ACTION MEMORANDUM FOR PARCEL 97

FORT MONMOUTH, OCEANPORT, MONMOUTH COUNTY, NEW JERSEY

BRAC 05 Facility
Contract W912DY-09-D-0062
Task Order: 0012, Project No. 369857

Submitted To:

U.S. Army Corps of Engineers

New York District and

U.S. Army Engineering and Support Center

Huntsville, Alabama

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Revision No. 1
April 2019

ACTION MEMORANDUM

FOR PARCEL 97

FORT MONMOUTH, NEW JERSEY

APPROVAL

This Action Memorandum presents the selected removal action for contaminated soil at Parcel 97 located at Fort Monmouth in Oceanport, Monmouth County, New Jersey. The U.S. Army is the lead agency at Fort Monmouth under the Defense Environmental Restoration Program, 10 U.S.C. § 2701, and the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601 et seq., as amended (CERCLA). This Action Memorandum is consistent with CERCLA, as amended, and the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300. This Action Memorandum will be incorporated into the Administrative Record file for Fort Monmouth, which is available for public review at the Eastern Branch of the Monmouth County Library, 1001 Route 35, Shrewsbury, New Jersey 07702. This document, presenting the results of the removal action performed in 2016 with a present worth cost of approximately $100,000, is approved by the undersigned.

Thomas P. Lederle

23 APR 2019

Thomas E. Lederle
Chief, BRAC Division
Department of the Army Assistant Chief of Staff Installation Management

Date

1.0 STATEMENT OF BASIS AND PURPOSE

This Action Memorandum describes the time critical removal action (TCRA) performed in 2016 at Parcel 97 (Building 978 Electrical Substation, referred to throughout this Action Memorandum as 'Parcel 97') at Fort Monmouth, New Jersey for the excavation and disposal of soil contaminated with polychlorinated biphenyls (PCBs). The purpose of this Action Memorandum is to document, as part of the closeout documentation for the project, the U.S. Department of the Army's ("Army's") decision to undertake the TCRA.

This Action Memorandum was developed in accordance with: the Defense Environmental Restoration Program (DERP), 10 United States Code (U.S.C.) Section 2701; the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601 et seq., as amended (CERCLA); and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 Code of Federal Regulations (CFR) Part 300 (USEPA 1991). The Army is the lead agency for Fort Monmouth in accordance with CERCLA and Executive Order 12,580. The Army makes remedial decisions for Fort Monmouth in consultation with the New Jersey Department of Environmental Protection (NJDEP), the state support agency.

2.0 SITE CONDITIONS AND BACKGROUND

The location of Parcel 97 is shown on **Figure 1**. A description of Parcel 97 is provided in Section 2.1. Previous investigation activities are summarized in Section 2.2; investigative results are summarized in Section 2.3.

2.1 Site Setting and History

The Main Post (MP) of FTMM was established in 1917 as Camp Little Silver. The name of the Camp was changed shortly thereafter to Camp Alfred Vail. The initial mission of the Camp was to train Signal Corps operators for service in World War I. After the war, Camp Alfred Vail was designated as the site of the Signal Corps School. In 1925, the facility became a permanent post, and its name was changed to Fort Monmouth (FTMM). The primary mission of FTMM was to provide command, administrative, and logistical support for Headquarters, U.S. Fort Monmouth Communications and Electronics Command (CECOM) (Shaw, 2012).

Parcel 97 is an electrical substation located adjacent to Building 978 in the central portion of the Main Post (**Figure 1**). Real property records indicate that Building 978 was constructed by 1954 as an electrical switching station. Building 978 presently houses electrical components and is adjacent to an active electrical substation. Based on the period of operation of the substation, it is likely that PCB-containing electrical equipment were used at Parcel 97.

2.2 Summary of Investigation Activities

The Army collected surface soil samples within Parcel 97 (which was then designated as a portion of Parcel 66) in December 2007 to determine if historic use of potential PCB-containing equipment resulted in the release of PCBs from the electrical substation adjacent to Building 978 (U.S. Army BRAC, 2008). A total of ten surface soil samples were collected (including one duplicate sample) from nine distinct hand auger

sample locations. Surface soil samples were collected for PCB analysis from the 0- to 6-inch below ground surface (bgs) interval. If sample locations were within gravel-covered areas, then samples were collected from the 0- to 6-inch interval below the gravel sub-base.

In November 2015, the Army conducted additional soil sampling and identified areas impacted with PCBs near a concrete pad adjacent to Building 978. A total of 22 soil samples from 17 boring locations were collected in 2015 to confirm and further delineate the PCB occurrences identified in 2007.

From January 2016 through August 2016, the Army removed PCB-impacted soil and concrete, and performed additional delineation and confirmation soil sampling for PCBs (Tetra Tech, 2016). A total of 105 soil samples were collected during three phases of field activity.

2.3 Investigation Results

The soil sampling conducted in 2007 (U.S. Army BRAC, 2008) encountered two out of 10 surface soil sample locations with Aroclor 1260 (a specific PCB compound, or "congener") concentrations that exceeded the current NJDEP Residential Direct Contact Soil Remediation Standard (RDCSRS) of 0.2 mg/kg for PCBs. Additional soil sampling conducted by the Army in 2015 verified that surface soil exceeded the RDCSRS and the NJDEP Non-Residential Direct Contact Soil Remediation Standard (NRDCSRS) of 1.0 mg/kg for PCBs in multiple locations. PCB exceedances were present in subsurface soils to at least 3.5 feet (ft) bgs. The Toxic Substances Control Act (TSCA) unrestricted use standard of 1 mg/kg for PCBs is the same concentration as the NRDCSRS.

This removal action was completed in three phases between January 2016 and August 2016 to facilitate the transfer of the Main Post to the Fort Monmouth Economic Revitalization Authority (FMERA) scheduled for November 2016. The removal action was expedited to eliminate the risk of PCB exposure to onsite workers, and thereby allow timely transfer of this critical electrical infrastructure property to FMERA as part of the Phase II property transfer.

Summary tables of Phase I, II, and III PCB confirmation soil sample analytical results are provided in **Table 1** (from Tetra Tech, 2016). Each phase of the removal action involved excavation of contaminated soils followed by post excavation confirmation sampling. Phase I removal was completed in January 2016. The concrete pad in front of Building 978 was discovered to be approximately 4 ft thick. Approximately 69 cubic yards of soil and 38 cubic yards of concrete were removed for offsite disposal. Confirmation soil samples were collected from the floor and sidewalls of the excavation. **Figure 2** summarizes the extent and depth of soil excavation, and the locations identified by Parsons in 2015 and by Tetra Tech (2016) that continued to exceed the RDCSRS of 0.2 mg/kg and the NRDCSRS of 1.0 mg/kg after Phase I soil and concrete excavation activities.

Based on the PCB exceedances in the Phase I confirmation samples, additional soil delineation and groundwater sampling were conducted in Phase II (June 2016). A total of 43 soil samples from eight additional soil borings were collected. **Figure 3** summarizes the Phase II soil sample locations that exceeded the RDCSRS and NRDCSRS for PCBs. PCBs were also detected in three of seven grab groundwater samples that were collected from the soil borings; these results were attributed to PCB-containing soil in the turbid groundwater samples.

Phase III soil excavation was completed in July 2016 to remove additional PCB-impacted soil from multiple areas, and 12 post-excavation confirmation soil samples were collected. An additional 104 tons of PCB-impacted soil and concrete were removed for offsite disposal in August 2016. **Figure 4** summarizes the

extent and depth of the additional Phase III soil excavation, and the results of Phase III post-excavation confirmation soil samples for total PCBs. Soil from Phase III sample locations that exceeded the NRDCSRS and RDCSRS in **Figure 4** were subsequently excavated and disposed of. All final confirmation soil samples indicated that remaining site soils were below the NJDEP and TSCA unrestricted use standards.

Two permanent monitor wells were installed at the locations of previous detections of PCBs in groundwater grab samples. The wells were sampled in April 2017 and analyzed for PCBs; none were detected, confirming that PCBs had not impacted groundwater at Parcel 97.

Following soil excavation and additional groundwater assessment, NJDEP concurred with the Army's determination that no remedial action is needed for the site (see approval letters dated 26 May 2017 and 19 January 2018 in **Appendix A**).

3.0 THREATS TO PUBLIC HEALTH, WELFARE, AND THE ENVIRONMENT

PCB soil concentrations before and after soil removal were compared to U.S. Environmental Protection Agency (EPA) Residential Screening Levels (RSL) to evaluate the potential effects of PCBs on human health and the environment. The results of these comparisons were used to evaluate the need for soil removal and to identify the general effectiveness of the removal action performed in 2016.

3.1 Risk Assessment Evaluation

The Army performed a screening evaluation to analyze the need for soil removal at Parcel 97 to reduce the threat to human health. **Table 2** presents the maximum detected concentrations of PCBs (specifically Aroclor 1260, the only PCB congener detected at Parcel 97). This maximum concentration exceeded the USEPA Residential RSL for Aroclor 1260 by over an order of magnitude, indicating a potential threat to human health. Following soil removal, Aroclor 1260 was detected in some of the post-removal samples of the soil remaining in-place. Another screening evaluation was performed to evaluate risks to future receptors (e.g., residents, workers, recreational users) from exposure to PCBs (specifically Aroclor 1260) in soil via incidental ingestion, dermal contact, and inhalation. The concentration of Aroclor 1260 remaining in site soil did not exceed the USEPA Residential RSL. The conclusion of the post-excavation screening evaluation was that PCBs (represented by Aroclor 1260 concentrations) no longer pose an unacceptable risk to future receptors.

In summary, there were exceedances of the USEPA RSL for Aroclor 1260 prior to soil removal that indicated a potential threat to human health. Following soil removal, the remaining concentrations were reduced to levels that no longer pose an unacceptable risk.

Table 2. Maximum Aroclor 1260 Concentration in Soil Prior to and After the TCRA

Contaminant	Pre-Soil Removal Maximum Concentration (mg/kg)	Post-Soil Removal Maximum Concentration (mg/kg)	USEPA RSL[1] (mg/kg)
Aroclor 1260	12	0.096	0.24

1. USEPA RSLs for Residential Soil, based on target risk of 1E-06 and target hazard quotient of 0.1. Effective June 2017 (USEPA, 2017).

ND – not detected, at a reporting limit of 0.027 mg/kg

The Baseline Ecological Evaluation (BEE; Shaw, 2012) concluded that constituents at the Main Post of FTMM (including Parcel 97) were unlikely to have a deleterious effect on sensitive ecological receptors or habitats, and additional ecological assessments were not warranted or recommended.

4.0 REGULATORY FRAMEWORK AND ENDANGERMENT DETERMINATION

This section summarizes the regulatory framework for the TCRA at Parcel 97 and presents the objectives of the removal action.

4.1 Regulatory Framework

CERCLA provides the President authority to respond to releases of hazardous substances, including removal actions (42 U.S.C. Section 9604(a)). Executive Order 12580 Section 2(d) delegates the President's authority under various CERCLA sections, including Section 9604(a), to the Secretary of the U.S. Department of Defense (DoD). Section 300.415 of the NCP further specifies the structure and requirements for removal actions. As the lead agency, the Army decided to implement the removal action at Parcel 97 as described in this Action Memorandum in accordance with CERCLA and the NCP. The NJDEP concurred with the Army's action at Parcel 97 (NJDEP, 2018).

4.1.1 Justification of the Time Critical Removal Action

A removal action is warranted pursuant to the NCP when the lead agency makes the determination considering several factors that there is a threat to public health or welfare or the environment (40 CFR 300.415(b)(1)). Of the listed factors in the NCP, the following two factors in Section 300.415(b)(2) of the NCP (40 CFR 300.415) were directly applicable to Parcel 97 and were used in determining the appropriateness of a TCRA to address the contaminant concentrations in soil near Parcel 97:

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, pollutants, or contaminants. (40 CFR 300.415(b)(2)(i)).

PCBs were present in soil at Parcel 97 at concentrations that could pose a threat to human health (Table 2). The NCP also states:

If the lead agency determines that a removal action is appropriate, actions shall, as appropriate, begin as soon as possible to abate, prevent, minimize, stabilize, mitigate, or eliminate the threat to public health or welfare of the United States or the environment. (40 CFR 300.415(b)(3)).

The U.S. Army determined that a TCRA was appropriate for Parcel 97 to remove the source of PCB contamination in soil. The source of the contamination was an historic electrical substation where PCBs in soils constituted an immediate threat to the environment. Since soil concentrations of PCBs exceeded risk-based exposure criteria by over an order of magnitude (Section 3.1), an accelerated response was warranted. Another factor in expediting this removal action was the planned transfer in November 2016 of all Main Post property including Parcel 97 to the FMERA. Since the resources were available and the contract vehicles were funded and in-place the Army decided to address this environmental concern immediately.

4.1.2 Applicable or Relevant and Appropriate Requirements

The TCRA described in this Action Memorandum complied with ARARs. In accordance with the NCP (40 CFR 300.415(i)), onsite removal actions conducted under CERCLA are required to meet applicable or relevant and appropriate requirements (ARARs) "to the extent practicable." The RDCSRSs were applicable to this TCRA. The applicable RDCSRS, which was reviewed by and coordinated with NJDEP, for PCBs is 0.2 mg/kg. NJDEP (2017, 2018; see **Appendix A**) has approved NFA for the site and therefore concurred that Parcel 97 meets the ARARs after implementation of the TCRA.

The U.S. Army also complied with applicable requirements for offsite actions (i.e., Resource Conservation and Recovery Act [RCRA] hazardous waste transportation and offsite treatment requirements prior to land disposal as required by the RCRA land disposal restrictions).

4.2 Endangerment Determination

Actual or threatened releases of hazardous substances from Parcel 97, if not addressed by implementing the response action described in this Action Memorandum, may have resulted in unacceptable exposures to contaminants and presented a threat to human health.

4.3 Removal Action Objectives

The removal action objective (RAO) for Parcel 97 was to remove PCB concentrations in soil that posed a threat to human health.

5.0 DESCRIPTION OF THE REMOVAL ACTION

Two alternatives for Parcel 97 were evaluated using the effectiveness, implementability, and cost selection criteria established by the NCP. The relative performances of the alternatives were subsequently evaluated in a comparative analysis.

The alternatives considered for Parcel 97 were:

- Alternative 1 – No Action
- Alternative 2 – Soil Removal and Offsite Disposal.

Both alternatives were evaluated against CERCLA remedial criteria of effectiveness, implementability, and cost. Only Alternative 2 satisfied the threshold criteria of protecting human health and the environment and complied with ARARs and was effective and implementable; therefore, it was then assessed for cost. Based on the comparative analysis in terms of effectiveness, implementability, and cost, the U.S. Army's selected alternative was **Alternative 2 – Soil Removal and Offsite Disposal.** Protectiveness is achieved by the removal of contamination in soil and is more cost effective in the long term compared to institutional controls.

The Parcel 97 removal action consisted of removing PCB-contaminated soil at the locations shown on **Figures 2 and 4**. Removal action activities included site preparation, removal of contaminated soil, offsite transportation and disposal, and site restoration.

Site preparation included staking the excavation locations and identifying locations of utilities. Contaminated soil was removed and placed in roll-off boxes. Clean backfill was compacted in lifts and graded to maintain positive drainage. The excavation area was restored with grass seed and straw where

previously vegetated, and crushed stone where previously not vegetated. Characterization, transportation, and offsite disposal of solid or hazardous waste complied with all appropriate Federal and state laws.

The general criteria for evaluating removal actions include effectiveness, implementability, and cost. The ability of the proposed action to meet these criteria is described below.

NJDEP (2018) has concurred with the Army's determination that no further action is necessary following the TCRA performed at the site. Since hazardous substances will not remain at Parcel 97 above an unrestricted use/unlimited exposure scenario, further site investigation will not be necessary.

5.1 Effectiveness

The removal action for Parcel 97 has been effective at providing short- and long-term protection. This action is permanent because the source of the soil contamination has been removed. This removal action complied with ARARs as discussed in Section 4.1.2. The remaining chemical concentrations in the soil at the site did not present an unacceptable risk to site workers during the removal action. Physical risks were addressed by implementing approved health and safety practices during the removal action.

5.2 Implementability

The removal action has been demonstrated to be both technically and administratively implementable. Soil excavation employed construction practices that are routinely used. All services and materials required were readily available.

5.3 Contribution to Remedial Performance

The removal action addressed all residual site contamination to meet the RDCSRS identified in Section 4.1.2, and no hazardous substances remain at the site above an unrestricted use/unlimited exposure scenario. Therefore, the risks at Parcel 97 have been addressed and no post-removal CERCLA action will be necessary.

5.4 Cost

The approximate cost of the Parcel 97 TCRA was $100,000. A breakdown of the costs is provided in **Table 3**. The costs include development of project-specific work plans, site preparation, soil excavation, transportation and disposal, and site restoration.

Table 3. Approximate Costs for the Removal Action

Phase Name	Year 1
Work Plan	$5,000
Soil Removal	$55,000
Transportation and Disposal	$20,000
Restoration	$5,000
U.S. Army Corps Costs	$15,000
Present Worth Total Cost:	$100,000

6.0 EXPECTED CHANGE IN THE SITUATION HAD THE ACTION BEEN DELAYED OR NOT TAKEN

Delaying the implementation of the removal action or taking no action would have resulted in potential threats to human health and the environment, as well as delays in the transfer of Parcel 97 from the U.S. Army to the Fort Monmouth Economic Revitalization Authority (FMERA).

7.0 PUBLIC INVOLVEMENT AND PARTICIPATION

The February 2019 (Revision 0) version of this Action Memorandum was made available for a 30-day public review and comment period from Monday March 4, 2019 to Wednesday April 3, 2019. The Action Memorandum was posted on the FTMM Environmental Restoration Program website (http://www.pica.army.mil/ftmonmouth/) and placed in the FTMM Environmental Restoration Public Information Repository (the Administrative Record) at the following location:

Monmouth County Library, Eastern Branch
1001 Route 35, Shrewsbury, NJ
Phone: (732) 683-8980
Hours: Mon-Thurs, 9am-9pm; Fri-Sat, 9am-5pm; and Sun, 1pm-5pm

Appendix B is the press release regarding the TCRA (which includes the public notice requesting comments) that was published in a local newspaper and posted on the FTMM Restoration Program website. No comments were received during the public review and comment period. Therefore, no changes were made to the Action Memorandum other than an update of this section (Section 7.0) regarding the results of the public participation process.

8.0 CONCLUSIONS

The removal action for PCB-contaminated soil at Parcel 97 meets the NCP criteria because it:

- Was technically feasible based on commonly used construction techniques and demonstrated proven approaches;
- Was administratively feasible;
- Provided a high degree of long-term public health and environmental protection through the removal of the source of the contaminated soil;
- Complied with chemical- and action-specific ARARs;
- Imposed no restrictions on future use of the site;
- Met the criteria of effectiveness, implementability, and cost;
- Will facilitate transfer of the property to the FMERA; and
- Serves as a final action at the site.

9.0 REFERENCES

New Jersey Department of Environmental Protection (NJDEP), 2012. Letter to Army; Re: *March 2012 Army Response to NJDEP Correspondence Letter Dated October 28, 2008, Fort Monmouth, NJ.* July 10.

NJDEP, 2017. Letter to Army; Re: *Approval, Unrestricted Use, Area of Concern: Parcel 97 PCBs, Monmouth County.* May 26.

NJDEP, 2018. Letter to Army; Re: *Approval, Unrestricted Use, Areas of Concern: Parcel 97, Monmouth County.* January 19.

Shaw, 2012. *Final Fort Monmouth Main Post and Charles Wood Area Baseline Ecological Evaluation Report, U.S. Army Garrison Fort Monmouth, Fort Monmouth, New Jersey.* Prepared for the Army Corps of Engineers, Baltimore District. Rev. 1.

Tetra Tech, 2016. Letter to Army; Re: *Interim Removal Action Adjacent to Building 978 (Parcel 97), For Monmouth, Oceanport, New Jersey*. November 1.

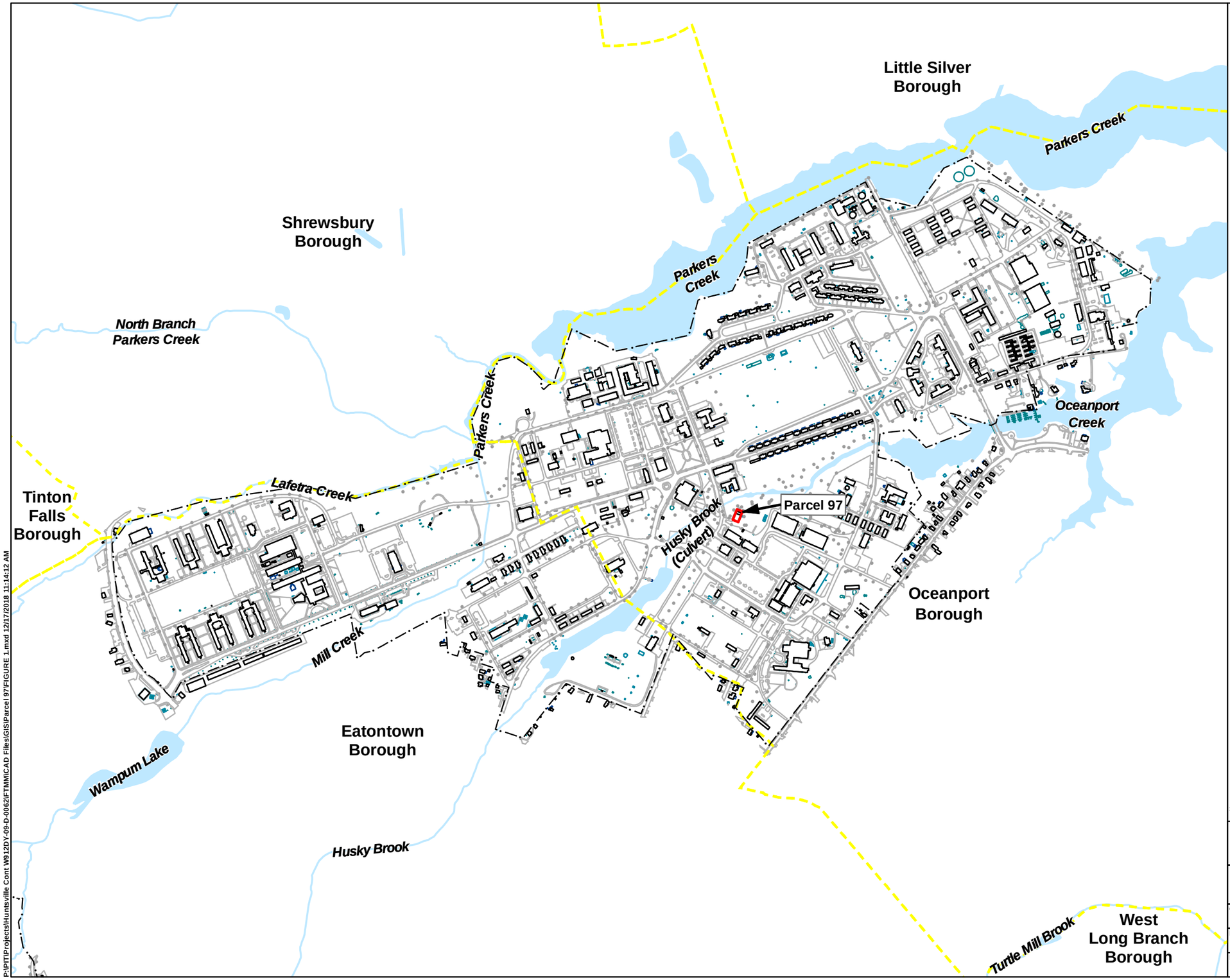
United States (US) Army Base Realignment and Closure (BRAC), 2007. *Environmental Condition of Property Report – Fort Monmouth, Monmouth County, New Jersey.* Final. January 29.

US Army BRAC, 2008. *Site Investigation Report, Fort Monmouth.* Final. July 21.

USEPA, 2017. Regional Screening Levels Summary Table (based on target risk of 1E-06 and target hazard quotient of 0.1). June. Available at: https://semspub.epa.gov/work/03/2245071.pdf.

Figure 1

Parcel 97 Location



LEGEND:

- Parcel Boundary
- Installation Boundary
- Municipal Boundary
- Surface Water Feature

N

1 inch = 1,000 feet

0 500 1,000 2,000 Feet

Source: FTMM Supplied CAD, 2013; ESRI Data and Maps, 2011; USGS NHD, 2012.

PARSONS 401 Diamond Drive NW, Huntsville AL	**Fort Monmouth** **New Jersey**

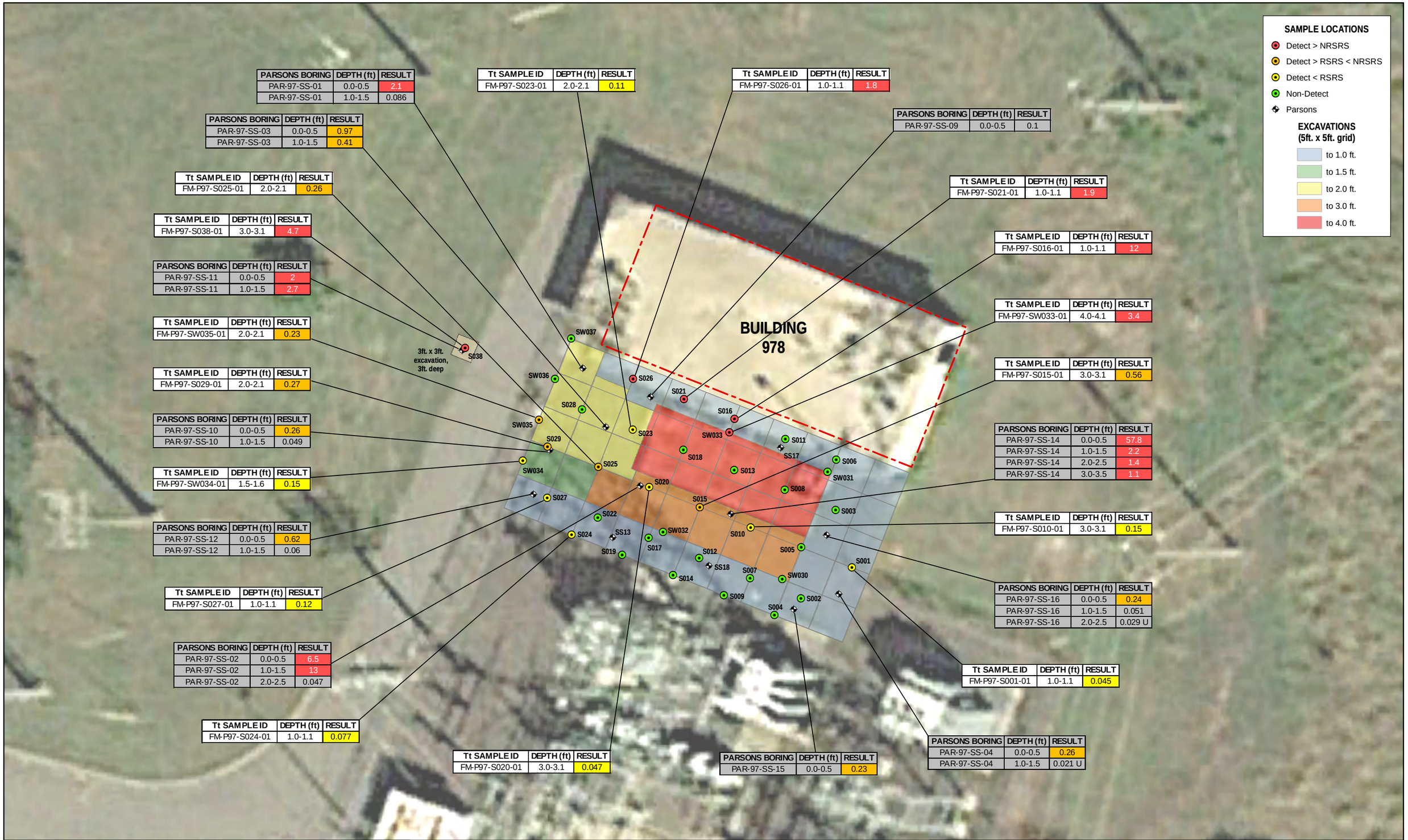
PARCEL 97 LOCATION

CREATED BY: RR	REVIEWED BY: KF
DATE: DEC. 2018	FIGURE NUMBER: FIGURE 1
PROJECT NUMBER: 748810-01000	FILE: FIGURE 1.mxd

P:\PIT\Projects\Huntsville Cont W912DY-09-D-0062\FTMM\CAD Files\GIS\Parcel 97\FIGURE 1.mxd 12/17/2018 11:14:12 AM

Figure 2

Parcel 97 Historic and Phase I PCB Soil Sampling



TETRA TECH

0 2 4 6 8 10 20 30 40 50 Feet

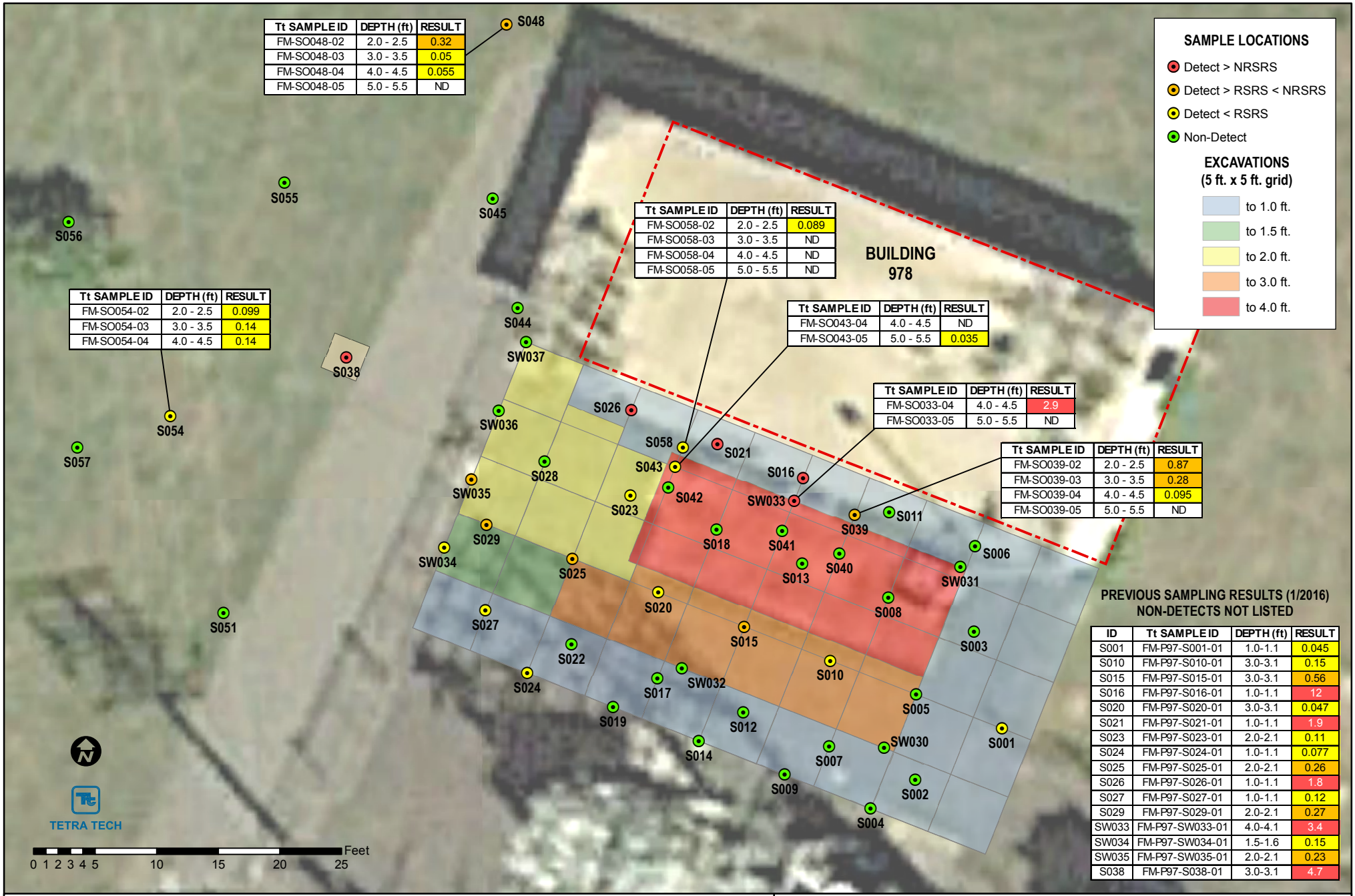
NOTES:
1. All results are for Aroclor-1260
2. All results are expressed in units of mg/kg
3. The Impact to GW Residential Soil Screening Level and Residential Soil Remediation Standard (RSRS) is 0.2 mg/kg. Exceedances are shaded orange.
4. The Non-Residential Soil Remediation Standard (NRSRS) is 1.0 mg/kg. Exceedances are shaded red.
5. Detections beneath the Residential Cleanup Standard are shaded yellow.

FORT MONMOUTH, NJ

FIGURE 2 PARCEL 97 HISTORIC AND PHASE I PCB SOIL SAMPLING

Figure 3

Parcel 97 Phase II PCB Soil Sampling



PREVIOUS SAMPLING RESULTS (1/2016)
NON-DETECTS NOT LISTED

ID	Tt SAMPLE ID	DEPTH (ft)	RESULT
S001	FM-P97-S001-01	1.0-1.1	0.045
S010	FM-P97-S010-01	3.0-3.1	0.15
S015	FM-P97-S015-01	3.0-3.1	0.56
S016	FM-P97-S016-01	1.0-1.1	12
S020	FM-P97-S020-01	3.0-3.1	0.047
S021	FM-P97-S021-01	1.0-1.1	1.9
S023	FM-P97-S023-01	2.0-2.1	0.11
S024	FM-P97-S024-01	1.0-1.1	0.077
S025	FM-P97-S025-01	2.0-2.1	0.26
S026	FM-P97-S026-01	1.0-1.1	1.8
S027	FM-P97-S027-01	1.0-1.1	0.12
S029	FM-P97-S029-01	2.0-2.1	0.27
SW033	FM-P97-SW033-01	4.0-4.1	3.4
SW034	FM-P97-SW034-01	1.5-1.6	0.15
SW035	FM-P97-SW035-01	2.0-2.1	0.23
S038	FM-P97-S038-01	3.0-3.1	4.7

NOTES:
1. All results are for Aroclor-1260
2. All results are expressed in units of mg/kg
3. The Impact to GW Residential Soil Screening Level and Residential Soil Remediation Standard (RSRS) is 0.2 mg/kg. Exceedances are shaded orange.
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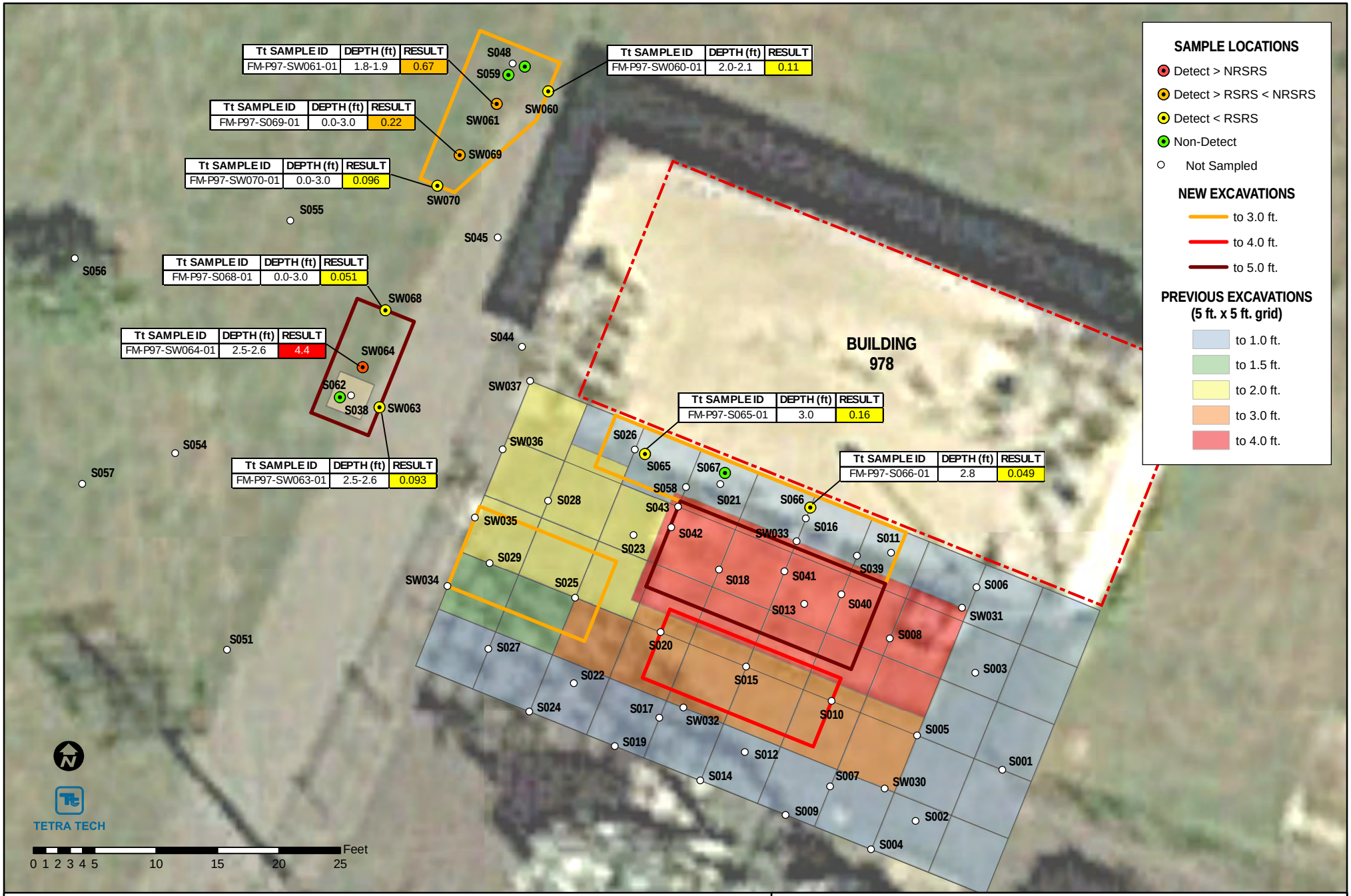
5. Detections beneath the Residential Cleanup Standard are shaded yellow.

FORT MONMOUTH, NJ

FIGURE 3 - PARCEL 97 PHASE II PCB SOIL SAMPLING

Figure 4

Parcel 97 Phase III PCB Soil Sampling



NOTES:
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3. The Impact to GW Residential Soil Screening Level and Residential Soil Remediation Standard (RSRS) is 0.2 mg/kg. Exceedances are shaded orange.
4. The Non-Residential Soil Remediation Standard (NRSRS) is 1.0 mg/kg. Exceedances are shaded red.
5. Detections beneath the Residential Cleanup Standard are shaded yellow.

FORT MONMOUTH, NJ

FIGURE 4 - PARCEL 97 PHASE III PCB SOIL SAMPLING

Table 1

PCB Remediation at Building 978 (Parcel 97), Excavation Confirmation PCB Sample Results

Table 1
PCB Remediation at Building 978 (Parcel 97)
Excavation Confirmation PCB Sample Results
Fort Monmouth, New Jersey

			Analtyical Method	EPA 8082A	EPA 8082A	EPA 8082A	EPA 8082A	EPA 8082A	EPA 8082A
			Parameter	Aroclor (Total)	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248
			Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			RSRS (mg/kg)	0.2	0.2	0.2	0.2	0.2	0.2
			NRSRS (mg/kg)	1	1	1	1	1	1
Sample ID	Collection Date	Depth (ft bgs)	Matrix						
Phase I									
FM-P97-S001-01	1/5/2016	1 - 1.1	Soil	0.045	ND	ND	ND	ND	ND
FM-P97-S002-01	1/6/2016	1 - 1.1	Soil	ND	ND	ND	ND	ND	ND
FM-P97-S003-01	1/5/2016	1 - 1.1	Soil	ND	ND	ND	ND	ND	ND
FM-P97-S004-01	1/6/2016	1 - 1.1	Soil	ND	ND	ND	ND	ND	ND
FM-P97-S005-01	1/5/2016	1 - 1.1	Soil	ND	ND	ND	ND	ND	ND
FM-P97-S006-01	1/5/2016	1 - 1.1	Soil	ND	ND	ND	ND	ND	ND
FM-P97-S007-01	1/6/2016	1 - 1.1	Soil	ND	ND	ND	ND	ND	ND
FM-P97-S008-01	1/6/2016	4 - 4.1	Soil	ND	ND	ND	ND	ND	ND
FM-P97-S009-01	1/6/2016	1 - 1.1	Soil	ND	ND	ND	ND	ND	ND
FM-P97-S010-01	1/5/2016	3 - 3.1	Soil	0.15	ND	ND	ND	ND	ND
FM-P97-S011-01	1/5/2016	1 - 1.1	Soil	ND	ND	ND	ND	ND	ND
FM-P97-S012-01	1/6/2016	1 - 1.1	Soil	ND	ND	ND	ND	ND	ND
FM-P97-S013-01	1/6/2016	4 - 4.1	Soil	ND	ND	ND	ND	ND	ND
FM-P97-S013-01-FD	1/6/2016	4 - 4.1	Soil	ND	ND	ND	ND	ND	ND
FM-P97-S014-01	1/6/2016	1 - 1.1	Soil	ND	ND	ND	ND	ND	ND
FM-P97-S015-01	1/5/2016	3 - 3.1	Soil	0.56	ND	ND	ND	ND	ND
FM-P97-S016-01	1/5/2016	1 - 1.1	Soil	12	ND	ND	ND	ND	ND
FM-P97-S017-01	1/6/2016	1 - 1.1	Soil	ND	ND	ND	ND	ND	ND
FM-P97-S018-01	1/7/2016	4 - 4.1	Soil	ND	ND	ND	ND	ND	ND
FM-P97-S019-01	1/6/2016	1 - 1.1	Soil	ND	ND	ND	ND	ND	ND
FM-P97-S020-01	1/5/2016	3 - 3.1	Soil	0.047	ND	ND	ND	ND	ND
FM-P97-S021-01	1/5/2016	1 - 1.1	Soil	1.9	ND	ND	ND	ND	ND
FM-P97-S022-01	1/7/2016	1 - 1.1	Soil	ND	ND	ND	ND	ND	ND
FM-P97-S023-01	1/7/2016	2 - 2.1	Soil	0.11	ND	ND	ND	ND	ND
FM-P97-S024-01	1/7/2016	1 - 1.1	Soil	0.077	ND	ND	ND	ND	ND
FM-P97-S024-01-FD	1/7/2016	1 - 1.1	Soil	0.097	ND	ND	ND	ND	ND
FM-P97-S025-01	1/7/2016	2 - 2.1	Soil	0.26	ND	ND	ND	ND	ND
FM-P97-S026-01	1/6/2016	1 - 1.1	Soil	1.8	ND	ND	ND	ND	ND
FM-P97-S026-01-FD	1/6/2016	1 - 1.1	Soil	0.8	ND	ND	ND	ND	ND

Table 1
PCB Remediation at Building 978 (Parcel 97)
Excavation Confirmation PCB Sample Results
Fort Monmouth, New Jersey

				Analtyical Method	EPA 8082A	EPA 8082A	EPA 8082A	EPA 8082A	EPA 8082A	EPA 8082A
				Parameter	Aroclor (Total)	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248
				Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
				RSRS (mg/kg)	0.2	0.2	0.2	0.2	0.2	0.2
				NRSRS (mg/kg)	1	1	1	1	1	1
Sample ID	Collection Date	Depth (ft bgs)	Matrix							
FM-P97-S027-01	1/7/2016	1 - 1.1	Soil		0.12	ND	ND	ND	ND	ND
FM-P97-S028-01	1/7/2016	2 - 2.1	Soil		ND	ND	ND	ND	ND	ND
FM-P97-S029-01	1/7/2016	2 - 2.1	Soil		0.27	ND	ND	ND	ND	ND
FM-P97-SW030-01	1/7/2016	3 - 3.1	Soil		ND	ND	ND	ND	ND	ND
FM-P97-SW031-01	1/7/2016	4 - 4.1	Soil		ND	ND	ND	ND	ND	ND
FM-P97-SW032-01	1/7/2016	3 - 3.1	Soil		ND	ND	ND	ND	ND	ND
FM-P97-SW032-01-FI	1/7/2016	3 - 3.1	Soil		ND	ND	ND	ND	ND	ND
FM-P97-SW033-01	1/7/2016	4 - 4.1	Soil		3.4	ND	ND	ND	ND	ND
FM-P97-SW034-01	1/7/2016	1.5 - 1.6	Soil		0.15	ND	ND	ND	ND	ND
FM-P97-SW035-01	1/7/2016	2 - 2.1	Soil		0.23	ND	ND	ND	ND	ND
FM-P97-SW036-01	1/7/2016	2 - 2.1	Soil		ND	ND	ND	ND	ND	ND
FM-P97-SW037-01	1/7/2016	2 - 2.1	Soil		ND	ND	ND	ND	ND	ND
FM-P97-SW038-01	1/7/2016	3 - 3.1	Soil		4.7	ND	ND	ND	ND	ND
Phase II										
FM-SO039-02	6/22/2016	2 - 2.5	Soil		0.87	ND	ND	ND	ND	ND
FM-SO044-02	6/24/2016	2 - 2.5	Soil		ND	ND	ND	ND	ND	ND
FM-SO044-02-FD	6/24/2016	2 - 2.5	Soil		ND	ND	ND	ND	ND	ND
FM-SO045-02	6/24/2016	2 - 2.5	Soil		ND	ND	ND	ND	ND	ND
FM-SO048-02	6/24/2016	2 - 2.5	Soil		0.32	ND	ND	ND	ND	ND
FM-SO051-02	6/24/2016	2 - 2.5	Soil		ND	ND	ND	ND	ND	ND
FM-SO051-02-FD	6/24/2016	2 - 2.5	Soil		ND	ND	ND	ND	ND	ND
FM-SO054-02	6/24/2016	2 - 2.5	Soil		0.099	ND	ND	ND	ND	ND
FM-SO055-02	6/24/2016	2 - 2.5	Soil		ND	ND	ND	ND	ND	ND
FM-SO057-02	6/24/2016	2 - 2.5	Soil		ND	ND	ND	ND	ND	ND
FM-SO058-02	6/22/2016	2 - 2.5	Soil		0.089	ND	ND	ND	ND	ND
FM-SO039-03	6/22/2016	3 - 3.5	Soil		0.28	ND	ND	ND	ND	ND
FM-SO044-03	6/24/2016	3 - 3.5	Soil		ND	ND	ND	ND	ND	ND
FM-SO045-03	6/24/2016	3 - 3.5	Soil		ND	ND	ND	ND	ND	ND
FM-SO048-03	6/24/2016	3 - 3.5	Soil		0.05	ND	ND	ND	ND	ND
FM-SO051-03	6/24/2016	3 - 3.5	Soil		ND	ND	ND	ND	ND	ND
FM-SO054-03	6/24/2016	3 - 3.5	Soil		0.14	ND	ND	ND	ND	ND
FM-SO054-03-FD	6/24/2016	3 - 3.5	Soil		0.14	ND	ND	ND	ND	ND

Table 1
PCB Remediation at Building 978 (Parcel 97)
Excavation Confirmation PCB Sample Results
Fort Monmouth, New Jersey

				Analtyical Method	EPA 8082A	EPA 8082A	EPA 8082A	EPA 8082A	EPA 8082A	EPA 8082A
				Parameter	Aroclor (Total)	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248
				Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
				RSRS (mg/kg)	0.2	0.2	0.2	0.2	0.2	0.2
				NRSRS (mg/kg)	1	1	1	1	1	1
Sample ID	Collection Date	Depth (ft bgs)	Matrix							
FM-SO055-03	6/24/2016	3 - 3.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO055-03-FD	6/24/2016	3 - 3.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO056-03	6/24/2016	3 - 3.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO056-03-FD	6/24/2016	3 - 3.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO057-03	6/24/2016	3 - 3.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO058-03	6/22/2016	3 - 3.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO033-04	6/22/2016	4 - 4.5	Soil	2.9	ND	ND	ND	ND	ND	
FM-SO039-04	6/22/2016	4 - 4.5	Soil	0.095	ND	ND	ND	ND	ND	
FM-SO040-04	6/22/2016	4 - 4.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO041-04	6/22/2016	4 - 4.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO042-04	6/22/2016	4 - 4.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO043-04	6/22/2016	4 - 4.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO044-04	6/24/2016	4 - 4.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO045-04	6/24/2016	4 - 4.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO048-04	6/24/2016	4 - 4.5	Soil	0.055	ND	ND	ND	ND	ND	
FM-SO048-04-FD	6/24/2016	4 - 4.5	Soil	0.053	ND	ND	ND	ND	ND	
FM-SO051-04	6/24/2016	4 - 4.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO054-04	6/24/2016	4 - 4.5	Soil	0.14	ND	ND	ND	ND	ND	
FM-SO055-04	6/24/2016	4 - 4.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO057-04	6/24/2016	4 - 4.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO058-04	6/22/2016	4 - 4.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO033-05	6/22/2016	5 - 5.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO039-05	6/22/2016	5 - 5.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO040-05	6/22/2016	5 - 5.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO041-05	6/22/2016	5 - 5.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO042-05	6/22/2016	5 - 5.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO043-05	6/22/2016	5 - 5.5	Soil	0.035	ND	ND	ND	ND	ND	
FM-SO044-05	6/24/2016	5 - 5.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO045-05	6/24/2016	5 - 5.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO048-05	6/24/2016	5 - 5.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO057-05	6/24/2016	5 - 5.5	Soil	ND	ND	ND	ND	ND	ND	
FM-SO058-05	6/22/2016	5 - 5.5	Soil	ND	ND	ND	ND	ND	ND	

Table 1
PCB Remediation at Building 978 (Parcel 97)
Excavation Confirmation PCB Sample Results
Fort Monmouth, New Jersey

				Analtyical Method	EPA 8082A	EPA 8082A	EPA 8082A	EPA 8082A	EPA 8082A	EPA 8082A
				Parameter	Aroclor (Total)	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248
				Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
				RSRS (mg/kg)	0.2	0.2	0.2	0.2	0.2	0.2
				NRSRS (mg/kg)	1	1	1	1	1	1
Sample ID	Collection Date	Depth (ft bgs)	Matrix							
Phase III										
FM-P97-S059-01	7/18/2016	3 - 3.1	Soil		ND	ND	ND	ND	ND	ND
FM-P97-SW060-01	7/18/2016	2 - 2.1	Soil		0.11	ND	ND	ND	ND	ND
FM-P97-SW061-01	7/18/2016	1.8 - 1.9	Soil		0.67	ND	ND	ND	ND	ND
FM-P97-S062-01	7/18/2016	5 - 5.1	Soil		ND	ND	ND	ND	ND	ND
FM-P97-SW063-01	7/18/2016	2.5 - 2.6	Soil		0.093	ND	ND	ND	ND	ND
FM-P97-SW064-01	7/18/2016	2.6 - 2.7	Soil		4.4	ND	ND	ND	ND	ND
FM-P97-S065-01	7/19/2016	3 - 3	Soil		0.16	ND	ND	ND	ND	ND
FM-P97-S066-01	7/19/2016	2.8 - 2.8	Soil		0.049	ND	ND	ND	ND	ND
FM-P97-S067-01	7/19/2016	2.4 - 2.4	Soil		ND	ND	ND	ND	ND	ND
FM-P97-S068-01	7/22/2016	0 - 3	Soil		----	ND	ND	ND	ND	ND
FM-P97-S069-01	7/25/2016	0 - 3	Soil		----	ND	ND	ND	ND	ND
FM-P97-S069-FD	7/25/2016	0 - 3	Soil		----	ND	ND	ND	ND	ND
FM-P97-SW070-01	7/27/2016	0 - 3	Soil		0.096	ND	ND	ND	ND	ND

Notes:

mg/kg	milligrams per kilogram
RSRS	New Jersey Department of Environmental Protection (NJDEP) Soil Remediation Standards (June 2, 2008) Residential critieria.
NRSRS	New Jersey Department of Environmental Protection (NJDEP) Soil Remediation Standards (June 2, 2008) Non-Residential critieria.
FD	Field Duplicate
ND	Not Detected
N/A	No criterion derived for this constituent.
----	Not analyzed.
	Detected result less than RSRS and less than NRSRS criteria shown.
	Detected result exceeds RSRS but less than NRSRS criteria shown.
	Detected result exceeds RSRS and exceeds NRSRS criteria shown.

Table 1
PCB Remediation at Building 978 (Parcel 97)
Excavation Confirmation PCB Sample Results
Fort Monmouth, New Jersey

			Analtyical Method	EPA 8082A	EPA 8082A	EPA 8082A	EPA 8082A
			Parameter	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268
			Units	mg/kg	mg/kg	mg/kg	mg/kg
			RSRS (mg/kg)	0.2	0.2	NA	NA
			NRSRS (mg/kg)	1	1	NA	NA
Sample ID	Collection Date	Depth (ft bgs)	Matrix				
Phase I							
FM-P97-S001-01	1/5/2016	1 - 1.1	Soil	ND	0.045	ND	ND
FM-P97-S002-01	1/6/2016	1 - 1.1	Soil	ND	ND	ND	ND
FM-P97-S003-01	1/5/2016	1 - 1.1	Soil	ND	ND	ND	ND
FM-P97-S004-01	1/6/2016	1 - 1.1	Soil	ND	ND	ND	ND
FM-P97-S005-01	1/5/2016	1 - 1.1	Soil	ND	ND	ND	ND
FM-P97-S006-01	1/5/2016	1 - 1.1	Soil	ND	ND	ND	ND
FM-P97-S007-01	1/6/2016	1 - 1.1	Soil	ND	ND	ND	ND
FM-P97-S008-01	1/6/2016	4 - 4.1	Soil	ND	ND	ND	ND
FM-P97-S009-01	1/6/2016	1 - 1.1	Soil	ND	ND	ND	ND
FM-P97-S010-01	1/5/2016	3 - 3.1	Soil	ND	0.15	ND	ND
FM-P97-S011-01	1/5/2016	1 - 1.1	Soil	ND	ND	ND	ND
FM-P97-S012-01	1/6/2016	1 - 1.1	Soil	ND	ND	ND	ND
FM-P97-S013-01	1/6/2016	4 - 4.1	Soil	ND	ND	ND	ND
FM-P97-S013-01-FD	1/6/2016	4 - 4.1	Soil	ND	ND	ND	ND
FM-P97-S014-01	1/6/2016	1 - 1.1	Soil	ND	ND	ND	ND
FM-P97-S015-01	1/5/2016	3 - 3.1	Soil	ND	0.56	ND	ND
FM-P97-S016-01	1/5/2016	1 - 1.1	Soil	ND	12	ND	ND
FM-P97-S017-01	1/6/2016	1 - 1.1	Soil	ND	ND	ND	ND
FM-P97-S018-01	1/7/2016	4 - 4.1	Soil	ND	ND	ND	ND
FM-P97-S019-01	1/6/2016	1 - 1.1	Soil	ND	ND	ND	ND
FM-P97-S020-01	1/5/2016	3 - 3.1	Soil	ND	0.047	ND	ND
FM-P97-S021-01	1/5/2016	1 - 1.1	Soil	ND	1.9	ND	ND
FM-P97-S022-01	1/7/2016	1 - 1.1	Soil	ND	ND	ND	ND
FM-P97-S023-01	1/7/2016	2 - 2.1	Soil	ND	0.11	ND	ND
FM-P97-S024-01	1/7/2016	1 - 1.1	Soil	ND	0.077	ND	ND
FM-P97-S024-01-FD	1/7/2016	1 - 1.1	Soil	ND	0.097	ND	ND
FM-P97-S025-01	1/7/2016	2 - 2.1	Soil	ND	0.26	ND	ND
FM-P97-S026-01	1/6/2016	1 - 1.1	Soil	ND	1.8	ND	ND
FM-P97-S026-01-FD	1/6/2016	1 - 1.1	Soil	ND	0.8	ND	ND

Table 1
PCB Remediation at Building 978 (Parcel 97)
Excavation Confirmation PCB Sample Results
Fort Monmouth, New Jersey

			Analtyical Method	EPA 8082A	EPA 8082A	EPA 8082A	EPA 8082A
			Parameter	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268
			Units	mg/kg	mg/kg	mg/kg	mg/kg
			RSRS (mg/kg)	0.2	0.2	NA	NA
			NRSRS (mg/kg)	1	1	NA	NA
Sample ID	Collection Date	Depth (ft bgs)	Matrix				
FM-P97-S027-01	1/7/2016	1 - 1.1	Soil	ND	0.12	ND	ND
FM-P97-S028-01	1/7/2016	2 - 2.1	Soil	ND	ND	ND	ND
FM-P97-S029-01	1/7/2016	2 - 2.1	Soil	ND	0.27	ND	ND
FM-P97-SW030-01	1/7/2016	3 - 3.1	Soil	ND	ND	ND	ND
FM-P97-SW031-01	1/7/2016	4 - 4.1	Soil	ND	ND	ND	ND
FM-P97-SW032-01	1/7/2016	3 - 3.1	Soil	ND	ND	ND	ND
FM-P97-SW032-01-FI	1/7/2016	3 - 3.1	Soil	ND	ND	ND	ND
FM-P97-SW033-01	1/7/2016	4 - 4.1	Soil	ND	3.4	ND	ND
FM-P97-SW034-01	1/7/2016	1.5 - 1.6	Soil	ND	0.15	ND	ND
FM-P97-SW035-01	1/7/2016	2 - 2.1	Soil	ND	0.23	ND	ND
FM-P97-SW036-01	1/7/2016	2 - 2.1	Soil	ND	ND	ND	ND
FM-P97-SW037-01	1/7/2016	2 - 2.1	Soil	ND	ND	ND	ND
FM-P97-SW038-01	1/7/2016	3 - 3.1	Soil	ND	4.7	ND	ND
Phase II							
FM-SO039-02	6/22/2016	2 - 2.5	Soil	ND	0.87	ND	ND
FM-SO044-02	6/24/2016	2 - 2.5	Soil	ND	ND	ND	ND
FM-SO044-02-FD	6/24/2016	2 - 2.5	Soil	ND	ND	ND	ND
FM-SO045-02	6/24/2016	2 - 2.5	Soil	ND	ND	ND	ND
FM-SO048-02	6/24/2016	2 - 2.5	Soil	ND	0.32	ND	ND
FM-SO051-02	6/24/2016	2 - 2.5	Soil	ND	ND	ND	ND
FM-SO051-02-FD	6/24/2016	2 - 2.5	Soil	ND	ND	ND	ND
FM-SO054-02	6/24/2016	2 - 2.5	Soil	ND	0.099	ND	ND
FM-SO055-02	6/24/2016	2 - 2.5	Soil	ND	ND	ND	ND
FM-SO057-02	6/24/2016	2 - 2.5	Soil	ND	ND	ND	ND
FM-SO058-02	6/22/2016	2 - 2.5	Soil	ND	0.089	ND	ND
FM-SO039-03	6/22/2016	3 - 3.5	Soil	ND	0.28	ND	ND
FM-SO044-03	6/24/2016	3 - 3.5	Soil	ND	ND	ND	ND
FM-SO045-03	6/24/2016	3 - 3.5	Soil	ND	ND	ND	ND
FM-SO048-03	6/24/2016	3 - 3.5	Soil	ND	0.05	ND	ND
FM-SO051-03	6/24/2016	3 - 3.5	Soil	ND	ND	ND	ND
FM-SO054-03	6/24/2016	3 - 3.5	Soil	ND	0.14	ND	ND
FM-SO054-03-FD	6/24/2016	3 - 3.5	Soil	ND	0.14	ND	ND

Table 1
PCB Remediation at Building 978 (Parcel 97)
Excavation Confirmation PCB Sample Results
Fort Monmouth, New Jersey

			Analtyical Method	EPA 8082A	EPA 8082A	EPA 8082A	EPA 8082A
			Parameter	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268
			Units	mg/kg	mg/kg	mg/kg	mg/kg
			RSRS (mg/kg)	0.2	0.2	NA	NA
			NRSRS (mg/kg)	1	1	NA	NA
Sample ID	Collection Date	Depth (ft bgs)	Matrix				
FM-SO055-03	6/24/2016	3 - 3.5	Soil	ND	ND	ND	ND
FM-SO055-03-FD	6/24/2016	3 - 3.5	Soil	ND	ND	ND	ND
FM-SO056-03	6/24/2016	3 - 3.5	Soil	ND	ND	ND	ND
FM-SO056-03-FD	6/24/2016	3 - 3.5	Soil	ND	ND	ND	ND
FM-SO057-03	6/24/2016	3 - 3.5	Soil	ND	ND	ND	ND
FM-SO058-03	6/22/2016	3 - 3.5	Soil	ND	ND	ND	ND
FM-SO033-04	6/22/2016	4 - 4.5	Soil	ND	2.9	ND	ND
FM-SO039-04	6/22/2016	4 - 4.5	Soil	ND	0.095	ND	ND
FM-SO040-04	6/22/2016	4 - 4.5	Soil	ND	ND	ND	ND
FM-SO041-04	6/22/2016	4 - 4.5	Soil	ND	ND	ND	ND
FM-SO042-04	6/22/2016	4 - 4.5	Soil	ND	ND	ND	ND
FM-SO043-04	6/22/2016	4 - 4.5	Soil	ND	ND	ND	ND
FM-SO044-04	6/24/2016	4 - 4.5	Soil	ND	ND	ND	ND
FM-SO045-04	6/24/2016	4 - 4.5	Soil	ND	ND	ND	ND
FM-SO048-04	6/24/2016	4 - 4.5	Soil	ND	0.055	ND	ND
FM-SO048-04-FD	6/24/2016	4 - 4.5	Soil	ND	0.053	ND	ND
FM-SO051-04	6/24/2016	4 - 4.5	Soil	ND	ND	ND	ND
FM-SO054-04	6/24/2016	4 - 4.5	Soil	ND	0.14	ND	ND
FM-SO055-04	6/24/2016	4 - 4.5	Soil	ND	ND	ND	ND
FM-SO057-04	6/24/2016	4 - 4.5	Soil	ND	ND	ND	ND
FM-SO058-04	6/22/2016	4 - 4.5	Soil	ND	ND	ND	ND
FM-SO033-05	6/22/2016	5 - 5.5	Soil	ND	ND	ND	ND
FM-SO039-05	6/22/2016	5 - 5.5	Soil	ND	ND	ND	ND
FM-SO040-05	6/22/2016	5 - 5.5	Soil	ND	ND	ND	ND
FM-SO041-05	6/22/2016	5 - 5.5	Soil	ND	ND	ND	ND
FM-SO042-05	6/22/2016	5 - 5.5	Soil	ND	ND	ND	ND
FM-SO043-05	6/22/2016	5 - 5.5	Soil	ND	0.035	ND	ND
FM-SO044-05	6/24/2016	5 - 5.5	Soil	ND	ND	ND	ND
FM-SO045-05	6/24/2016	5 - 5.5	Soil	ND	ND	ND	ND
FM-SO048-05	6/24/2016	5 - 5.5	Soil	ND	ND	ND	ND
FM-SO057-05	6/24/2016	5 - 5.5	Soil	ND	ND	ND	ND
FM-SO058-05	6/22/2016	5 - 5.5	Soil	ND	ND	ND	ND

Table 1
PCB Remediation at Building 978 (Parcel 97)
Excavation Confirmation PCB Sample Results
Fort Monmouth, New Jersey

				Analtyical Method	EPA 8082A	EPA 8082A	EPA 8082A	EPA 8082A
				Parameter	Aroclor-1254	Aroclor-1260	Aroclor-1262	Aroclor-1268
				Units	mg/kg	mg/kg	mg/kg	mg/kg
				RSRS (mg/kg)	0.2	0.2	NA	NA
				NRSRS (mg/kg)	1	1	NA	NA
Sample ID	Collection Date	Depth (ft bgs)	Matrix					
Phase III								
FM-P97-S059-01	7/18/2016	3 - 3.1	Soil	ND	ND	ND	ND
FM-P97-SW060-01	7/18/2016	2 - 2.1	Soil	ND	0.11	ND	ND
FM-P97-SW061-01	7/18/2016	1.8 - 1.9	Soil	ND	0.67	ND	ND
FM-P97-S062-01	7/18/2016	5 - 5.1	Soil	ND	ND	ND	ND
FM-P97-SW063-01	7/18/2016	2.5 - 2.6	Soil	ND	0.093	ND	ND
FM-P97-SW064-01	7/18/2016	2.6 - 2.7	Soil	ND	4.4	ND	ND
FM-P97-S065-01	7/19/2016	3 - 3	Soil	ND	0.16	ND	ND
FM-P97-S066-01	7/19/2016	2.8 - 2.8	Soil	ND	0.049	ND	ND
FM-P97-S067-01	7/19/2016	2.4 - 2.4	Soil	ND	ND	ND	ND
FM-P97-S068-01	7/22/2016	0 - 3	Soil	ND	0.0505	ND	ND
FM-P97-S069-01	7/25/2016	0 - 3	Soil	ND	0.222	ND	ND
FM-P97-S069-FD	7/25/2016	0 - 3	Soil	ND	0.351	ND	ND
FM-P97-SW070-01	7/27/2016	0 - 3	Soil	ND	0.096	ND	ND

Notes:

mg/kg	milligrams per kilogram
RSRS	New Jersey Department of Environmental Protection (NJDEP) Soil Remediation Standards (June 2, 2008) Residential critieria.
NRSRS	New Jersey Department of Environmental Protection (NJDEP) Soil Remediation Standards (June 2, 2008) Non-Residential critieria.
FD	Field Duplicate
ND	Not Detected
N/A	No criterion derived for this constituen
----	Not analyzed.
	Detected result less than RSRS and less than NRSRS criteria shown.
	Detected result exceeds RSRS but less than NRSRS criteria shown.
	Detected result exceeds RSRS and exceeds NRSRS criteria shown.

APPENDIX A

NJDEP Approval Letters

State of New Jersey

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Case Management
401 East State Street
P.O. Box 420/Mail Code 401-05F
Trenton, NJ 08625-0028
Phone #: 609-633-1455
Fax #: 609-633-1439

BOB MARTIN
Commissioner

May 26, 2017

William Colvin
BRAC Environmental Coordinator
OACSIM – U.S. Army Fort Monmouth
PO Box 148
Oceanport, NJ 07757

Approval

Re: **Remedial Action Type:** *Unrestricted Use*
Scope of Remediation: *Area of Concern: Parcel 97 PCBs*
Monmouth County
SRP PI# G000000032
RPC000001

Dear Mr. Colvin,

The New Jersey Department of Environmental Protection (Department) has completed review of the submittal, *Request for No Further Action Determination for PCBs at Parcel 97*, received May 17, 2017, prepared by the Department of the Army Office of Assistant Chief of Staff for Installation Management to request determination of no further action for PCBs at Parcel 97.

The Department concurs with the Department of the Army that no additional action is necessary for PCBs at Parcel 97; all remedial actions relative to PCBs are complete. This determination is based upon information in the Department's case file, the report submitted by the Department of the Army, and the certified representations and information provided to the Department. This approval does not apply to the three soil sample locations which exhibited slight exceedances for PAHs of the Residential Direct Contact Soil Remediation Standards.

Please contact Linda Range at (609) 984-6606 if you have any questions.

Sincerely,

Gwen B. Zervas, P.E.
Section Chief

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Site Remediation and Waste Management Program
401 East State Street
Trenton, NJ 08625

PHIL MURPHY
Governor

SHEILA OLIVER
Lt. Governor

CATHERINE R. McCABE
Acting Commissioner

January 19, 2018

Mr. William Colvin
BRAC Environmental Coordinator
OACSIM – U.S. Army Fort Monmouth
PO Box 148
Oceanport, NJ 07757

Approval

Re: **Remedial Action Type:** *Unrestricted Use*
Scope of Remediation: *Areas of Concern: Parcel 97*
Monmouth County
SRP PI# G000000032

Dear Mr. Colvin:

The New Jersey Department of Environmental Protection (Department) reviewed the information submitted on December 11, 2017 by the Department of the Army. The Department concurs with the Department of the Army that no additional action is necessary for Parcel 97, in particular the three borings previously collected exhibiting slight exceedances for PAHs for Residential Direct Contact soil Remediation Standards. These three borings meet the September 18, 2017 Amended Residential Direct Contact Soil Remediation Standards when compliance averaging is applied. It is therefore agreed, all remedial actions are complete. The determination that the remedial action is complete is based upon information in the Department's case file, the report submitted by the Department of the Army, and the certified representations and information provided to the Department.

If you have any questions regarding this matter, please contact A. J. Joshi at (973) 656-4427.

Sincerely,

Gwen B. Zervas, P.E.
Section Chief

cc: James Moore, USACE
Cristina Grill, Parsons
Joe Fallon, FMERA
File

APPENDIX B

PUBLIC NOTICE

U.S. Army Corps of Engineers,
NY District

ACTION MEMORANDUM FOR PARCEL 97
at Fort Monmouth, NJ

The U.S. Army Corps of Engineers New York District and the U.S. Army Engineering and Support Center, Huntsville (USAESCH), has prepared an *Action Memorandum* for Parcel 97 (Building 978 Electrical Substation) at Fort Monmouth (FTMM) in Oceanport, Monmouth County, New Jersey. The U.S. Army is the lead agency for FTMM in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Executive Order 12580. New Jersey Department of Environmental Protection (NJDEP) is the state support agency under the National Contingency Plan for FTMM.

The purpose of the *Action Memorandum* is to document the U.S. Army's decision to undertake the Time Critical Removal Action (TCRA) at Parcel 97 where polychlorinated biphenyl (PCB) contaminated soil was identified. This *Action Memorandum* describes the TCRA selected for and performed at Parcel 97. The NJDEP has concurred with the soil removal completed at Parcel 97.

The *Action Memorandum,* the associated reports, and the full public record for the site, are available for review at the Monmouth County Library, Eastern Branch, 1001 Route 35, Shrewsbury NJ 07702. The *Action Memorandum* is also posted on the FTMM Environmental website (http://www.pica.army.mil/ftmonmouth/).

The New York District invites public comment on the *Action Memorandum*. Written comments will be accepted during a 30-day comment period starting Monday March 4, 2019 and ending Wednesday April 3, 2019. All comments must be postmarked by April 3, 2019 and mailed to the address below (or emailed by April 3, 2019 to william.r.colvin18.civ@mail.mil):

BRAC Environmental Coordinator
OACSIM - U.S. Army Fort Monmouth
Attn: Mr. William Colvin
P.O. Box 148, Oceanport, NJ 07757
(732) 383-5104