



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY - REGION II
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OCT 2 1998

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Paul A. Rakowski, P.E., DEE
Head , Environmental Program Branch
Environmental Division
Atlantic Division (LANTDIV), Code 182
Naval Facilities Engineering Command
1510 Gilbert Street
Norfolk, VA 23511-2699

Re: Naval Station Roosevelt Roads - EPA ID # PR2170027203

- 1) EPA Comments on Draft Report on Corrective Measures Study Investigations at Tow Way Fuel Farm, dated June 30, 1998, and
- 2) Draft RCRA Facility Investigation Work Plan, Additional Investigations at SWMU #9, dated September 4, 1998.

Dear Mr. Rakowski:

The United States Environmental Protection Agency (EPA) Region 2 has completed its review of the Draft Report on Corrective Measures Study (CMS) Investigations at Tow Way Fuel Farm, dated June 30, 1998, and the Draft RCRA Facility Investigation Work Plan, Additional Investigations at SWMU #9, dated September 4, 1998. Both documents were submitted on your behalf by your contractor, Baker Environmental, Inc..

Report on Corrective Measures Study Investigations at Tow Way Fuel Farm

EPA approves the June 30, 1998 CMS Investigations report (the Report) for Tow Way Fuel Farm. That report satisfies the "Description of Current Situation [Conditions]" requirement for the CMS Task I draft report, subject to the Navy adequately addressing the following comments/questions in either, the [remainder of the] CMS Task I draft report, due to be submitted by December 1, 1998, or a separate response submitted concurrently.

1. As discussed in the enclosed September 17, 1998 Evaluation of the Report prepared by for EPA by TechLaw, Inc., trichlorethene (TCE) was detected in groundwater at 1 of the 9 wells (well 7MW07) sampled as part of the additional investigations. TCE was measured in well 7MW07 at a concentration of 2000 ug/l [but "J" qualified as an estimated value], significantly above the maximum contaminant level (MCL) of 5 ug/l [refer to 40 CFR § 141]. Since TCE has a specific gravity greater than 1.0, the dissolved concentration of 2000 ug/l may indicate the possible presence of dense non-aqueous phase liquids (DNAPLs) in the 7MW07 area. Pursuant to EPA guidance ["DNAPL Site Evaluation", EPA/600/R-93/002, February 1993], a dissolved concentration of a DNAPL constituent, such as TCE, of less than one percent of the aqueous solubility may indicate the presence of an undetected DNAPL phase. Therefore, EPA requests the Navy to review all other existing groundwater data at Tow Way Fuel Farm for detections of any dissolved DNAPL constituents in the groundwater. Also, EPA requests the Navy to develop procedures, to be followed during future well installations, to screen for the presence of any undetected DNAPL phase, and avoid mobilizing such DNAPL phase if present.

2. Please revise Cross Sections A-A' and B-B' (Figure 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.

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

c) For cross section B-B', the relationship between the notation "Gabbro 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.

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.

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

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)?

b) What is the cause and significance of the groundwater “mounding” centered around wells UGW01, and MW03 and 04?

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 & MW06, and if so, the measured concentrations?

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]).

As discussed in my letter of February 11, 1998, the CMS Task I draft report for Tow Way Fuel Farm is due December 1, 1998, and must include, among other things, recommended clean-up levels/goals (e.g., removal of all measurable free product/phase separated hydrocarbons, and clean-up of groundwater to specified concentration levels), and/or other corrective action objectives (e.g., institutional controls on groundwater usage). EPA requests supporting analysis (such as a risk assessment) if clean-up concentration levels or other goals are not based on recognized standards, such as maximum contaminant levels (MCLs) for groundwater, or other generally applied standards, such as the Commonwealth of Puerto Rico’s standard of 100 mg/kg TPH for soils). In addition, the Task I draft report must contain a screening (identification and first stage evaluation) of potentially applicable technologies and/or remedies. The full requirements for the CMS report are given in Appendix B of Module III of the 1994 RCRA Permit. Further guidance is given in the Final RCRA Corrective Action Plan, dated May 1994, EPA publication number EPA 520-R-94-004.

RFI Work Plan for Additional Investigations at SWMU #9

EPA approves the September 4, 1998 Work Plan for Additional Investigations at SWMU #9 (the work plan). The work plan includes additional site characterization at the underground storage tanks and associated sludge burial pits, along with collection of seven surface water and sediment samples as part of an Ecological Risk Assessment (ERA) screening for possible impacts from releases from SWMU #9. EPA’s consultant TechLaw, Inc., has reviewed the proposed ERA and found it acceptable, so no technical comments have been prepared on the proposed ERA.

No implementation schedule is given in the work plan, except to state that "It is expected that funds will be available in FY99 to implement the additional investigations ...[at] SWMU 9." For this work plan, EPA will approve a waiver of the requirement of Condition E.2 of Module III of the 1994 RCRA Permit that implementation commence within 60 calendar days following EPA's written approval of the work plan. However, since FY'99 has now commenced, EPA requests that within 60 days of your receipt of this letter the Navy submit an implementation schedule for all RFI activities planned to be implemented during FY'99, at all Roosevelt Roads SWMUs and AOCs (including SWMU #9). In addition, following commencement of implementation of the work plan, all reporting requirements and deadlines given in Condition E.3 of Module III of the 1994 RCRA Permit shall apply.

Please telephone Mr. Tim Gordon, of my staff, at (212) 637-4167 if you have any questions regarding any of the above.

Sincerely yours,



Nicoletta DiForte
Chief, Caribbean Section
RCRA Programs Branch

Enclosure: TechLaw Evaluation dated September 17, 1998

cc: Mr. Israel Torres, PREQB, w/o encl.
Ms. Madeline Rivera, NAVSTA Roosevelt Roads, w/encl.
Mr. Christopher Penny, LANTDIV, w/encl.
Mr. Tom Fuller, Baker Environmental, w/encl. ✓
Ms. Luz Muriel-Diaz, PREQB, w/encl.
Mr. William Goold (for Adam Balough), TechLaw Inc., w/o encl.

EVALUATION OF
DRAFT
CORRECTIVE MEASURES STUDY INVESTIGATIONS
TOW WAY FUEL FARM
RCRA FACILITY INVESTIGATION
NAVAL STATION ROOSEVELT ROADS
CEIBA, PUERTO RICO

Submitted to:

Ms. Elizabeth Van Rabenswaay
Regional Project Officer
U. S. Environmental Protection Agency
Region 2
290 Broadway, 22nd Floor
New York, New York 10007

Submitted by:

TechLaw, Inc.
122 East 42nd Street
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New York, New York 10168

September 17, 1998

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1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA) has requested support for technical review of documents associated with the RCRA Facility Investigation (RFI) of the U.S. Naval Station Roosevelt Roads (NSRR) located in Ceiba, Puerto Rico. TechLaw has assigned this project to TRC, a TechLaw Team member under the REPA Contract under Work Assignment No. R02020.

The NSRR is located on the east coast of Puerto Rico in the municipality of Ceiba, approximately 33 miles southeast of San Juan. The primary mission of NSRR is to provide full support for the Atlantic Fleet weapons training and development activities. NSRR is currently operating under a Draft RCRA Corrective Action Permit that includes varying degrees of work at 28 Solid Waste Management Units (SWMUs) and three Areas of Concern (AOCs).

EPA requested the TechLaw Team to review the *Draft Corrective Measures Study Investigations Tow Way Fuel Farm*, dated June 30, 1998.

The TechLaw Team's report presents evaluations of the Draft Corrective Measures Study Investigation for Tow Way Fuel Farm. The method and objective of this evaluation are presented in Section 2.0. Page-specific comments are detailed in Section 3.0. Editorial comments are detailed in Section 4.0; and, recommendations are presented in Section 5.0.

2.0 METHODOLOGY

Pursuant to the EPA Work Assignment Manager's (WAM's) Technical Directive dated July 2, 1998, the TechLaw Team reviewed the Corrective Measures Study Investigations Tow Way Fuel Farm to evaluate the adequacy and acceptability of overall phase separated hydrocarbons (PSH) and dissolved phase hydrocarbons (DPH) plume delineation and analytical results. The following documents were considered during the review:

- Tow Way Fuel Farm Quarterly Summary Progress Report No. 4, NSSR, P.R. prepared by Baker Environmental, Inc., dated March 6, 1998.

- Final RCRA Facility Investigation, NSSR, P.R. prepared by Baker Environmental, Inc., dated September 1995;
- Interim Final RCRA Facility Investigation Guidance, OSWER Directive 9502.00-60, EPA 530/SW-89-031, May 1989;
- EPA February 11, 1998 Comment letter to Atlantic Division on RFI Quarterly Progress Report (August 1, 1997 - October 31, 1997), Tow Way Fuel Farm Quarterly Progress Report No. 3 (July 1, 1997 through September 30, 1997), Draft Corrective Measures Study Work Plan for Tow Way Fuel Farm (SWMUs #7 & #8), and Navy Response of December 24, 1997 to EPA's November 14, 1997 comments on OU 1, 6, and 7 RFI Report and Work Plan for Additional Characterization at SWMU #30.
- DNAPL Site Evaluation, EPA/600/R-93/002, February 1993.

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.

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.

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.

Figure 3-9, Figure 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.

Figure 3-11

The annotation in the legend should be revised to “TPH GRO Concentration” instead of “BTEX Concentration”.

5.0 RECOMMENDATIONS

The following is recommended:

- Since the TCE concentration at monitoring well 7MW07 approaches one of EPA’s guidance limits for considering the presence of DNAPL, subsequent subsurface investigation techniques should be carefully conducted in the area to screen for DNAPL and to avoid mobilizing DNAPL.