



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

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NSB NEW LONDON
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October 14, 1994

Mark Evans, RPM
U.S. Department of the Navy
Northern Division
10 Industrial Highway
Code 1823, Mail Stop 82
Lester, PA 19113-2090

RE: EPA's Comments on the Draft Work Plan, Quality Control Plan, Sampling and Analysis Plan, Safety, Health and Emergency Response Plan and Environmental Protection Plan for the Interim Remedial Action at Site 6, DRMO, at the Naval Submarine Base - New London, Groton, Connecticut

Dear Mr. Evans:

The purpose of this letter is to transmit my comments on the subject document. (See attachment) Although the Region supports the Navy's effort to act quickly, it is necessary to strike a balance between the timely use of resources and the quality of both the remedial investigation and the administrative record. In considering such a balance, the Region has provided you with reasons that the Spent Acid Disposal Area lends itself more readily to a removal action than does the DRMO site in a letter dated August 5, 1994.

The EPA has provided you our specific concerns regarding several outstanding issues at the DRMO in letters dated April 29, 1994, May 27, 1994, June 28, 1994, and August 5, 1994. These issues will have to be addressed prior to selecting a final remedy for this site and it is also essential that this proposed removal action be consistent with the final remedy chosen for the site.

If, however, you still want to continue with this removal action many details regarding sampling, health and safety, and daily activities need to be modified in the above referenced work plans as I have indicated in my attached comments.

Since the work plan is one of the documents that the public would need to familiarize themselves with the project, this workplan should explain the process in more detail. Additional graphics should be included to show the horizontal and vertical extent of contamination, the landfill, and the proposed cap.

There were a few significant omissions from the work plan. The workplan should address how the Navy is proposing to protect the onsite Sub Base workers and the off-base residents from hazards



due to dust migration. An after action report was missing from the requirements. This report is crucial to the ongoing CERCLA process. The results of this removal action will need to be incorporated with the results of the Phase II RI in order to chose a final remedy for this site. Additional monitoring will be necessary to ensure the effectiveness of this removal action. We look forward to working with you and the State to develop a work plan that will address this issue.

If you have any questions regarding these comments, you should feel free to call me at (617) 573-5736 or Kymberlee Keckler at (617)573-5777.

Sincerely,



Christine Williams
Federal Facilities Superfund Section

Attachment

cc. Mark Lewis, CT DEP
Andy Stockpole, NLNSB
Rona Gregory, EPA
Kymberlee Keckler, EPA
Rich Piligian, EPA
Mary Sanderson, EPA
Dan Winograd, EPA
Dale Weiss, TRC

General Comments

Work Plan:

1. The work plan should have included greater discussion of many of the proposed procedures.
2. Additional graphics should be included to show the horizontal and vertical extent of contamination, the landfill, and the proposed cap.
3. The work plan should also address how the Navy is proposing to protect the onsite Sub Base workers and the off-base residents from hazards due to dust migration.
4. The work plan should include an after action report.
5. The work plan should include reference to an additional monitoring work plan to ensure the effectiveness of this removal action.
6. The work plan has not yet been changed to reflect the Navy's commitment to a cleanup level of 500 ppm lead instead of the 1,000 ppm lead. (The 9-13-94 submission of the revised site map was helpful.)
7. The work plan has not addressed how the proposed air monitoring will be sufficient to protect the NSB workers at the site and adjacent sites nor has it addressed adjacent residents.
8. The work plan does not address how the contractor will coordinate with local base authorities and off base authorities for the emergency/contingency plans.
9. The work plan does not describe how the contractor will coordinate her hazardous waste characterization with the base hazardous waste analysis plan.
10. The work plan does not describe how the "visual clean" of Bldg 491, will be verified by post "visual clean" sampling. These samples must be taken in accordance with the CT DEP RCRA closure guidance since the building was used for hazardous waste accumulation, sometimes in access of 90 days.
11. The work plan does not indicate how the cap will be applied around this building. As this building seems to be of a somewhat temporary nature, concrete slab with cinderblock and metal construction, was any consideration made to the removal of this building?

12. Quality Control Plan

Based on the requirements specified in Section 01400, page 3 of Navy specifications No: 04930286, March 16, 1994, the Quality Control (QC) Plan has the following deficiencies;

- The QC Plan does not include a letter signed by an officer of the firm (OHM Corp.) appointing the QA Manager.
- The QC Plan does not provide information concerning the testing laboratory as specified in Sections 1.11.1 & 1.11.2 of Section 01400.
- The QC Plan does not provide documentation procedures, including proposed report formats.
- The QC Plan does not provide a specific listing of outside organizations, such as testing laboratories, and a description of the services these firms will provide.

13. Sampling and Analysis Plan

The Sampling and Analysis Plan (SAP) does not provide sufficient detail to properly evaluate the soil sampling program. For example, the sampling protocols regarding the excavation/removal of the spent acid tank are not presented. Additional comments presented in the page-specific comments below should be addressed and incorporated into the SAP.

14. Safety, Health, and Emergency Response Plan

Overall, the Draft Safety, Health, and Emergency Response Plan (SHERP) is well-written and consistent with OSHA requirements. However, the SHERP failed to fully address certain procedures and contingencies. For example:

- the confined space entry protocol is described briefly in Section 3.4.3 and on Page xii of 8 in Appendix B. Due to the serious hazards associated with confined space work, the SHERP should have a more detailed stand alone section on safe work practices, monitoring requirements, etc.;
- the SHERP does not include discussion of sanitary facilities, illumination requirements, or temporary facilities as specified in Section 3.1(k), (l), and (m) of the Navy specifications;
- the SHERP needs to include Material Safety Data Sheets for any chemical(s) brought on site by the contractor (sample preparation/preservation and decontamination

chemicals), per Section 3.1 of the Navy specifications;

- emergency response procedures are comprehensive but need to be clarified in certain instances. Specifically, the roles and responsibilities of various individuals and specific procedures need to be presented more clearly; and
- accident reporting procedures are not included in the SHERP.

15. Environmental Protection Plan

Work strategies presented in the Environmental Protection Plan (EPP) do not appear to consider the potential hazard to onsite workers or off base residents that may be caused by volatile emissions or dust from open excavations and soil stock piles. As indicated in the page-specific comments below, practices like daily backfilling of excavations and soil wetting should be incorporated to reduce the risk of contaminant migration to onsite workers.

16. Appendix A Technical Specifications

The design criteria referring to Virginia Department of Transportation (VDOT) should be replaced with the appropriate specifications for a program located in Connecticut to avoid confusion. For example, the criteria "VDOT #1 coarse aggregate" (page III-7) would be more accurately defined by a grain-size distribution curve. In addition, the Minimum Standards referred to on page III-7 have not been provided or adequately referenced in the report.

Pag -Sp cific Comments

Quality Control Plan

17. Page ii, Table of Contents: The Table of Contents indicates that a Table 2, Submittal Register, is included in the plan. The Table is not included in the plan nor is it referenced in the text of the plan.

18. Page 4-1, ¶4.0: The SAP does not provide sampling procedures for field testing materials or processes. Therefore, the QC Plan must define the various materials and processes to be sampled and the procedures to be utilized.

19. Page 5-1, ¶4 §5.2: The paragraph states; "As a quality control check on the accuracy of the field analyses, 10% of all soil samples analyzed in the field will be split and sent to an off-site laboratory for total petroleum hydrocarbon (TPH) and percent moisture." It is unclear why samples are to be sent off-site for TPH and percent moisture analysis. The SAP and the SD states that the primary contaminants of concern are lead, polychlorinated biphenyls (PCBs) and polycyclic aromatic hydrocarbons (PAHs). The SAP states that the analysis to be conducted in the field is headspace analysis for volatile organic compounds. The SAP does not include any mention of TPH analysis. This discrepancy between the QC Plan and SAP must be resolved.

Sampling and Analysis Plan

20. Page 1-1, ¶2 § 1.1: The text should clarify that contaminated soils will be removed to a depth of 3 feet or greater, if necessary, until the contamination has successfully been removed or until the water table is reached.

The text should clarify that contaminated soils and concrete removed from the excavation will be transported off-site by a licensed transporter and will be disposed of appropriately.

21. Page 2-1, Second Bullet: The text should indicate the objectives for field screening of the soils.

22. Page 2-1, ¶1 § 2.1: The sample collection methodology should be changed to noncomposite samples for VOCs. A minimum of one representative sample should be obtained from each 100 cubic yards of soil and submitted for laboratory analysis, unless the Connecticut waste characterization requirements are stricter.

23. The text should outline the revised sampling procedure.

24. Page 2-1, ¶1 § 2.2.1: The text should reference the "sampling grid discussion" mentioned and should clearly describe how the grid and frequency of sampling were established.
25. Page 2-1, ¶1 § 2.2.2: The text should explain which samples will be screened by field headspace analysis and provide a rationale for performing headspace analysis. It is unclear why headspace analysis, which detects volatile organic compounds, is being performed as a screening method when the primary contaminants are lead, PCBs and PAHs.
26. Page 2-1, ¶2 § 2.2.2: The sample container should be shaken, after the 15-minute heating period and prior to removing the cap, to fully release any volatiles that may be present.
27. Page 2-1, ¶4 §2.2.1: The sampling grid should be presented in the discussion of the sampling methodology since the appropriateness of the methodology may be related to the location of the sample relative to other samples and site-related features.
28. Page 2-2, ¶2 § 2.3.1: The text should be revised to indicate that non-compositing sampling methodologies will be used to obtain verification samples.
29. Presently, the text discussing soil sampling methods refers to Section 2.2.1 which describes a compositing sampling method. The SAP should present an alternate method for sampling the walls and floor of each excavation area, should they become difficult or unsafe for the field personnel to enter or work in. Any change in the field sampling procedures will need to have the appropriate evaluation and review prior to implementation.
30. Page 2-2, Table 2.1: Table 2.1 should include the Matrix Spike/Matrix Spike Duplicate (MS/MSD) sample. The MS/MSD sample is a pre-planned sample which supplies the laboratory with sufficient volume to perform MS/MSD analyses.
31. The estimated perimeter length of each excavation and the anticipated square footage of the bottom of each excavation should be presented in Table 2-1 to assist in evaluating the adequacy of the proposed sampling density of each area.
32. Page 2-2, § 2.3.1: The text should be revised to explain the rationale for the selection of QA/QC samples obtained during field operations (e.g., random number, etc.).
33. Page 2-4, ¶1 § 2.4.1.2: The text should state what decontamination methods will be used for the sampling equipment.

34. Page 2-5, Table 2.1: The use of TCL analysis for the purpose of disposal assessment should be justified or removed since the analysis is not required.

35. Page 3-2 § 3.3: The QA/QC Samples section should include an MS/MSD sample for quality control purposes.

36. Page 3-2, ¶1 § 3.3.1: The last sentence stating that 2 rinsate blank samples are anticipated for this project conflicts with Page 2-2 which indicates that 3 rinsate samples will be collected. The anticipated number of rinsate blank samples should be consistent throughout the text, revise appropriately.

37. Page 3-2, ¶1 § 3.3.2: The term "auger" used in the second sentence should be replaced with "stainless steel trowel" for consistency with the SAP. According to the SAP, stainless steel trowels will be used as sampling tools, not augers.

38. Page 3-3-3, ¶1 § 3.3.3: The text stating that 1 field blank will be collected during the program should be revised to indicate that 3 field blanks will be collected. There are 3 separate sampling events and 1 field blank should be obtained per event.

39. Page 3-3-3, ¶1 § 3.5: The revision date for the U.S. EPA Region I Laboratory Data Validation Functional Guidelines for Evaluating Organic Analyses, February 1, 1988 should be corrected. The date of the latest revision is November 1988, not "7/88" as stated in the text.

40. Page 4-1, § 3.5: The example sample label should be reformatted to include "fill-in-the-blank" spaces for all the listed information so that field personnel will not have to rely on memory for all the required information.

41. Page 4-3, ¶1 § 4.4: The discussion on sample storage and shipment should be revised for consistency with EPA protocol. Section 6.1.6.2 of the Compendium of Superfund Field Operations Methods states that immediately after collection, samples should be stored so that their temperature is maintained at 4°C until the time of analysis.

42. Page 4-5, Table 4.1: Aqueous samples obtained for cyanide analysis should be preserved with sodium hydroxide to achieve a pH of greater than 12. Table 4.1 indicates that aqueous TAL-Cyanide parameters will be preserved through storage at 4°C only. Please review and revise this table, as appropriate.

43. Include the mercury holding time in Table 4.1. The holding time for mercury (preparation and analysis) is 28 days from sample collection.

44. Page 5-2, ¶2, §5.1: The text stating "Holding times for the samples associated with this project will begin at the VTSR (verified time of sample receipt)" is inconsistent with Table 4.1 which indicates that holding times will be based on time of collection. Review and revise as appropriate.

Safety, Health, and Emergency Response Plan

45. Page 2-2, §206: The Site Supervisor and Site Safety Officer need to be identified prior to finalization of the SHERP.

46. Page 3-1, §3.1: Lead is identified as a potential chemical hazard at this site. If ambient concentrations may potentially exceed 30 ug/m³, OSHA's lead standard (29 CFR 1926.62) applies. The SHERP needs to address the applicability of this standard, which would necessitate more rigorous sampling and employee training and monitoring.

47. Page 3-1, §3.2: It is recommended that the reader be directed to Section 3.4 for a description of site-specific physical hazards and prevention methods. In addition, OHM's "standard safety protocols" need to be identified. For example, refer to Section 4.5 and/or other standard safety rules.

48. Page 3-2 §3.3 1: The heat stress section references "Procedure 22 LANTDIV Health and Safety Procedures Manual" for further heat stress procedures. The SHERP itself needs to include requirements and action levels based on oral temperature readings and weight loss observations as well as a brief description of the signs and symptoms of heat stress, per Section 3.9 of the Navy specifications.

49. Page 3-8, §3.4.1: The reference to "high/low ambient temperature" here and in certain other sections of this hazard analysis table is the only reference to cold stress in the SHERP. Section 3.1(j) of the specifications requires a discussion on both heat and cold stress. A discussion on cold stress needs to be included if it is anticipated that site work will continue into the colder months of the year.

50. Page 3-11 §3.4.3: If fire/explosion is considered a potential hazard during tank cleaning, the required use of spark-proof tools needs to be added to the list of hazard control measures.

51. Page 4-1, §4.0: The SHERP does not indicate that caution signs will be posted at all approaches to the Exclusion Zone and Contamination Reduction Zone, per Section 3.6.5 of the Navy specifications.

52. Page 5-1, §5.1: It unclear whether the protection levels presented in this section represent minimum entry requirements. Additional discussion tied to action levels presented in Section 7.0 of the SHERP needs to be presented to clearly describe the decision process for personal protective equipment.

53. In addition, tank cleaning is not included in the list of tasks. Please clarify whether tank cleaning/confined space entry will occur as is indicated in Section 3.4.3 of the SHERP.

54. Page 5-7, §5.7: The SHERP indicates that respirator cartridges will be changed a minimum of once weekly. Specification 3.6.1 requires that cartridges be changed daily or upon breakthrough, whichever is more frequent.

55. Page 6-1, §600: No diagram illustrating personnel and equipment decontamination is provided in this section as is specified in Section 3.1(n) of the Navy specifications.

56. Page 6-2, §6.3: More extensive procedures for the disposal of contaminated waste need to be presented, consistent with Section 3.12 of the specifications (e.g., designated area for storage, drum and bag availability, and run-off collection plans).

57. Page 7-1, Table: As noted previously, OSHA's lead standard needs to be adhered to during the excavation of lead contaminated soils. The Mini-Ram is appropriate for real-time monitoring; however, the SHERP needs to demonstrate that the 30 ug/m³ action level for lead is not being exceeded.

58. Page 7-2, ¶4:§7.2: The SHERP indicates that volatile organic compounds will be measured once every hour in the exclusion zone when levels are detected above background. If PID readings are higher than background, subsequent monitoring should be continuous. PID measurements should be taken continuously during any invasive activity. Note that no previous discussion on VOC contamination at Site 6 is presented in the SHERP; PAHs, PCBs, and lead are identified as the chemical hazards of concern in Section 3.1. Please clarify and describe the known or potential extent of VOC contamination.

59. Page 7-2, ¶5, §7.3: The SHERP indicates the frequency of dust monitoring will be dependent on site conditions. More specific guidelines on what will trigger dust monitoring needs to be presented, especially where particulate-borne contaminants (i.e., PAHs, PCBs, and lead) are the primary chemical hazards at this site. Section 3.7.2 of the Navy specifications requires that the SHERP indicate frequency of monitoring. Note also that the frequency of LEL/O₂ monitoring is not specified in the SHERP.

60. Page 8-1, ¶2 §8.1: The SHERP indicates that certain conditions will warrant implementation of the "ERCP." Please define the ERCP and clarify that Section 8 of the SHERP is the ERCP.

61. Page 8-3, Table 8.1: The SHERP identifies Lawrence Memorial hospital but does not present any information pertaining to the Sub-base Hospital which is identified in Section 3.4.3 of the Navy specifications.

62. Please clarify what, if any, onsite medical facilities are available and how they may be used by site personnel.

63. Page 8-4, ¶6 §8.3.2, fourth bullet: Table 8.1 is referred to for a listing of the "local Emergency Response Team". Table 8.1 does not include the local Emergency Response Team. Please clarify and identify the role, responsibility of this team.

64. Page 8-5, third bullet: Please identify the "LANTDIV ROICC" and include the appropriate telephone number in Table 8.1.

65. Page 8-13, ¶4 §8.8.3: The directions to the hospital need to be included in this section. A map with the hospital route also needs to be included in the SHERP.

Environmental Protection Plan

66. Page 1-1, ¶2 § 1.1: The potential exposure to dust, in particular lead-containing dust, needs to be added to the list of hazards. The EPP needs to present practices that minimize exposure, especially in light of recent OSHA emphasis on lead exposure in the workplace.

67. Page 1-3, ¶2 § 1.2.1: Since it is possible that analytical data will indicate that the D008 waste code is inappropriate, the text should be revised to include a review of the waste code characterization based on analytical results.

68. Page 2-1, ¶3 § 2.1.1: This paragraph, stating that the contractor will notify the Navy of any environmental protection plan incident as soon as possible, should be expanded to indicate proper notification of the appropriate off-base regulatory agencies and emergency groups as well. For example, certain spill or release incidents may require immediate notification of the Fire Department or Connecticut Department of Environmental Protection (CTDEP).

69. Page 4-2, ¶2 §4.3: The decontamination pad should be surrounded by walls of sufficient height to catch overspray of pressurized water used to clean large vehicles. A simple wall structure could be made from plastic sheeting draped over a

temporary wooden frame extending from the berms surrounding the decontamination pad. In addition, the paragraph should indicate how the decontamination fluids will be stored and disposed. Decontamination fluids should be handled as hazardous waste and stored and disposed of accordingly.

70. Page 6-1, ¶3 § 6.1.1: The trench excavation and soil stockpiling activities should be modified to address the potential of dust and volatile emissions as contaminant sources to onsite workers. The trench excavation and pipe installation should be conducted in short, manageable lengths so as to avoid overnight or extended staging of exposed soils. A provision should be added to moisten dry soils with water if dust becomes a problem. In addition, a daily cover will need to be placed over the backfilled soils in order to avoid exposure of debris and to create a uniform cover across the entire landfill.

71. Page 7-3, § 7.5: The section discussing monitoring equipment should present all of the instruments that will be used onsite in order to evaluate the program effectiveness. For example, a dust monitor should be included since the excavation of soils may create a dust problem. The Navy should establish monitoring stations in at least four locations at the perimeter of the site in order to monitor for offsite contamination. Each of the four monitoring stations should include a flame igniting device (FID) and dust monitor in order to evaluate the offsite migration of volatile organic compounds and dust. The instruments should be connected to a central computer to enable real-time display of the readings as well as data recording capabilities.

72. Page 8-3, ¶1 § 8.5.3: The discussion of the temporary vehicle decontamination station construction description should refer to Section 7.4.3, not Section 8.5.1 as stated in the text.

73. Table 2 Material Inventory: Table 2 should be expanded to include virgin oils, greases, and used oil that will be generated by the program.

Appendix A Technical Specifications

74. Page III-7 Planning Considerations: The "Minimum Standard #17" should be clarified and presented as part of the Technical Specifications.

75. Page III-12 Specifications: The "Std. & Spec. 3.17" should be clarified and presented as part of the Technical Specifications.

76. Page III-13 Specifications: The text should be revised to indicate the grain-size for "VDOT #1 coarse aggregate" in order to avoid confusion.

77. Page III-13 Permanent Roads and Parking Areas: The text should be modified to refer to the criteria appropriate for a program in Connecticut and not refer to VDOT criteria, unless Connecticut recognizes Virginia's program.