

N61165.AR.004504
CNC CHARLESTON
5090.3a

U S NAVY RESPONSE TO REGULATOR COMMENTS TO RCRA FACILITY INVESTIGATION
REPORT AND CORRECTIVE MEASURES STUDY WORKPLAN AREA OF CONCERN 563
(AOC 563) ZONE E WITH TRANSMITTAL CNC CHARLESTON SC

4/22/2003
CH2M HILL

AOC 563 Zone E

RtC RFI REPORT and CMS WORKPLAN (Rf)

CH2MHILL TRANSMITTAL

To: Jerry Stamps
South Carolina Department of Health
and Environmental Control
Bureau of Land and Waste
Management
2600 Bull Street
Columbia, SC 29201

From: Sam Naik/CH2M-Jones
(770) 604-9182 ext. 255

Date: April 22, 2003

Re: CH2M-Jones' Responses to Comments by SCDHEC regarding the *RFI Report Addendum and CMS Work Plan, AOC 563, Zone E, Revision 0*

Quantity	Description
4	CH2M-Jones' Responses to Comments by SCDHEC regarding the <i>RFI Report and CMS Work Plan, AOC 563, Zone E, Revision 0</i> – Originally Submitted on October 17, 2002

If material received is not as listed, please notify us at once.

Remarks:

Copy To:

Dann Spariosu/USEPA, w/att

[REDACTED]

Dean Williamson/CH2M-Jones, w/att

Gary Foster/CH2M-Jones, w/att

Hydrogeology Comments Prepared by Mansour Malik

1. Section 1.1 Background: The report failed to mention the existing two paint booths inside Building 177 and how the activities of their operation may have affected AOC 563. The site operation history must include all relative activities that would impact the environmental setting of the site. The text must be revised to reflect those facts.

CH2M-Jones Response:

AOC 563 is former Building 37, a locomotive maintenance house constructed in 1913 and used until 1939. According to the Final Zone E RFA Report (EnSafe, 1995), probable maintenance activities at Building 37 involved petroleum-based lubricants, chlorinated solvents and degreasers, and coal or petroleum fuels. Building 177 was built over the site of former Building 37 in 1955.

The existing paint booths inside Building 177 are not related to the historic site operations at Building 37 (AOC 563). The need for the identification of an AOC at Building 177 so that an RFI can be conducted has been evaluated by the previous CNC BCT based on operations conducted at this facility. Such assignment of an AOC had not been made during the initial RFI. The Navy/CH2M-Jones team recently recommended identification of the older paint booth on the southeastern side of Building 177 as a new AOC, and this location has been identified as AOC 723 for inclusion in the RCRA Part B permit for the CNC.

An RFA and RFI are being planned for AOC 723 during 2003, and the impact of the old paint booth operation on the southwestern side of Building 177 and related site COPCs will be evaluated and discussed in the RFI Report for AOC 723.

2. The Division of Hydrogeology believes that the shallow groundwater source of contamination has not been fully investigated and the extent of the contamination is yet to be delineated. The Navy must delineate the vertical and horizontal extent of the plume using all available information from the existing and to-be-installed monitoring wells as well as the DPTs on site.

CH2M-Jones Response:

Additional shallow and deep groundwater monitoring wells were installed during November 2002 and sampled by the Navy/CH2M-Jones team to provide additional information on the nature and extent of groundwater contamination in the vicinity of AOC 563. Analytical results from this sampling effort will be presented and discussed in the Revision 1 of the RFI Report Addendum/CMS Work Plan (RFIRA/CMSWP) for AOC 563.

3. Because only one deep monitoring well exists on site (E563GW010) at the present time, the 1,2 Dichloroethene (1,2-DCE) detection in the deep groundwater is not satisfactorily addressed. This RFI report neither identified a possible contamination source nor has it discussed the steps the Navy has taken to investigate such a potential source in the deep groundwater. The installation and monitoring of the newly added deep wells E563GW 04D and 07D will enhance delineation in the deep groundwater.

CH2M-Jones Response:

As indicated in the comment, two deep wells E563GW04D and E563GW07D were installed during November 2002. These wells were analyzed for VOCs. Analytical results from this sampling event will be presented in Rev 1 of the RFIRA/CMSWP for AOC 563.

4. The groundwater data in the report ignored the Direct Push (DPTs) results. The Geographic information system (GIS) recorded a TCE concentration of 168 :g/L at 699GP022 sample (E1a) dated 07/23/1997 and 24.1 :g/L of TCE at 037GP045. The text must be revised to include this information together with the information that might result from the newly installed wells.

CH2M-Jones Response:

The text in Revision 1 of this RFIRA/CMSWP will be updated to include a discussion of these detections.

5. Section 8.3: CMS Work Plan: The CMS suggested a Monitoring Natural Attenuation (MNA) with Land Use Controls (LUCs) as a potential remedy. The Division of Hydrogeology would like to refer the Navy to the US EPA Guidance Seminars Monitored Natural Attenuation for Groundwater EPA/625/K-98/001 and the Interim Final OWSER Directive 9200.4-17 Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites. Among many steps the Navy should take are the following:
 - a. All monitored natural attenuation requests must be accompanied by the site-specific characterization data and analysis.
 - b. Identification of the mechanisms responsible for the attenuation.
 - c. Demonstration that MNA will achieve site-specific remedial objectives within a reasonable time frame as compared to other methods.
 - d. Demonstration that off-site migration of groundwater with hazardous constituents in concentrations above an established maximum contaminant level (MCL) or above a site-specific background concentrations is not occurring.
 - e. Identification of any transformation products that are more toxic than the parent contaminant.
 - f. Identification of any transfer of contaminants from one medium to another.

CH2M-Jones Response:

Monitored natural attenuation (MNA) has been mentioned in the RFIRA/CMSWP as a potential remedy. The CMS Report will address the final remedy chosen for the site. Should MNA be the chosen remedy, the information requested above will be provided in the CMS Report.

6. The report lacks the following items and the Navy should include them:
 - a. A potentiometric map showing all the existing monitoring wells and the groundwater geoprobe locations.

CH2M-Jones Response:

A shallow groundwater potentiometric map has been included in Appendix A of the Revision 0 RFIRA/CMSWP.

- b. A deep groundwater flow map.

CH2M-Jones Response:

A deep groundwater flow map will be included in Appendix A of the Revision 1 of this RFIRA/CMSWP.

- c. The required well logs including the groundwater geoprobes.

CH2M-Jones Response:

Well logs for the groundwater monitoring wells installed during the RFI are included in Appendix A of the Zone E RFI Report, Revision 0 (EnSafe, 1997).

- d. Geologic cross sections figures.

CH2M-Jones Response:

Geologic cross sections in this area of Zone E have been provided in Figures 2-4A and 2-4B of the Zone E RFI Report, Revision 0 (EnSafe, 1997). If a more localized geologic cross-section is found necessary for the CMS, it will be provided as part of the CMS Report for AOC 563.

- e. Chain of custody forms and data validation

CH2M-Jones Response:

Data validation reports for the November 2002 sampling will be included in Revision 1 of the RFIRA/CMSWP. Data validation reports and chain of custody forms for the initial RFI sampling efforts have been provided in Appendix I of the Zone E RFI Report, Revision 0 (EnSafe, 1997). Chain of custody forms for the November 2002 sampling will be provided in the Revision 1 of the RFIRA/CMSWP.

7. Reference to the Sampling and Analysis Plan dated October 31, 2002 Section 3.3 Groundwater Sampling and Analysis Plan stated, "and samples will be collected from these new wells in order to verify the presence of VOCs in the vicinity of the site and assess geochemical conditions". The Division of Hydrogeology wants to remind the Navy that all analyzed VOCs must be reported in the final report of findings.

CH2M-Jones Response:

This data will be included in Revision 1 of this RFIRA/CMSWP.

Conclusion:

It may be premature to conduct a CMS prior to receipt of analytical data from the new six shallow and deep wells. The Navy must incorporate data generated by the October 31, 2002 SAP into the CMS.

The CMS report should consider the present conditions of the site and evaluate all data that has been generated. The CMS report must evaluate and propose remedial measures for both shallow and deep groundwater if warranted.

It is strongly recommended that in situ remediation in areas of elevated contamination be considered.

CH2M-Jones Response:

Comment noted. Data generated from the November 2002 sampling event will be included in Revision 1 of the RFIRA/CMSWP.