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LETTER REGARDING SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL REVIEW OF ZONE I RESPONSE TO COMMENTS AND FINAL RCRA FACILITY INVESTIGATION (RFI) REPORT DATED 1 MARCH 1999 FOR ZONE I CNC CHARLESTON SC

05/07/1999

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

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2600 Bull Street
Columbia, SC 29201-1708

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CERTIFIED MAIL

May 7, 1999

Henry Shepard II, P.E.
Caretaker Site Office
Naval Facilities Engineering Command, Southern Division
P.O. Box 190010
North Charleston, SC 29419-9019

Re: Zone I Response to Comments and
Final RCRA Facility Investigation (RFI) Report, Revision 0
Dated March 1, 1999
Charleston Naval Complex
SC0 170 022 560

Dear Mr. Shepard:

Within Zone I are Areas of Concern (AOCs) 671, 672, 673, 675, 676, 677, 678, 679, 680, 681, 685, 687, 688, 689, 690, RTC/177, DMA and solid waste management units (SWMUs) 12 and 16. The Navy has submitted to the Department an RFI report for Zone I that does not address AOCs 678, 679, 680, and 681. Thus the Department's decisions are based on the information contained in the above submitted report.

The Department has reviewed the report according to applicable State and Federal Regulations and the Charleston Naval Complex Hazardous Waste Permit effective September 17, 1998. The report presented recommendations on the next step in the corrective action process for the AOCs and SWMUs. The Department, after this review and according to permit condition II.E.8., believes that the units at Zone I should be classified as follows:

AOC 671	CMS for surface soil and shallow groundwater
AOC 672, 673	CMS for surface soil
AOC 675, 676, 677	Corrective action should be addressed under RCRA Subtitle I authority
AOC 685	CMS for surface soil
AOC 687	RFI for groundwater
AOC 688	NFA
AOC 689, 690	CMS for surface soil
SWMU 12	RFI for groundwater
RTC/177	CMS for surface soil
DMA	NFA

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Water Monitoring Management &
Protection Division

The Navy should refer to Michael Danielsen's comments (April 30, 1999 memorandum Danielsen to Peterson) for more detail as to the Navy's requirements with AOCs 675, 676, 677, 687, and SWMU 12. The Navy should also address the comments prepared by the Department's Risk Assessor (March 29, 1999 memorandum Byrd to Peterson) as well as the comments prepared by Susan Peterson.

As noted above, the Department believes that the corrective action status of AOC 688 and the DMA are "No Further Action" (NFA). The Department's concurrence is based on the information provided by the Navy to date. Any new information contradicting the basis for this concurrence may require further investigation or action. It should be noted that the permit shall be modified pursuant to R.61-79.270.41 to change the status on these units.

The nature of the comments generated do not preclude the Department from giving conditional approval of the RFI report in order to expediate the proposed CMS activities. However, upon receipt of this letter, please make the specified changes and resubmit a Final Zone I RFI Report, Revision 1 to the Department and U.S. EPA for a final review and approval. Revised pages to be inserted into the orginal document are acceptable. If revised pages are submitted, each page should be coded; for example, 32(R-6/13/99) would be page 32, revised 6/13/99. In addition to the revisions or new document, please provide a summary of the responses.

Should you have any questions regarding this issue, please contact me at (803) 896-4182 or Michael Danielsen at (803) 896-4194.

Sincerely,

Susan Peterson

Susan Peterson, Environmental Engineer Associate
Corrective Action Engineering Section
Bureau of Land and Waste Management

attachment: memorandum: Byrd to Peterson, March 29, 1999
attachment: memorandum: Danielsen to Peterson, April 30, 1999
attachement: comments prepared by Peterson, May 3, 1999

cc: Michael Danielsen, Hydrogeology
Dann Spariosu, EPA Region IV
David Dodds, SOUTHDIV
Todd Haverkost, EnSafe Environmental
Rick Richter, Trident EQC District
Paul Bristol, DHEC Bureau of Water

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MEMORANDUM

TO: Susan C. Peterson, Environmental Engineer Associate
Hazardous Waste Permitting Section
Division of Hazardous and Infectious Waste Management
Bureau of Land and Waste Management

FROM: Michael W. Danielsen, Hydrogeologist
Hazardous Waste Section
Division of Hydrogeology
Bureau of Land and Waste Management

DATE: April 30, 1999

RE: Navbase Charleston (CNC)
Charleston, South Carolina
SC 170 022 560

Zone I RCRA Facility Investigation (RFI) Report for Charleston Naval Complex (CNC) Sections 1 to 11
Revision 0, Dated March 1, 1999

The document referenced above has been reviewed with respect to the requirements of R.61-79 of the South Carolina Hazardous Waste Management Regulations, The Environmental Protection Agencies (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.

Based on the results of that review, comments are attached.

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Zone I RCRA Facility Investigation (RFI) Report for
Charleston Naval Complex (CNC) Sections 1 to 11
Michael W. Danielsen April 30, 1999

1. **AOC 675/ 676/ 677**

The Navy, in the Response, states that "this area is already being addressed by the tank program." The Department contacted Paul Bristol of the Tank Program who explained he reviewed a closure report for "NS-2A" and "NS-4". The Department agrees that the Tank Program is the most appropriate program to address environmental concerns at AOC 675/676/677. However , the Navy must submit to the Department a request to transfer AOC's 675/676/677 from RCRA Subtitle C to RCRA Subtitle I authority.

Upon reading Mr. Bristol's correspondence with the Navy, the Department realizes there has been a break in communications. No investigative work has been completed since the issuance of the letters in October, 1996 and March 1997. Please contact Paul Bristol at (803) 898-3559 to resume this work.

2. **Page 10.4.1 AOC 678/ 679**

The addendum to the revised RFI Report was not available for review. This information must be provided before the Department can complete the review of this work.

3. **Page 10.5.1 AOC 680**
See comment #2.

4. **Page 10.6.1 AOC 681**
See comment #2.

5. **AOC 687**

Well 687GW002 is a permanent well that has been sampled 6 times from 1995 to 1998. The maximum contaminant level(mcl) for Arsenic is 50ug/L. Arsenic concentrations have exceeded the MCL in 3 rounds of sampling. The levels were: 73.7 ug/L (round2), 131 ug/L (round 5), and 58.3 ug/L (round 6). It is clear that these hits are not random and

indicates that contamination exists.

Contamination can not be delineated from a single monitoring well (arsenic does not exceed its MCL in the other three wells at AOC 687 (687GW001, 003, and 004)). The Navy must delineate the horizontal and vertical extent of arsenic contamination in groundwater. If the Navy believes the detection of arsenic is site related or is the result of a naturally occurring geologic condition, the Department is amenable to reviewing additional information that substantiates that claim.

6. **SWMU 12**

Well 012002 is a permanent well that has been sampled 4 times from 1995 to 1998. The maximum contaminant level (mcl) for Arsenic is 50ug/L. Arsenic concentrations have exceeded the MCL in all 4 rounds of sampling. The levels were: 177 ug/L (round 1), 220ug/L (round 2), 188 ug/L (round 3), and 253 (round 4). It is clear that these hits are not random and indicates that contamination exists.

Contamination can not be delineated from a single monitoring well (arsenic does not exceed MCL's in the other three wells at SWMU 12 (012001, 012003, GD1003 and GD 103D)). The Navy must delineate the horizontal and vertical extent of arsenic contamination in groundwater. If the Navy believes the detection of arsenic is site related or is the result of a naturally occurring geologic condition, the Department is amenable to reviewing additional information that substantiates that claim.

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2600 Bull Street
Columbia, SC 29201-1708

MEMORANDUM

TO: Susan Peterson, Environmental Engineer Associate
Corrective Action Engineering Section
Division of Hazardous and Infectious Waste
Bureau of Land and Waste Management

FROM: Susan K. Byrd, Risk Assessor Susan K. Byrd
Corrective Action Engineering Section
Division of Hazardous and Infectious Waste
Bureau of Land and Waste Management

DATE: March 29, 1999

RE: Charleston Naval Shipyard
South Carolina
SC 0170022560

Document:
Zone I RCRA Facility Investigation Report Revision
NavBase Charleston
Volumes I-VI
March 1, 1999

The Department has reviewed the above referenced document completed by Ensafe Inc as well as the attached Response to Comments dated January 1996. The following comments pertain to the Human Health and Ecological Risk Assessments:

1.) Section 7, Page 7.10, Line 7 and Page 7.14, Line 17: The text lists iron as one of the essential nutrients that will be eliminated from the human health risk assessment. EPA Region IV Human Health Risk Assessment Bulletin Number 2 (Data Collection and Evaluation) lists essential nutrients that may be eliminated. Iron is not listed as an essential nutrient that may be eliminated; therefore, its risk due to environmental exposure should be evaluated where necessary.

2.) Section 10.3.6, Tables 10.3.10 and 10.3.11: The tables list the organic and inorganic results for sediment samples collected at AOCs 675/676/677. Since no background sediment samples were collected at this site, screening values such as sediment screening values or RBCs should be listed in the table for comparison to the levels detected.

3.) Section 10.7.6.3, Page 10.7.87, Line 15: The text states that "Groundwater is not currently used the future as potable or process water, nor is such use anticipated in the future." It appears that the text contains a typographical error and the words "the future" should be deleted from the text.

4.) Table 10.9.18, Page 10.9.47: The table used the abbreviation ERR; however, no description of the meaning was given in the notes or abbreviation/acronyms listing in the front of Volume I. The notes portion of the table should be modified to include the meaning of ERR.

5.) Section 10.2, Page 10.12.1, Line 10: A typographical error is present. " Rhe" should be changed to "the".

6.) Page 12, Response 37, SCDHEC Comments on Risk Assessment Portion of Zone I:

The response states that chemical concentrations were not compared to RBC's or reference values in the DMA area because the soils are recently dredged river- bottom sediments. In order to appropriately use the information provided regarding compounds detected in the DMA "soils", a reference value is needed. A comparable background value from another area that received river-bottom sediments (up gradient of potential CNC influence) may need to be collected. From a risk perspective, the river-bottom sediments should be compared to RBC's if the target population would come into contact with sediments in the same manner as surface soils. A common scenario is when intermittent stream sediments are treated as surface soils during times of drought when the sediments are exposed.

If you have any further questions or comments regarding Zone I, please contact me at (803)896-4188.