DEPARTMENT OF THE ARMY
OFFICE OF THE DEPUTY CHIEF OF STAFF, G-9
600 ARMY PENTAGON
WASHINGTON, DC 20310-0600

19 November 2019

Mr. Ashish Joshi
New Jersey Department of Environmental Protection
Division of Remediation Management & Response
Northern Bureau of Field Operations
7 Ridgedale Avenue (2nd Floor)
Cedar Knolls, NJ 07927-1112

SUBJECT: Replacement Pages for the Parcel 57 Commissary Building Investigation Letter Report
Fort Monmouth, Monmouth County, New Jersey
PI G000000032

Dear Mr. Joshi:

The U.S. Army Fort Monmouth (FTMM) Team is please to submit the replacement pages for the 7 November 2019 Parcel 57 Commissary Building Investigation Letter Report submitted to the New Jersey Department of Environmental Protection (Department). Please replace the pages in the report with the pages included in this letter. Below is a summary of the rational for the replacement pages.

Location	Comment	Replacement
Page 1	Revised date	Revised letter date to 19 November 2019
Page 1, Section 2.0, Paragraph 1(last sentence)	Revised boring name SB-03	Revised boring name to PAR57-CB-SB-03
Page 2, Section 3, Paragraph 2	Removed following statement: please note validation is going.	Statement was replaced with: Data was validated in accordance with the Quality Assurance Project Plan (QAPP) contained in the Final FTMM Sampling and Analysis Plan for Remedial Investigations, Feasibility Studies, and Decision Documents, Fort Monmouth, Oceanport, New Jersey
Page 3, References	Added document to reference section	Parsons. 2013 Final Sampling and Analysis Plan for Remedial Investigations,

		Feasibility Studies and Decision Documents, Fort Monmouth, Oceanport New Jersey. March
Table 1 Soil Sampling Results and Comparison to NJDEP EPH Criteria	Removed note 1- Lab data is preliminary and has not been validated	Note was replaced with: Data validated in accordance with the QAPP contained in the Final FTMM Sampling and Analysis Plan for Remedial Investigations, Feasibility Studies and Decision Documents, Fort Monmouth, Oceanport New Jersey.

We look forward to your approval and/or comments on the Parcel 57 Commissary Building Investigation Report. Our technical Point of Contact is Kent Friesen; kent.friesen@parsons.com. I can be reached at (732) 383-5104; william.r.colvin18.civ@mail.mil

Sincerely,

William R. Colvin
Fort Monmouth BRAC Environmental Coordinator

cc: Ashish Joshi (email and replacement pages for 2 hard copies)
William Colvin, BEC (e-mail and replacement pages for 1 hard copy)
Joseph Pearson, Calibre (e-mail)
James Moore, USACE (e-mail)
Jim Kelly, USACE (e-mail)
Joseph Fallon, FMERA (e-mail)
Cris Grill, Parsons (e-mail)

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New Jersey Department of Environmental Protection
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7 Ridgedale Avenue (2nd Floor)
Cedar Knolls, NJ 07927-1112

SUBJECT: Findings of the Parcel 57 Commissary Building Investigation
Fort Monmouth, Monmouth County, New Jersey
PI G000000032

Dear Mr. Joshi:

The U.S. Army Fort Monmouth (FTMM) Team prepared this report of the soil investigations within and near the Parcel 57 former Commissary Building 1007 as proposed in **Reference 1** (provided in **Attachment A**) and approved by the New Jersey Department of Environmental Protection (Department) in **Reference 2** (**Attachment A**).

1.0 OBJECTIVES AND SITE DESCRIPTION

The purpose of this investigation was to address the Department's concerns related to transfer of Parcel 57 due to previous removal of petroleum-contaminated soils from the area underlying a portion of Building 1007, which was the former Main Post Commissary building until FTMM closed in 2011. Petroleum-contaminated soils were encountered during construction of the Commissary Building in January 1997. The discharge was reported to the Department, and case number 97-1-11-0938-02 was assigned. Approximately 4,000 cubic yards of petroleum-contaminated soil were removed from the vicinity of the Commissary Building in 1997. The estimated area of contamination at the Commissary Building is shown on **Figure 1**. A removal action report was prepared by the FTMM Directorate of Public Works Environmental Office in 1997 as presented in Attachment A of **Reference 3**. Additional site background and investigation results at Parcel 57 are also presented in **Reference 3**.

2.0 FIELD ACTIVITIES

Soil borings with the collection of soil samples was conducted on 30 and 31 October 2019 to assess the current condition of soils underlying the former Commissary Building within the area of a petroleum-contaminated soil removal performed in 1997. Soil boring locations are shown on **Figure 1**. Two soil borings (PAR57-CB-SB-01 and PAR57-CB-SB-02) were advanced inside of the building and five borings (PAR57-CB-SB-03, PAR57-CB-SB-03a, PAR57-CB-SB-03b, PAR57-CB-SB-03c and PAR57-CB-SB-03d) were advanced outside the building and near the loading docks. Borings PAR57-CB-SB-03a, PAR57-CB-SB-03b, PAR57-CB-SB-03c and PAR57-CB-SB-03d were contingency locations located near boring PAR57-CB-SB-03.

On 30 October 2019 a track-mounted 54LT Geoprobe rig with a macro core sampling tube was initially used to penetrate through the 6- to 7-inch thick concrete floor at the interior sample locations; however, this rig could not advance the sampling tube through the approximately 16-inch-thick layer of ¾ in. crushed stone encountered below the flooring due to the stone collapsing into the boring hole at location SB-01. A more powerful track-mounted 7822DT Geoprobe rig was used on 31 October 2019 to collect soil samples at the six locations except PAR57-CB-SB-01, which could not be accessed again since the rig was too large to fit through the access doors of Building 1007. Boring depths ranged from 10 to 15 feet below ground surface (ft bgs), and field screening was performed every 6 inches throughout the borings with a photoionization detector (PID). One sample was collected from each boring at the depth interval that exhibited the highest PID reading or, if no elevated PID readings were recorded, from just above the groundwater table. Soil samples from three borings (PAR57-CB-SB-02, PAR57-CB-SB-03 and PAR57-CB-SB-03b) were analyzed for unfractionated Extractable Petroleum Hydrocarbons (EPH) in accordance with the requirements for fuel oil No. 2 in Table 2-1 of the New Jersey Adminstrative Code (NJAC) 7:26E *Technical Requirements for Site Remediation* (TRSR). Soil samples from borings PAR57-CB-SB-03a, PAR57-CB-SB-03c and PAR57-CB-SB-03d were collected for EPH analysis, extracted by the lab and held for contingency analysis pending the results of the other samples.

Samples were also collected, extracted by the lab and held for contingency analysis of naphthalene and 2-methylnaphthalene in 25 percent of the samples where EPH was detected over 1,000 mg/kg. The sample from contingency boring PAR57-CB-SB-03B was analyzed for EPH due to slightly elevated PID readings encountered in the field. Cuttings were placed back in each boring, and each boring was topped with bentonite chips and then the concrete was replaced to match the surrounding flooring or pavement thickness.

3.0 SITE INVESTIGATION RESULTS

The results of the soil investigation are presented in this section. Boring logs are provided in **Attachments B**. A small band of dark gray-stained sandy soil with slightly elevated PID readings (up to 0.5 parts per million [ppm] above ambient background) was encountered from 4.4 to 4.7 ft bgs in boring PAR57-CB-SB-02; therefore the 4.5 to 5 ft bgs interval was submitted for EPH analysis. Gray-stained soil, a slight petroleum odor and slightly elevated PID readings (up to 1.7 ppm) were observed in boring PAR57-CB-SB-03b from 4.5 to 5.5 ft bgs; therefore the 4.75 to 5.25 ft bgs interval was submitted for EPH analysis. There were no indications of petroleum impacts in boring PAR57-CB-SB-03; therefore, a sample from 5.5 to 6.0 ft bgs located above the water table in this boring was submitted for EPH analysis.

The EPH soil analytical data are presented in **Table 1**. Data was validated in accordance with **Reference 4**. The EPH results for the samples analyzed ranged from 15.9 mg/kg (PAR57-CB-SB-03 duplicate) to 37.2 mg/kg (PAR57-CB-SB-03b) and were less than the Department's EPH soil remediation criterion of 5,100 mg/kg. Since EPH was not detected above 1,000 mg/kg, there was no need for additional contingency analysis for EPH or naphthalene and 2-methyl naphthalene. Therefore, in accordance with **Reference 5**, there is no need for additional action for soils at the Commissary Building.

4.0 RECOMMENDATIONS

Based on the results of this investigation, the Army requests the Department's concurrence that no further action is needed and that an Unrestricted Use, NFA determination be issued for the former Commissary Building 1007 within Parcel 57.

Thank you for reviewing this report; we look forward to your approval and/or comments. Our technical Point of Contact is Kent Friesen; kent.friesen@parsons.com. I can be reached at (732) 383-5104; william.r.colvin18.civ@mail.mil.

Sincerely,

William R. Colvin
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References:

1. U.S. Army. 2019. FTMM Sampling Plan for Commissary Building. Email and certification form from the FTMM BRAC Environmental Coordinator to NJDEP. 11 October.
2. NJDEP. 2019. Letter to U.S. Army, Re: *Sampling Plan for Commissary Building - Parcel 57.* 18 October.
3. U.S. Army. 2019. Fort Monmouth, NJ; Commissary Building Footprint Category Determination. 11 October.
4. Parsons. 2013 Final Sampling and Analysis Plan, Remedial Investigations, Feasibility Studies and Decision Documents, Fort Monmouth, Oceanport New Jersey. March.
5. NJDEP. 2019. Evaluation of Extractable Petroleum Hydrocarbons in Soil Technical Guidance. Version 1.0, June.

Attachments:
Figure 1 – Soil Sample Locations, Parcel 57 Commissary Building 1007
Table 1 – Soil Sampling Results and Comparison to NJDEP EPH Criteria

Attachment A - Regulatory Correspondence
Attachment B – Soil Boring Log

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TABLE 1
Soil Sampling Results-Comparison to NJDEP EPH Criteria
Site Parcel 57-Commissary Building 1007
Fort Monmouth, Oceanport, NJ

Loc ID	NJDEP EPH Soil Remediation Criteria Residential	P57-CB-SB-02	P57-CB-SB-03			Equipment Blank
Sample ID		PAR-57-CB-SB-02-4.5-5.0	PAR-57-CB-SB-03B-4.75-5.25	PAR-57-CB-SB-03-5.5-6.0	PAR-57-CB-SB-303-5.5-6.0*	PAR-57-EB-10312019
Sample Depth (ft)		4.5-5	4.75-5.25	5.5-6	5.5-6	
Sample Date		10/31/2019	10/31/2019	10/31/2019	10/31/2019	10/31/2019
Extractable/Volatile Petroleum Hydrocarbons (mg/kg)						
total unfractionated EPH (C9-C40)	5,100	26.1	37.2	20.2	15.9	0.094 **U**

Notes:
1) * indicates duplicate
2) Data validated in accordance with the QAPP contained in the Final FTMM Sampling and Analysis Plan for Remedial Investigations, Feasibility Studies and Decision Documents, Fort Monmouth, Oceanport New Jersey.

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