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LETTER REGARDING GEORGIA DEPARTMENT OF NATURAL RESOURCES COMMENTS
ON DRAFT FINAL RCRA FACILITY INVESTIGATION FOR SITES 5, 12 AND 16 NSB KINGS
BAY GA
1/13/1994
GEORGIA DEPARTMENT OF NATURAL RESOURCES

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Georgia Department of Natural Resources

205 Butler Street, S.E., Suite 1252, Atlanta, Georgia 30334

Joe D. Tanner, Commissioner
Harold F. Reheis, Director
Environmental Protection Division

January 13, 1994

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M.W. O'Neal
Captain, U.S. Navy
Commanding Officer
Naval Submarine Base
1063 USS Tennessee Avenue
Kings Bay, Georgia 31547-2606

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

RE: Notice of Deficiency
RFI Report for Sites 5 and 16, and
Site History and File Information
for Site 12

Dear Captain O'Neal:

The Georgia Environmental Protection Division (EPD) has reviewed the document entitled Draft Final RFI Report for Sites 5 and 16, and Site History and File Information for Site 12, which was received by our office on December 6, 1993. This letter transmits EPD's comments on the document. Comment numbers are provided.

SECTION 1.2

1. This section states that a Corrective Measures Study (CMS) is a part of the process for achieving remedial action goals. The Naval Submarine Base (NSB) should be aware that EPD does not require such documents. Upon determination by the facility that contamination has occurred, the facility is required to submit a Corrective Action Plan (CAP). While completion of the CMS may be required internally for NSB's decision-making purposes, the CAP is the only document required by EPD at this stage of the remedial process.

SECTION 1.3

2. This section states that "The extent to which these [RFI] requirements will be met will be established by... the applicability or appropriateness of certain suggested requirements presented in the guidance documents." This statement requires explanation.

SECTION 1.4

3. This section indicates that the goal of the RFI process is the CMS. As stated above, the State of Georgia does not require a CMS. The goal of the RFI process is the development and implementation of a Corrective Action Plan. A CMS may be required for NSB's decision-making process, but it is not a requirement imposed by EPD.

SECTION 2.2.2

4. This section states (for both sites 5 and 16) that water level measurements over a 24-hour period indicate that "no significant tidal influence on the aquifer" was observed. These statements should be quantified, and the method for making these determinations briefly described.

SECTION 3.1.1

5. This section should define the limits of the waste disposal area, describe how the waste was characterized and how the waste disposal area was delineated. This has not been done adequately. Figure 3-1 shows conflicting information. It shows the "approximate landfill boundary" by means of a heavy black line on the map; however, the magnetometry data indicate that buried wastes are located outside this area. This conflict must be resolved.

6. It appears that the magnetometer survey did not extend beyond the "approximate landfill boundary" on the western edge of the site. It is not clear why the survey was not extended beyond this point, particularly in view of the fact that buried ferrous waste was indicated to be present beyond the "boundary" in other areas.

7. The report should give the date(s) when the magnetometer survey was conducted.

8. The terrain conductivity data for Site 5 should be presented.

9. It is critical that the waste disposal area be accurately defined, so that the integrity of the background samples can be established. This has not been done for site 5. One of the upgradient wells (KBA-5-2) which has erroneously been referred to as a "background" well, is located immediately adjacent to (if not actually within) a waste disposal area. New background locations must be established which are both clearly upgradient and clearly outside the waste disposal area.

SECTION 3.2

10. This section should define the limits of the waste disposal area and describe how the area was delineated. This has not been done adequately. It is not clear how the "approximate landfill boundary" shown on Figure 2-6 was determined. It is also not clear how the nature of the waste and the waste disposal practices at the site were determined. This section must be revised to provide this information.

11. The terrain conductivity data for Site 16 should be presented.

SECTION 4.0 AND ASSOCIATED TABLES 4-1 and 4-2

12. Required cleanup levels for groundwater are Maximum Contaminant Levels (MCLs), for contaminants for which these have been established and site specific background levels for all other contaminants. EPD has determined that these standards are protective of human health and the environment. No Alternate Concentration Limits (ACLs) have ever been approved by EPD. This section must be revised. In addition, EPD does not regulate on the basis of proposed regulations. Until and unless such regulations are promulgated, all references to them should be removed from the document. Further, The last paragraph makes reference to groundwater "that is not potentially suitable for human use". NSB should be aware that the State of Georgia considers all groundwater in the State to be of potential potable use and subject to the same cleanup standards as groundwater currently in use for drinking water supply.

SECTION 5.1.1.1

13. The quantitation limits described in this section do not correspond to those reported with the analytical results in Appendices F and G. This discrepancy must be fully explained. It is briefly mentioned, for volatile organic contaminants, in Section 5.2.3; however, no mention is made of inorganic analyses.

SECTION 6.0

14. EPD does not regulate on the basis of proposed regulations. Until and unless such action levels are promulgated, cleanup levels for groundwater are MCLs, for contaminants for which these have been established and site specific background levels for all other contaminants. All references to proposed health-based action levels should be removed from the document.

15. The State of Georgia considers all ground water in the State to be potential sources of potable water. Required cleanup standards for groundwater are MCLs for contaminants for which these have been established, and site specific background levels for all other contaminants.

SECTION 6.1.1

16. This section discusses hydrocone sampling of groundwater for volatile organic contaminants. The actual laboratory results should be submitted, not just data summary tables.

SECTION 6.1.1.1

17. Determinations of the extent of contamination are made in relation to site specific background concentration, not to MCLs or action levels. This section does not discuss site background conditions. Background is the quality of groundwater which would have been characteristic of the site if site activities had not affected groundwater quality. (Please note that because most organic contaminants are man-made, site specific background concentrations for these contaminants will effectively be zero.)

18. Background is not synonymous with upgradient, although locations upgradient from waste disposal activities are likely areas from which to obtain samples for background determinations. Background concentrations must be established for this site and the document must be revised to assess contamination in relation to background.

SECTION 6.1.1.4, ASSOCIATED TABLE 6-6, AND APPENDICES F AND G

19. The statistical information presented in Table 6-6 makes use of comparisons of mean upgradient and downgradient concentration values. This is not acceptable. The effective result of comparing mean values will be to minimize the concentrations of contamination. In addition, "upgradient" and "background" are not synonymous; background has not been established for this site. The goal of the RFI is to accurately delineate contamination, in comparison to background, so that informed decisions concerning remediation can be made. Once background values have been established, comparisons of water quality must be made on a well to well basis.

20. There are several problems with the analytical results for Site 5. This section discusses analytical results for both filtered and unfiltered groundwater samples. EPD does not consider filtered results. These results and the conclusions regarding them, should be removed from the document. Also, some of the analytical methods used (Antimony, Beryllium, and Thallium) have quantitation limits which are above the MCLs. This is not acceptable for a Resource Conservation and Recovery Act (RCRA) facility investigation. The standards set forth under the Contract Laboratory Program (CLP) are designed for Superfund sites, and do not necessarily meet the requirements of RCRA.

21. The actual laboratory results, including all analyses of QA/QC samples, must be submitted. The data summary tables provided in the report, while useful, are interpretations and can not be fully evaluated.

22. The "no further action" recommendation for groundwater at Site 5 can not be accepted on the basis of the information presented in the RFI report. The State of Georgia requires cleanup to MCLs or site specific background concentrations. The analytical results for unfiltered groundwater samples indicate that inorganic contaminants (Arsenic, Beryllium, Chromium, Cadmium, Lead, Nickel and possibly Antimony and Thallium) are present above MCLs at Site 5. Background concentrations have not been established for these constituents; therefore the assertion that these constituents are naturally occurring has not been proven. (As stated above, "background" and "upgradient" are not necessarily synonymous.) Further investigation is required to establish background for the site and to define the extent of groundwater contamination to background in both the horizontal and vertical dimensions.

SECTIONS 6.1.2 THROUGH 6.1.2.4

23. None of the soil samples analyzed were taken from within the "approximate landfill boundaries" of Site 5. Therefore the potential for soil contamination has not been addressed. Additional soil samples must be collected and analyzed.

24. These sections make frequent references to analyzing soil samples for "Appendix IX" constituents. Appendix IX is the list of constituents for analysis of groundwater samples. This should be corrected.

25. The narrative describing the analytical results for the soil samples contains numerous inaccuracies and unsupported conclusions which can not be evaluated without the laboratory data. The actual laboratory results must be submitted. Data summary tables, while useful, can not be substituted.

26. Table 6-9 presents data on naturally occurring inorganic concentrations in soil. While interesting, these data are not applicable to NSB. EPD requires that contamination be assessed in relation to site-specific background data, not data derived from literature searches.

27. The "no further action" recommendation for soil at Site 5 can not be accepted on the basis of the information presented. The State of Georgia requires soil cleanup to TCLP values or site specific background concentrations. Background concentrations have not been established and site soils have not been sampled. Further investigation is required to establish background for the site and to define the extent of soil contamination to background in both the horizontal and vertical dimensions.

SECTION 6.2 General Comments

28. The monitoring wells and soil borings at Site 16 are not located in such a fashion that they can reasonably be expected to produce results which are representative of site conditions. Monitoring well/soil boring KBA-16-2 is the only well which appears to lie directly downgradient of the site. None of the soil samples analyzed were obtained within Site 16. Additional monitoring wells must be installed and soil samples must be obtained to establish background values and to assess groundwater quality and the potential for soil contamination within and in the vicinity of Site 16. Because the analytical results were determined not to be representative of site conditions, the remainder of the report on Site 16 was not exhaustively reviewed. The "no further action" recommendation for this site is not supported by the data presented. The following comments should also be addressed in the revised Section 6.2.

SECTION 6.2.1

29. The hydrocone sampling results for volatile organic contaminants do not appear to be included in this report. Data tables can not be substituted for the actual analytical results.

SECTION 6.2.2

30. This section refers to analysis of "Appendix IX" constituents in soil. Appendix IX is a list of groundwater constituents. This must be corrected.

SECTIONS 6.2.2.1 THROUGH 6.2.2.4

31. The actual laboratory results must be submitted. Data summary tables are interpretations and can not be fully evaluated.

32. Analytical results from filtered groundwater samples are not acceptable. Only results from unfiltered samples will be considered.

33. Statistical comparisons of background and downgradient water quality must be made on a well to well basis. Comparisons based on mean values for all downgradient wells are not acceptable.

SECTION 8.4.1

34. The RFI report presents EP Toxicity Test results from 1981 for soil/sludge removed from Site 2, the fire training pit. Although Ep Toxicity testing was appropriate at the time for characterizing the waste soil/sludge to be excavated from the Fire Training Pit, such characterization was intended only for waste disposal purposes. The EP Toxicity Test is not and has never been adequate for making a determination on the potential for groundwater contamination. Groundwater contamination may have occurred even though the soil/sludge excavated from the pit did not reach the threshold limits for definition of a hazardous waste.

35. The relationship between Site 12 and Site 2 is not clear. The RFI report submitted does not present any analytical data on potential soil or groundwater contamination at Site 2. Despite the fact that Site 2 is contained within the geographic extent of Site 12, Site 2 was not included in the plan for the RFI. These two sites differ in function, waste characteristics, waste quantity and remedial history, as well as other parameters. Thus, the "no further action" recommendation approved by EPD for Site 12 can not be applied to Site 2.

SECTION 9.0

36. The recommendations made in this section for Sites 5 and 16 are not supported by the data presented. These recommendations must be reevaluated following the further investigation recommended in Comments 1 - 35 above.

APPENDIX A

37. Complete well construction information should be provided for all monitoring wells at Sites 5 and 16.

Based on the information submitted, Site 2 will be designated as a Solid Waste Management Unit (SWMU) and a RCRA Facility Investigation will be required, along with a Permit Modification to add this SWMU to the Permit.

Please make the required revisions to address the deficiencies in the document. All recommendations for Sites 5 and 16 should be removed from the report. The revised report must be resubmitted within thirty (30) days. A Phase II RFI Workplan for Sites 5 and 16 must also be prepared and submitted within forty-five (45) days, to address the deficiencies in the field and analytical portions of the RFI. Within sixty (60) days, a RCRA Facility Investigation Workplan should be prepared and submitted for Site 2, the fire training pit. If you have any questions regarding this letter, or need further assistance, please contact Ms. Madeleine Kellam at (404) 656-2833.

Sincerely,



Bruce Khaleghi

Unit Coordinator

Hazardous Waste Management Branch

File: NSB - Kings Bay (R)
cc: Jeff Pallas