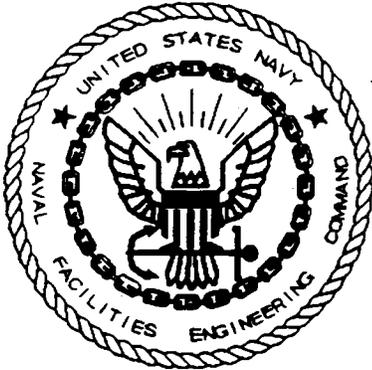


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RESPONSE TO COMMENTS FOR ZONE J DRAFT RESOURCE CONSERVATION AND
RECOVERY ACT FACILITY INVESTIGATION REPORT AREA OF CONCERN 681 DATED
JANUARY 1996
7/30/1999
ENSAFE INC.

**COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY
CHARLESTON NAVAL COMPLEX
CHARLESTON, SOUTH CAROLINA
CTO-029**



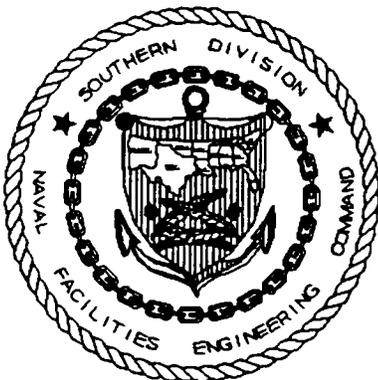
RESPONSE TO COMMENTS FOR

**ZONE I RCRA FACILITY INVESTIGATION REPORT
AOC 681
(Dated January 1996)**

Prepared for:

**Department of the Navy
Southern Division
Naval Facilities Engineering Command
Charleston, South Carolina**

**SOUTHDIV Contract Number:
N62467-89-D-0318**



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**July 30, 1999
Revision: 0**

**SCDHEC Comments on Risk Assessment Portion of The
Zone I RCRA Facility Investigation Report
(Dated January 1996) NAVBASE Charleston**

**AOC 681
RFI Report Addendum
July 30, 1999**

Comment 15:

Section 10.6.5.1 AOC 681. When discussing the fate and transport of all the ten organic constituents detected above their RBCs, at this site, it will be helpful to include a discussion on soil type, groundwater depth and meteorological (weather) conditions. According to Section 8.4 the soil type is sandy and the soil is low in organic carbon. The above mentioned factors, beside the Koc value of each constituents, are important in determining the fate and transport of each constituents. The possibility of soil-to-groundwater cross-media transport should be carefully analyzed in the absence of groundwater sampling. On the other hand, groundwater samples could be collected to demonstrate that this media has not been impacted.

Response 15:

First, please note that Section 10.6.5 of the draft document is Section 10.6.7 in the revised report addendum. Three groundwater monitoring wells were installed at AOC 681 in 1998. These wells were sampled in three rounds in late 1998 and early 1999. The results of the sampling are discussed in Section 10.6.4 as well as in the Fate and Transport Section (10.6.7). Additionally, soil and groundwater samples were collected via DPT (geoprobe sampling) at AOC 681 in March 1998. Results from this sampling event are included in revised Sections 10.6.2 and 10.6.4 as well as in revised Section 10.6.7 (Fate and Transport).

Comment 16:

Section 10 AOC 681. Considering the fact that so many organic chemicals are detected above their soil water protection SSL and that Benzo (a) pyrene was recognized as a COPC, based on the result of Wilcoxon rank sum test, a groundwater sampling is recommended at this site with analysis for VOCs and SVOCs.

Response 16:

The Wilcoxon rank sum test is not run on benzo(a)pyrene results since it is an organic compound. As noted above, three groundwater monitoring wells were installed and sampled and groundwater samples were collected from three DPT points at AOC 681. All the groundwater samples were analyzed for VOCs and SVOCs. The results of the soil sampling is presented in the Nature and Extent of Contamination discussion in Section 10.6.2 of the report addendum while the results of the groundwater sampling are discussed in Section 10.6.4 of the report addendum. PAHs were the only organics detected above SSLs in subsurface soil samples and these exceedances were only seen in boring 681SB001.

Comment 17:

Section 10.6.6.1. Please note that an USEPA report by Technical Review Workgroup for Lead (December 1996) provides recommendations for an interim approach to assessing risk associated with adult exposure to lead in soil. Under the light of above fact please reconsider the statement "...USEPA does not currently sanction any risk characterization model or approach for predicting the adverse health effects of lead in adults".

Response 17:

Please note that the HHRA which was found in Section 10.6.6 of the draft report is in Section 10.6.8 of the report addendum. The *Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil* is used to evaluate lead exposure for AOC 681. In addition, the above referenced statement has been deleted from the text.

Comment 18:

Section 10.6.6.2. Under the 'COPC identification' Section TPH is not mentioned as a COPC whereas Table 10.6.10 identifies TPH as a COPC. TPH has not been discussed under exposure assessment and toxicity assessment. A qualitative risk discussion on TPH is required if TPH is recognized as a COPC.

Response 18:

Please note that Section 10.6.6.2 is now 10.6.8.2 in the report addendum and Table 10.6.10 has been relabeled as 10.6.13. The revised Table does not identify TPH as a COPC. Typically the focus of the investigation is on RCRA regulated constituents. Where TPH has been detected, it is compared to standards provided under the State of South Carolina's UST Program. Sites where TPH concentrations are above UST standards are transferred to the Navy's Petroleum Storage Tank Program (as applicable). To date, quantitative risk assessments involving TPH exposure have not been necessary.

SPECIFIC COMMENTS

S/A Number	Site Name	Notes
681	Blast Booth & Cyclone	a) Soils: PAH, TPH (no 2 nd interval samples taken) b) Lead 2 nd interval > background c) Was an OWS a part of this site? d) No wells at this AOC

Response:

Comment "a", Multiple SVOCs were detected in soil samples (both surface and subsurface). Additional soil and groundwater samples have been collect by both EnSafe and the Detachment and the results of the additional analysis is included in the AOC 681 report addendum (Section 10.6.2 of the RFI report). TPH analyses were not performed on subsurface samples and the reason for this is not known. The point is mute however since TPH is not a RCRA regulated substance. As noted above, additional samples have been collected and analyzed for specific, regulated substances.

Comment "b", Lead was detected in the second interval above background in two samples but the detections were well below the residential action level of 400 mg/kg.

Comment "c", A 1968 sewer map indicates an oil water separator with a UST was located just off the northeast corner of Building 681, between 681 and Building NS-27. Based on a 1981 demolition map, this o/w separator and UST was closed by removal. Copies of these drawings are included as an attachment to the addendum report. There was an o/w separator and UST located on the east side of Building 681 which was closed by removal in 1997. A UST Assessment Report was complete and submitted for this removal. Also, field personnel encountered a line during soil sampling between buildings 680 and 681 that may have been associated with another oil water separator. A number of additional soil samples were collected in this area between the buildings. No additional information was discovered to indicate the nature or history of any o/w separator located between the two buildings.

Comment "d", Three groundwater monitoring wells were installed at AOC 681 in 1998 and three rounds of samples were collected from these wells. The results of the sampling are presented in Section 10.6.4 of the RFI report addendum. Grid well pair 13 is down gradient of Building 681 and is downgradient of the reported o/w separator. Per the 20 January 1998 conference call, 3 DPT samples were collected in a triangular pattern around grid well GD1013/13D. This data is also included in Section 10.6.4 of the RFI report addendum.

