 7	High-amplitude anomaly indicative of a UST.	620221	541257
P76_17	Both	Yes	< 3 x 3	< 3 x 3	Moderate-amplitude point target/anomaly, possible debris.	620221	541310
P76_18	Both	N/A	N/A	N/A	Surface metal.	620256	541333
P76_19	Both	N/A	N/A	N/A	Surface metal.	620274	541243
P76_20	Inphase	Yes	7 x 10	4 x 7	High-amplitude anomaly indicative of a UST.	620288	541231
P76_21	Both	Yes	5 x 7	see notes	Moderate-amplitude scattered anomalies, possible scattered debris.	620327	541282
P76_22	Both	N/A	N/A	N/A	Surface metal.	620363	541237
P76_23	Both	N/A	N/A	N/A	Surface metal.	620417	541290
P76_24	Both	N/A	N/A	N/A	Surface metal.	620442	541272

Table 3.18-4
Fort Monmouth Phase II Site Investigation, Parcel 76
Summary of TPHC Detected in Soil (mg/kg)

Sample ID	Lab ID	Sample Date	Depth (ft. bgs)	Result	MDL	NJDEP RDCSCC[1] (mg/kg)	NJDEP NRDCSCC[2] (mg/kg)	NJDEP IGWSCC[3] (mg/kg)
P76-A4-A	7049112	11/27/07	0.0-0.5	102	75	10000	10000	10000
P76-A6-A	7048821	11/26/07	0.0-0.5	288	76	10000	10000	10000
P76-A7-A	7049119	11/27/07	0.0-0.5	85	74	10000	10000	10000
P76-B1-A	7048303	11/21/07	0.0-0.5	265	71	10000	10000	10000
P76-B7-C	7048811	11/26/07	3.0-3.5	6163	75	10000	10000	10000
P76-C4-D	7049215	11/28/07	7.5-8.5	1998	83	10000	10000	10000
P76-C4-D DUP	7049202	11/28/07	7.5-8.5	1498	81	10000	10000	10000
P76-C8-A	7049225	11/28/07	0.0-0.5	395	75	10000	10000	10000
P76-C9-A	7049228	11/28/07	0.0-0.5	784	74	10000	10000	10000

[1] NJDEP Residential Direct Contact Soil Cleanup Criteria (NRDCSCC) per NJAC 7:26D, 1999.

[2] NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (NRDCSCC) per NJAC 7:26D, 1999.

[3] NJDEP Impact to Groundwater Soil Cleanup Criteria (IGWSCC) per NJAC 7:26D, 1999.

DUP = Duplicate sample.

ft. bgs = Feet below ground surface.

MDL = Method detection limit

mg/kg = milligram per kilogram.

Table 3.18-5
Fort Monmouth Phase II Site Investigation, Parcel 76
Summary of Analytical Parameters Detected in Soil (mg/kg)

				Analytical Results		
			Sample ID:	P76-B7-C	P76-C4-D	P76-C4-D DUP
			Lab ID:	7048811	7049215	7049202
			Date Sampled:	11/26/2007	11/28/2007	11/28/2007
			Depth (ft. bgs):	3.0-3.5	7.5-8.5	7.5-8.5
Chemical	RDCSCC[1]	NRDCSCC[2]	IGWSCC[3]	Result	Result	Result
Volatiles						
Acetone	1000	1000	100	**0.650 B**	**0.390 B**	**0.480 B**

[1] NJDEP Residential Direct Contact Soil Cleanup Criteria per NJAC 7:26D, 1999. Beryllium, Copper and Lead criteria per NJAC 7:26D, 2008.

[2] NJDEP Non-Residential Direct Contact Soil Cleanup Criteria per NJAC 7:26D, 1999. Beryllium, Copper and Lead criteria per NJAC 7:26D, 2008.

[3] NJDEP Impact to Groundwater Soil Cleanup Criteria per NJAC 7:26D, 1999.

DUP = Duplicate Sample.

ft. bgs = Feet below ground surface.

B = The compound was found in the associated method blank as well as in the sample.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

U = The compound was analyzed for but not detected.

NT = Not tested.

NLE = No limit established.

mg/kg = milligram per kilogram.

Bold = Analyte was detected.

Shaded = Concentration exceeds level of concern.
(Surface soil compared to NRDCSCC. Subsurface soil compared to IGWSCC when available, otherwise compared to NRDCSCC).

Table 3.18-6
Fort Monmouth Phase II Site Investigation, Parcel 76
Summary of Analytical Parameters Detected in Groundwater (µg/L)

		Analytical Results							
	Sample ID:	P76-A1	P76-A1 DUP	P76-A3	P76-A5	P76-A7	P76-A9	P76GW-1	P76GW-1 DUP
	Lab ID:	7049404	7049403	7049405	7049406	7049407	7049408	8002604	8002603
	Date Sampled:	11/28/2007	11/28/2007	11/28/2007	11/28/2007	11/28/2007	11/28/2007	1/18/2008	1/18/2008
	Screened Interval (ft. bgs):	11-16	11-16	11-16	7-12	7-12	11-16	4.0-9.0	4.0-9.0
Chemical	Quality Criteria[1]	Result	Result	Result	Result	Result	Result	Result	Result
Volatiles									
Acetone	6000	0.85 U	0.850 U	0.850 U	**2.12 B**	**2.79 B**	**2.51 B**	2.00 U	2.00 U
Chloroform	70	**0.65**	**0.68**	0.320 U	0.320 U	0.320 U	0.320 U	2.00 U	2.00 U
Toluene	600	0.27 U	0.270 U	0.270 U	0.270 U	0.270 U	**0.210 J**	2.00 U	2.00 U
Semi-Volatiles									
bis(2-Ethylhexyl)phthalate	3	1.28 U	**5.21 B**	**4.10 B**	**3.99 B**	**1.46 B**	**3.02 B**	**2.00 J**	10.0 U
Butyl benzyl phthalate	100	0.860 U	**0.780 J**	0.860 U	0.860 U	0.860 U	0.860 U	10.0 U	10.0 U
Diethyl phthalate	6000	0.960 U	0.960 U	0.960 U	0.960 U	0.960 U	**0.350 J**	10.0 U	10.0 U
Di-n-butylphthalate	700	**1.18 B**	**1.06 B**	**0.930 B**	**0.830 JB**	**0.800 JB**	**0.930 B**	10.0 U	10.0 U

[1] Higher of Practical Quantitation Limits (PQLs) & Groundwater Quality Criterion (GWQC) per NJAC 7:9-6, 2005.

DUP = Duplicate Sample.

ft. bgs = Feet below ground surface.

B = The compound was found in the associated method blank as well as in the sample.

D = Sample was diluted.

E = The compound's concentration exceeds the calibration range of the instrument for that specific analysis.

J = Mass spec and retention time data indicate the presence of a compound however the result is less than the MDL but greater than zero.

U = The compound was analyzed for but not detected.

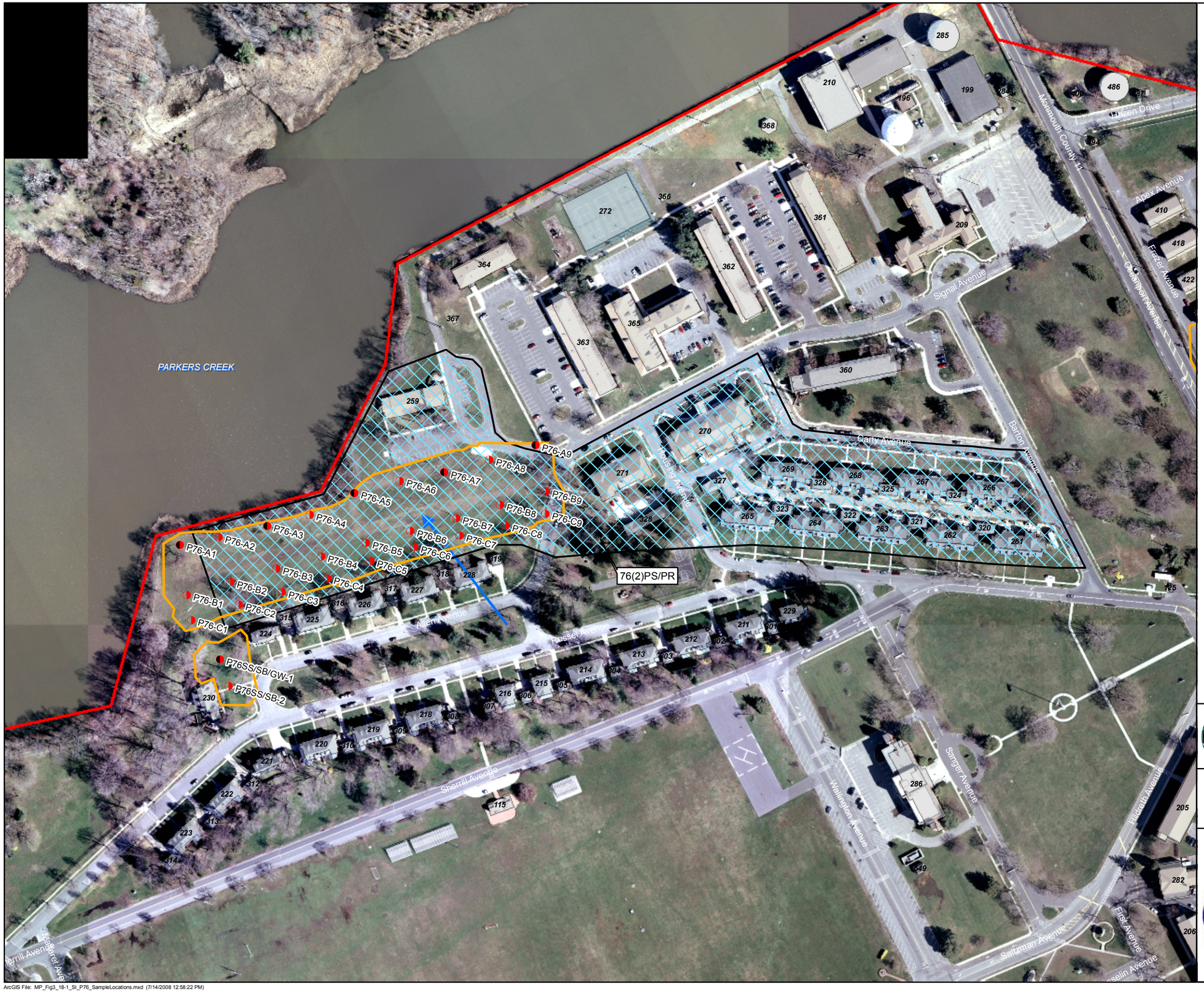
NT = Not tested.

NLE = No limit established.

Bold = Analyte was detected.

Shaded = Concentration exceeds Quality Criteria.

µg/L = micrograms per liter.



LEGEND

- Geoprobe Soil Sample Location
- Geoprobe Soil & Groundwater Sample Location
- Direction of Generalized Groundwater Flow derived from qualitative evaluation of surface topography, surface water features, and pre-existing IRP site groundwater potentiometric maps where available.
- Water Body
- Building
- Geophysical Investigation Area (Electromagnetic Survey Followed by Targeted Ground Pentrating Radar of Anomalies)
- Installation Boundary

ECP PARCEL CATEGORY DEFINITIONS

2 — Areas where only release or disposal of petroleum products has occurred.

BRAC PARCEL LABEL DEFINITIONS

8(2)PS

- CONTAMINATION DESCRIPTION
  - HS - Hazardous Substance Storage
  - HR - Hazardous Substance Release
  - PS - Petroleum Storage
  - PR - Petroleum Release
  - (P) - Possible Release or Disposal
- CATEGORY NUMBER
- PARCEL NUMBER

N

SCALE:

0 100 200 400 Feet

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

Shaw® Shaw Environmental, Inc.

FIGURE 3.18-1

FORT MONMOUTH ECP SITE INVESTIGATION

PARCEL 76 SAMPLE LOCATIONS

MAIN POST
FORT MONMOUTH
NEW JERSEY

ArcGIS File: MP_Fig3_18-1_SI_P76_SampleLocations.mxd (7/14/2008 12:58:22 PM)

PARKERS CREEK

P76_16
P76_12
P76_8
P76_4
P76_9
P76_13
P76_20
76(2)PS/PR

Logistics Avenue
Monmouth County 11
Blizen Drive
Apex Avenue
Frezer Avenue
Gleamont Avenue
Signal Avenue
Carty Avenue
Barton Avenue
Hoist Avenue
Housing Avenue
Allen Avenue
Sherrill Avenue
Wallington Avenue
Sanger Avenue
Hildreth Avenue
First Avenue
Saltzman Avenue
Wagner Avenue

LEGEND

- Subsurface Metallic Object (Suspected UST)
- Direction of Generalized Groundwater Flow derived from qualitative evaluation of surface topography, surface water features, and pre-existing IRP site groundwater potentiometric maps where available.
- Water Body
- Building
- Geophysical Investigation Area (Electromagnetic Survey Followed by Targeted Ground Pentrating Radar of Anomalies)
- Installation Boundary

N

SCALE:

0 100 200 400 Feet

Base Realignment and Closure 2005

U.S. Army Corps of Engineers

Shaw® Shaw Environmental, Inc.

FIGURE 3.18-2

FORT MONMOUTH ECP SITE INVESTIGATION

PARCEL 76 SUSPECTED UST LOCATIONS

MAIN POST
FORT MONMOUTH
NEW JERSEY

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