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S.O.# 62470-277-SRN
Subfile # 5
Initials

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April 21, 1999

U.S. Environmental Protection Agency
Region II
290 Broadway - 22nd Floor
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Attn: Ms. Nicoletta DiForte
Chief, RCRA Caribbean Section

Re: Contract No. N62470-89-D-4814
Navy CLEAN, District III
Contract Task Order (CTO) 0277
U.S. Naval Station Roosevelt Roads, Puerto Rico
RCRA Corrective Action Program
Response to EPA's Comment Letter of March 8, 1999

Dear Ms. DiForte:

Baker Environmental, Inc. (Baker), on behalf of the Navy, is pleased to provide responses to the comments received in your March 8, 1999 letter. Specific comments are addressed pertaining to the following reports:

- Tow Way Fuel Farm Corrective Measures Study (CMS) Task 1 Report (November 30, 1998), and
- Navy's December 16, 1998 Response to EPA's Comments on the June 30, 1998 CMS Investigation Report for the Tow Way Fuel Farm.

Each document is addressed separately below.

Tow Way Fuel Farm Corrective Measures Study (CMS) - Task 1 Report

There were three major issues reflected in the EPA comments:

- The clean-up levels
- The detection of TCE in well 7MW07, and
- The TechLaw comments.

1) Clean-up levels

Attachment 1 to this letter contains a fully revised Section 3.0 and associated appendices of the Task 1 Report. The clean-up goals have been re-calculated based on EPA comments and some re-analysis of the various exposure scenarios. All the EPA comments have addressed.

2) TCE in Well 7WM07

Attachment 2 to this letter is a work plan for specific investigations in the area of well 7MW07 where a significant detection of TCE occurred in a recent groundwater sample. The investigations extend to an adjacent well (7WM08) where a very low level detection of TCE was found.

The work plan contains a map showing all the TCE sampling results including non-detect locations. TCE detections are indicated in blue. It should be noted that UGW24 contained 2 µg/l TCE. This well is included in the investigations in that a confirmatory sampling in this well will be performed. The detection is thought to be anomalous since there is no apparent potential source in the area of the well, the well is located near the top of the hill in an unlikely location for DNAPL accumulation and there are no other detections of TCE between UGW 24 and 7MW07.

3) TechLaw Comments

The two TechLaw comments pertain to the risk assessment and clean-up goals. These have been addressed in the revised Section 3.0.

Navy's December 16, 1998 Response to EPA Comments on the June 30, 1998 CMS Investigation for the Tow Way Fuel Farm

Insert/replacement pages (3-hole punched) are provided in Attachment 3 to this letter. Also, new report covers and spines are included which designate the report as final.

All of the EPA comments have been addressed. The paragraphs which follow provide a summary of the comments responses. For ease of review, the comments are repeated followed by the response.

MARCH 8, 1999 EPA COMMENT LETTER

Comment

For the responses to EPA's comments #2, 3, 4, and 5, and those given in the TechLaw evaluation included with EPA's October 2, 1998 letter, the Navy indicates they accept EPA's/TechLaw's comments; yet instead of supplying the appropriately revised text or figure, the letter contains numerous statements to the effect that the revised text or figure, etc., will be provided either with the "final submission" or "next submittal". EPA requests that within 45 days of your receipt of this letter, the Navy submit an addendum to the June 1998 CMS Investigation report, which includes all revised text or figures, etc., as indicated in Baker's December 16, 1998 letter. Such an addendum may be combined with the Addendum for the Task 1 report discussed above.

Response
The text and figures corresponding to the comments in question will be revised and submitted as insert/replacement pages into the Corrective Measures Study Investigations report.

The comments from the EPA's comment letter dated October 2, 1998 are listed below with a brief description of where the revised figure or text is located.

OCTOBER 2, 1998 EPA COMMENTS

Comment
2. Please revise Cross Section A-A' and B-B' (Figures 3-2 and 3-3 respectively) to address the following EPA comments:

a) The intersection of the two cross sections should be shown on each.

Response
A symbol identifying the location of the intersection of the cross sections has been added to the replacement Figures 3-2 and 3-3.

Comment
b) It would be very useful to EPA's understanding of the LNAPL/phase separated hydrocarbons (PSH) accumulation at Tow Way Fuel Farm if all such occurrences were reflected in the wells shown on the two cross sections.

Response
Symbols have been added to the figures marked with "FP" to identify the free product level encountered during the groundwater level measurements as shown on replacement Figures 3-2 and 3-3.

Comment
c) For cross section B-B', the relationship between the notation "Gabro Bedrock" on the left half of cross section (between wells UGW-22 and 7MW05) and the "Weathered Zone" east of well MW02, and the depicted "Boundary between weathered and Unweathered Bedrock" apparently is erroneously depicted. Please revise the figure, or explain this anomalous relationship.

Response
The description"Gabbro Bedrock" has been changed to "Weathered Bedrock" on replacement Figure 3-3.

Comment
d) Some well data should be included in cross-section B-B' between wells UGW-22 and 7MW05, since there are several wells/data points (GW02 & 03, 470-MW03, etc.) either directly on, or adjacent to, the line of cross-section.

Response
Boring logs have been located for the 470 series wells, but still have not been located for GW02 and GW03. Cross-section B-B' has been revised to include 470-MW03.

Comment
e) Does well 7MW08 contain unweathered bedrock at the surface, as depicted in B-B'?

Response
Well 7MW08 does not contain unweathered bedrock at the surface, as depicted in B-B'. After reviewing the boring logs for 7MW08, unweathered bedrock was found to have been encountered eight feet below the ground surface. Replacement Figure 3-3 has been corrected to reflect this change.

Comment
3. EPA requests an explanation addressing the following comments/questions regarding the "Corrected Groundwater [Potentiometric] Surface Contour Map", Figure 3-13:

a) What is the cause and significance of the groundwater "sink" depicted in the area of wells UGW-13 and UGW-17 (and also UGW-12)?

Response
It was determined that the wrong values were input into the model for the three mentioned wells. The proper values have been input in the model and the groundwater contour map (replacement Figure 3-13) has been adjusted accordingly.

Comment
4. EPA requests an explanation for the very anomalous relationship between the elevated dissolved BTEX and TPH concentrations measured in the groundwater in wells 470-MW1 and 470-MW3, and the non-detect to very minimal concentrations of those same parameters in the groundwater at well 7MW01A, which is

located between those two 470 series wells (refer to Figure 3-14 and Appendix D.3). Also please discuss if there are dissolved BTEX and TPH groundwater measurements in nearby downgradient wells UGW15, UGW20, 7MW05 and 7MW06, and if so, the measured concentrations?

Response
It was determined that the two 470 series wells are screened in the overburden groundwater while 7MW01A was screened in the bedrock. A cross-section showing this has been developed and is attached to this response to comments to assist in viewing the actual conditions. It should be noted that boring logs have recently been located for the two 470 series wells from NSRR.

There were no detections of dissolved BTEX in nearby downgradient wells UGW15, UGW20, 7MW05, and 7MW06 as indicated on Table 3-7 and Appendix D.3. UGW15 was the only well of the four listed which detected TPH GRO (110 µg/L). UGW15 and UGW20 were the only two wells of the four listed which detected TPH DRO (0.18 and 0.065 J µg/L, respectively). Replacement Figures 3-14, 3-15, and 3-16 have been modified to include the non-detected values were appropriate to avoid any confusion.

Comment
5. Please quantify the volumes of contaminated soils (both surface and subsurface) as depicted in Figures 3-4 through 3-12 of the report. Since several figures depict the same depth interval (but different constituents/parameters), one composite quantity of contaminated soil for each depth interval may be calculated. Also, the basis for the volumetric calculations must be clearly described (e.g., all soils exceeding the Commonwealth of Puerto Rico's generally applied soil standard of 100 mg/kg total petroleum hydrocarbons [TPH]).

Response
The volumes of contaminated soil above the Commonwealth of Puerto Rico's generally applied soil standard of 100 mg/kg total petroleum hydrocarbons [TPH]) have been calculated and is provided on replacement page 3-4 (Section 3.1.2).

TECHLAW COMMENTS - CMS INVESTIGATIONS REPORT
Comment
3.0 PAGE-SPECIFIC COMMENTS

Page 3-7, Section 3.2.2, Paragraph 4
The text should indicate that the concentration of trichloroethene (TCE) detected above the maximum contaminant level (MCL) was 2,000 ug/L. Since this concentration approaches one criterion for considering the presence of dense non-aqueous phase liquid (DNAPL) (one percent of the aqueous solubility), the facility should consider the potential presence of DNAPL in the vicinity of monitoring well 7MW07. Subsequent subsurface investigation techniques should be carefully conducted in the area of monitoring well 7MW07 to screen for DNAPL and to avoid mobilizing DNAPL.

Response
The text has been modified to reflect the comment and is provided on replacement page 3-7.

Comment
Figure 3-17
Based on information presented in Table 3-10, Figure 3-17 should be corrected to indicate that the free product was detected at monitoring well UGW10 at a thickness of <0.01 feet. Currently, Figure 3-17 indicates that no free product was detected at monitoring well UGW10.

Response
The figure has been modified as requested and is presented on replacement Figure 3-17.

Comment
4.0 EDITORIAL COMMENTS
Figure 3-6, Figure 3-7, Figure 3-9, and Figure 3-12
The units of measure should be modified from mg/kg to ug/kg and the contour intervals revised as appropriate for consistency with data presented in Table 3-1, the text of the report, and other contaminant concentration figures.

Response
The units found in Figure 3-6, Figure 3-9, and Figure 3-12 are correct. The units found in Figure 3-7 were changed to µg/kg as presented in replacement Figure 3-7. Table 3-1 was adjusted to present the TPH DRO in mg/kg as presented on replacement Table 3-1.

Comment
Figure 3-9, 3-11, and Figure 3-12
For clarity, sample locations with no available data should be appropriately annotated. Currently, it is unclear from the figure if results for the following locations are non-detect or not available: 7DP22, 7DP23, 7DP28, 7DP27, and 7DP08.

Response
Figures 3-9, 3-11, and 3-12 have been revised to identify samples which are non-detect or not analyzed as shown on the replacement Figures 3-9, 3-11, and 3-12. The not analyzed locations have been changed to gray color. It should be noted that Figures 3-4 through 3-12 have been modified to this format and are provided as replacements.

Comment
Figure 3-11
The annotation in the legend should be revised to "TPH GRO Concentration" instead of "BTEX Concentration".

Response
The typographical error has been corrected as presented on replacement Figure 3-11.

Please do not hesitate to call me at (412) 269-2065, or Mr. Christopher T. Penny (the Navy's Technical Representative) at (757) 322-4815, if you have any questions or desire further clarification on the points discussed.

Sincerely,

BAKER ENVIRONMENTAL, INC.

Thomas C. Fuller
Activity Coordinator

TCF/lp
Attachment

cc: Mr. Christopher T. Penny - LANTDIV, Code 18231 (w/attachment)
Ms. Madeline Rivera - NSRR (w/attachment)
Mr. Isreal Torres - PREQB (w/attachment)
Mr. John Tomik - CH2M Hill (w/attachment)