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RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION WORK
PLAN ADDENDUM AREAS OF CONCERN 530 AND 531 (AOC 530 AND 531) CNC
CHARLESTON SC
4/1/2002
CH2MHILL

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Constructors, Inc.

April 1, 2002

Dr. Dann Spariosu, Ph.D.
US EPA, Region 4
61 Forsyth St., SW
4WD-FFB
Atlanta, GA 30303

Re: Draft Responses to Comments, RFI Report Addendum (Revision 0) – AOCs 530/531,
Zone E, Charleston Naval Complex

Dear Mr. Spariosu:

Enclosed is a copy of the Draft Responses to Comments and draft revised text from Section 6.0 of the RFI Report Addendum (Revision 0) for AOCs 530/531 in Zone E of the Charleston Naval Complex (CNC). These documents have been prepared in response to the U.S. Environmental Protection Agency's (EPA's) comments on the RFI Report Addendum (Revision 0) for AOCs 530/531, dated January 17, 2002, and are provided for discussion only. CH2M-Jones will distribute the final version of these responses to comments and the Revision 1 pages of the RFI Report Addendum after acceptance of these responses by the EPA.

Please contact me at 770/604-9182, extension 255, should you have any questions or comments.

Sincerely,

CH2M HILL

Sam Naik

cc: Tim Frederick/Gannett-Fleming, Inc., w/att
Rob Harrell/Navy, w/att
Gary Foster/CH2M HILL, w/att
Dean Williamson/CH2M HILL, w/att

DRAFT—FOR DISCUSSION ONLY
Responses to U.S. Environmental Protection Agency (EPA) Comments
on the RFI Report Addendum and CMS Work Plan, Revision 0,
for AOCs 530/531, Zone E
Dated December 2001

GENERAL COMMENT

The RFI Addendum's recommendation that a Corrective Measures Study should be performed is supported by the data presented. However, a few specific comments should be resolved.

SPECIFIC COMMENTS

Comment 1:

Page 3-1. The text states that the RFI indicated the presence of a UST at AOC 531, based upon a registration document. The text states, however, that there is no evidence that a tank is located at AOC 531. Additional information should be presented detailing the investigative steps taken to locate the reported tank. Also, in light of the conversations at the January BCT Meeting, it may be appropriate to transfer AOC 531 to the State UST program.

CH2M-Jones Response:

The reference to the UST registration document was made in the Zone E RFI Report, Revision 0 (EnSafe Inc., 1999). CH2M-Jones verified existing maps of UST locations, along with the Navy's records, and did not find a 20,000-gallon UST associated with AOCs 530/531. Additionally, CH2M-Jones contacted Mike Bishop with the SCHDEC Bureau of Water Management (UST Program) and Steve Parker with EnSafe Inc. during February 2002 to verify the existence of the UST. No information on a tank installation at this site exists in either SCDHEC's or the Navy's records. One of the objectives of the Zone E RFI Work Plan for AOC 531 was to investigate the presence of this UST during the RFI. This UST was not found during the Zone E RFI fieldwork. The inclusion of this UST in the referenced 1986 UST registration document is believed to be an incorrect entry.

AOC 531 is Building 459, which houses a transformer and a small cinder-block building with a bank of batteries.

With respect to the transfer of AOC 531 to the UST program, since no UST has been found to be associated with this site, transfer of this site to the UST program is not warranted.

Comment 2:

Page 6-2, Section 6.5. The RFIRA has used the former presence of a rail line in the area of AOCs 530/531 to help eliminate elevated arsenic concentrations as a COC in this area. However, this section indicates that the former rail line will not be included in the AOC 504, Investigated Rail Lines, evaluation. A clear discussion of how the former rail lines could be a source of elevated contaminated concentrations and yet not be evaluated as part of the rail line investigation should be included in the text.

CH2M-Jones Response:

The AOC 504 rail line investigations mentioned in Section 6.5 were part of the Zone L RFI. The text will be edited to clarify that a previous background study along the railroad lines indicated the presence of elevated arsenic and BEQs. The results of this investigation have been presented to the CNC BCT in Technical Memorandum: Results from Additional Background Sampling of the CNC Railroad Lines and Naval Annex (Zone K), dated August 14, 2001. The arsenic concentrations detected during this investigation ranged from 2 mg/kg to 92 mg/kg and the BEQ concentrations ranged from 87 µg/kg to 5,133 µg/kg. The BCT has adopted these background ranges of concentrations as screening guidance for surface soils at AOCs and SWMUs with historic or current railroad tracks near surface soil sampling locations.

Elevated arsenic appears to be associated with the base-wide application of pesticides along the railroad lines and adjacent to paved areas, fencelines, and buildings. Historical base-maintenance-related pesticide applications indicate arsenical pesticide use. Since these pesticides are applied according to their prescribed use and elevated arsenic levels are not associated with site RCRA operations, any elevated arsenic detects adjacent to sites are not regarded as site-related.

The elevated detections of arsenic and BEQs at AOCs 530/531 can be attributed to the historic railroad lines running through the site, which have been removed or paved over. There is no indication from information on past site activities that arsenic was used during operations at Building 35 or Building 459 or that the presence of arsenic in site soil is related to releases from the AOCs. Based on these considerations, arsenic was determined not to be a COC at AOCs 530/531.

Arsenic and BEQs were not detected above screening criteria in the subsurface soil or groundwater; therefore, they are not a leachability concern at these sites.

The above discussion will be incorporated into the text of Section 6.5 as shown in the proposed revision to the text (attached).

1 **6.0 Summary of Information Related to Site** 2 **Closeout Issues**

3 **6.1 RFI Status**

4 The *Zone E RFI Report, Revision 0* (EnSafe, 1997) addressed SWMUs/AOCs within Zone E of
5 the CNC, including AOCs 530/531.

6 In accordance with the RFI completion process, if a determination of No Further
7 Investigation (NFI) is made upon completion of the RFI, then a site may proceed to either
8 NFA status or to a CMS. The RFI for AOCs 530/531 identified COCs for surface soils and
9 shallow groundwater. Based on the discussion presented in Section 5 above, BEQs in
10 surface soil are considered a COC at AOCs 530/531.

11 The remaining subsections address the issues that the BCT agreed to evaluate prior to site
12 closeout.

13 **6.2 Presence of Inorganics in Groundwater**

14 For the purpose of site closeout documentation, the inorganics in groundwater issue refers
15 to the occasional or intermittent detection of several metals (primarily arsenic, thallium, and
16 antimony) in groundwater at concentrations above the applicable MCL, preceded or
17 followed by detections of these same metals below the MCL or below the practicable
18 quantitation limit.

19 There were no detections of antimony in shallow or deep wells above the laboratory
20 detection limits. There were no detections of arsenic above the MCL in samples from the
21 shallow or deep groundwater monitoring wells. Intermittent detections of thallium in
22 shallow and deep groundwater at the site above the MCL do not point to a site-specific
23 source, but can be attributed to natural occurrence. Table 5-3 shows thallium concentrations
24 from the RFI groundwater sampling at AOC 530. Further evaluation of this issue is not
25 warranted.

1 **6.3 Potential Linkage to SWMU 37, Investigated Sanitary** 2 **Sewers at the CNC**

3 There are no data suggesting that there was an impact to the sanitary sewers from this site.
4 Therefore, further evaluation of this issue is not warranted.

5 **6.4 Potential Linkage to AOC 699, Investigated Storm Sewers at** 6 **the CNC**

7 No direct connection from these sites to the storm sewers are known to exist. No COCs
8 requiring further evaluation are present at the site. Based on these findings, further
9 evaluation of this issue is not warranted.

10 **6.5 Potential Linkage to AOC 504, Investigated Railroad Lines** 11 **at the CNC**

12 The nearest railroad line to AOCs 530/531 is approximately 300 feet north of the site. There
13 is no known linkage between AOCs 530/531 and the investigated railroad lines of AOC
14 504. A previous background study along the railroad lines indicated the presence of
15 elevated arsenic as well as BEQs in soil. The results of this investigation have been
16 presented to the CNC BCT in the document *Technical Memorandum: Results from Additional*
17 *Background Sampling of the CNC Railroad Lines and Naval Annex (Zone K)*, dated August 14,
18 2001 and discussed in Section 5.1 above. Based on the findings of this study, the elevated
19 arsenic and BEQs at AOCs 530/531 are attributed to the former railroads at this site.

20 **6.6 Potential Migration Pathways to Surface Water Bodies at** 21 **the CNC**

22 The nearest surface water body to AOCs 530/531 is the Cooper River, which lies
23 approximately 1,000 feet east of the site. The only potential migration pathway from the site
24 to surface water is via overland flow via stormwater runoff. The entire site is covered with
25 buildings and pavement, which eliminates contact of surface soil with stormwater.
26 Similarly, runoff directed to the storm sewer system, which discharges to the Cooper River,
27 does not contact the surface soil. Since the BEQ detections at the site are under concrete and
28 asphalt pavement, no further evaluation of a potential pathway for contaminant migration
29 via stormwater runoff is warranted.

1 **6.7 Potential Contamination in Oil/Water Separators (OWSs)**

2 There are no OWSs associated with AOCs 530/531. In addition, there is no reference to an
3 OWS at the site in the *Oil Water Separator Data* report, Department of the Navy, September
4 2000. Therefore, further evaluation of this issue is not warranted.

5 **6.8 Land Use Control (LUC)**

6 The CNC BCT has agreed that all of Zone E will have at least some land use controls and
7 restrictions. At a minimum, these land use controls are likely to include restrictions against
8 residential land use. Site specific land use controls are also expected to be required at
9 specific sites within Zone E depending on the results of the site-specific investigations. At
10 AOCs 530 and 531, land use controls are expected to be applied due to the presence of
11 COCs in surface soil. The specific land use controls will be identified in a CMS for these
12 sites.