State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Division of Remediation Management & Response
P.O. Box 413
Trenton, New Jersey 08625-0413

JON S. CORZINE
Governor

LISA P. JACKSON
Commissioner

AUG 1 4 2007

Mr. Joseph Fallon, CHMM
Directorate of Public Works
ATTN: IMNE-MON-PWE
167 Riverside Ave.
Fort Monmouth, NJ 07703-5101

RE: M-18 Landfill, Fort Monmouth, NJ

Dear Mr. Fallon:

The NJDEP Division of Remediation Management & Response (DRMR) has completed its review of the following reports on the M-18 Landfill at Fort Monmouth:

- Remedial Investigation Report, M-18 Landfill Site, dated October 1, 2003
- Remedial Investigation Report for Near Surface Soils, M-18 Landfill Site, dated March 17, 2004
- Remedial Investigation Report and Sediment Quality Evaluation, M-18 Landfill Site, dated February 23, 2004

NJDEP's comments are attached. NJDEP cannot make any No Further Action (NFA) determinations for soil, ground water, or sediments at the M-18 Landfill at this time, based upon the reports. Our comments describe the additional investigations or actions that would be needed before NFAs could be considered.

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

Larry Quinn, P.E., CHMM, Case Manager
Bureau of Design & Construction

Attachment

NJDEP COMMENTS ON M-18 LANDFILL SITE REPORTS
FORT MONMOUTH SITE

The comments below address the following reports on the M-18 Landfill Site:

- **Remedial Investigation Report, M-18 Landfill Site, dated October 1, 2003**
- **Remedial Investigation Report for Near Surface Soils, M-18 Landfill Site, dated March 17, 2004**
- **Remedial Investigation Report and Sediment Quality Evaluation, M-18 Landfill Site, dated February 23, 2004**

General

1. The Army should submit a comprehensive investigation workplan for NJDEP review and approval, prior to initiating any of the additional sampling requested below, to ensure complete agreement on all details prior to sampling. After sampling activities are completed, a supplemental remedial investigation (RI) report should be submitted.

2. To reiterate a comment provided on the M-12 and M-14 Landfills, NJDEP requests that the Army review, and re-visit if appropriate, the delineation of all landfill areas at Fort Monmouth, including M-18. There are no indications that test pitting was ever conducted to verify the limits of fill areas, which were created based upon geophysical surveys.

Surface Soils - Landfill

1. Surface soil sampling results indicate that semi-volatile organic compounds (SVOCs) and metals exceed the NJDEP Residential Direct Contact Soil Cleanup Criteria (RDCSCC) in the 0-12 inch surface soil interval in two distinct portions of the M-18 Landfill (Area SVOC-1 and Area Metals-1). Therefore, these surface soils pose a potential direct contact threat, and remedial action is required to minimize or eliminate the direct contact threat. Depending upon the location and extent of the soils that exceed the RDCSCC, targeted soil excavations may be feasible. At a minimum, engineering controls such as additional soil cover, fencing, and warning signs may be required, in conjunction with a deed notice.

Soil – UST Removals

1. Building 296 – Eleven USTs . Since no soil contamination in excess of the New Jersey RDCSCC remains in this area, no further investigation of soils is required.

2. Building 290 – Two gasoline USTs. Since no soil contamination in excess of the New Jersey RDCSCC remains in this area, no further investigation of soils is required.

3. Building 290 – One 2,000 gallon diesel fuel UST. Two post-excavation samples contained total petroleum hydrocarbons (TPHC) in excess of the RDCSCC (samples A and B at 16,200 and 11,900 ppm), both at a depth of 5.5 to 6 feet. No further excavation was conducted to address those spots. Additional excavations should be considered. If the Army proposes to leave the contaminated soils in place, a deed notice must be filed to document the contamination, including location.

4. Building 290 – Suspected Former Gasoline Pump Island. Since no soil contamination in excess of the New Jersey RDCSCC remains in this area, no further investigation of soils is required.

Surface Water and Sediments

1. A Baseline Ecological Evaluation (BEE) must be performed to determine whether receptors, especially within Parkers Creek, have been impacted by contaminants from the M-18 Landfill.

2. Due to the presence of measurable VOCs in surface water samples, additional surface water samples should be collected along Parkers Creek. At a minimum, sampling locations should be as follows: one immediately upstream of the landfill, one immediately downstream, and at least two alongside the landfill. Analytes should be TCL+30 and TAL metals. It is recommended that passive diffusion bags (PDB) be used to collect the samples for VOC analysis. The PDBs can be deployed in the sediments, to monitor shallow ground water discharging to Parkers Creek.

3. Sediment samples were analyzed for PCBs only. Based upon a review of all sampling data associated with the M-18 Landfill, additional sediment samples should be collected in conjunction with the aforementioned surface water sampling, and analyzed for full Target Compound List +30 (TCL+30) and Target Analyte List (TAL) metals.

4. In addition, the Army must evaluate/investigate any Army property upgradient of the M-18 Landfill that could be sources of the VOCs in Parkers Creek.

Ground Water

1. NJDEP agrees that the ground water classification at the M-18 Landfill is Class III-A, which necessitates that Class II-A ground water quality standards be utilized. The ground water model created for the M-18 Landfill and all model inputs are

acceptable. However, NFA for ground water cannot be issued at this time, due to the concerns and deficiencies discussed below.

2. One upgradient background well must be installed and sampled, to provide data for remedial decision-making. The background well should be near the landfill, but in an area that is clearly not impacted by the landfill. Samples from the background wells can be analyzed for TAL Metals only.

3. For reasons unknown to NJDEP, no monitoring wells were installed in the eastern portion of the M-18 Landfill. At least 2 wells should be installed and analyzed for TCL+30 and TAL metals.

4. Since the existing wells may not have been sampled since 2001, an additional round of samples from all wells is required for remedial decision-making. Analyses should be for TCL volatiles, MTBE (methyl tertiary butyl ether), TBA (tert-butyl alcohol), TCL semi-volatiles, and TAL metals.

5. The Army must submit a map that shows the former locations of all USTs and the existing M-18 monitoring wells. The Army must justify the location of monitoring wells in relation to the USTs and demonstrate that ground water contamination was delineated, and also document whether gasoline stored was leaded or unleaded.

6. The Army must document whether there was a pump island associated with any of the removed gasoline USTs. If a pump island(s) was/were present, then a ground water sample is required at the pump island location pursuant to N.J.A.C. 7:26E-4.4 (f)3 and a figure pursuant to N.J.A.C. 7:26E-4.2(d)1 must show the location of any pump islands.

7. Paper copies of all sampling documentation (such as ground water field parameters and low-flow sampling sheets) must be submitted in summary tables in reports.