

March 19, 2012

Ms. Linda Range
New Jersey Department of Environmental Protection
Case Manager
Bureau of Southern Field Operations
411 East State Street (5th Floor)
PO Box 413
Trenton, NJ 08625

**Subject: Fort Monmouth, NJ
ECP Phase 2 Site Investigation Parcel 28 Site**

Dear Ms Range:

The Army is in the process of preparing the required documentation to support the transfer of a portion of Fort Monmouth Charles Wood Area (CWA) known as Parcel E (see attached map) to the Fort Monmouth Economic Revitalization Authority (FMERA). Per the Army's request, CALIBRE Systems, Inc. (CALIBRE) has prepared this letter to provide the New Jersey Department of Environmental Protection (NJDEP) with a response to an open item from the U.S. Army BRAC 2005 Site Investigation Report Fort Monmouth, Final July 21, 2008 that is associated with Parcel E. The Site Investigation (SI) report is also referred to as the Environmental Condition of Property (ECP) Phase II as the investigation work in the SI was performed to support the evaluations completed in the U.S. Army BRAC Environmental Condition of Property (ECP) Report, Fort Monmouth, Monmouth County, New Jersey, January 29, 2007.

The open item is associated with Parcel 28 from the SI and must be closed prior to the Army completing the Draft Finding of Suitability to Transfer (FOST) and making it available to the public and ultimately transferring the Parcel E property. I am attaching the New Jersey Department of Environmental Protection (NJDEP) comments on the SI report dated October 28, 2008 and an excerpt of the SI report covering the results of the SI for Parcel 28 for your reference. The area investigated in the SI is associated with a former fenced storage area and potential tank pads in this area (see Figure 3.5.1 from the SI report attached). The NJDEP comment was: "There is no recommendation or proposal for the former storage areas and possible tank pads". In the SI, the Army concluded that there were no COCs and no additional investigation was warranted for this area. The following discusses the Army's recommendation for these areas.

Of the four soil samples collected in this area there was only one detection of a compound above the Residential Direct Contact Soil Remediation Standard (RDCSRS). This was for arsenic at soil boring location P28-SB3 (at a depth of 5.5 feet). The result was 20.7 mg/kg which is only

slightly above the RDCSRS of 19 mg/kg. This level is also lower than the site specific background level of 31.6 mg/kg identified in the Site Inspection report prepared by Weston in 1995. Arsenic is also a component of the glauconitic soils found in the area of Fort Monmouth and would indicate a natural source of this metal. It is also noted that there is no likely direct contact hazard from soil at this depth. Therefore the Army requests that the NJDEP approve a No Further Action for soils in this area of Parcel 28.

To investigate groundwater in this area the Army collected one groundwater grab sample from a geoprobe boring in the SI. The only analyte to exceed the Ground Water Quality Standard (GWQS) was aluminum. Aluminum was detected at a concentration of 500 parts per billion (ppb) versus a GWQS of 200 ppb. The site specific background level for aluminum in groundwater as developed in the Weston SI was 8,210 ppb. As discussed in the 1995 Weston Site Investigation Report, several natural and anthropogenic factors contribute to the wide range in concentrations of metals in soils, which further impact the concentrations of metals in groundwater. Soils derived from glauconitic sands contain abundant aluminum, calcium, potassium, iron, magnesium, manganese, and sodium (among others), which are likely to be present at elevated concentrations in the groundwater, particularly when sediments are entrained in the collected groundwater sample. The aluminum observed is also likely influenced by the nature of the sample collection method (i.e. sample was turbid due to collection from geoprobe boring). Due to the low level of exceedence, the likely turbidity issue and the fact that the level observed at this location was well below the background level, the Army requests NJDEP approve a No Further Action for groundwater in this Area of Parcel 28.

In order to support the property transfer the Army will be revising the property classification for this area of Parcel 28 only. The entire Parcel 28 was originally classified as Category 7, "Areas that have not been evaluated or require additional evaluation." Based on the sampling results that do not indicate a release in the area of Parcel 28 within transfer Parcel E, the Army is proposing to reclassify this part of Parcel 28 only as a Category 1, "Areas in which no release or disposal of hazardous substances or petroleum products have occurred (including no migration of such substances from adjacent areas) and a visual inspection indicates that both the land and the buildings are uncontaminated". The remainder of Parcel 28 will remain a Category 7 until the additional investigation and if needed remedial actions are completed. The Army requests NJDEP's concurrence in the Category 1 designation for this area.

The Army and FMERA are working to transfer Parcel E by June 15, 2012. In order to achieve this goal the Army is requesting that the NJDEP provide a quick evaluation of this above issue so that we can complete our Finding of Suitability to Transfer and make it available for a 30 day public comment period and ultimately transfer the property by the target date.

Should you require additional information, have any questions or wish to meet in person to help resolve this item please contact Wanda Green at 732-380-7064 or myself at 215-699-4490..

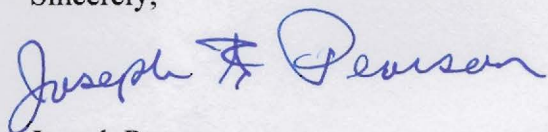
CALIBRE

6354 Walker Lane

• Metro Park

• Alexandria, Virginia 22310-3252

Sincerely,



Joseph Pearson
BRAC Contract Support
Fort Monmouth
CALIBRE Systems

Cc: James Briggs, BRAC HQ
Wanda Green, BEC

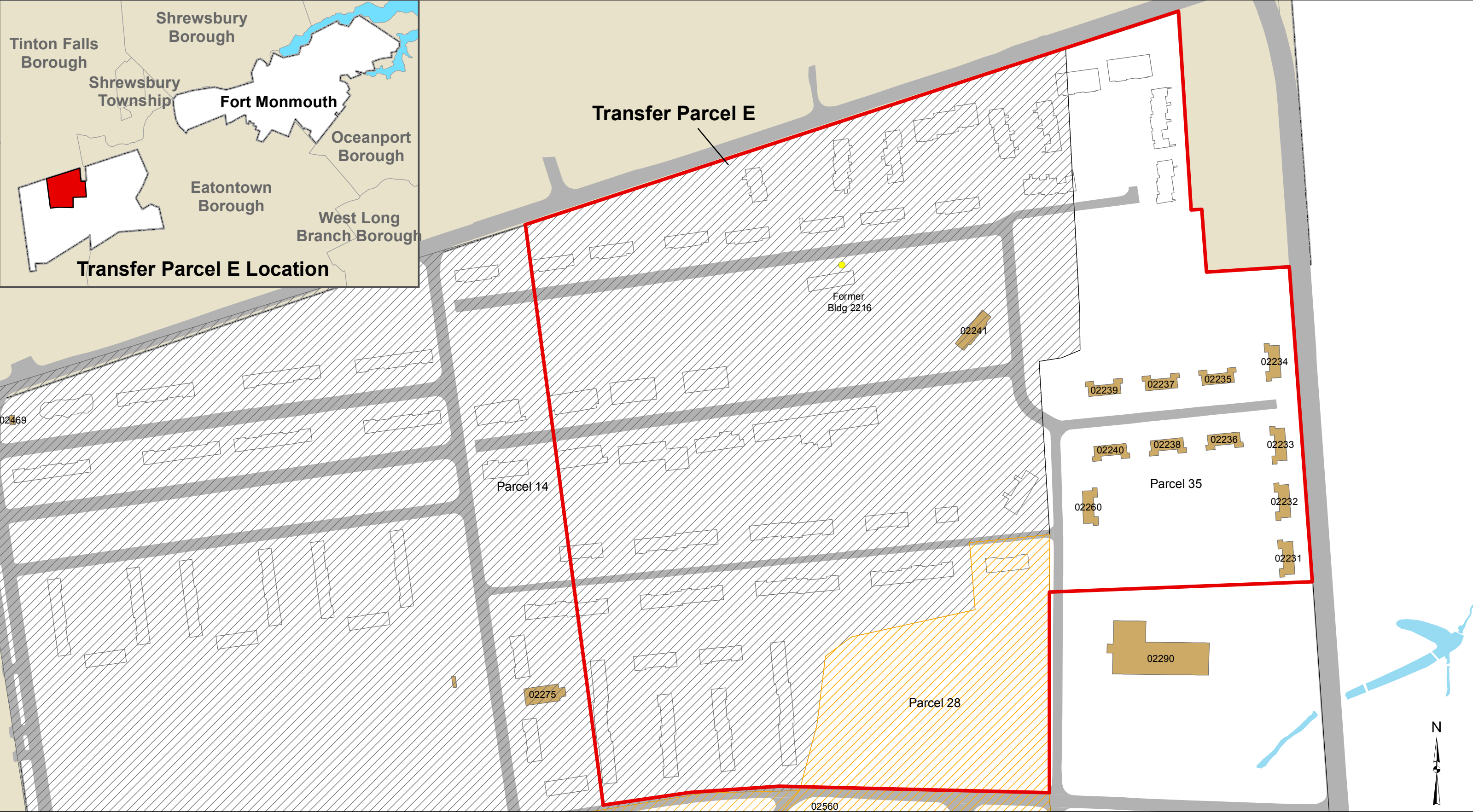
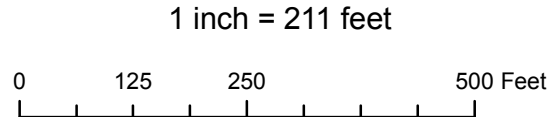


Figure 1
Fort Monmouth
Finding of Suitability To Transfer
Parcel E Property Information

Publication Date: 13 MAR 2012
Spheroid: WGS 1984
Projection: UTM Zone 18
Prepared by: Susan Gidley, CALIBRE GIS Team



- | | |
|------------------------------------|---|
| Installation | Category 1: Areas where no release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas). |
| Transfer Parcel E boundary | Category 2: Areas where only release or disposal of petroleum products has occurred. |
| Existing Buildings | Category 7: Areas that are not evaluated or require additional evaluation. |
| Roads & parking | |
| Potential underground storage tank | |



LEGEND

- Geoprobe Soil Sample Location
- Geoprobe Soil & Groundwater Sample Location
- Geoprobe Groundwater Sample Location
- Test Pit Soil Sample Location
- Surface Soil Sample Location
- Sediment Sample Location
- Generalized Groundwater Flow Direction. 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.
- Geophysical Investigation Area (Electromagnetic Survey Followed by Targeted Ground Penetrating Radar of Anomalies)
- Geophysical Investigation Area - Ground Penetrating Radar (GPR)
- Building
- Installation Boundary

ECP PARCEL CATEGORY DEFINITIONS

Areas that are not evaluated or require additional evaluation.

BRAC PARCEL LABEL DEFINITIONS

CONTAMINATION DESCRIPTION: HS - Hazardous Substance Storage, HR - Hazardous Substance Release, PS - Petroleum Storage, PR - Petroleum Release, (P) - Possible Release or Disposal.

CATEGORY NUMBER: 8(2)PS

PARCEL NUMBER: 28(7)HS/HR(P)/PS/PR(P)

Base Realignment and Closure 2005

Shaw Shaw Environmental, Inc.

FIGURE 3.5-1

FORT MONMOUTH ECP SITE INVESTIGATION

PARCEL 28 SAMPLE LOCATIONS AND CONSTITUENTS OF CONCERN

CHARLES WOOD AREA FORT MONMOUTH NEW JERSEY



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
PUBLICLY FUNDED REMEDIATION ELEMENT
P.O. BOX 413
TRENTON, NJ 08625-0413

JON S. CORZINE
Governor

LISA P. JACKSON
Commissioner

October 28, 2008

Mr. Joseph Fallon, CHMM
Directorate of Public Works
ATTN: IMNE-MON-PWE
167 Riverside Ave.
Fort Monmouth, NJ 07703

RE: Draft Site Investigation Report
Fort Monmouth, NJ

Dear Mr. Fallon:

The NJDEP Division of Remediation Management & Response (DRMR) has reviewed the Draft Site Investigation Report dated July 21, 2008 by Shaw Environmental, Inc., which was prepared under Phase II of the Environmental Condition of Property (ECP) assessment of Fort Monmouth. Our comments are attached.

You or your staff may contact me at 609-633-0766 with any questions on the enclosed comments, or any other site remediation matters at Fort Monmouth.

Sincerely,

Larry Quinn, P.E., CHMM, Site Manager
Bureau of Design and Construction

Attachment

NJDEP COMMENTS on
SITE INVESTIGATION REPORT
FORT MONMOUTH, NJ

General Comments

1. USTs at Parcels 14, 28, 51, 76, and 79. The recommendation of no further action (NFA) for the suspected underground storage tanks (USTs) is not acceptable to the NJDEP. The suspected USTs are subject to New Jersey regulations N.J.A.C. 7:26E – Technical Requirements for Site Remediation (the Technical Requirements). Under the Technical Requirements, Fort Monmouth is required to do at least the following in regard to the suspected USTs:
 - a) Verify the tank contents and collect a sample of any contents for analysis as specified at 7:26E-3.9(a)3.iii,
 - b) Collect and analyze at least 4 soil samples within 2 feet of each tank as specified at 7:26E-3.9(a)3.i,
 - c) Conduct a site investigation for ground water in accordance with 7:26E-3.7 and 3.4,
 - d) Implement remedial action and tank closure in accordance with 7:26E-6.3(b).

The soil and ground water sampling conducted during the Army's Site Investigation (SI) are a good starting point. However, since suspected USTs have been identified by geophysical surveys, the specific sampling requirements of 7:26E-3.4, 3.7, and 3.9 must now be followed.

The suspected USTs are **also** subject to N.J.A.C. 7:14B - Underground Storage Tanks. Under 7:14B-1.4(b)3, tanks of any size used to store heating oil for onsite consumption in a residential building (such as a barracks) are exempted from the requirements of the UST regulations. However, all other hazardous substance USTs of any size are regulated due to the aggregate volume provision found in the definition of "Tank capacity" in 7:14B-1.6. All confirmed regulated USTs at Fort Monmouth must be registered and closed in accordance with 7:14B.

2. Septic System at Parcel 28. Similarly, the recommendation of NFA for the septic tank, septic box, and septic piping at Parcel 28 is also unacceptable. The septic system components must be sampled as specified at 7:26E – 3.9(e)3 and the ground water sampling requirements of 7:26E-3.7 must also be followed.
3. Action Levels, page 2-14. Analytical results were compared to NJDEP criteria, specifically the non-residential direct contact soil cleanup criteria (NRDCSCC) and the impact-to-ground water soil cleanup criteria (IGWSCC). Subsequent to the start of the site investigation, NJDEP has promulgated new Soil Remediation Standards (SRS). The NJDEP has provided for a phase in period for the new SRS. If a Remedial Action Workplan (RAW) is submitted to the Department on or before December 2, 2008 (6 months after the June 2, 2008 promulgation date) then the

subsequent cleanup may be conducted using the previous SCC. However, any remedial actions not approved by NJDEP by the December 2, 2008 deadline must follow the new SRS. Detailed guidance can be found at the following website: <http://www.nj.gov/dep/srp/guidance/rs/>.

4. Sediments at Parcels 15, 27, 28, 39, 43, 49, 61, and 69. NJDEP concurs with the recommendations to further evaluate sediments at these Parcels as part of a facility-wide baseline ecological evaluation.
5. Indoor Air at Parcels 15, 34, 43, 50, and 52. NJDEP concurs with the recommendations to conduct one additional round of indoor air sampling at these Parcels.
6. Section 4.1.2, Surface and Subsurface Soil Investigations. This section discusses the results of soil sampling at multiple areas of concern (AOCs) relative to the NJDEP **Non-Residential** Direct Contact Soil Cleanup Criteria (NRDCSCC). Further evaluation of soil contamination is recommended at some, but not all, soil AOCs.

The future use of most Parcels at Fort Monmouth is not yet certain. Since future residential use is possible, **all** areas of soil contamination must be delineated to the **Residential** Direct Contact Soil Cleanup Criteria (RDCSCC). Remediation of soils by the Army to the NRDCSCC prior to property transfer would be acceptable, but deed notices would be required to document remaining soil contamination above the RDCSCC, and appropriate engineering controls must be implemented and documented.

Parcel-Specific Comments

Parcel 13 – Former Barracks (Buildings 2004-2016)

1. The recommendations of NFA for soil and ground water are acceptable based upon the sampling results and the results of the geophysical survey.
2. The Report states that no suspected USTs were located by the geophysical surveys, however it further indicates that no UST removals have been documented at the locations of numerous former barracks within Parcel 13. The Report should provide a possible explanation(s) for why no USTs were found.

Parcel 14 – Northwest Portion of CWA

1. See General Comment #1 above.

Parcel 15 – Building 2700

1. The Report states that no suspected USTs were located by the geophysical surveys, however it further indicates that no UST removals have been documented at the locations of numerous former barracks within Parcel 15. The Report should provide a possible explanation(s) for why no USTs were found.
2. It is unclear why an NFA for ground water is being recommended when a ground water remediation is currently being implemented for the CW-1 area. If the Army wants to identify individual AOCs within Parcel 15 for an NFA designation, they should make that case for those individual AOCs.
3. The recommendation of NFA for soil is acceptable based upon the sampling results and the results of the geophysical survey.
4. The report states that well UST-2337-65 could not be located. If the well has been surveyed, an attempt shall be made to locate the well using the State Plane Coordinates.

Parcel 27 – Southwestern Corner CWA

1. The report states that numerous USTs were removed from this parcel and are summarized in the Phase I ECP Report. Appendix A of that document states that the Department sent UST closure approval letters for 7 of the 12 USTs that were removed, and that the Army is waiting for Department approval of the remaining 5 UST closures.

NFA for soil and ground water cannot be approved until documentation on all 12 USTs, including the closure reports for the remaining 5 USTs, are reviewed by the NJDEP project team. NJDEP requests that the Army provide a brief summary of the 7 USTs that received Department approval. This summary should include a figure showing the former UST locations and the soil and ground water sampling locations and results.

Parcel 28 - Former Eatontown Laboratory

1. See General Comment #2 above.
2. Former installation plans and figures show three separate septic tanks and leach fields and one underground transformer vault. These potential AOCs must be shown on Figure 3.5-1 to allow comparison with sample locations.

3. Figure 3.5-2 shows that only one suspected septic tank, one suspected septic distribution tank, and one suspected pipe were found. The Report should provide a possible explanation(s) for why the suspected three septic tanks and leach fields and one underground transformer vault weren't located.
4. There is no recommendation or proposal for the former storage areas and possible former tank pads.

Parcel 34 – Building 2567

No specific comments. NJDEP hopes to review the Remedial Investigation Report and Remedial Action Workplan (dated 10-28-05) on Building 2567 in the coming months.

Parcel 38 – Former Outdoor Pistol Range (1940-1955)

1. The NFA proposal is not acceptable. Since the site may have been re-worked, the surface soil sampling results are not a reliable indicator of potential ground water contamination, and a site investigation for ground water must be performed in accordance with 7:26E-3.7. Ground water samples should be analyzed for lead.

Parcel 39 - Building 1150 (Vail Hall)

1. The report states that no metal contaminants were detected in soil above the NJDEP NRDCSCC. The recommendation of NFA for soil is acceptable, however, soil contaminants must be compared to and delineated to the RDCSCC, so that a deed notice can be filed when necessary.

Parcel 43 – Building 1122 (Do-it-yourself Auto Repair)

No specific comments. NJDEP recently provided comments on reports specific to Building 1122.

Parcel 49 - Former Squier Laboratory Complex

1. NJDEP concurs with the recommendations to conduct additional sampling of surface soils to delineate contaminants above NJDEP criteria.
2. The proposal to add benzene and bromodichloromethane to the proposed CEA for the M-18 Landfill should be included in a future CEA proposal.

3. The SI Report must include some discussion regarding the source of the VOC contaminants in ground water or the remediation of the contamination, as required by N.J.A.C. 7:26E-3.13(b)4ii(1) and N.J.A.C. 7:26E-3.13(b)4ii(4).

Parcel 50, IRP Sites FTMM-54, FTMM-55 and FTMM-61

No specific comments. The comments previously provided by NJDEP on the M-18 Landfill, Building 296, and Building 290 sites in a letter dated August 14, 2007 need to be addressed.

Parcel 51 – 750 Area, 500 Area, 600 Area, 1100 Area – Former Buildings

1. See General Comment #1 above.

Parcel 52 – Building 699 - Army Exchange Services Gas Station

No specific comments. NJDEP hopes to begin reviewing the available Remedial Action Progress Reports on Building 699 in the coming months.

Parcel 57 – Former Coal Storage and Railroad Unloading – 800 Area

1. NJDEP concurs with the general recommendation to conduct additional soil and ground water sampling. A remedial investigation (RI) of ground water is required pursuant to N.J.A.C. 7:26E-4.4. A RI workplan for all proposed investigation work shall be submitted for NJDEP approval.
2. Previous NJDEP comments requested that the analytical parameters for soils include PCBs, due to reported historical coal storage and fuel unloading activities. The requested PCB analyses were not performed. Soil sample collection and analysis for PCBs must be included in the RI work plan.

Parcel 61 – Building 1075 - Patterson Health Clinic

1. NJDEP concurs with the recommendations to conduct additional soil sampling to evaluate base neutral contamination.
2. Previous NJDEP comments requested that the analytical parameters for soils include PCBs, due to reported historical coal storage and fuel unloading activities. The requested PCB analyses were not performed. Soil samples must be re-collected and analyzed for PCBs.

Parcel 69 - Building 900 Former Vehicle Repair/Motor Pool

1. The proposed NFA for soil is not acceptable. Sample analysis at this AOC should have included analysis for PCBs, due to the former waste oil tank, as stated in previous NJDEP comments. Soil samples must be re-collected and analyzed for PCBs.
2. All sediment samples collected adjacent to Parcel 69 must include PCB analysis.
3. NJDEP concurs with the recommendations to further evaluate ground water. Pursuant to N.J.A.C. 7:26E-4.4, a remedial investigation of ground water is required. An investigation workplan must be submitted for NJDEP review and approval.

Parcel 70 – Building 551 – Former Photoprocessing

1. NJDEP concurs with the recommendations for no further action (NFA).

Parcel 76 – 200 Area, 300 Area – Former Barracks

1. See General Comment #1 above.

Parcel 79 – 400 Area Former Barracks

1. See General Comment #1 above.

Parcel 80 – Former Buildings 105 and 106 – Photoprocessing

1. The footprint of the former building 105 and 106 should be shown on Figure 3.20-1. On the current Figure, it cannot be determined where the former buildings were located in relation to the Geoprobe borings, so NFA for soil can't be approved.
2. The NJDEP concurs with the recommendation for further evaluation of ground water. Pursuant to N.J.A.C. 7:26E-4.4, a remedial investigation of ground water is required. An RI workplan must be submitted for NJDEP review and approval.

Parcel 83 - Northeast MP

1. Former structures, buildings and other areas of concern are discussed in the text and in the tables but are not indicated on the Figure 3.21-1. All areas of concern, whether existing or former structures, must be depicted on the site figures.

2. The NFA proposal for ground water is acceptable, based on the ground water sampling results presented in the report.

Sanitary Sewer System

No comments.

Electrical Substations

1. As discussed in General Comment #6, a Deed Notice and engineering controls are required at the 2 locations where PCBs were found above the RDCSCC of 0.49 ppm.

3.5 Parcel 28 – Former Eatontown Laboratory

3.5.1 Site Description

Parcel 28 is located in the CWA and encompasses Bldg 2525 – the former Eatontown Laboratory complex. Bldg 2525 was constructed in 1941-1942. The Eatontown Signal Laboratory was renamed Watson Laboratories in 1945 and subsequently moved to Rome, New York in 1951 (8).

It was reported that Bldg 2525 had been a chemical laboratory known as Eatontown Labs around the 1940s. This information was confirmed by FTMM site plans showing the Eatontown Laboratory complex. Plan No. 6148/1015 dated September 3, 1941, shows the Eatontown Laboratory complex, including Bldg 2525 (numbered 1 through 6 for the six bays) and nine other buildings numbered 7 through 15 (**Appendix G**). This plan also depicts three separate septic tanks and leach fields and one underground transformer vault. The main sanitary sewer line from the building is shown to discharge to a septic tank and leach field east of the building. A review of the DPW map and engineering drawings repository indicated a 2-inch “acid proof drain” leading from Bay 1 to a dry well southeast of the building. Floor drains were shown to discharge to the brook northwest of the building (23). Building revitalization plans show all floor drains were later connected to the sanitary sewer system.

Bldg 2525 was included in the Watson Laboratory complex in the mid-1940s. Crystal growing and processing operations were conducted in the Watson Laboratory building located in the southwest portion of the CWA in the early 1950s. Operations included cleaning of crystals, quartz etching, soldering, and gold (and other metal) plating, which was conducted in Bldg 2532. These operations involved chemicals such as carbon tetrachloride, ammonium bifluoride, cadmium sulfate, and sulfuric acid. Crystal etching was also noted in Bldg 2538 using ammonium bifluoride. Other processes associated with the Watson Laboratories included machining of metals and remelting lead in Bldg 2533; growing of crystals and physical chemistry in Bldg 2534; and machining of crystals in Bldg 2538 (15,24,25). In 1951, the laboratories were moved to Rome, New York (8).

Following the 1951 Watson Laboratories move, the Aviation Research and Development Command Laboratory was moved from the Myer Center to Bldg 2525. This laboratory operation occupied the building until 1978. A 1978 IH Survey reported ozalid reproduction in Room 5101 of Bldg 2525 (26). Building revitalization plans show all floor drains connected to the sanitary sewer system (27). No sumps or floor drains were noted during the 2006 VSI. The use of the building has been strictly administrative since the late 1990s, as confirmed during the VSI.

Prior to 1997, the building was used to house electronics laboratories. No chemical usage was associated with the electronics laboratories. Geothermal well fields used for the heating of facilities within Parcel 28 are present at multiple locations throughout the parcel.

Parcel 28 also contains the CECOM laboratory and radiological testing facility housed in Bldg 2540. This building contains a gamma irradiator, Radiac calibrators, a storage room for low-level RAM with multiple radioactive sources from the demilitarization of commodities, a nuclear counting laboratory, and several health physics laboratories. A survey of the interior of Bldg 2540 will be performed as part of the radiological scoping surveys.

The 1993 Environmental Research, Inc. Aerial Photographic Site Analysis noted a fenced open storage area and possible tank pads in the northern portion of Parcel 28, to the northeast of Bldg 2525 (14). Additional information pertaining to this parcel can be found in Section 4.3.2.2.1, Section 4.3.2.2.6, Section 4.4.4.2, Section 5.4, Section 5.8, Section 5.13.3, Table 5-1, Section 5.13.7, Table 5-16, and Appendix G of the Phase I ECP (1).

3.5.2 Previous Investigations

Multiple former USTs associated with buildings throughout Parcel 27 have been removed under the FTMM UST Management Program and are summarized within the FTMM Phase I ECP Report (1). However, no investigations have been conducted to evaluate the potential impact from previous operations associated with the Eatontown and Watson Laboratory facilities (area around Bldg 2525) or the former open storage area and possible tank pads in the northern portion of the parcel.

3.5.3 Site Investigation Sampling

A review of documented septic tank locations and of historical site drawings revealed several septic tanks, leaching fields, and USTs that once existed within Parcel 28 as well as a former acid proof drain in Bldg 2525 that discharged to Shrewsbury Creek. All known USTs have been removed; however, no investigations have been conducted to evaluate the potential impact from previously operated septic systems, former open storage and possible tank pads, and the former floor drains. Further, two USTs were identified on historic figures for which no UST removal documentation was identified. Geophysical surveys were conducted in order to determine the absence/presence of formerly utilized septic tanks, associated leaching fields, and USTs. The potential for historic releases to the environment were investigated via soil sampling, sediment sampling, groundwater sampling, and test pit soil sampling throughout Parcel 28. The locations of all samples and survey areas within Parcel 28 are illustrated on **Figure 3.5-1**.

Geophysical Survey Investigation

GPR surveys were conducted in Parcel 28 to delineate the locations of former septic tanks, USTs, and drywells. One survey was conducted over an area north of Bldg 2541 to investigate the location of a former septic tank (southeast of Bldg 2525). One survey was conducted over an area adjacent to Bldg 2542 to investigate a former drywell southeast of Bldg 2525. An EM and GPR survey was also performed to investigate former USTs associated with former Bldgs T-7, T-8, and T-9. The survey was extended

north to investigate the location of a 500-gallon septic tank associated with former Bldgs T-7 and T-10.

Geoprobe® Investigation

Soil and groundwater samples were collected in December 2007 in Parcel 28 in order to investigate potential septic system discharges and former storage pads that were identified through aerial analysis. A total of three surface soil samples and three subsurface soil samples were collected from three distinct Geoprobe® borings. Two boring locations, P28-SB-1;2, were located downgradient of a former drainage field that once serviced former Bldgs 13, 14, and 15. Boring P28-SB-3 was located where former pads existed in an open field west of Bldg 2290 and Guam Lane. Surface soil samples for non-VO analysis were collected from the 0- to 6-inch interval bgs. 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 soil boring cores was conducted using PID/FID instruments. No visual or olfactory evidence of soil contamination was noted during field operations.

A total of five groundwater samples (including one duplicate sample) were collected from four distinct temporary wells that were installed with the Geoprobe® rig. Three temporary wells, P28GW-1;2;4, were installed downgradient of former drainage fields, and one temporary well, P28GW-3, was installed downgradient of a former storage pad area located in an open field west of Bldg 2290 and Guam Lane. Temporary wells were constructed of PVC and 5 ft of factory-slotted screen.

Test Pit Soil Investigation

In order to determine if any contamination exists resulting from former septic tank discharges that once serviced Bldg 2525, four test pits were excavated in an open field east of Bldg 2525 and Heliport Drive. Test pits P28-TP1;3 were excavated within the boundaries of the former leaching field, and test pits P28TP-2;4 were excavated directly downgradient of former leaching pool structures (**Figure 3.5-1**). Top soil was observed to extend from ground surface to a depth of 0.5 ft bgs. The former leaching field was confirmed to still be in place through the observance of a 2-ft layer of sand and gravel underlain by a layer of engineered gravel 4 ft in thickness that extended to a depth of 6.5 ft bgs. Soil sample depths at P28-TP1;3, for non-VO and VO analysis, were contingent upon visual observations (i.e., depth to water table, thickness of layered engineered gravel) and field screening results. Based upon field observations at P28-TP1;3, three soil samples (including one duplicate sample) were collected at the 6-inch interval below the layer of engineered gravel, approximately 6.5 to 7.0 ft bgs. This depth coincided with the 6-inch interval directly above the water table. Soil sample depths at P28-TP2;4, for non-VO and VO analysis, were contingent upon visual observations (i.e., depth to water table, depth below leaching pool structure) and field screening results. Based upon field observations at P28-TP2, one soil sample was collected below the leaching pool structure at approximately 4.5 to 5.0 ft bgs, and one soil sample, P28-TP2-B, was collected at the 6-inch interval directly above the water table (5.5 to 6.0 ft bgs). Due to the close proximity of groundwater to the leaching pool

structure at P28TP-4, only one soil sample was collected at the 6-inch interval directly above the water table (4.5 to 5.0 ft bgs). No visual or olfactory evidence of impacted soil was noted.

Test Pit 5 (P28-TP5) was excavated within the boundaries of a former leaching field. P28-TP5 was originally planned to be located southeast of Bldg 2525 in order to investigate the location of a former drywell. This test pit was relocated upon preliminary evaluation of geophysical survey results that did not reveal any anomalous features that would represent a dry well. The test pit was relocated northeast of Bldg 2525 in order to investigate the septic system and leach field that was associated with former Bldgs T-7 and T-10 (**Figure 3.5-1**). Soil sample depths for non-VO and VO analysis were contingent upon visual observations (i.e., depth to water table, thickness of layered engineered gravel) and field screening results. Based upon field observations at P28-TP5, two soil samples (including one duplicate sample) were collected at the 6-inch interval below the layer of engineered gravel, approximately 6.0 to 6.5 ft bgs. This depth coincided with the 6-inch interval directly above the water table. No visual or olfactory evidence of impacted soil was noted.

Surface Soil Investigation

Surface soil samples were collected in December 2007 in Parcel 28. A total of two surface soil samples were collected from two distinct hand augered borings located in a former storage area in an open field west of Bldg 2290 and Guam Lane (**Figure 3.5-1**). Samples were collected in order to investigate the former storage area. Surface soil samples for non-VO analysis were collected from the 0- to 6-inch interval bgs. Surface soil samples collected for VO analysis were collected from the 18- to 24-inch interval bgs. No visual or olfactory evidence of impacted soil was noted.

Sediment Investigation

Sediment samples were collected in December 2007 in Parcel 28. A total of four sediment samples were collected from two distinct hand augered borings located along the southeast bank of Shrewsbury Creek adjacent to Bldg 2525 (**Figure 3.5-1**). Samples were collected to investigate potential discharges from former floor drains to outfalls that were associated with Bldg 2525. Samples were located directly downgradient of potential former discharge pipes observed on the southeast bank of the Creek. Two samples were collected from each location; one from the 0- to 6-inch interval, and the other from the 12- to 18-inch interval, measured from the bottom of the creek. No visual or olfactory evidence of impacted sediment was noted.

Table 3.5-1 presents a summary of all field activities, and all sample locations are provided on **Figure 3.5-1**. A summary of sampling activities, including sample IDs, collection dates, and analytical parameters, is provided in **Table 3.5-2**.

**Table 3.5-1
Parcel 28 Sampling Location, Rationale and Analytical**

Sample Location	Sample Media	Sample Location Rationale	Analytical Suite
Former septic tank and dry well associated with Bldg 2525	A geophysical investigation consisting of a GPR survey was conducted over a 125-ft x 125-ft area, 650 ft east of Bldg 2542 and 175 ft north of Bldg 2541, in order to investigate the location of former septic tank southeast of Bldg 2525, and a 100-ft x 100-ft area adjacent to Bldg 2542 to investigate the former drywell southeast of Bldg 2525.		
200-ft x 800-ft former shops and labs area and concrete vault	A geophysical survey was conducted over the 200-ft x 800-ft area to investigate former USTs associated with former Bldgs T-7, T-8, and T-9. The geophysical investigation area was extended to the north to investigate the location of a 500-gallon septic tank associated with Bldgs T-7 and T-10 – the associated leach field was removed during installation of the geothermal well field. The geophysical investigation consisted of both an EM and GPR survey of the entire area.		
28TP-1A/B through 28TP-4A/B (6 samples – includes 1 duplicate sample)	Subsurface soil	Soil samples were collected from test pits to investigate the location of the former septic drainage field associated with Bldg 2525. Sample collection depths were determined based upon visual observations (i.e., depth to water table, depth below engineered gravel layer, depth below leaching pool structure) and by field monitoring instrument readings.	TCL+30 (w/o pesticides), TAL Metals
28GW-1 (2 samples – includes 1 duplicate sample)	Groundwater	A groundwater sample was collected from a Geoprobe® boring to evaluate potential impact to groundwater from the former drainage field associated with Bldg 2525.	TCL+30 (w/o pesticides/PCBs), TAL Metals, ammonia, nitrate, nitrite
28SS-1 and 2 (2 samples)	Surface soil	Soil samples were collected from the 0- to 6-inch bgs interval from the Geoprobe® soil borings to investigate the location of the former drainage field from former Bldgs 13, 14, and 15.	TCL+30 (w/o pesticides), TAL Metals
28SB-1 and 2 (2 samples)	Subsurface soil	Soil samples were collected from the 6-inch interval directly above the water table (depth 4.5 to 5.0 ft bgs) from each Geoprobe® soil boring to investigate the location of the former drainage field from former Bldgs 13, 14, and 15. Field screening of the entire Geoprobe® soil core was conducted using PID and FID meters.	TCL+30 (w/o pesticides), TAL Metals
28GW-2 (1 sample)	Groundwater	A groundwater sample was collected from the specified Geoprobe® soil boring to investigate the location of the former drainage field from former Bldgs 13, 14, and 15.	TCL+30 (w/o pesticides/PCBs), TAL Metals, ammonia, nitrate, nitrite

Sample Location	Sample Media	Sample Location Rationale	Analytical Suite
28SS-3, 4, and 5 (3 samples)	Surface soil	Soil samples were collected from the 0- to 6-inch bgs interval to investigate the former fenced storage area west of Bldg 2290 (west side of Guam Lane) and the former pads immediately to the south, identified in aerial analysis.	TCL+30 (w/o pesticides), TAL Metals
28SB-3 (1 sample)	Subsurface soil	A soil sample was collected from the 6-inch interval directly above the water table (depth 5.0 to 5.5 ft bgs) from the specified Geoprobe® soil boring to investigate the former pads in the northern section of Parcel 28. Field screening of the entire Geoprobe® soil core was conducted using PID and FID meters.	TCL+30 (w/o pesticides), TAL Metals
28GW-3 (1 sample)	Groundwater	A groundwater sample was collected from the specified Geoprobe® soil boring to investigate the former pads identified in aerial analysis of the northern section of Parcel 28.	TCL+30 (w/o pesticides/PCBs), TAL Metals
28TP-5 (2 samples – includes 1 duplicate sample)	Subsurface soil	Soil sample was collected from a test pit to investigate the location of the former drainage field northeast of Bldg 2525 that serviced former Bldgs T-7, T-10. Sample collection depths were determined by visual observations (i.e., depth to water table, depth to engineered gravel layer) and by field monitoring instrument readings.	TCL+30 (w/o pesticides), TAL Metals
28GW-4 (1 sample)	Groundwater	A groundwater sample was collected from the specified Geoprobe® boring to investigate the potential impact to groundwater from the former drainage field northeast of Bldg 2525 that serviced former Bldgs T-7, T-10.	TCL+30 (w/o pesticides/PCBs), TAL Metals
28SD-1 and 2 (2 samples)	Sediment	Sediment samples were collected from the 0- to 6-inch bgs interval to investigate potential discharges from former 3-inch floor drains within Bldg 2525 that previously discharged to Shrewsbury Creek. Samples were collected directly at the former discharge point and a location downgradient.	TCL+30 (w/o pesticides), TAL Metals
28SD-1D and 2D (2 samples)	Sediment	Sediment samples were collected from the 12- to 18-inch bgs interval to investigate potential discharges from former 3-inch floor drains within Bldg 2525 that previously discharged to Shrewsbury Creek. Samples were collected directly at the former discharge point and a location downgradient.	TCL+30 (w/o pesticides), TAL Metals

3.5.4 Site Investigation Results

Geophysical Survey Results

The geophysical surveys identified a total of 23 target EM anomalies. The survey areas and results (locations of suspected USTs, suspected septic tanks, and suspected septic system distribution tanks) are presented on **Figure 3.5-2**. The results of the GPR/TW-6 follow-up scanning are listed in **Table 3.5-3**, and full results of the geophysical surveys are included in **Appendix A**. In summary, GPR scanning of the 23 targets revealed:

- Eight targets that were associated with surface metal/debris (previously unaccounted for).
- Seven targets that could not be relocated with the TW-6 because the targets were too small to be re-occupied, and therefore are most likely not a drywell, UST, or septic tank.
- Three targets with the characteristics of a utility.
- Two targets with moderate-amplitude near-surface point target/anomaly indicative of small pieces of buried debris; not indicative of a UST, drywell, or septic tank.
- One target with the high-amplitude parabolic reflections indicating a possible UST (P28-8). The location of the suspected UST matches up with former Bldg 2526. Bldg 2526 (AKA T8-H) served as a laboratory heater building, a non-housing structure, until the end of its life cycle. Supporting real property records are included in **Appendix I**.
- Two targets with a high-amplitude flat reflection indicating possible septic tanks.

Additional GPR scanning was completed within the small roughly square areas labeled **A** and **B** on **Figure 3.5-2**. These areas are thought to contain possible remnant septic system features. Several anomalies were delineated. In Area A, a roughly 4-ft x 6-ft non-metallic anomaly was delineated and may represent a former septic holding tank reported to have been in place in that area. In Area B, a high-amplitude non-metallic linear anomaly was partially delineated and is suspected to be the former supply pipe to a septic distribution box which was delineated in the EM survey. Follow-up GPR scanning showed a 10-ft x 10-ft high-amplitude flat anomaly characteristic of a box-shaped septic tank. No other features of the suspected septic systems in Areas A and B were observed.

In summary, no drywell was identified within Parcel 28; however, one possible UST (P28-8), one suspected septic holding tank, and one suspected septic distribution box and associated piping were identified.

Geoprobe® Investigation Results

Surface and subsurface soil samples were analyzed for TCL+30 (without pesticides) and TAL metals.

As presented in **Tables 3.5-4 and 3.5-5**, one VO (acetone) and 12 B/Ns were detected in Parcel 28 surface or subsurface soil samples at concentrations below the NJDEP NRDCSCC. A total of 17 metals were detected in surface and subsurface soil samples. Of the 17 metals, one (arsenic) was detected at a concentration in excess of the NJDEP NRDCSCC. Arsenic was detected at a concentration of 20.7 mg/kg in soil sample (P28-SB3-C) that exceeded the NJDEP NRDCSCC of 20 mg/kg. The arsenic concentration of P28-SB3-C did not exceed the CWBC of 31.6 mg/kg. Sample P28-SB3-C was collected at a depth of 5.0 to 5.5 ft bgs, directly above the water table. The arsenic concentration in surface soil is below the NRDCSCC, and arsenic was not detected in groundwater at this location.

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 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 concentration of 30 mg/kg (48). 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.

Test Pit Investigation Results

Subsurface soil samples were analyzed for TCL+30 (minus pesticides) and TAL metals.

As shown in **Table 3.5-4**, one VO and 12 B/Ns were detected in subsurface soil samples at concentrations below NJDEP NRDCSCC. A total of 17 metals were detected at concentrations below NJDEP NRDCSCC. No COCs were identified in test pit soil.

Groundwater Investigation Results

Groundwater samples P28GW-1 and 2 were analyzed for TCL+30 (without pesticides/PCBs), TAL metals, ammonia, nitrate, and nitrite. Groundwater samples P28GW-3 and 4 were analyzed for TCL+30 (without pesticides/PCBs) and TAL metals.

As presented in **Table 3.5-6**, a total of 13 metals were detected in Parcel 28 groundwater samples. Only two metals (aluminum and manganese) were detected at concentrations above the NJDEP GWQC.

Several natural and anthropogenic factors contribute to the wide range in concentrations of metals in soils, which further impact the concentration of metals in groundwater. Soils derived from glauconitic sands contain abundant aluminum, calcium, potassium, iron, magnesium, and manganese (among others), which are likely to be present at elevated concentrations in the groundwater, particularly when sediments are entrained in the collected groundwater samples. As a result of these natural influences, aluminum and manganese are not considered COCs in groundwater.

A total of three VOIs, acetone, chloroform, and toluene, were detected at concentrations below the NJDEP GWQC in Parcel 28 groundwater samples. One B/N, bis(2-ethylhexyl)phthalate, was detected at concentrations below the NJDEP GWQC.

As shown in **Table 3.5-6**, nitrite and nitrate were detected at concentrations below the NJDEP GWQC in groundwater samples collected from temporary wells P28GW-1, P28GW-1-Duplicate, and P28GW-2. No COCs were identified in groundwater at Parcel 28.

Sediment Investigation Results

Sediment samples were analyzed for TCL+30 (without pesticides) and TAL metals. Shrewsbury Creek is a non-tidal water body in this portion of the facility; therefore, sediment analytical results were evaluated in relation to the Freshwater Sediment Screening Values-LEL and SEL.

As presented in **Table 3.5-7**, one VO, five B/Ns, and 17 metals were detected in Parcel 28 sediment samples. Acetone was detected at concentrations below the LEL in all four samples. All B/N concentrations were below the LEL. Only one metal (chromium) was detected at a concentration greater than the LEL.

Chromium was detected above the LEL of 26 mg/kg in all four sediment samples collected in Parcel 28 at concentrations ranging from 36.8 mg/kg in sample P28SD-2 to 50.6 mg/kg in sample P28SD-2D (**Table 3.5-7**). Three of the four chromium concentrations also exceeded the CWBC of 36.9 mg/kg. No constituents were detected at concentrations greater than the SEL. Chromium is considered a COC in sediment at Parcel 28.

3.5.5 Summary and Conclusions

The locations of a suspected UST (P28-8), suspected former septic holding tank, a suspected septic distribution box, and suspected supply piping associated with the suspected septic distribution box were identified as a result of the geophysical survey.

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 the suspected UST, suspected former septic holding tank, suspected septic distribution box, and suspected supply piping associated with the suspected septic distribution box is recommended.

Arsenic was detected at a concentration above the NJDEP NRDCSCC in the soil. However, the arsenic concentrations did not exceed the CWBC, and arsenic levels in the soil in Monmouth County are influenced by several natural and anthropogenic sources causing elevated concentrations. Thus, arsenic is not considered a COC in soil. No further evaluation is recommended for soil at Parcel 28.

One metal, chromium, was detected in sediment at concentrations greater than the Freshwater Sediment Screening Values-LEL and the CWBC and was identified as a COC. Sediment at Parcel 28 is recommended for further evaluation as part of a facility-wide baseline ecological evaluation.

**Table 3.5-2
Parcel 28 Sample and Analytical Summary**

Media	Type	Field Sample #	Sample Date	Sample Time	Begin Depth	End Depth	TPHC	VO+15	BIN+15	PCBs	TAL Metals	Cyanide	Mercury	Ammonia/ Nitrate/ Nitrite	COMMENTS/VARIANCES
BLANK	TRIP	TRIP BLANK	12/04/07	-	--	--		X							
SOIL	TEST PIT	P28-TP1	12/04/07	9:55	6.5	7.0		X	X	X					
SOIL	TEST PIT	P28-TP3	12/04/07	10:55	6.5	7.0		X	X	X					
SOIL	TEST PIT	P28-TP3 DUPLICATE	12/04/07	10:55	6.5	7.0		X	X	X					
SOIL	TEST PIT	P28-TP2-A	12/04/07	13:30	4.5	5.0		X	X	X					
SOIL	TEST PIT	P28-TP2-B	12/04/07	13:50	5.5	6.0		X	X	X					
SD	HAND AUGER	P28-SD1	12/04/07	14:40	0.0	0.5		X	X	X					
SD	HAND AUGER	P28-SD1-D	12/04/07	14:45	1.0	1.5		X	X	X					
SD	HAND AUGER	P28-SD2	12/04/07	15:00	0.0	0.5		X	X	X					
SD	HAND AUGER	P28-SD2-D	12/04/07	15:05	1.0	1.5		X	X	X					
BLANK	FIELD	FIELD BLANK	12/04/07	15:10	--	--		X	X	X					Semi-volatiles extracted for Base Neutrals only. No Acids were reported by lab.
BLANK	TRIP	TRIP BLANK	12/05/07	-	--	--		X							
SOIL	HAND AUGER	P28-SS4-A	12/05/07	7:55	0.0	0.5			X	X	X				
SOIL	HAND AUGER	P28-SS4-B	12/05/07	7:55	1.5	2.0		X							
SOIL	HAND AUGER	P28-SS5-A	12/05/07	8:10	0.0	0.5			X	X	X				
SOIL	HAND AUGER	P28-SS5-B	12/05/07	8:10	1.5	2.0		X							
SOIL	GEOPROBE	P28-SB3-A	12/05/07	9:40	0.0	0.5			X	X	X				
SOIL	GEOPROBE	P28-SB3-B	12/05/07	9:40	1.5	2.0		X							
SOIL	GEOPROBE	P28-SB3-C	12/05/07	9:50	5.0	5.5		X	X	X	X				
SOIL	TEST PIT	P28-TP4	12/05/07	10:30	4.5	5.0		X	X	X	X				
SOIL	GEOPROBE	P28-SB1-A	12/05/07	11:10	0.0	0.5			X	X	X				
SOIL	GEOPROBE	P28-SB1-B	12/05/07	11:10	1.5	2.0		X							
SOIL	GEOPROBE	P28-SB1-C	12/05/07	11:20	4.5	5.0		X	X	X	X				
SOIL	GEOPROBE	P28-SB2-A	12/05/07	11:30	0.0	0.5			X	X	X				
SOIL	GEOPROBE	P28-SB2-B	12/05/07	11:30	1.5	2.0		X							
SOIL	GEOPROBE	P28-SB2-C	12/05/07	11:35	4.5	5.0		X	X	X	X				
SOIL	TEST PIT	P28-TP5	12/05/07	14:00	6.0	6.5		X	X	X	X				

**Table 3.5-2
Parcel 28 Sample and Analytical Summary**

Media	Type	Field Sample #	Sample Date	Sample Time	Begin Depth	End Depth	TPHC	VO+15	BN+15	PCBs	TAL Metals	Cyanide	Mercury	Ammonia/ Nitrate/ Nitrite	COMMENTS/VARIANCES
SOIL	TEST PIT	P28-TP5 DUPLICATE	12/05/07	14:00	6.0	6.5		X	X	X	X				
BLANK	FIELD	FIELD BLANK	12/05/07	14:05	--	--		X	X	X	X				
BLANK	TRIP	TRIP BLANK-AQ	12/06/07	10:00	--	--		X							
BLANK	FIELD	FIELD BLANK-AQ	12/06/07	11:00	--	--		X	X		X			X	
GW	GEOPROBE	P28GW-1	12/06/07	11:30	6.0	11.0		X	X		X			X	
GW	GEOPROBE	P28GW-1 DUPLICATE	12/06/07	11:30	6.0	11.0		X	X		X			X	
GW	GEOPROBE	P28GW-2	12/06/07	12:00	2.5	7.5		X	X		X			X	
GW	GEOPROBE	P28GW-3	12/06/07	13:30	3.0	8.0		X	X		X				
GW	GEOPROBE	P28GW-4	12/06/07	14:30	5.0	10.0		X	X		X				

X = Sample analyzed for the indicated analytical parameter suite

Table 3.5-3
Parcel 28 - 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
P28_1	Inphase	N/A	N/A	N/A	Surface metal.	607941	532602
P28_2	Both	N/A	N/A	N/A	Surface metal.	608174	532700
P28_3	Both	Yes	< 2 x 2	< 2 x 2	Moderate-amplitude point target/anomaly, possible debris.	608179	532811
P28_4	Conductivity	No	N/A	N/A	No MD anomaly found associated with EM anomaly.	608194	532694
P28_5	Conductivity	No	N/A	N/A	No MD anomaly found associated with EM anomaly.	608199	532962
P28_6	Conductivity	Yes	N/A	N/A	Possible utility.	608212	532635
P28_7	Both	N/A	N/A	N/A	Surface metal.	608212	532987
P28_8	Both	Yes	10 x 10	7 x 7	High-amplitude parabolic anomaly characteristic of UST; also note associated linear anomaly is suspected pipe.	308212	532882
P28_9	Both	N/A	N/A	N/A	Surface metal.	608217	532610
P28_10	Conductivity	Yes	< 2 x 2	< 2 x 2	Moderate-amplitude point target/anomaly, possible debris.	608221	532844
P28_11	Both	N/A	N/A	N/A	Surface metal.	608228	532528
P28_12	Inphase	N/A	N/A	N/A	Surface metal.	608250	533240
P28_13	Conductivity	No	N/A	N/A	No MD anomaly found associated with EM anomaly.	608254	532992
P28_14	Conductivity	No	N/A	N/A	No MD anomaly found associated with EM anomaly.	608273	532658
P28_15	Conductivity	Yes	N/A	N/A	Possible utility.	608284	532567
P28_16	Conductivity	No	N/A	N/A	No MD anomaly found associated with EM anomaly.	608302	532624
P28_17	Conductivity	No	N/A	N/A	No MD anomaly found associated with EM anomaly.	608321	532687
P28_18	Conductivity	No	N/A	N/A	No MD anomaly found associated with EM anomaly.	608325	532782
P28_19	Both	Yes	N/A	N/A	Possible utility.	608352	532694
P28_20	Inphase	N/A	N/A	N/A	Surface metal.	608375	533130
P28_21	Inphase	N/A	N/A	N/A	Surface metal.	608379	533094
P28_22	Both	Yes	12 x 12	10 x 10	Suspected septic system distribution box.	608611	532714
P28_23	GPR	N/A	N/A	4 x 6	Suspected septic tank.	608272	533247

Table 3.5-4
Fort Monmouth Phase II Site Investigation, Parcel 28
Summary of Analytical Parameters in Soil (mg/kg) South of Corregidor Road

Chemical	Sample ID:		Analytical Results					
	Lab ID:		P28-SB1-A	P28-SB1-B	P28-SB1-C	P28-SB2-A	P28-SB2-B	P28-SB2-C
	Date Sampled:		7051111	7051112	7051113	7051114	7051115	7051116
	Depth (ft. bgs):		12/5/2007	12/5/2007	12/5/2007	12/5/2007	12/5/2007	12/5/2007
			0.0-0.5'	1.5-2.0'	4.5-5.0	0.0-0.5'	1.5-2.0'	4.5-5.0
Chemical	NRDCSCC ²	IGWSCC ³	Result	Result	Result	Result	Result	Result
Volatiles								
Acetone	1000	100	NT	3.100 B	0.690 B	NT	0.650 B	0.360 B
Semi-Volatiles								
Benzo[b]fluoranthene	4	50	1.100 U	NT	1.200 U	1.000 U	NT	1.100 U
Indeno[1,2,3-cd]pyrene	4	500	1.100 U	NT	1.200 U	1.000 U	NT	1.100 U
Benzo[a]anthracene	4	500	1.100 U	NT	1.200 U	1.000 U	NT	1.100 U
Benzo[a]pyrene	0.66	100	1.100 U	NT	1.200 U	1.000 U	NT	1.100 U
Benzo[k]fluoranthene	4	500	1.100 U	NT	1.200 U	1.000 U	NT	1.100 U
bis(2-Ethylhexyl)phthalate	210	100	0.160 J	NT	1.200 U	1.000 U	NT	1.100 U
Chrysene	40	500	1.100 U	NT	1.200 U	1.000 U	NT	1.100 U
Di-n-butylphthalate	10000	100	1.100 JB	NT	0.290 JB	0.200 JB	NT	0.630 JB
Di-n-octyl phthalate	10000	100	1.100 U	NT	1.200 U	1.000 U	NT	1.100 U
Fluoranthene	10000	100	0.095 J	NT	1.200 U	1.000 U	NT	0.074 J
Phenanthrene	NLE	NLE	0.069 J	NT	1.200 U	1.000 U	NT	0.081 J
Pyrene	10000	100	0.120 J	NT	1.200 U	1.000 U	NT	1.100 U
Metals								
Aluminum	NLE	NLE	7170 B	NT	5580 B	2290 B	NT	7200 B
Arsenic	20	NLE	7.16	NT	3.29	1.78	NT	4.17
Barium	47000	NLE	30.1 B	NT	19.2 B	8.30 B	NT	19.8 B
Beryllium	140	NLE	0.794	NT	0.295	0.154	NT	0.291
Cadmium	100	NLE	0.338	NT	0.173	0.147	NT	0.233
Calcium	NLE	NLE	1280 B	NT	491 B	461 B	NT	336 B
Chromium (Total)	NLE	NLE	58.6	NT	35.9	17.4	NT	38.9
Cobalt	NLE	NLE	1.15	NT	0.334 U	0.465	NT	0.324 U
Copper	45000	NLE	9.21 B	NT	4.53 B	5.27 B	NT	5.91 B
Iron	NLE	NLE	21900	NT	10400	5660	NT	11600
Lead	800	NLE	28.0	NT	6.79	27.8	NT	10.5
Magnesium	NLE	NLE	2690 B	NT	822 B	524 B	NT	894 B
Manganese	NLE	NLE	52.4	NT	35.0	24.1	NT	29.7
Nickel (Soluble Salts)	2400	NLE	6.55	NT	3.32	2.15	NT	3.19
Potassium	NLE	NLE	5250	NT	1310	770	NT	1400
Vanadium	7100	NLE	33.7	NT	30.6	16.6	NT	36.1
Zinc	1500	NLE	51.9 B	NT	51.4 B	31.1 B	NT	47.9 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 3.5-4
Fort Monmouth Phase II Site Investigation, Parcel 28
Summary of Analytical Parameters in Soil (mg/kg) South of Corregidor Road

Chemical	Sample ID:		P28-TP1	P28-TP2-A	P28-TP2-B	P28-TP3	P28-TP3 DUP	P28-TP4	P28-TP5	P28-TP5 DUP
	Lab ID:		7050603	7050605	7050606	7050604	7050602	7051110	7051117	7051102
	Date Sampled:		12/4/2007	12/4/2007	12/4/2007	12/4/2007	12/4/2007	12/5/2007	12/5/2007	12/5/2007
	Depth (ft. bgs):		6.5-7.0'	4.5-5.0'	5.5-6.0'	6.5-7.0	6.5-7.0	4.5-5.0'	6.0-6.5'	6.0-6.5'
Chemical	NRDCSCC ²	IGWSCC ³	Result	Result	Result	Result	Result	Result	Result	Result
Volatiles										
Acetone	1000	100	0.350	0.430	0.320	0.270 J	0.370	0.520	0.550 B	0.340
Semi-Volatiles										
Benzo[b]fluoranthene	4	50	1.100 U	1.100 U	1.100 U	1.100 U	1.100 U	0.130 J	1.100 U	1.100 U
Indeno[1,2,3-cd]pyrene	4	500	1.100 U	1.100 U	1.100 U	1.100 U	1.100 U	0.066 J	1.100 U	1.100 U
Benzo[a]anthracene	4	500	1.100 U	1.100 U	1.100 U	1.100 U	1.100 U	0.120 J	1.100 U	1.100 U
Benzo[a]pyrene	0.66	100	1.100 U	1.100 U	1.100 U	1.100 U	1.100 U	0.100 J	1.100 U	1.100 U
Benzo[k]fluoranthene	4	500	1.100 U	1.100 U	1.100 U	1.100 U	1.100 U	0.062 J	1.100 U	1.100 U
bis(2-Ethylhexyl)phthalate	210	100	1.100 U	1.100 U	1.100 U	1.100 U	1.100 U	1.100 U	1.100 U	0.120 J
Chrysene	40	500	1.100 U	1.100 U	1.100 U	1.100 U	1.100 U	0.150 J	1.100 U	1.100 U
Di-n-butylphthalate	10000	100	0.140 JB	0.780 JB	0.130 JB	0.220 JB	0.530 JB	0.860 JB	1.300 B	1.200 B
Di-n-octyl phthalate	10000	100	1.100 U	1.100 U	1.100 U	1.100 U	1.100 U	1.100 U	1.100 U	1.100 U
Fluoranthene	10000	100	1.100 U	1.100 U	1.100 U	1.100 U	1.100 U	0.270 J	1.100 U	1.100 U
Phenanthrene	NLE	NLE	1.100 U	1.100 U	1.100 U	1.100 U	1.100 U	0.110 J	1.100 U	1.100 U
Pyrene	10000	100	1.100 U	1.100 U	1.100 U	1.100 U	1.100 U	0.260 J	1.100 U	1.100 U
Metals										
Aluminum	NLE	NLE	10800 B	7980 B	6800 B	6460 B	6570 B	3920 B	8980 B	8320 B
Arsenic	20	NLE	5.80	5.29	4.03	5.12	4.62	4.00	4.43	3.97
Barium	47000	NLE	9.95 B	12.0 B	9.73 B	12.0 B	11.8 B	17.5 B	7.62 B	7.08 B
Beryllium	140	NLE	0.848	0.633	0.571	0.745	0.762	0.304	0.811	0.693
Cadmium	100	NLE	0.166	0.110	0.129	0.112	0.117	0.129	0.253	0.234
Calcium	NLE	NLE	327 B	488 B	404 B	171 B	173 B	373 B	685 B	650 B
Chromium	NLE	NLE	109	81.7	73.2	99.1	89.2	28.7	130	115
Cobalt	NLE	NLE	0.373	0.338 U	0.322 U	0.622	1.57	0.320 U	0.342 U	0.398
Copper	45000	NLE	4.93 B	3.64 B	2.91 B	4.38 B	4.63 B	4.80 B	4.62 B	4.60 B
Iron	NLE	NLE	23000	19900	16400	21200	20600	7960	23700	20900
Lead	800	NLE	1.49	0.458	1.12	5.07	4.25	9.74	1.16	1.84
Magnesium	NLE	NLE	2900 B	2040 B	1860 B	2460 B	2420 B	794 B	2460 B	2300 B
Manganese	NLE	NLE	11.6	21.9	14.0	12.3	20.3	22.1	11.6	10.0
Nickel	2400	NLE	4.46	3.48	2.83	3.72	3.67	2.87	3.88	4.09
Potassium	NLE	NLE	5850	4350	4010	5340	5240	1280	5450	4820
Vanadium	7100	NLE	61.7	48.8	40.6	45.0	44.4	24.3	55.1	49.4
Zinc	1500	NLE	41.1 B	27.6 B	22.6 B	32.0 B	38.6 B	22.6 B	51.0 B	46.0 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.

(Surface soil compared to NRDCSCC. Subsurface soil compared to IGWSCC when available, otherwise compared to NRDCSCC).

Table 3.5-5
Fort Monmouth Phase II Site Investigation, Parcel 28
Summary of Analytical Parameters in Soil (mg/kg) North of Corregidor Road

Chemical	Sample ID: Lab ID: Date Sampled: Depth (ft. bgs):			Analytical Results						
				P28-SB3-A	P28-SB3-B	P28-SB3-C	P28-SS4-A	P28-SS4-B	P28-SS5-A	P28-SS5-B
				7051107	7051108	7051109	7051103	7051104	7051105	7051106
				12/5/2007	12/5/2007	12/5/2007	12/5/2007	12/5/2007	12/5/2007	12/5/2007
				0.0-0.5'	1.5-2.0'	5.0-5.5'	0.0-0.5'	1.5-2.0'	0.0-0.5'	1.5-2.0'
	RDCSCC ¹	NRDCSCC ²	IGWSCC ³	Result	Result	Result	Result	Result	Result	Result
Volatiles										
Acetone	1000	1000	100	NT	0.430	0.580	NT	0.430	NT	0.420
Semi-Volatiles										
Benzo[b]fluoranthene	0.9	4	50	1.200 U	NT	1.200 U	1.200 U	NT	1.200 U	NT
Indeno[1,2,3-cd]pyrene	0.9	4	500	1.200 U	NT	1.200 U	1.200 U	NT	1.200 U	NT
Benzo[a]anthracene	0.9	4	500	1.200 U	NT	1.200 U	1.200 U	NT	1.200 U	NT
Benzo[a]pyrene	0.66	0.66	100	1.200 U	NT	1.200 U	1.200 U	NT	1.200 U	NT
Benzo[k]fluoranthene	0.9	4	500	1.200 U	NT	1.200 U	1.200 U	NT	1.200 U	NT
bis(2-Ethylhexyl)phthalate	49	210	100	1.200 U	NT	1.200 U	1.200 U	NT	1.200 U	NT
Chrysene	9	40	500	1.200 U	NT	1.200 U	1.200 U	NT	1.200 U	NT
Di-n-butylphthalate	5700	10000	100	0.940 JB	NT	0.950 JB	0.510 JB	NT	0.420 JB	NT
Di-n-octyl phthalate	1100	10000	100	1.200 U	NT	0.087 J	1.200 U	NT	1.200 U	NT
Fluoranthene	2300	10000	100	0.074 J	NT	1.200 U	1.200 U	NT	1.200 U	NT
Phenanthrene	NLE	NLE	NLE	1.200 U	NT	1.200 U	1.200 U	NT	1.200 U	NT
Pyrene	1700	10000	100	0.073 J	NT	1.200 U	1.200 U	NT	1.200 U	NT
Metals										
Aluminum	NLE	NLE	NLE	13900 B	NT	17700 B	15100 B	NT	14500 B	NT
Arsenic	20	20	NLE	14.6	NT	20.7	14.9	NT	19.1	NT
Barium	700	47000	NLE	37.1 B	NT	36.3 B	59.0 B	NT	48.4 B	NT
Beryllium	16	140	NLE	1.77	NT	2.11	2.33	NT	2.12	NT
Cadmium	39	100	NLE	0.602	NT	0.785	0.853	NT	0.824	NT
Calcium	NLE	NLE	NLE	1090 B	NT	330 B	1650 B	NT	1630 B	NT
Chromium (Total)	NLE	NLE	NLE	132	NT	194	172	NT	151	NT
Cobalt	NLE	NLE	NLE	1.98	NT	1.74	2.97	NT	2.16	NT
Copper	3100	45000	NLE	7.43 B	NT	4.57 B	11.6 B	NT	13.0 B	NT
Iron	NLE	NLE	NLE	50900	NT	60600	65100	NT	62100	NT
Lead	400	800	NLE	6.80	NT	0.401 U	28.0	NT	18.8	NT
Magnesium	NLE	NLE	NLE	6160 B	NT	7910 B	8240 B	NT	7700 B	NT
Manganese	NLE	NLE	NLE	36.6	NT	26.4	63.4	NT	34.5	NT
Nickel (Soluble Salts)	250	2400	NLE	9.34	NT	10.8	12.6	NT	10.9	NT
Potassium	NLE	NLE	NLE	13300	NT	18300	18700	NT	17100	NT
Vanadium	370	7100	NLE	63.6	NT	91.2	70.8	NT	71.6	NT
Zinc	1500	1500	NLE	77.6 B	NT	82.0 B	105 B	NT	110 B	NT

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.

mg/kg = milligram per kilogram.

NT = Not tested.

NLE = No limit established.

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).

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.

Table 3.5-6
Fort Monmouth Phase II Site Investigation, Parcel 28
Summary of Analytical Parameters Detected in Groundwater (µg/L)

Chemical	Sample ID: Lab ID: Date Sampled: Screened Interval (ft. bgs):	Analytical Results				
		P28GW-1	P28GW-1 DUP	P28GW-2	P28GW-3	P28GW-4
		7051404	7051403	7051405	7051406	7051407
		12/06/2007	12/06/2007	12/06/2007	12/06/2007	12/06/2007
		6-11'	6-11'	2.5-7.5'	3-8'	5-10'
	Quality Criteria ¹	Result	Result	Result	Result	Result
Volatiles						
Acetone	6,000	1.33	0.85 U	0.85 U	1.25	1.43
Chloroform	70	0.32 U	0.32 U	0.66	0.32 U	0.32 U
Toluene	600	0.27 U	0.27 U	0.38	0.27 U	0.27 U
Semi-Volatiles						
bis(2-Ethylhexyl)phthalate	3	2.07 B	1.28 U	1.28 U	0.94 JB	2.30 B
Metals						
Aluminum	200	198	80.4	75.6	550	973
Barium	6,000	27.8	24.9	13.9	77.2	92.0
Beryllium	1	0.100 U	0.100 U	0.100 U	0.507	0.533
Cadmium	4	0.200 U	0.200 U	0.314 B	0.388 B	0.533 B
Calcium	NLE	5540	5200	5910	7160	30400
Chromium (Total)	70	0.200 U	0.200 U	0.200 U	2.34	0.200 U
Cobalt	100*	0.200 U	0.200 U	0.200 U	6.21	5.99
Magnesium	NLE	3220	3000	2060	8210	7380
Manganese	50	56.9	53.3	8.36	50.0	248
Nickel (Soluble Salts)	100	0.300 U	0.300 U	0.300 U	21.0	5.03
Potassium	NLE	3270	2980	507	2000	3520
Sodium	50,000	4670 B	4250 B	48800 B	4850 B	14700 B
Zinc	2,000	3.58 U	3.58 U	3.58 U	65.0	35.8
Anions						
Nitrate	10,000	2040	2220	550	NT	NT
Nitrite	1,000	200 U	200 U	250	NT	NT

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.

Table 3.5-7
Fort Monmouth Phase II Site Investigation, Parcel 28
Summary of Analytical Parameters Detected in Sediment (mg/kg)

Chemical	Sample ID:		Analytical Results			
	Lab ID:		P28SD-1	P28SD-1D	P28SD-2	P28SD-2D
	Date Sampled:		7050607	7050608	7050609	7050610
	Depth (ft. bgs):		12/4/2007	12/4/2007	12/4/2007	12/4/2007
	Depth (ft. bgs):		0.0-0.5	1.0-1.5'	0.0-0.5	1.0-1.5'
	LEL ¹	SEL ²	Result	Result	Result	Result
Volatiles						
Acetone	NLE	NLE	0.440	0.480	0.390	0.330 J
Semi-Volatiles						
Benzo[a]anthracene	0.320	1480	1.200 U	1.300 U	0.180 J	1.300 U
Chrysene	0.340	460	1.200 U	1.300 U	0.270 J	1.300 U
Di-n-butylphthalate	NLE	NLE	0.190 JB	0.180 JB	0.150 JB	0.220 JB
Fluoranthene	0.750	1020	1.200 U	1.300 U	0.160 J	1.300 U
Pyrene	0.490	850	1.200 U	1.300 U	0.370 J	1.300 U
Metals						
Aluminum	NLE	NLE	4710 B	5620 B	4340 B	5630 B
Arsenic	6	33	2.32	3.39	2.75	3.20
Barium	NLE	NLE	28.7 B	40.9 B	31.6 B	34.3 B
Beryllium	NLE	NLE	0.454	0.485	0.399	0.510
Cadmium	0.6	10	0.222	0.372	0.449	0.263
Calcium	NLE	NLE	964 B	1130 B	1080 B	1150 B
Chromium (Total)	26	110	43.0	48.7	36.8	50.6
Cobalt	NLE	NLE	0.596	0.826	1.09	0.735
Copper	16	110	5.92 B	8.61 B	11.5 B	4.40 B
Iron	NLE	NLE	13200	21500	10600	13100
Lead	31	250	7.69	7.78	28.0	4.78
Magnesium	NLE	NLE	1530 B	1590 B	1390 B	1710 B
Manganese	NLE	NLE	24.2	36.6	31.0	31.5
Nickel (Soluble Salts)	16	75	5.42	6.17	5.28	5.76
Potassium	NLE	NLE	3220	3300	2150	3310
Vanadium	NLE	NLE	23.5	24.8	22.3	32.0
Zinc	120	820	35.9 B	66.7 B	55.6 B	29.5 B

¹ NJDEP Freshwater Sediment Screening Values - Lowest Effect Levels, 1998.

² NJDEP Freshwater Sediment Screening Guidelines - Severe Effects Levels, 1998.

For non-polar organics (PAHs, organochlorine pesticides, PCBs), the SEL is calculated from a site-specific TOC level. To calculate a site-specific SEL, TOC is multiplied by the table SEL. However, no TOC analysis was performed on the FTMM sediment samples. Generally, TOC values range from 1% (10,000 mg/kg) to 10% (100,000 mg/kg) (USEPA, 1998). Since the table SEL is based on 100% TOC, the calculated site-specific SEL would be lower.

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 LEL.



Sample ID	Media	Depth (ft bgs)	Compound	Concentration (mg/kg)	Criteria	Criteria Value (mg/kg)
P28SD-2D	SD	1-1.5	Chromium	50.6	LEL/SEL	26/110

Sample ID	Media	Depth (ft bgs)	Compound	Concentration (mg/kg)	Criteria	Criteria Value (mg/kg)
P28SD-1	SD	0-0.5	Chromium	43.0	LEL/SEL	26/110
P28SD-1D	SD	1-1.5	Chromium	48.7	LEL/SEL	26/110

LEGEND

●

Geoprobe Soil Sample Location

●

Geoprobe Soil & Groundwater Sample Location

○

Geoprobe Groundwater Sample Location

■

Test Pit Soil Sample Location

■

Surface Soil Sample Location

▲

Sediment Sample Location

→

Generalized Groundwater Flow Direction. 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.

□

Geophysical Investigation Area (Electromagnetic Survey Followed by Targeted Ground Penetrating Radar of Anomalies)

□

Geophysical Investigation Area - Ground Penetrating Radar (GPR)

■

Building

□

Installation Boundary

ECP PARCEL CATEGORY DEFINITIONS

□

7 Areas that are not evaluated or require additional evaluation.

* Parcel not included in Site Investigation. Information pertaining to parcels not included in this Site Investigation is presented in the Fort Monmouth Phase I ECP Report (January 2007).

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



Shaw Environmental, Inc.



FIGURE 3.5-1
FORT MONMOUTH ECP
SITE INVESTIGATION
PARCEL 28 SAMPLE LOCATIONS
AND CONSTITUENTS OF CONCERN
CHARLES WOOD AREA
FORT MONMOUTH
NEW JERSEY

