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SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
COMMENTS ON CORRECTIVE MEASURE REPORT FOR AREA OF CONCERN 653 (AOC
653) AND SOLID WASTE MANAGEMENT UNIT 159 (SWMU 159) CNC CHARLESTON SC

5/17/2001

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL



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Memorandum:

To: Mihir Mehta, Environmental Engineer Associate
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From: Mansour N. Malik
Hazardous Waste Section
Division of Hydrogeology
Bureau of Land and Waste Management

Date: 5/17/01

Re: Navbase Charleston (CNC)
Charleston, South Carolina
SC 1 70 022 560

Zone H, AOC 653 Corrective Measure Study Report and
Zone H, SWMU 159 Corrective Measure Study (CMS) Report

Revision 0, Dated May, 23rd, 2000

The Document referenced above has been reviewed with respect to the requirement of R.61-79 of the South Carolina Hazardous Waste Management Regulations, The Environmental Protection Agency's (EPA) RCRA Facility Assessment Guidance Document dated October 1988, and the revised EPA Region IV Environmental Compliance Branch Standard Operating Procedures and Quality assurance Manual (SOP/QAM) dated May 1996, the CNAV Final Comprehensive Sampling and Analysis Plan dated 30 August 1994, CERCLA 120(h) as amended.

Based on the results of the current review, the Department has the following comments:

General Comments:

1. The document appears to be well prepared, with satisfactory illustrations and maps. Revision of some might be required. Please see specific comments.
2. This report as presented was supposed to address the CMS activities plus the ISM (Interim Stabilization Measure) in terms of final remedy. Based on the attached document, justification towards an NFA (No Further Action) is not fulfilled. The Department would like to see more soil and groundwater sampling to make sure no risk is posed on human health or the environment.
3. In referring to other relative documents, this document does not bring in some of the important information regarding the geological and hydrogeological settings of the area in concern. This document failed to build a comprehensive correlation with data from adjacent SWMUs and AOCs, and therefore creates data gaps that make it impossible to come to a conclusion. Please revise and include all neighboring SWMUs and AOCs, and any oil-water separators, plus the pertinent hydrogeological data.
4. This documents does not relate to the unfinished work in Zone L and Zone J. It does not concur with proposed NFA.
5. Evaluation of the fate and transport potential of the Arsenic as from soil-to-groundwater is insufficient to support the claim that "Arsenic did not have the potential to migrate from soil to groundwater". It is evident that in the subsurface soil concentration of Arsenic exceeds that of the surface soil as proved throughout the current work and the background correlation reported. For the Department to consider an NFA, the soil-to-groundwater pathway for Arsenic and VOCs must be extensively studied.

6. The lack of information related to the locations and settings of the oil-water separators form a data gap for present and future evaluation of this site. The Department recommends that the Navy must include OWS (Oil Water Separators) data linkages to all SWMUs and AOCs to help enhance the quality of evaluation and assessment.

Zone H, AOC 653:

7. Fig 2 failed to show correlation with associated SWMUs and AOCs, and OWS as it should. Building 1508 is associated with SWMU 124; the Satellite Accumulation Area. Building 1347 is associated with SWMUS 92,93 and 115. Building 636 is associated with SWMUs 122, 123, SAA and PSWMUs 92, 93 and 115. None of the information cited, is included on the figures nor commented on, throughout the text. Please revise and include comments on correlations.
8. AST 640 and UST 640B are in the range of 250-300 ft east of AOC 635. Although groundwater flow direction is generally northeast, a correlation might be useful in predicting source and extent of the contaminants in concern. Please check and include relative information.
9. Table 3.3 on page 3.6 shows the TPH as non detect out of one round of sampling RFI (1996), while in Section 3.2 Navy DET (Environmental Detachment) ISM stated TPH was detected in all soil samples with a high of 42,000 mg/kg and also exceeded its 100 mg/kg screening level. Please clarify.
10. Section 6.2, 2nd line, SWMU 136/AOC 663 never appeared in any of the maps and figures throughout the document. However, the text has used them for correlation. Please revise and include relative information.
11. Section 4.1 2nd paragraph, last line. "Fig 3 shows..." Please be advised that wells NBCHGRD003/03D and BCHGRD006/06D were not indicated anywhere in the figure mentioned. Please check and include wells with their relevant parameters.
12. All of the figures presented lack information related to the wells parameters. Please revise well locations, depths, groundwater levels and any relevant hydrogeological data.

Zone H, SWMU 159:

13. Fig 6 shows TCE concentration values in soil as increasing downgradient (9, 13, 15, 21) mg/kg. In order to thoroughly investigate what is beyond that, the Department believes it is necessary to conduct more sampling downgradient both for the surface and subsurface intervals.

14. Fig 3: Sediment sample locations are not indicated in the legend. Please revise and include the information on the figure.
15. In order to support the claim that TCE has no potential to migrate from soil to groundwater, the Navy must complete more extensive data research/sampling and include better interpretations to support conclusion.
16. Section 4.2.1.1, Line 8: The document points out that reviewing archived soil data for three confirmation sample points at AOC 653 were reviewed to help evaluate SWMU 159. Please be advised that no figure throughout the documents ever ties the two sites together. The results of the evaluation are nowhere to be found in the text. For better correlation, Please revise and include an illustrating figure connecting the two locations with pertinent hydrological data. Also include the evaluation referenced.