LETTER AND COMMENTS FROM U S EPA REGION I REGARDING LONG TERM MONITORING REPORT SEMI ANNUAL ROUND 2 REPORT RUBBLE DISPOSAL AREA OPERABLE UNITS 2 (OU 2) AND 9 (OU 9) NAS SOUTH WEYMOUTH MA
02/10/2010
U S EPA REGION I

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION I
5 Post Office Square, Suite 100
Boston, MA 02109-3912

February 10, 2010

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

Re: Long-Term Monitoring Report - Semi-Annual Round 2 – 2009 for the Rubble Disposal Area

Dear Mr. Helland:

EPA reviewed the *Long-Term Monitoring Report - Semi-Annual Round 2 – 2009 for the Rubble Disposal Area* dated January 2010. The Annual Report tabulates and evaluates data from 2009 Round 2 long-term monitoring, conducted in September 2009. Detailed comments are provided in Attachment A.

Significant results from the reporting period include:

- Manganese remains widespread and highly elevated in groundwater, showing exceedances of the remedial goal (0.313 mg/L) at nine of ten monitoring wells. Maximum detected manganese in the reporting period was 15.7 mg/L (TT-04), lower than past maxima (over 20 mg/L). Maximum manganese detected in surface water is 18.6 mg/L, at SW-03, in close proximity to the locations of elevated manganese in groundwater (TT-04, TT-05).

- Arsenic was not detected in groundwater above the RG/MCL of 10 µg/L. The maximum detection was 6.2 J µg/L at MW-50D. Occasional exceedances have been detected in previous monitoring events.

- Benzo(a)pyrene was detected at MW-50D2 and TT-007 at 0.1J µg/L, below the RG of 0.2 µg/L. Occasional exceedances have been detected in previous monitoring events.

- PCBs were not detected in groundwater or surface water, although the laboratory QA review notes that the PALs were not met for the PCBs, and that results may be biased low.

- VPH were detected in groundwater (TT03, TT05, TT07) at concentrations below MMCLs. C5 – C8 aliphatics were detected at a maximum concentration of 270 µg/L, compared to the MMCL of 300 µg/L.

- Elevated methane was detected at perimeter gas probes and interior gas vents in a pattern similar to that observed in previous rounds.

Please revise the tables of chemical analytical results to include all chemicals that will be measured in that medium during any sampling event. These tables should serve for this and all subsequent sampling events. If the particular parameter is not measured for a particular sampling event, then report the result as "NM", not measured. If it is measured and not detected, enter "< Detection Limit" with a quantified detection limit (*e.g.* < 0.01 mg/kg). This is necessary because the absence of entries in the result tables suggests that the parameter was not analyzed when it should have been. For instance, Table 1-1 indicates that PCBs are to be measured in groundwater on a semi-annual basis and herbicides are to be measured in two wells (TT02, TT06) on a semi-annual basis in the fall event. However, there are no entries for PCBs or herbicides in Table 3-1, even though the text on page 3-2 states that neither PCBs nor herbicides were detected in any of the groundwater results during this event. Similarly, there is no documentation in Table 3-4 that the required analysis of VPH, EPH, pesticides and PCBs was conducted with a result of non-detect, as asserted in Section 3.2. All statements of non-detection in text must be documented with tabulated data or notations such as non-detect or not measured.

I look forward working with you and the Massachusetts Department of Environmental Protection on the investigation and remediation of the remaining areas of the base. Please do not hesitate to contact me at (617) 918-1385 should you have any questions.

Sincerely,

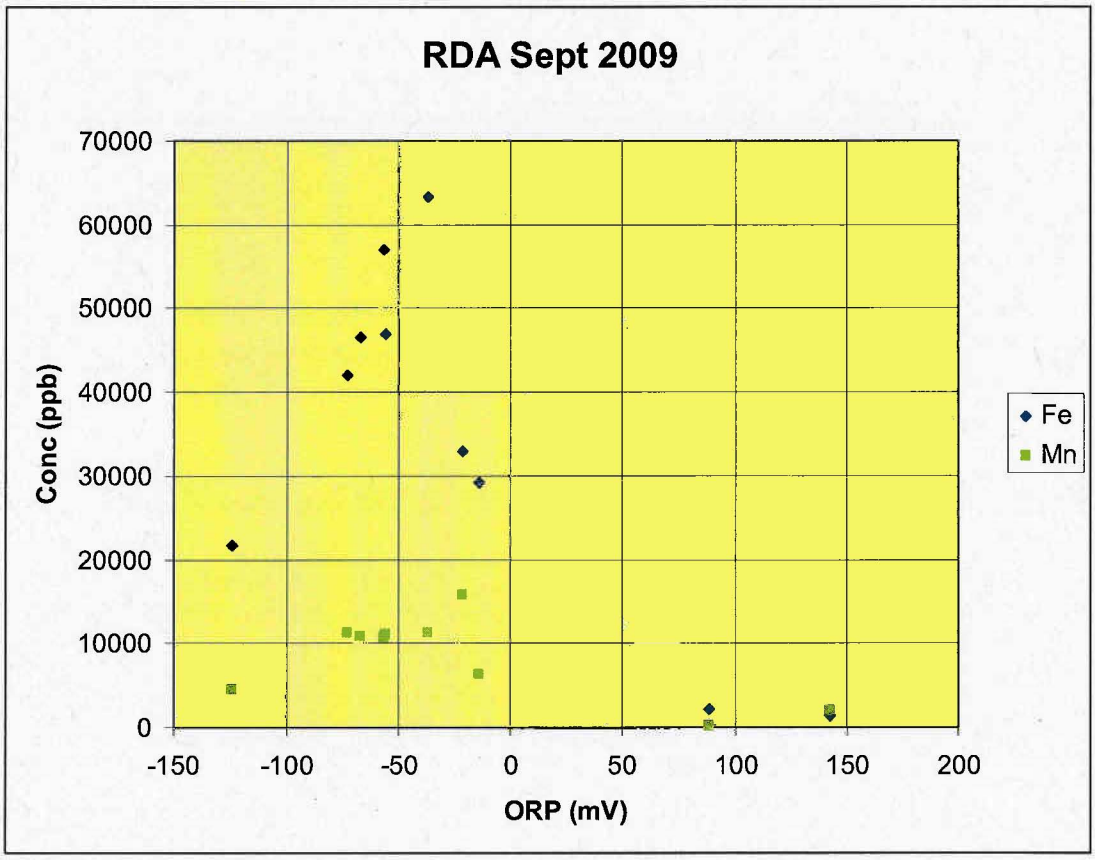
Kymberlee Keckler, Remedial Project Manager
Federal Facilities Superfund Section

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

Page	Comment
Table 3-1	Please revise the heading "Metals" to "Total Metals" and define "RG" in the footnotes.
Table 3-4	Please define "NRWQC" in the footnotes.
	The data validation report for SDG CTOWE11-1 indicates that data usability may have been impacted, although project objectives were met, albeit with numerous samples designated as non-detect with a low bias. Please review the following data validation issues with your contracted laboratory: • pp. 6 & 7: Project accuracy goals for the C11-C22 aliphatics may be impacted because of low surrogate recovery. • p. 9: PALs in surface water samples were not met for fourteen VOCs. • p. 9: PALs were not met for four PAHs. • p. 9: In surface water, PALs were not met for Aroclors and all but two pesticides. EPA requests that the results of this review be provided with the response to these comments.
p. 4-2, §4.1	EPA agrees that the elevated iron and manganese observed in site groundwater is correlated with reducing conditions. It is interesting that the highest concentrations of iron and manganese are observed in the ORP range of about -20 to -40 mV. Under more oxidizing conditions (higher ORP), the iron and manganese are, presumably, taken up by less soluble oxide phases, and dissolved concentrations are lower. As illustrated in the attached plot, iron and manganese concentrations decrease at lower ORP (*e.g.*, TT02, ORP = -124 mV). It is possible that sulfide formation controls the solubility of iron and manganese under the most strongly reducing conditions at the site.


RDA Sept 2009
70000
60000
50000
40000
30000
20000
10000
0
Conc (ppb)
-150
-100
-50
0
50
100
150
200
ORP (mV)
Fe
Mn