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REVIEW OF THE PROPOSED REVISIONS TO FINAL COMPREHENSIVE RESOURCE
CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION WORK PLAN AND
RESPONSE TO SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL
CONTROL COMMENTS CNC CHARLESTON SC

7/30/1996

ENSAFE/ ALLEN AND HOSHALL

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

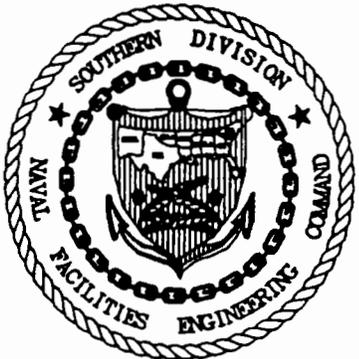


**REVIEW OF THE PROPOSED REVISIONS TO THE
FINAL COMPREHENSIVE RCRA FACILITY
INVESTIGATION (RFI) WORKPLAN
RESPONSE TO REGULATORY COMMENTS**

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, 1996

**Response To
South Carolina Department of Health and Environmental Control
Comments For The
Proposed Revisions to the Final Comprehensive RFI Workplan (Dated 12/1/95)
March 7, 1996**

Comment 1:

The Department and EPA Region IV have had discussions with NAVBASE regarding the manner in which background concentrations are calculated. Currently, the Final Comprehensive RFI Work Plan includes general discussions for calculation of background concentrations. However, more thorough and specific procedures were developed and incorporated into the Zone H RFI Report. Since the procedures included in the Zone H RFI Report are more thorough, it seems appropriate to revise the Comprehensive RFI Work Plan to incorporate these procedures. Therefore, NAVBASE should propose appropriate revisions to the Comprehensive RFI Work Plan to accomplish this.

Response 1: Appendix G, submitted on December 1, 1995, contains the *Background Evaluation Technical Memorandum*. This memorandum discusses, in detail, thorough and specific procedures for calculating background concentrations. Appendix G will be resubmitted for review.

Comment 2:

In Section 4.3.4 (Soil Sample using LIF/DPT) of the proposed revisions, it is noted that "Appendix E contains information concerning the two LIF systems available for use: Rapid Optical Screen Tool (ROST) and Site Characterization Analysis Penetrometer Systems (SCAPS). However, Appendix E is not included in the proposed revisions. This appendix should be submitted for review.

Response 2: Appendix E will be incorporated into Volume III, *Final Comprehensive Baseline Risk Assessment RCRA Facility Investigation*.

Comment 3:

Section 4.6.4 (Continuous Core Sampling using Rotasonic Drilling Methods) notes that a detailed description of the Rotasonic method is provided in Section 5.6. This is incorrect. The Rotasonic drilling method is described in Section 5.5. This error should be corrected.

Response 3: Section 4.6.4 (Continuous Core Sampling using Rotasonic Drilling Methods) refers to the Rotasonic method in Section 5.6; however, this method is actually discussed in Section 5.5. The referencing section will be corrected to read "Section 5.5".

Comment 4:

It is noted in the proposed changes [see Section 4.3.3 (Soil Sample Screening using DPT) and Section 4.3.4 (Soil Sample Screening using LIF/DPT)] that specific procedures for sample collection using DPT technology vary between equipment manufacturers. Thus, the Final Comprehensive RFI Work Plan includes only a general description of procedures for sample collection when using DPT. While the Department understands that specific procedures will likely vary depending upon the specific DPT equipment being used, the exact procedures for sample collection must be included either in the Comprehensive RFI Workplan, or in the Zone-specific workplans. Therefore, if DPT will be used during assessment at NAVBASE, the Zone-specific workplans should include a description of the exact sampling procedures to be used to collect samples for the particular DPT employed.

Response 4: Section 4.3.3 (Soil Sample Screening using DPT) and Section 4.3.4 (Soil Sample Screening using LIF/DPT), in Volume II, *Final Comprehension Sampling and Analysis Plan RCRA Facility Investigation*, describes the exact procedures for sample collection using DPT equipment. If the DPT sampling approach by the selected vender differs from the outlined procedures, the deviations will be outlined and submitted as an amendment to the zone-specific work plan.

**RESPONSE TO
SOUTH CAROLINA DEPARTMENT OF
HEALTH AND ENVIRONMENTAL CONTROL
COMMENTS FOR THE
REVIEW OF THE PROPOSED REVISIONS TO THE FINAL COMPREHENSIVE
RFI WORKPLAN (HUNT TO THOMPSON, 4/15/96)
MAY 9, 1996**

Comment 1:

NAVBASE Charleston has proposed the use of two innovative technologies; the Rapid Optical Screen Tool (ROST) and the Site Characterization Analysis Penetrometer Systems (SCAPS). Little information was included in the previous submittal describing these technologies. Therefore, my previous memorandum on this subject (Bowers to Tapia, 3/7/96) noted that additional information on the proposed technologies should be submitted for review. In the April 13, 1996 submittal, NAVBASE Charleston provided additional information on these technologies, including two August 1995 Superfund Innovative Technology Evaluation bulletins. The Department was also provided with the report "Site Characterization at Naval Base Charleston AOC 626", dated April 1996.

The information submitted regarding the ROST and SCAPS is vague. The equipment to be used, method of operation, sampling procedures, accuracy, precision, potential interferences, quantitation limits, as well as the advantages and disadvantages of using the technologies, and any other relevant information should be included in the Comprehensive RFI Workplan. NAVBASE Charleston should refer to Appendix B (RCRA Facility Investigation (RFI) Workplan Outline), including, but not limited to Section I.B (Sampling and Analysis Plan(s) of the RCRA permit for a more complete list of issues that must be addressed.

As an example of the questions surrounding the proposed use of ROST and SCAPS, an important limitation to these technologies has been noted while reviewing the Zone L RFI Workplan, in which use of ROST and SCAPS is proposed. Specifically, ROST and SCAPS are capable of detecting only a limited suite of parameters, such as volatile organic compounds and some petroleum compounds. Thus, these technologies are apparently incapable of detecting several common suites of parameters, such as many of the inorganics listed as hazardous constituents under RCRA. This is a severe limitation and should be fully discussed in the Comprehensive RFI Workplan.

Based upon this comment, approval of the use of ROST and SCAPS for incorporation into the Comprehensive RFI Workplan for site screening and/or sampling is not recommended. If NAVBASE Charleston wishes to submit additional information addressing the concerns noted above, the Department will review this information.

Response 1:

Due to the concerns of the accuracy, precision and other limitations of the ROST and SCAPS screening systems by EPA and SCDHEC, all references regarding these screening systems have been removed from the *Comprehensive RFI Work Plan*. These corrections have been made throughout Section 4.0 of Volume II, *Final Comprehensive Sampling and Analysis Plan*.

The above comment states "(it) has been noted while reviewing the *Zone L RFI Workplan*, ...use of ROST and SCAPS is proposed". The *Zone L RFI Workplan* does not propose the use of either the ROST or SCAPS systems; however, it does propose the use of more conventional direct push technology (DPT) such as the Geoprobe to obtain soil and groundwater samples that can be analyzed by a SCDHEC certified laboratory. The *Zone D, F, and G RFI Workplan* is the only document which proposed the use of the ROST and SCAPS systems as a screening testing tool. References to the SCAPS and ROST systems are being deleted from the *Zone D, F, and G* as well.

**ENVIRONMENTAL PROTECTION AGENCY
COMMENTS ON THE DRAFT REVISIONS
PROPOSED FOR THE COMPREHENSIVE RESOURCE CONSERVATION
RECOVERY ACT FACILITY INVESTIGATION WORK PLAN
MAY 9, 1996**

Comment 1:

In several places in various documents, reference is made to reducing the number and types of analyses performed. Volume I, Pages 2-5 — 2-10 present an explanation for this procedure. EPA agrees with this concept and this section as written. However, it is important to note that before the number and types of analyses approved in a work plan are reduced, it is important for agreement to be reached between Naval Base Charleston, South Carolina Department of Health and Environmental Control (SCDHEC), and EPA. EPA recommends that, at the point where Naval Base Charleston believes a reduction in number and types of analyses is justified, agreement be reached verbally and then consummated in writing. Pending such agreement, the approved work plan must be followed. Volume I, Pages 2-5 — 2-10 need to include this agreement.

Response 1:

Volume I, *Final Comprehensive Project Management Plan*, Page 2-10 has been revised to indicate that verbal approval to reduce the number and types of samples will be obtained from SCDHEC and EPA prior to actually doing so. This action will be followed up with written correspondence. Ideally this will occur at the 60% progress meetings which have recently been included in the CAMP schedule.

Comment 2:

In several places in various documents, reference is made to the use of the Rapid Optical Screen Tool (ROST) and Site Characterization Analysis Penetrometer System (SCAPS). Volume II, Appendix E provides some information about these methods. However, based on the information which has been provided, these appear to be primarily research tools which have not been fully tested and approved by the American Society for Testing and Materials (ASTM) or EPA for field use. Pending such approval, EPA does not favor the use of these methods in the RFI at Naval Base Charleston.

Response 2:

As stated in Response 1 of the SCDHEC comments, all references to the ROST and SCAPS systems will be removed from the *Comprehensive RFI Workplan*.

Comment 3:

Volume II, Section 8.0 is closely related to EPA's Comment 2 above. Mention is made of passive soil gas sampling. Again, EPA would expect that such methods be approved by ASTM

and/or EPA before they are included in the Naval Base Charleston Comprehensive RFI Work Plan.

Response 3:

Per recent discussions between the Navy and EPA it is recognized that the passive sampling method described is to be used solely for screening to direct other sampling. The method will be retained in the work plan as a possible screening tool.

Comment 4:

Naval Base Charleston has conducted PM₁₀ monitoring but that method is missing from the draft revisions proposed for the Comprehensive RFI Work Plan. If it is to be used as a part of the RFI at Naval Base Charleston, it should be included in the Comprehensive RFI Work Plan.

Response 4:

A reference to the procedures for operating a PM₁₀ station has been included on Page 8-8 of Volume II, *Final Comprehensive Sampling and Analysis Plan*. In addition, the instruction and operations manual, as well as 40 CFR, Part 50, Appendix J, for the PM₁₀ station has been included in Appendix E of Volume II.

Comment 5:

Volume IV, Section 8.0 is closely related to EPA's Comments 2 and 3 above. No mention is made of personnel with specialized training or experience in the design or conduct of air monitoring investigations. One of the fundamental criteria for EPA's acceptance of air monitoring data for decision-making purposes is that any air monitoring investigation must be designed and conducted by personnel with specialized training and experience in this area.

Response 5:

Volume I, Section 6.0 briefly describes key personnel involved with the project. Resumes for these personnel can be found in Appendix C of the document. The appendix has been updated to include personnel with experience in conducting air monitoring investigations.

Comment 6:

The term "Final" is used on some of the documents submitted for EPA review and comment. EPA recommends that the term "Draft" be used on all documents which are submitted to SCDHEC and EPA for review and comment but for which approval has not yet been given. Once a document has been approved, the term "Draft" should be deleted. The term "Final" is not needed.

Response 6:

As explained at the meeting held June 10, 1996 between members of the Project Team, the terminology used to identify versions of documents is linked to specific contractual language between the Navy and their contractor. Team members agreed to continue using the terminology listed above in a fashion similar to that used in the past to support the Navy's contractual terms.

**COMMENTS ON REVISION TO THE
FINAL COMPREHENSIVE RCRA FACILITY INVESTIGATION WORK PLAN
DECEMBER 01, 1995**

Comment 1:

On Volume I, Appendix A: "Updated list of SWMUs and AOCs," tables A-1, A-1a, A-2, and A-2a should be appropriately labeled to express the purpose of this summary, i.e. SWMUs/AOCs listed by building number or SWMU/AOC identification number. If these is the purpose of these tables then a header indicating so should be included in the tables. Tables A-1, A-1a, A-2, and A-2a should be revised accordingly.

Response 1: Each table's header description has been revised as suggested.

Comment 2:

The record of changes sent to the Department on December 01, 1995 indicates that a corrected list of Acronyms for Volume II and a revised Table of Contents for Volume III should have been submitted for revision. This is not the case, the Department has not received the referenced changes. Please submit them for review.

Response 2: The revised list of Acronyms for Volume II and a revised Table of Contents for Volume III has been included for review.

Comment 3:

On Volume III, page 1-1 states that the number of AOCs identified to date is 204. On Appendix A the number of AOCs listed adds up to 205. In addition, these page reads "...234 have been recommended for further investigation and 165 have been designated as requiring no further investigation (NFI) at this time". This statement does not concur with Appendix A. Either the data submitted on Appendix A contains some mistakes or the above mentioned statement needs to be corrected. Explain these discrepancies in the report.

Response 3: To date, a total of 400 sites have been identified: 205 AOCs and 195 SWMUs. Of these 400 total sites, 219 have been recommended for further investigation and the remaining 181 sites are designated as NFI. Page 1-1 will be corrected to reflect the actual number of AOCs.

Comment *:

In Table A-2, page A-41, AOC 648 is listed as requiring CSI. This is incorrect. According to the RFA Report, AOC 648 is listed for NFI. Table A-2 should be revised accordingly.

Response *: Page A-41 of Table A-2 indicates AOC 648 to be a CSI; however, AOC 648 should be an NFI. Pages A-41 and A-63 have been corrected to reflect this change.

**ENVIRONMENTAL PROTECTION AGENCY
COMMENTS ON THE FINAL COMPREHENSIVE
RCRA FACILITY INVESTIGATION WORK PLAN**

Comment 1:

Page 4-1, Section 4.0: The Laser Induced Fluorescence (LIF) analytical screening procedure must be evaluated by EPA before approval can be given. Naval Base Charleston should submit a technical description of the procedure for evaluation by EPA.

Response 1: Appendix E contains information concerning the two LIF systems available for use: Rapid Optical Screen Tool (ROST) and Site Characterization Analysis Penetrometer Systems (SCAPS). These procedures will be resubmitted for evaluation and review.

Comment 2:

Page 5-21, Section 5.5: Equipment rinse blanks must be taken of a small percentage of the plastic sleeves that the samples are extruded into.

Response 2: Table 13-1 in Volume II, *Final Comprehensive Sampling and Analysis Plan RCRA Facility Investigation*, requires that equipment rinsate blanks be taken during well construction at each site. In order to reiterate this comment, a statement has been added in Section 5.5 which references that an equipment rinsate blank must be taken of a small percentage of the plastic sleeves that the samples are extruded into.

RESPONSE TO COMMENTS
FINAL COMPREHENSIVE RFI WORK PLAN (REV. 01) JUNE 18, 1996
SOUTH CAROLINA DEPARTMENT OF
HEALTH AND ENVIRONMENTAL CONTROL
JULY 12, 1996

Comment 1:

It is unclear why pages 3, 4, 8, 9, and 10 of 10 were submitted. These pages are currently included in their present form in the Final Comprehensive Project Management Plan. No changes are evident on these pages.

Response 1:

As a result of the changes incorporated in the revised document, the page numbering was affected. Consequently the aforementioned pages were provided to account for the changed numbering sequence despite the fact that there were no changes to the text.

Comment 2:

The last sentence of the second paragraph found on page 2-6 states: "However, exceptions exist where adequate background delineation will allow for more accurate assessment of the relationship of the detected organics to site impacts." The meaning of this sentence is unclear. This meaning of this sentence should be clarified.

Response 2:

This comment has been addressed and the aforementioned text has been reworded in order to clarify the meaning.

Comment 3:

The last full sentence on page 2-6 states: "There are some exceptions to the rule and these are discussed in greater detail in the *Final Comprehensive Baseline Risk Assessment work Plan*." The section(s) and page(s) of the Final Comprehensive Baseline Risk Assessment Work Plan which discuss these exceptions should be noted on this page.

Response 3:

This comment has been addressed and the aforementioned sentence has been changed to include the information as requested.