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LETTER OF TRANSMITTAL FOR FINAL PROJECT COMPLETION REPORT FOR EXCAVATION OF GASOLINE-CONTAMINATED SOIL AT THE NAVAL EXCHANGE WITH TRANSMITTAL OF U S NAVY RESPONSES TO REGULATOR COMMENTS NAS BRUNSWICK ME

1/6/2011

BASE REALIGNMENT AND CLOSURE PROGRAM MANAGEMENT OFFICE NORTHEAST

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DEPARTMENT OF THE NAVY
BASE REALIGNMENT AND CLOSURE
PROGRAM MANAGEMENT OFFICE, NORTHEAST
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BPMO NE/TB
Ser 11-036
January 6, 2011

Mr. Michael J. Daly
Remedial Project Manager
OSRR07-3
U.S. Environmental Protection Agency, Region I
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Ms. Claudia Sait
Remedial Project Manager
Maine Department of Environmental Protection
Bureau of Remediation and Waste Management
17 State House Station
Augusta, ME 04333-0017

Dear Mr. Daly and Ms. Sait:

Enclosed, please find a copy of the Final Project Completion Report for Excavation of Gasoline-Contaminated Soil at the Naval Exchange Service Station Site located at Naval Air Station Brunswick, Maine. This version incorporates comments made by Maine Department of Environmental Protection.

If you have any questions or comments, please contact the Navy's Remedial Project Manager, Todd Bober at (215) 897-4911.

Sincerely,

Paul F. Burgio
BRAC Environmental Coordinator
By direction of BRAC PMO

Enclosure:
Final Project Completion Report - Excavation of Gasoline-Contaminated Soil at Naval Exchange Service Station, Naval Air Station Brunswick, Maine

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Project Completion Report
Excavation of Gasoline-Contaminated Soil
Naval Exchange
Brunswick, Maine
Rev. 00 August 2010

Responses to Comments from Maine Department of Environmental Protection (MEDEP); Letter dated November 17, 2010

General Comments:

1. MEDEP supports the recommendation to establish the frequency, timing, and location of wells for monitoring the attenuation of residual petroleum in groundwater at the site.

   Response: Noted.

2. Please add a spread sheet of the confirmation samples results to the body of the report.

   Response: Two tables have been added to the body of report showing the confirmation sample results. Table 2-2 provides TPH-GRO results and Table 2-3 provides VPH results.

3. Figure 2-2 is too busy and some of the information on the confirmation samples is lost. Please generate another figure depicting just the final excavation boundary (which in some cases exceed the limits of sheet piling as shown) and the locations, results and depth of the confirmation sample. If any of the confirmation samples that exceeded the goal of 200 ppm of Gasoline Range Organics (GRO) where not removed please highlight this in some way. (for example, near the north wall of Building 27).

   Response: An additional figure (Figure 2-3) has been included to show only the final side wall and bottom confirmation sample. There were no confirmation samples that exceeded 200 ppm for GRO that were not excavated. Soils exceeding 200 ppm near the north wall of Building 27 were solidified in place due to the potential for undermining the foundation of Building 27. However, some of the soil in the jet grouting area has been removed during auguring process and have been disposed of off-site along with the rest of the contaminated soil.

4. When discussing the Underground Storage Tanks (USTs) removal the requirement is 100 ppm not the 200 ppm goal for the rest of the site.

   Response: The text has been updated to reflect this information.

5. Please include one copy of the final report with Appendices E and G printed out but printed both sides to reduce the use of paper.

   Response: Noted. The final report will comply with this request.

Specific Comments:

6. <u>Section 1.2, Site Description, para 6</u>: "The highest concentration of TPH-GRO detected in groundwater was 23,000 µg/L."

Please add the date and number of the well to this statement. Also please add for comparison the Maximum Exposure Guideline (MEG) for GRO (50 µg/L) in place for groundwater at that time.

Response: The text has been changed to reflect this information. The sample date and location is provided along with the MEG comparison.

7. Section 1.3, Project Objectives, bullet 3: For the removal of the USTs please add: " in accordance with the Chapter 691-Rules for Underground Storage Facilities".

   Response: The text has been changed to reflect this information.

8. Section 2.0, Remediation Activities: Please add a table or text description in this section of the number of monitoring wells removed and their identification.

   Response: A total of seven monitoring wells were removed during excavation activities. This information, along with the monitoring wells identifications are provided in Section 2.9 of the text. The paragraph reads "During excavation activities, a total of seven monitoring wells were removed. MW-NASB-225, MW-NASB-300, MW-NASB-301, MW-NASB-302, MW-NASB-24, MW-SDP-5, and MW-NASB-26 were removed entirely, which included both the riser and the screen."

9. Section 2.2, Underground Utilities Re-routed, bullets 5, 6 & 7: Do you mean "capped" instead of "cap"?

   Response: Yes; the text has been changed to reflect this information.

10. Section 2.4, Confirmation Sample Collection:

    a.) Para 1: Field screening of soil samples..." It needs to be noted that other than the removal of the UST, the field screening was only used at the excavation as a tool to help determine if goals were met not as final confirmation results. (Also please correct the typo for the March 16.)

    Response: The text has been changed to reflect this information and the typo has been corrected. Paragraph 1 in Section 2.4 now finishes with: "Other than the UST excavation and removal, field screening of soil samples were only used as a tool to help determine if goals were met and was not utilized for final confirmation results."

    b.) Para 3: The Maine laboratory certification is not overseen by HETL but rather by the Drinking Water Program at the Department of Health and Human Services. Please revise the text.

    Response: The text has been changed to reflect this information.

    c.) Para 3: There are no summary tables in the appendix, only the raw laboratory data sheets. Please summarize the data in a table or tables in the main report with a reference to the lab sheets in the appendix. Also see comment 2 above.

    Response: Two tables have been added to the body of report showing the confirmation sample results. Table 2-2 provides TPH-GRO results and Table 2-3 provides VPH results A note has been added referencing the location of the laboratory results in the appendices.

d.) Para 4: "However, the two sidewall confirmation samples, which were selected due to the high TPH_GRO concentration, slightly exceeded the criteria for C9-C10 aromatics. Criteria is 710 mg/kg but the soil samples had results of 760 mg/kg and 820 mg/kg, respectively, for SWC-11 and SWC-12. It should be noted that these two locations have been excavated prior to installation of the jet grouting."

Since no additional soil samples were taken beyond the sheet piling in the area of the jet grouting these concentrations will have be used to establish land use controls for this area.

Response: Agreed.

11. Section 2.5, Jet Grouting: Please confirm if the jet grouting process actually removed soil prior to injection – MEDEP understood that all soils were incorporated in the grout mix during placement.

    Response: Yes, we confirm that for jet grouting activities, some of the soil that is displaced during the auguring process have been removed and disposed of with the contaminated soil. Cement-bentonite grout mix has been injected to solidify the remaining soil in-place to prevent potential structural impacts to Building 27 during sheetpiling and excavation.

12. Section 2.8, Underground Storage Tank and Associated Piping Removal, para 6, last sentence: Requirements for the removal of USTs are 100 ppm using a PID or 5 ppm for lab analysis. Please compare the results to those requirements. Please provide the actual results and compare to the requirements under Chapter 691.

    Response: A table has been provided within the text showing the results from the two confirmation samples collected on the bottom of the UST excavation. In addition, PID headspace results are provided in Appendix B as part of the UST Assessment Report. This has been noted with the body of the text and screening requirements have been updated.

13. Section 2.9, Excavation of Contaminated Soil:

    a.) Please add what the acronym T&D stands for.

    Response: T&D is an acronym for transportation and disposal. The text has been changed to reflect this information and the acronym has been added to the "Acronyms and Abbreviations" list.

    b.) Please add a figure with an estimation of what portion of the excavation was extended to the clay surface. This is needed to confirm enough bottom samples were collected for areas that did not reach the clay surface as agreed to by the Navy in RTC 10 of the work plan.

    Response: Figure 2-4 has been added to the PCR depicting the approximate amount of the excavation that reached the clay. Bottom confirmation samples were collected as specified in the final approved work plan and are depicted on this figure. All bottom confirmation samples confirmed that TPH-GRO concentrations are below the 200 ppm goal for the entire site. Bottom confirmation samples are further discussed in detail in Section 2.4.

14. Section 2.10, Excavation Dewatering: "Once the final treated water [*met*] the discharge permit issued by BSD, a total of approximately 56,000 gallons of groundwater was discharged to the storm sewer."

Please provide documentation from the Brunswick Sewer District that the treated groundwater was actually discharged to the sanitary sewer per the workplan not the storm water sewer, which was not approved by MEDEP for this project.

Response: Storm sewer was incorrectly used in this sentence. It should have been sanitary sewer and the sentence has been changed to reflect this information. As indicated in Table 2-1, all treated water was discharged to the sanitary sewer (Refer to field notes for November 02, 03, 04, 12, and 18, 2010). All Brunswick Sewer District discharge permit requirements were met for these discharges. Photographs showing discharge to the sanitary sewer are provided below.

15. Section 2.10 and Section 2.12, wastewater sampling: Please add a brief summary of the water testing completed for disposal that lists the sample names and what they represent, as

was done for soils in Section 2.4. It is unclear from the data what the "ASWater" and "WDC" sample identifiers represent, and if they were pre-treatment or pre-disposal/discharge.

Response: A brief summary has been provided in Section 2.10. WDC is an acronym for "water discharge characterization" and ASWater is improperly labeled within the laboratory report and should be A2Water for "Area 2 Water". The following was added to Section 2.10 "A total of 7 water samples were collected to verify and screen for requirements under the discharge permit. Prior to collection and treatment of groundwater, one groundwater sample was collected (A2Water) to aid in determining necessary requirements for treatment. A2Water was collected is from the second excavation as a pre-treatment baseline sample. To verify treatability of the system, water disposal characterization (WDC) samples were collected near the effluent to determine that the required contaminant levels were met under the BSD permit. The groundwater was retreated until it was below the required levels. A total of 6 WDC samples were obtained."

16. Figure 1-3: Please over lay the sheet pile wall outline over this figure.

    Response: Figure 1-3 has been updated to show this information. The final sheetpile layout was added to the figure.

17. Figure 1-4: Please add a dashed 1 mg/L contour including MW-NASB-300. Data collected during 2006 showed that there was still a core of the plume over 20 mg/L, this report should clearly indicate there was groundwater above 1 mg/L.

    Response: Figure 1-4 has been updated to show this information. An additional contour line of 1 mg/L was added to Figure 1-4.