DEPARTMENT OF THE ARMY

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

December 1, 2014

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

Re: Request for No Further Action for Groundwater at FTMM-54, Fort Monmouth, Oceanport, Monmouth County, New Jersey

Dear Ms. Range:

As part of the ongoing process of property transfer at Fort Monmouth (FTMM), the US Army-Office of Assistant Chief of Staff for Installation Management (OACSIM) has learned that a prospective buyer has a particular interest in purchasing from Fort Monmouth Economic Revitalization Authority (FMERA) a series of properties in the north-central portion of the Main Post, including FTMM-54. In an effort to facilitate transfer of these properties, FTMM requests that New Jersey Department of Environmental Protection (NJDEP) review this summary letter report of groundwater chemistry results for FTMM-54 and, based on the review, the Army requests that NJDEP issue a No Further Action (NFA) for groundwater at FTMM-54. The Army believes that the data supports a NFA for groundwater at FTMM-54. The Army will submit a Remedial Investigation/Feasibility Study (RI/FS) report for FTMM-54 to NJDEP for review and approval, once the document is completed. This letter report contains the same chemistry results that will be presented in the FTMM-54 RI/FS report. At this stage in the property transfer process, a NFA for groundwater at FTMM-54 would serve as informational tool for the FMERA and prospective buyers of the property. Below is a brief summary of the site background, geology and hydrogeology, and groundwater chemistry results for FTMM-54 that provides our rational for requesting a NFA for groundwater from the NJDEP.

Site Background

FTMM-54 is located in the north-central portion of the Main Post (**Figure 1.2**). It is associated with Building 296, which is adjacent to existing Buildings 292 and 291 and former Building 290 (FTMM-55) (**Figure 1.3**). FTMM-54 has also been referred to as Building 296 or Site 296 in historical documents. FTMM-54 includes the former UST area south of Building 296, and the fuel distribution piping that extended approximately 500 feet to the north into the western portion of FTMM-18 (**Figure 1.3**). Fuel products from the USTs at Building 296 were distributed from remote pumping islands located over 450 feet away within site FTMM-18, near Parkers Creek (U.S. Army, 2008). FTMM-54 is located within Parcel 50, which also includes nearby UST sites FTMM-55 (at former Building 290) and FTMM-61 (at Building 283).

FTMM-54 is located near other sites where fuel hydrocarbons were stored and or released, including FTMM-55 and FTMM-18 (**Figure 1.3**). At FTMM-55, four UST closures and the removal of a gasoline

dispenser island were conducted from 1991 to 1994. At FTMM-18, it was suspected that numerous fuel spills occurred during use of diesel and gasoline generators to support field exercises (Versar, 2003). FTMM-54 was used as a fuel distribution facility. The facility was abandoned, and the tanks and distribution piping were rediscovered during a renovation project at Building 296. The facility dates back to the 1940s. Twelve former USTs were associated with FTMM-54, including the following:

- one 550-gallon, steel, No. 2 diesel fuel tank NJDEP Registration No. 81533-69);
- nine 1,000- to 2,000-gallon steel gasoline USTs (NJDEP Registration Nos. 81515-213 through 221); and
- two 1,000-gallon steel diesel fuel USTs (NJDEP Registration Nos. 81515-222 and 81515-223).

The removal of UST No. 81533-69 and the associated site assessment were documented in a UST Closure and Site Investigation Report prepared by Smith Environmental Technologies Corp. in 1996. The Army requested a NFA approval letter for the removed diesel UST and associated piping, which was approved in a letter dated January 10, 2003 (NJDEP, 2003). Removal of the other 11 gasoline and diesel fuel USTs and associated piping is described in a UST Closure and Site Investigation Report prepared by Versar (2001). The 2001 closure report documented the removal of these USTs, associated piping, and soils completed in 1993 and 1994. Following review of this report, the NJDEP approved the Army's NFA request for these 11 tanks (and associated piping) in a letter dated January 10, 2003 (NJDEP, 2003).

Seven monitoring wells (**Figure 1.3**) were installed and hydraulically downgradient from FTMM-54 in 1994 and 1995. Quarterly groundwater sampling began at four of the wells in 1994. Quarterly sampling of all seven wells was initiated in 1995. The FTMM long-term groundwater monitoring program began in June 1997, and quarterly monitoring continued from June 1997 to August 2011.

Sampling at wells associated with FTMM-54 has also been conducted during RI activities at FTMM-18, including an RI by Versar in 2003 and an RI addendum in 2012.

In August 2013, groundwater sampling was conducted at FTMM-54 to re-establish baseline groundwater conditions following temporary suspension of groundwater sampling in late 2011. The results of the August 2013 baseline sampling are provided in a report prepared by Parsons (2013) and submitted to the NJDEP in March 2014.

Geology and Hydrogeology

The geology at the FTMM-54 consists of brown sand and clay or medium to coarse, yellow sand and silt to a depth of three feet. The soil below three feet down to 12.5-15 feet bgs is composed of green clay and sand or black and green sand and silt with traces of clay. The soils within FTMM-18 (downgradient of FTMM-54) have been altered by excavation or filling activities; the filled areas contain soils that consist of loamy material that is more than 20 inches thick, and contains concrete, asphalt, metal and glass remnants in some areas.

The depth to groundwater at the MP typically ranges from approximately 2 to 9 feet bgs. At FTMM-54, the groundwater depth ranges from 4 to 8 feet bgs based on water level depth measurements collected in 2010 and reported by the U.S. Army (2012). Potentiometric surface maps presented by Versar (2003) indicate that groundwater in the vicinity of Building 296 flows toward the north-northwest (i.e., toward Parkers Creek, **Figure 1.3**). The hydraulic conductivity of the subsurface materials ranges from 0.34 ft/day to 14.3 ft/day with a calculated geometric mean of 2.5 ft/day, and the average groundwater velocity for the site was calculated to be 0.14 ft/day (51 feet per year).

Groundwater Chemistry

Groundwater chemistry results for FTMM-54 is provided in the attached tables, **Tables 1 and 2.**
One VOC (benzene) exceeded the NJDEP GWQS, but the exceedance was limited to monitoring well 296MW06, which is located within FTMM-18. Although fuel distribution piping from the former Building 296 USTs extended beneath FTMM-18 (most likely to support training exercises at FTMM-18), it is suspected that fuel spills occurred at FTMM-18 during use of diesel and gasoline generators to support the field exercises. Since the benzene concentrations exceeding the GWQS were limited to the footprint of FTMM-18, the VOCs are attributed to releases at FTMM-18 and not FTMM-54. Therefore the VOCs in well 296MW06 will be administratively addressed under the RI/FS report for FTMM-18.

Metals detected in the most recent 8 quarters of sampling and the 2013 baseline sampling were largely below the background concentrations for the Main Post established by Weston (1995). Exceptions to this include manganese, which upgradient of FTMM-18 is mostly less than background, and zinc which exceeds the GWQS only in 296MW02. Zinc is not related to diesel or gasoline fuel, and is therefore not a site contaminant of concern. Manganese is related to FTMM-18, not FTMM-54, so similarly to the VOC, it will be administratively addressed under the RI/FS report for FTMM-18.

Conclusion and Recommendation

Based on the summary of site conditions, geology and hydrogeology, and groundwater chemistry, the Army believes that there is sufficient justification to support a NFA for groundwater at FTMM-54. A more complete description of the same groundwater chemistry results will be provided in the RI/FS report for FTMM-54 to be submitted to NJDEP at a later date. The Army appreciates NJDEP's consideration of this request, as we challenge ourselves to develop creative and pragmatic ways to facilitate property transfers at Fort Monmouth.

Please contact me if you have any questions.

Sincerely,

Wanda Green

Wanda Green
BRAC Environmental Coordinator
OACSIM – U.S. Army Fort Monmouth

Cc: Parsons
USACE

Encl

References cited attached.