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BOB MARTIN
Commissioner

May 13, 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-02* dated January 2016
(& *Landfill Boundary Refinement for FTMM-02* 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 February 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-02 provided in Section 2.1 and Appendix A FTMM-02 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 Report (RIR) as well as the more recent 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 remaining levels of contamination in this manner is acceptable pending compliance with comments as noted below.

A figure and/or statement should have been included which demonstrates all sample locations containing elevated levels of contamination are located within the area to be addressed via

engineering controls. In the interest of time, however, a comparative review was performed by this office and although it is agreed most affected boring locations appear to be within that area designated as landfill, the entire area as amended in the Landfill Refinement Report along Mill Creek appears to exclude not only landfill material (see comments regarding same below), but also borings which exhibit elevated levels of contaminant concentrations (e.g. B-178 – PCBs 5.98 ppm; B-113E – DDE 3.7 ppm, DDT 6.8 ppm; B-64 - As 26.8 ppm, Hg 16.7 ppm).

PCBs

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

Correction of/clarification to the following two sentences beginning on line 18 of page 8-1 of the RIR is necessary;

> "TSCA does not regulate PCBs at concentrations less than 50 ppm. At concentrations greater than 50 ppm PCBs, TSCA stipulates a range of self-implementing cleanup levels…".

The TSCA regulated level of 50 ppm does not apply to remediation in that TSCA regulates PCBs in soil at concentrations *greater than 1 ppm.* TSCA stipulates a range of self-implementing cleanup levels based upon future high and low occupancy scenarios that are identified in 40 CFR 761.61(a)4. These self-implementing remediation scenarios fall within PCB soil contamination ranges from *1 ppm* to 100 ppm.

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 ensure future submittals include figures with not only sample locations and depths, but also specific contaminant concentrations plotted on the maps to allow for confirmation of adequate delineation and removal, as required by N.J.A.C. 7:26E-1.6(b)8(2).

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

As was indicated during a April 12, 2016 phone conversation with Army representatives, the Department is not in agreement with the categorizations of the test pit findings utilized in determining the boundaries of the landfills, as referenced in Section 2.0 Landfill Boundary Refinement Program and Summary (Appendix A). More specifically, the Department does not agree debris of a "scattered nature" or "*de minimus*" quantity may be presumed as existing

beyond the boundaries of a landfill. This would include, for instance, debris as noted in test pits M2TP8 and M2TP10, which are among those test pits with scattered, non-contiguous or *de minimus* amounts of debris used in Figure A1 of the Landfill Boundary Refinement Report to designate the revised extent of the northern boundary, but which the Department considers located within the landfill boundary.

Unless test pits at anticipated landfill boundaries are free of debris (e.g. M2TP 25, Test Pit 2 at the western boundary noted on Figure A1 above), or it is sufficiently demonstrated areas of scattered, non-contiguous, or *de minimus* debris are not within the landfill boundaries (e.g,. as was suitably demonstrated for the southern boundary of FTMM-02 via submittal of historic aerial photographs, which established the historic and continued presence of the railway and wooded areas), as per the discussion on April 12, those areas at which scattered, non-contiguous and/or *de minimus* debris is noted are considered landfill material and must also be incorporated into that area at which capping is to be performed.

Ground Water

A CEA was established for ground water at FTMM-02 in 2001, with the most recent revision comprising the contaminants benzene, chlorobenzene and tertiary butyl alcohol (TBA). The CEA is to remain in place at this time, as appropriate, with a biennial sampling frequency proposed. However, a previously approved submittal (*Annual - Fourth Quarter - 2014 Groundwater Sampling Report* dated *December 2015*), which confirmed the continued exceedance of the Ground Water Quality Standards for benzene, recommended one additional sampling round for wells M2MW11, M2MW21, M2MW22 and M2MW24, and continued annual VOC monitoring for M2MW03 and M2MW10. Please clarify the disparity.

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 existing CEA, 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".

Please contact this office with any questions.

Sincerely,

Linda S. Range

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