State of New Jersey

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BOB MARTIN
Commissioner

June 3, 2016

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

Re: *Final Remedial Investigation Report for FTMM-08* dated April 2016
(& *Landfill Boundary Refinement for FTMM-08* dated January 2016)
Fort Monmouth
Oceanport, Monmouth County
PI G000000032

Dear Mr. Colvin:

The New Jersey Department of Environmental Protection (Department) has performed a review of the referenced report, received on May 3, 2016. The review did not include an evaluation of the Risk Assessment, but did include an assessment of the boundary modification information applicable to FTMM-08 provided in Section 2.1 and Appendix E FTMM-08 of the January 2016 *Landfill Boundary Refinement and Methane Gas Survey Report for Nine Landfills*; comments generated from said review are included. Comments regarding the Methane Gas Survey portion of that document were previously provided; see the Department's correspondence dated April 20, 2016. Comments relative to the Remedial Investigation Feasibility Study (RI/FS) as well as the landfill boundary refinement efforts are as follows:

Soil Analytical Results

Elevated levels of pesticides, priority pollutant metals, PAHs, and PCBs have been noted in the soil. Levels of PCBs have been found which require additional remedial action, see below, however, the remaining contaminants of concern are to be addressed via engineering and institutional controls. Addressing all known remaining levels of contamination in this manner is acceptable pending compliance with comments as noted below. If areas of obvious and/or significant contamination are encountered during the landfill preparation or capping activities, it is possible additional hot spot removal may be necessary.

As has been discussed, all previously noted sample locations containing elevated levels of contamination are to be addressed via engineering and institutional controls (none may remain beyond the area undergoing capping). Figure 9.1, although not created for this purpose, displays all historic boring locations relative to the FTMM-08 Landfill 2015 Revised Boundary, and demonstrates each boring is located within the noted boundary.

PCBs

PCBs have been noted at numerous locations within the landfill at levels exceeding both NJDEP and USEPA regulatory concern, and as referenced in the submittal, at several locations above that requiring additional action under the NJDEP Guidance on Coordination of NJDEP and USEPA PCB Remediation Policies.

Correction of/clarification to a sentence on page 9-4, line 34/35 as well as Figures 9.1 and 9.2 is necessary. The sentence in question states "three areas were identified that have PCB concentrations in soil above the 1 mg/kg NJDEP non-residential direct contact standard (Figure 9.1)." Although it is agreed three areas were identified which contain greater than 25 mg/kg, identified as "A", B" and "C" on Figure 9.1, boring locations B63 (PCBs 4.763 mg/kg), B214 (PCBs 3.268 mg/kg), B140 (PCBs 1.416 mg/kg), B153 (PCBs 20.06 mg/kg) and B158 (PCBs 4.623 mg/kg) also contain PCBs above the 1 mg/kg NJDEP non-residential direct contact standard (NRDCS). Figures 9.1 and 9.2 indicate boring location B-158 exhibits less than 1 mg/kg, however, the analytical data indicates 4.623 mg/kg is present at that location.

A pre-design investigation to determine the lateral and vertical extent of PCBs greater than 25 ppm is to be performed, as appropriate. The proposal for subsequent removal of all PCBs > 25 ppm is acceptable to the Department.

Please note, following characterization, and at least 30 days prior to remedial activities, notification to the EPA must be made, as per the Self-Implementing Cleanup provisions at §761.61(a)(3).

Landfill Boundary

The landfill boundary as revised in 2015 and as indicated on Figure 9.1 of the RI/FS and Figure E1 appears to adequately incorporate the area as supported by historic aerial photographs, and all boring locations at which analytical results exceeded standards/criteria, as well as trench/test pit locations at which waste material was found.

Ground Water

The proposal for the establishment of a Classification Exception Area (CEA) with long term monitoring (monitored natural attenuation) to address ground water contamination is acceptable. However, certain issues require clarification, based upon a previous report submittal. In the

Final Annual (Fourth Quarter) 2014 Ground Water Sampling Report dated December 2015, results from the 2014 sampling event at the FTMM-08 landfill exceeded the Ground Water Quality Standards (GWQS) for PCE and pesticides. That report recommended continued annual ground water sampling of well M8MW11 for VOCs and lead, M8MW12 for VOCs and 697MW01 for pesticides and VOCs. The report also recommended discontinuing the sampling of M8MW15, M8MW16, M8MW17, M8MW21 and RM8MW24. Please confirm these recommendations are undergoing implementation as the Department approved same in a letter dated January 26, 2016.

The RI/FS submittal indicates a proposed CEA would address only PCE and benzene. However, manganese exceeds the GWQS in ground water. The submittal states the manganese exceedance is due to fuel hydrocarbons such as benzene causing reducing conditions, resulting in the releasing of manganese in soils into the ground water. As such, manganese must also be included as a contaminant of concern in a proposed CEA.

Levels of pesticides above the GWQS had been noted during previous sampling. The pesticide 4,4-DDD was found in a sample from well 697-MW01 at a concentration exceeding the GWQS during the October 2014 sampling event. Pesticides must also be included as a CEA contaminant of concern.

When submitting the CEA proposal, please complete the CEA/Well Restriction Area Fact Sheet Form or equivalent.

Proposed Remedy

Following removal of PCBs greater than 25 ppm, the landfill is to be cleared, regraded, and covered with a vegetated (or functional equivalent) two foot cap of clean soil. A vegetated soil cover of two feet of clean fill, the implementation of a LUC through filing of a deed notice with its incumbent inspection and reporting requirements (and in association with the proposed CEA if amended as necessary), was previously deemed appropriate and is acceptable. Although conceptually feasible, a "functional equivalent" in lieu of the vegetated layer must be proposed and reviewed for appropriateness once specifications are known, to ensure "functional equivalency".

Miscellaneous

Boring location 10, found on Figure E1, Appendix E of the January 2016 Landfill Boundary Refinement submittal, which was performed on northwest of Building 292, exhibited no waste material, and is located beyond the boundary of FTMM-08. Evidence of petroleum in the soil and on the ground water (a sheen was observed), however, were noted. Was/is investigation of this contamination incorporated into remedial activities at Parcel 49?

Please contact this office with any questions.

Sincerely,

Linda S. Range

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C: Joe Pearson, Calibre
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