



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-222-4462

December 13, 2002

Arthur Sylvester
Environmental Protection Division, Code 408
NSN PWD Bldg.1
1 Simon Pietri Drive
Newport, RI 02841

RE Corrective Action Plan for Tanks 38, 42, 45, and 48- Tank Farm 4. Naval Station
Newport, Newport, Rhode Island.

Dear Mr. Sylvester,

The Rhode Island Department of Environmental Management, Office of Waste Management has reviewed the Corrective Action Plan (CAP) for Tanks 38, 42, 45, and 48 on Tank Farm # 4, dated October 2002. Attached are comments generated as a result of this review.

The scope of the Plan is limited to the remediation of areas surrounding four tanks at Tank Farm # 4. It does not address the investigation of other potential sources of contamination at the site.

The Office of Waste Management looks forward to receiving a written response to these comments. If the Navy has any questions or requires additional information please call this Office at (401) 222-2797 ext.7111.

Sincerely,

A handwritten signature in cursive script that reads "Paul Kulpa".

Paul Kulpa,
Project Manager

cc Richard Gottlieb, DEM OWM
Jill Eastman, DEM OWM

DEC 20 2002

**Corrective Action Plan
For Tanks 38, 42, 45, and 48
Tank Farm 4
Naval Station Newport
Newport, Rhode Island**

1. General Comment

As performed at other sites on the base, the OWM must be forwarded a weekly updated schedule of upcoming field activities so that oversight inspections can be scheduled. As field schedules can be dynamic, when possible, the OWM should also receive a twenty-four notification for the cancellation of field activities.

2. Section 1.2, Page 1-8

The report proposes a soil TPH standard of 2500-5000 ppm. The use of the 500 ppm standard is required to meet residential standards in accordance with Section 8.01(A)(iv) of the RIDEM Remediation Regulations. There are also additional requirements for SVOCs, VOCs and metals. Please modify the report to reflect these regulatory standards.

3. Section 1.2, Page 1-9

Please be advised that although the groundwater onsite is not being utilized for drinking water purposes currently, the Regulations still require that this area be returned to GA classification. The report should also note that the regulatory standards, which are applicable to the site, are drinking water Maximum Contaminant Levels (MCLs).

4. Table 2.1, Page 2-2

Please change the TPH Action Level columns to reflect the RI Residential Criteria. Please correct this in all other tables where the Action Level is mentioned. In addition, this table does not appear to have **all** relevant results. Please include all results in the Table.

5. Table 2-2, TPH in Groundwater, Page 2-3

This table also does not appear to have all relevant results. Figure 2-2 shows TPH results at three intervals in three wells. Please include **all** of these results in the Table.

6. Table 2-2, TPH in Groundwater, Page 2-3

This table does not contain results from well MW-605 depicted in Figure 2-1. Please include **all** results in the Table.

7. Figure 2-1, Page 2-4

Please indicate the direction of groundwater flow.

8. Figure 2-2, Page 2-5

The legend indicates that there should be a section on the figure that depicts an 'area of petroleum impacted soil'. Please add this information to the figure.

9. Section 2.1.1.2, Groundwater, Page 2-6.

The second paragraph is misleading, as it does not mention that samples were also collected at other screened intervals. What were those results? What parameters were these samples analyzed for?

10. Section 2.1.1.1, Subsurface Soils, Page 2-6

Information regarding **all** results from B-38 is not included in Table 2-1. Please add **all** results.

11. Section 2.1.1.1, Subsurface Soils, Page 2-6

The report notes that the lack of petroleum contamination in SB-415 and indicates that petroleum is not migrating outside of the tank. SB-415 was only drilled to a depth of approximately 20 feet. Table 2-1 indicates that only one sample was collected at 18-20 ft bgs. This boring was sampled well below the water table, but above the depths where heavy petroleum contamination was found adjacent to the tanks. Accordingly, the boring would not intercept either LNAPLs or DNAPLs associated with the various oil products stored in the tank. As such, it is inappropriate to state that petroleum is not migrating out of the socket. Therefore, please remove these statements from this section and any other section of the report.

**12. Section 2.1.1.3, Surface Soils,
Page 2.6**

The report states that the 0-6 inch interval was not sampled in order to avoid detecting impacts associated with tank closure activities. Please indicate what these impacts were.

13. Section 2.1.2.1, Subsurface Soils, Page 2-7

Please explain the rationale behind SB-410 indicating no contamination downgradient of tank 42. Where were all samples collected (depth)? Table 2-4 indicates that only one sample was collected. What parameters were all of these samples analyzed for?

14. Table 2-3, Page 2-8

This table is incorrectly referencing Tank 38 in the title.

15. Table 2-4, Page 2-9

Please put all sample results for all soil borings related to Tank 42 in this table.

**16. Section 2.1.2.2, Surface Soils,
Page 2-13**

The report notes that no petroleum migrations are expected as impacted soils were not found on top of the bedrock outside of the tank socket. Soil boring SB-806 was collected at a depth that did not allow for adequate examination of either heavy or light oils. Therefore, please remove these statements from this and any other section of the report.

17. General Comment

For Tanks 45 and 48 please refer to all previous comments.

18. General Comment

All samples collected should have been analyzed for TPH, VOCs, SVOCs and metals.

19. Interpretive Water Table Map, Page 2-37

This is a public document; therefore, please explain why wells were screened below the water table only.

20. Table 2-13, Page 2-40

Please include a column with the depth to water

21. 3.1 Introduction, Page 3-1

Please note the following in this section of the report: The presence of NAPL in groundwater is an exceedance of the Upper Concentration Limit. This requires a remedial response according to RI Regulations Section 8.07. In addition, groundwater quality should be restored to original GA classification regardless of well use onsite.

22. 3.3 Volume of Contaminated Media, Page 3-2

Why wasn't contamination on the northern side of Tank 45 included in the calculation of contaminated soil? Second sentence in the same paragraph mentions SB-330 on the northern side of the Tank with TPH at 23,000 mg/kg. RI Residential standards are 500 mg/kg for TPH, which means that you haven't defined the area of contamination with the information provided. Table 2-7 doesn't provide soil results from all depths at all boring locations. Excavation will have to continue until samples are below the standard. Therefore, the estimated volume of 1,244 cu yd of TPH contaminated soil is greatly underestimated. Finally, there is contaminated soil around all four tanks. Please revise.

23. Section 3.5, Technology Description and Screening, Whole Section.

The report limits the remedial alternatives to institutional controls, thermally enhanced air sparging and removal. There are other viable alternatives, which have not been evaluated. Please include an evaluation of these alternatives.

24. Section 3.5, Technology Description and Screening, Whole Section.

The report notes that two of the alternatives; thermally enhanced air sparging and removal are cost prohibitive and therefore are not considered as viable alternatives. Actual cost estimates are needed in order to justify these statements. Please modify the report to include these estimates.

25. 3.5.1 Institutional Controls, Page 3-4

This section states that monitored natural attenuation may be used as a remedial action. Please be advised that in order to consider natural attenuation as an alternative, it must be shown that it has a reasonable chance of success through chemical, biological and physical means. Please provide a section that documents that natural attenuation is occurring at the site and include an estimated remedial time line.

26. 3.5.1 Institutional Controls, Page 3-4

Irrespective of the alternative chosen, upper concentration limits cannot be exceeded (i.e. free product cannot remain).

27. 3.5.2 Effectiveness, Page 3-9, Paragraph 4

Impacted soils need to be sampled for more than TPH.

28. Preferred Technology Selection

Please be advised that attempts to clean up the site have to occur before a Residual Zone Designation will be an option for groundwater. To date nothing has been done in that respect. In addition, free product cannot remain at the site. Therefore, institutional controls by themselves are not considered a viable alternative. Institutional controls may be used in conjunction with another alternative.

29. Technology Implementation

The golf course falls under recreational use; therefore, must follow RI residential criteria for soil.

30. Corrective Action Groundwater Monitoring

The monitoring wells are limited in their screening interval. Resulting data will be limited.

31. Appendix C

This report is a public document; therefore, please explain NA and B in the legend and report the units the results are reported in.