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LETTER AND COMMENTS FROM U S EPA REGION I REGARDING DRAFT PRE DESIGN
INVESTIGATION REPRT FOR WEST GATE LANDFILL NAS SOUTH WEYMOUTH MA
10/15/2009
U S EPA REGION I



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 1

1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

October 15, 2009

Brian J. Helland, P.E.
BRAC Program Management Office NE
4911 South Broad Street
Philadelphia, PA 19112-1303

Re: Draft Pre-Design Investigation Report for the West Gate Landfill

Dear Mr. Helland:

EPA reviewed the *Draft Pre-Design Investigation Report* for the West Gate Landfill, Naval Air Station South Weymouth, Weymouth Massachusetts, dated September 2009 (PDI) for consistency, technical accuracy and completeness and for compliance with the requirements of the approved PDI-QAPP. The PDI reports the results of the data needed to complete the Remedial Design for the West Gate Landfill. Detailed comments are provided in Attachment A.

Please include a list of acronyms used.

Please provide GPS coordinates for all the features depicted in Figure 1-4 to confirm the relative locations of features. Also please include the survey benchmarks used to conduct the field survey on a site figure.

The northwestern portion of the wetland was supposed to be sampled at three locations according to the approved PDI QAPP, but only a single sediment sample was collected from that general area and it was located immediately adjacent to the landfill limit. Consequently, the northwestern portion of the wetland has not been adequately characterized. This is especially true because most of the data from this area collected during the RI was rejected, which was why the additional sampling during the PDI was required. Additional sampling of the sediment in the northwestern portion of the wetland should therefore be conducted in conjunction with the remedy implementation. Please include that sampling effort in the remedial action work plan.

Please explain why data tag maps are presented for PAHs and 2,3,7,8-TCDD equivalents but are not presented for pesticides and metals (both of which exceeded the PALs).

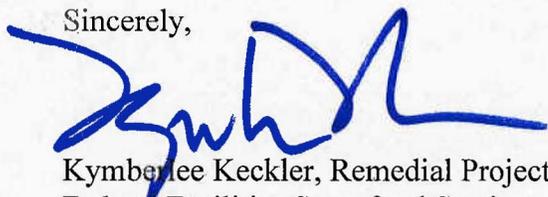
Please clarify to what extent the wetlands have been inspected for debris and if the wetlands beyond the immediate perimeter of the landfill can be considered free of debris. Please augment the PDI to describe the extent of the area inspected and include a boundary line on a figure to indicate the extent of the inspection.

It appears that conservative flow rate estimates have been used in the calculations (the 220 cfs rate was used up to Station 43+00) (*see* Appendix E, the 100-year flood plain report,). Since the water surface elevation at Station 2+00 matches the Rockland FIS elevation at that point (125 feet), the

stream characteristics used in the calculations underestimated the impact of the flood on the water elevations. Consequently, it is not clear from the calculations that an appropriate assessment of the 100-year flood conditions has been achieved. Please explain whether the conservative flow rate overrides the underestimated stream characteristics or explain if the use of more accurate stream characteristics would result in greater water surface elevations even with less conservative flow rates. It is essential to determine whether the flood assessment is appropriate.

I look forward working with you and the Massachusetts Department of Environmental Protection to complete the West Gate Landfill cap. Please contact me at (617) 918-1385 should you have any questions.

Sincerely,



Kymberlee Keckler, Remedial Project Manager
Federal Facilities Superfund Section

Attachment

cc: Dave Barney, USN, South Weymouth, MA
Dave Chaffin, MADEP, Boston, MA
Kevin Donovan, SSTTDC, South Weymouth, MA
Phoebe Call, TTNUS, Wilmington, MA

ATTACHMENT A

<u>Page</u>	<u>Comment</u>
p. 2-3, §2.2	The sixth sentence in the last paragraph should be changed to refer to a <i>maximum diameter of 4 inches</i> rather than a <i>minimum diameter of 4 inches</i> .
p. 2-3, §2.3.1	The second paragraph refers to 20 debris locations shown on Figure 1-4. Figure 1-4 does not indicate 20 debris locations (debris locations are indicated with a red star). Please reconcile the discrepancy.
p. 2-10, §2.6.1	The last bullet refers to dissolved metals analysis for sediment. This should refer to total metals because this is not an aqueous sample. Please correct.
p. 3-3, §3.1.1.6	The discussion in the second paragraph includes the acronym NASD, which is either a typographical error (should be NAVD) or presumably refers to Naval Air Station Datum, but please verify. The use of this acronym (if not NAVD) suggests a problem that needs to be reconciled, specifically the use of multiple datums. Please use a single datum to present data in this and all subsequent documents for this site. The datum should be selected in consideration of the datum used for earlier investigations because ultimately all data must be evaluated in the context of a single datum.
p. 3-8, §3.2.2.1	<p>a) Please correct the last paragraph to state that total PCBs ranged from 420 to 12,180 µg/kg.</p> <p>b) The last sentence states that PCBs have not migrated to the southern wetlands. While this may be true based on the limited sampling associated with the found transformer/electric parts, this statement is supported only by very limited data. Some sample locations from the PDI QAPP were not sampled and other samples were collected from locations immediately adjacent to the landfill. Because PCBs have an affinity for fine-grained particles that are most prone to migration from runoff, it is not apparent that the sampling is sufficient to claim that PCBs have not migrated to the southern wetlands. Additional sampling will be needed to define the limits of PCBs in sediment before the scope of the remedial action can be completed.</p>
p. 3-8, §3.2.2.2	Please explain why a valid VOC sample was not collected from TP-112 given that it was a petroleum odor that prompted the collection of the sample.
Table 2-1	Please include the size (length and width) of each test pit.
Table 3-5	Please add a footnote indicating that the VOC sample was compromised and the results are biased low.
Table 3-6	<p>a) Why are there no PCB results listed in this table?</p> <p>b) Add a footnote to indicate that additional PCB detections associated only</p>

with electrical equipment debris found at the site are presented in Table 3-4.

Table 3-7

a) Why are there no PCB results listed in this table?

b) Either add the transformer-related sediment samples to this table and screen them or add a footnote to indicate where the screening evaluation was presented for the PCBs associated with the transformers.

Figure 1-2

Please correct the graphic scale presented with this figure.

Figure 1-4

a) Please correct the inconsistency between the relative positions of TP-113 and WGL-MW-102 as depicted in this figure and as shown in the test pit log sketch for TP-113.

b) Please correct the inconsistency between the relative positions of TP-112 and TP-116 and TP-117 as depicted in Figure 1-4 and in the test pit logs for TP-116 and TP-117.

c) This figure uses WGL-LG-# for landfill gas locations whereas the landfill gas monitoring sheets in Appendix A-3 use WGL-SG-SG# to identify locations. Although the numbers for each identifier coincide and provide a proper cross reference for each location, it would be preferable if the identifiers matched.

d) Please verify the location of Area 2 where PCB-4 and PCB-5 were collected. The location is not consistent with the location shown in the sketch for PCB-4 shown in Appendix A-4.

e) Several debris locations are missing based on non-consecutive ID numbers. For example, the sediment sample log for SD-101 in Appendix A-5 refers to D-6 adjacent to SD-101, but D-6 is not shown in Figure 1-4. The log for SD-102 refers to D-8. Also the sketch in the SD-102 log is not consistent with Figure 1-4. The large debris pile near SB-110 is also missing. Please add the missing locations and correct misplaced locations.

f) The sketch for SD-110 (Appendix A-5) is not consistent with Figure 1-4. Please correct.

g) A photograph of the SD-110 location in Appendix B-1 shows SD-110 immediately adjacent to and just inside (?) the chain link fence. Figure 1-4 locates SD-110 approximately 20 feet south of the fence. Is the chain link fence in the photograph different from the fence depicted in Figure 1-4? Please correct as appropriate.

h) It is not apparent from this figure and the sediment sample logs that the sediment samples collected for the PDI have been located as agreed to during the PDI QAPP development. Several of the sediment samples are within the interpreted extent of debris identified in Figure 3-11 of this PDI Report and

do not apparently serve the purpose intended for the sediment samples. Consequently, further characterization of sediment left in place will need to be included in the remedial action work plan.

- Figure 2-1 a) Please correct the title of this figure. It is identified as the GPR Survey, but is the EM survey.
b) Please include the EM survey lines for reference.
- Figure 3-8 a) This figure indicates that the peat depth is approximately 4 feet at SB-103, but the boring log in Appendix A-6 indicates that peat extends to approximately seven feet deep at SB-103. Please correct.
b) This figure indicates that the peat depth is approximately 8 feet at SB-108, but the boring log in Appendix A-6 indicates that peat extends to approximately thirteen feet deep at SB-108. Please correct.
- Figure 3-9 The data tags presented are inconsistent and incomplete. For example, at SD-103 benzo(a)pyrene, chrysene, and dibenzo(a,h)anthracene also exceeded their PALs. Furthermore, in the RI samples (ASSD-7 and ASSD-8), chrysene, fluoranthene, and phenanthrene exceeded of their PALs. Presumably, based on these exceedances, the rejected values for these contaminants should also be listed in the data tag for ASSD-6 as was done with benzo(a)anthracene and pyrene. Benzo(a)anthracene, benzo(a)pyrene, and dibenzo(a,h)anthracene are all contaminants of concern with remedial goals.
- Figure 3-11 Please include the survey grid lines for both the EM survey and the GPR survey and differentiate between them.
- Appendix C Please correct the EM survey profiles. The x-axis is mislabeled on all east lines. The profile is actually looking west, not north.
- Appendix D The Wetland and Water Resources Delineation and Functional Assessment was not provided with the Draft PDI Report. Please include this assessment in the next version of the PDI Report or sooner.
- Appendix E a) The second paragraph in the *Hydraulic Model* discussion refers to French Stream flow rates contained in the Weymouth flood insurance study (FIS). The correct reference should apparently be the Rockland FIS, because French River flow rates are not included in the Weymouth FIS. Therefore, it is not clear why the Weymouth FIS was included as an attachment. Please correct.
b) The table included in the *Hydraulic Results* section lists flow at Sta. 100+00 (CFS). This should apparently be Sta. 2+00 (where the flow is 220 cfs for the 100 year flood according to the Rockland FIS). Please correct.
c) Also in the *Hydraulic Results* section the flow rates at Sta. 43+00 are

listed. Please explain how these flow rates were obtained because no calculations using the entire drainage area for the west branch of French Stream were provided in the calculations.

d) In the *Conclusions and Results* section, a table of water surface elevations is provided. The FIS data are all NGVD 1929 elevations. EPA assumes that the elevations in this table must also be NGVD 1929 because they tie into the 125 water surface elevation from the FIS at Station 2+00. However, Shaw has indicated that the NAVD 1988 datum will be used for the design. Therefore, please convert all the elevation data in this appendix to the NAVD 1988 datum.

e) Attachment A containing Figure 1 shows an incorrect location for the site. The Project Location tag points to a location several hundred feet south of the West Gate Landfill. Please correct.

f) Please provide an introductory section for Attachment C that includes a compilation of the assumptions used for the calculations, a compilation of the given information (field measurements, site data, reference data), a written description of the methodology, and a description of the sequence of steps that have been used to complete the calculations. This information is necessary to support the detailed printouts for HEC-RAS and WinTR-55 that comprise the bulk of this attachment.

g) In Attachment C, the Basin Characteristics report lists a total stream length of 0.00342 miles (18 feet). Please clarify what this is referring to and correct as necessary.

h) Also, regarding the Basin Characteristics report, the area of the basin is listed as 0.18 square miles, which appears to be the area of the drainage area at Station 100+00 because the drainage area for the west branch of French Stream is much greater than 0.18 square miles. Please explain why the entire west branch drainage area has not been considered. If it has, please supplement this attachment to clarify that.

g) It is not apparent how the time of concentration was calculated considering that a significant portion of NAS SOWEY is paved with storm drains. Please clarify.