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RESPONSE TO SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL COMMENTS ON RESOURCE CONSERVATION AND RECOVERY ACT FACILITY INVESTIGATION ZONE E WORK PLAN WITH TRANSMITTAL CNC CHARLESTON SC
6/2/1995
ENSAFE/ ALLEN AND HOSHALL

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

RCRA FACILITY INVESTIGATION (RFI)
ZONE E WORK PLAN
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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June 2, 1995

DEPARTMENT OF THE NAVY
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Ser 106.2/0535
26 JUL 1995

Mr. G. Randall Thompson
Director, Division of Hazardous and Infectious Waste Management
Bureau of Solid and Hazardous Waste Management
South Carolina Department of Heath and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: INCORPORATION OF ADDITIONAL COMMENTS FOR ZONE E RCRA FACILITY INVESTIGATION (RFI) WORK PLAN.

Dear Mr. Thompson;

Enclosure (1) provides a Response to Comments from the Environmental Protection Agency and the South Carolina Department of Health and Environmental Control, and additional pages that are part of the Zone E RFI Work Plan. These pages incorporate comments as provided in your letter addressed to me dated June 29, 1995. If you have any questions, please contact Amos Webb at (803) 743-5519.

Sincerely,

W. F. NOLD
Captain USN
Commander,
Charleston Naval Shipyard

Encl:
(1) Response to Comments and page changes for the Zone E RFI Work Plan.

Copy to:
SCDHEC (Walton, Bowers)
COMNAVBASE (N4BEC, Dearhart, Fontenot, Brittain)
SOUTHNAVFACENGCOM (Hunt, Stockmaster)
USEPA (Brittain)
E/A&H

Draft-Final Zone E RFI Work Plan
Response to Regulatory Comments
June 2, 1995

The following comment was received in the form of a memorandum from Joe Bowers to David Walton dated April 21, 1995.

Comment: Assessment of the extent of contamination is discussed in section 1.2 of the work plan. It is noted in this section that:

Sampling will continue until the extent of any contamination is determined, which is defined herein as the horizontal and vertical area in which concentrations of COPC in the investigated media are above either PRGs or background concentrations, whichever is appropriate.

As discussed with NAVBASE on numerous occasions, the determination of the extent of contamination must be made in comparison to background concentrations. In an effort to speed the assessment process at NAVBASE, the department will not require the language included in the work plan to be revised. However, NAVBASE must acknowledge and accept this requirement. All assessments at NAVBASE must be completed to background concentrations. The department will not approve a RFI Report until NAVBASE completes assessment of SWMUs and AOCs in this manner.

Response: The technical approach for the overall RFI is outlined in Section 2 of the *Final Comprehensive RFI Work Plan*, and also discussed in Sections 1 and 2 of the *Final Comprehensive Baseline Risk Assessment*. The method by which background concentrations will be determined is a separate issue to the Zone E work plan. The approach outlined in the Comprehensive Plan addresses the determination of background and the identification of sampling endpoints. A memorandum outlining several methods of background determination has been prepared to assist the BCT in deciding which method of background determination is favorable for the NAVBASE RFI.

The following comments are a result of the SCDHEC review of the Draft-Final Zone E RFI Work Plan.

GENERAL COMMENTS

Comment 1. The workplan notes on page 1-5 that site-specific groundwater flow directions may be influenced by the quaywall located along the water front in Zone E. In order to develop an accurate conceptual model of groundwater flow, additional information should be collected on the extent of the quaywall. The quaywall's

total length, dept of installation, etc. should be determined. It is not necessary to revise the Zone E RFI Workplan to include this information, however, NAVBASE should gather this information as quickly as possible so that it may be considered during assessment of Zone E.

Response 1. All drawings of the quaywall and pier structures representing RFI sites at the waterfront have been collected and filed for easy access by the field teams. To our knowledge, there is no plan view schematic of the entire length of the quaywall. The only drawings found thus far are cross-section views. The Navy will continue to research this issue and agree that the information would be extremely helpful in constructing a conceptual model of groundwater as it relates to the Cooper River in Zone E.

Section 2.3.4 Sampling and Analysis Plan

Comment 2. The first paragraph in this section contains the following sentences: "The potential for surface water impacts will be further evaluated if the additional groundwater data to be collected indicate a high probability that contaminated groundwater is being discharged to the Cooper River. These media were excluded from the investigation." The meaning of these sentences is unclear. However, impacts to all media should be investigated under the RFI. If the Cooper River is receiving adverse impacts from contaminants associated with sites in Zone E (or any other zone), this must be assessed during the RFI. The workplan should be revised to clarify the meaning of these sentences.

Response 2. The Navy agrees that this wording is confusing. The sentence on page 2-13, second paragraph: "These media were excluded from the investigation." will be deleted and replaced with: "This determination will be made after review of the groundwater data from sample points between the SWMU and the Cooper River. If it is determined that surface water or sediments are being impacted as a result of contaminant migration from SWMU 21 or SWMU 54, further assessment will be conducted in the Zone J investigation."

Comment 3. The second paragraph under this section notes that the samples will be analyzed to Data Quality Objective Level (DQO) Level II to supplement the existing DQO Level III data. However, all samples collected should be analyzed at DQO Level III. The workplan should be revised accordingly.

Response 3. The sentence "Samples will be analyzed at DQO Level II to supplement the existing DQO Level III data." will be deleted from the work plan. Sample strategy will follow the standard protocol of sample analysis at DQO Level III analysis with a 10 percent split for Level IV.

Section 2.4 SWMU 22 — Old Plating Shop Wastewater Treatment System (WWTS), SWMU 25 — Building 44, Old Plating Operation, and AOC 554 — Paint Shop, Former Building 1003

Comment 4. The workplan proposes the analysis of soil and groundwater samples collected at SWMUs 22 — Old Plating Shop Wastewater Treatment System, 25 — Building 44 Old Plating Operation, and AOC 554 — Paint Shop at Former Building 1003 for Volatile Organic Compounds and inorganic constituents. However, since semivolatile organics were detected during previous assessment events, they should also be included in the list of analyses. The workplan should be revised accordingly.

Response 4. The work plan will be revised to include SVOCs in the list of analytes at this site.

Comment 5. The workplan proposes the collection of a sediment sample near the northwest corner of SWMU 25 (see Figure 2-03 in the workplan). The reason for collecting a sediment sample in this location is unclear. It appears more appropriate to collect a soil sample from this location. The workplan should be revised to justify the collection of a sediment sample adjacent to SWMU 25, or to propose the collection of a soil sample, whichever is appropriate.

Response 5. The last note in Table 2.8 provides a description of the origin of the sediment. The description will be moved to the body of the text in section 2.4.4 for clarification. The description reads "The sediment sample will be collected from the area beneath the plating shop's ventilation system where sediments have accumulated on top of the asphalt."

Comment 6. In the document titled *Process Decontamination and Closure Procedures* submitted to the Department in June 1994, it is noted in Appendix B that 2 Underground Storage Tanks (USTs) are located at Building 44. No mention is made of this in the Zone E RFI Workplan. The RFI Workplan should be revised to indicate the locations of these tanks, and to propose assessment measures to determine if these tanks have impacted the environment. The workplan should be revised accordingly.

Response 6. The text will be revised to provide a better description of the tanks. Three samples have been proposed based on a visual confirmation of the former treatment system's location.

Section 2.15 SWMU 102 — Mercury Spill, Building 79

Comment 7. The workplan does not identify the suspected location of the mercury pool that was reported under building 79. The location should be identified and sampling concentrated in this area.

Response 7. The documentation does not indicate a specific area of the building which locates the mercury pool. The sampling strategy will remain consistent with the work plan.

Section 2.16 SWMU 106 — Blast Area, Drydock 3 and AOC 603 — Burning Dump

Comment 8. According to Table 2.33 (SWMU 106 and AOC 603 Sampling Plan), one soil sample is proposed in the area of SWMU 106 (Blast Area). This does not appear to be a sufficient number of soil samples to be collected from an area of this size (approximately 50 feet by 200 feet). Additional soil samples should be collected from this area. The workplan should be revised accordingly.

Response 8. A soil sample will be collected from the shallow monitoring well proposed at the northeast corner of SWMU 106. One additional soil boring will be added to the work plan. The additional soil boring will be located in the center of the area depicted for SWMU 106. It should also be mentioned that several neighboring sites (SWMU 5, AOC 602, and AOC 604) surround SWMU 106. The analytical results from neighboring sites will be coordinated with the results of the SWMU 106 investigation.

Section 2.23 AOC 531 — Substation and Storage, Building 459

Comment 9. The workplan notes the possible presence of a 20,000 gallon Underground Storage Tank at this AOC. As part of the proposed work, the workplan proposes to determine the presence of this tank. If the presence of this tank is verified during field work, potential impacts to the environment from this tank must be verified, including collection of additional soil samples and installation of monitoring wells. The workplan should be revised accordingly.

Response 9. If the RFI verifies the presence of the 20,000 gallon tank, the disposition of the tank will be further assessed under the RFI or the CNSY Tank Management Plan.

Section 2.32 AOC 563 — Locomotive House, Former Building 37

Comment 10. It is recognized that many of the actual locations of borings and/or monitoring wells will vary from the proposed locations included in the workplan. However, in general, monitoring wells and soil sampling locations should be as close to the SWMU or AOC under investigation as possible. Thus, if possible, the locations of the monitoring wells at AOC 563 (Locomotive House) should be adjusted so that they are closer to the AOC.

Response 10. Internal wall structures and limited passageways limit the access of a drill rig to this site. Internal wall structures will be added to the location justification on page 2-153, paragraph 3.

Section 2.44 AOC 590 — Alley between Buildings 79 and 1760

Comment 11. Due to the possibility that the acetone and cutting oil released at this AOC may have been adulterated, the workplan should be revised to include analyses of metals in samples collected at this AOC.

Response 11. The work plan will be revised to add metals to the analyte list for this site.

Section 2.46 AOC 596 — Former Torpedo Storage, Building 101

Comment 12. The workplan should be revised to include the analyses of metals in samples collected at this AOC.

Response 12. The work plan will be revised to add metals to the analyte list for this site.

The following comments are a result of the USEPA review of the Draft-Final Zone E RFI Work Plan.

GENERAL COMMENTS

Comment 1. Page 2-1 and other places throughout the remainder of the Zone E RFI Work Plan. Reference is made to data collected in previous investigations. Any data that either has been or is being, collected apart from an approved RFI Work Plan is collected at the risk of Naval Base Charleston. EPA assumes no obligation to use these data for decision making purposes. Please note that this is not a new comment from EPA; EPA has made this point on numerous previous occasions.

Response 1. The Navy has submitted representative data packages from previous investigations to USEPA. In addition, the Navy will submit to USEPA and SCDHEC copies of procedures and field notes that detail how the samples in question were collected.

Comment 2. A thorough review needs to be made of the Comprehensive RFI Work Plan to ensure that all procedures being used or planned for use are included in the Comprehensive RFI Work Plan. See General Comment 1 above. Specific examples of modifications needed include:

a. Section 2.8.4, Page 2-41 and other places throughout the remainder of the RFI Work Plan. Reference is made to the use of a mercury vapor detector. These procedures are missing from the Comprehensive RFI Work Plan. Before data are collected, the Comprehensive RFI Work Plan needs to be revised to include the appropriate procedures.

b. Section 2.11.4, Page 2-57, and other places throughout the remainder of the RFI Work Plan. Reference is made to the use of the High Volume Air Sampler to collect particulate matter up to ten microns in diameter. These procedures are missing from the Comprehensive RFI Work Plan. Before data are collected, the Comprehensive RFI Work Plan needs to be revised to include the appropriate procedures. Before these data are collected, EPA suggests that consideration be given to specific conditions under which these monitors will be operated and the interpretation which will be made of the data.

Response 2. A review of the Comprehensive RFI Work Plan has been completed recently.

a. These procedures are specific to the investigation of Zone E. The Zone E work plan will be revised to provide procedures for the operation of a mercury vapor detector.

b. These procedures are specific to the investigation for Zone E. The Zone E work plan will be revised to provide procedures for the operation of high volume air samplers.

Comment 3. Since the Comprehensive RFI Work Plan was approved, subcontracts have been awarded to companies to do environmental investigations. Before these subcontractors conduct these environmental investigations, the Comprehensive RFI Work Plan needs to be examined and as appropriate revised. See General Comment 1 above.

Response 3. Quality Assurance Plans and credentials have been added to the Comprehensive RFI Work Plan. Any time a new lab subcontractor is used, the appropriate information will be added to the Comprehensive RFI Work Plan before the start of field work.

Comment 4. Section 2.2.4, Page 2-8, and throughout the remainder of the Work Plan. No mention is made of dioxin sampling. In addition to the Appendix IX scan at Data Quality Objective (DQO) Level IV, dioxin sampling needs to be conducted throughout Naval Base Charleston using the same strategy as outlined in the Zone H RFI Work Plan. This includes dioxin and congeners. Because of previous dioxin detections at Naval Base Charleston, the analysis for dioxin should be mentioned explicitly.

Response 4. A 10 percent split for Appendix IX parameters is mentioned throughout the work plan. Listing Appendix IX parameters and dioxin would be redundant since dioxin and congeners are included in the Appendix IX list.

Comment 5. Section 4.0 is the Health and Safety Plan. Most of this information is the same as that contained in the Comprehensive RFI Work Plan. The whole purpose for the Comprehensive RFI Work Plan was to provide needed information once so that it would be equally applicable to all Zone Specific RFI Work Plans thereby reducing costs, paper, and review time. EPA Suggests that Naval Base Charleston consider the original intention of the Comprehensive and Zone Specific RFI Work Plans.

Response 5. The HASP is designed to be a stand alone document that satisfies several sets of regulations outside of USEPA. The HASP is required for the RFI Work Plan.

Comment 6. The site specific health and safety information that does appropriately belong in the Zone E RFI Work Plan could easily be made a short section within Sections 2 and 3. This would eliminate the need for a lot of repetition of the Sections 2 and 3 information in Section 4. Again, it would reduce costs, paper, and review time.

Response 6. See Response 5. above.

Comment 7. Much of the information provided on each site is both lengthy and identical to the information provided on every other site. As discussed in the Zones H, C, and I RFI Work Plans, much of this information could be stated once in the front of the Zone specific RFI Work Plan thereby reducing costs, paper, and review time.

Response 7. The Zone E RFI Work Plan was designed to incorporate major technical approach comments received on preceding work plans. Much of the common language is provided in direct response to comments on previous work plans from SCDHEC needing complete justification of the proposed sampling locations.

Due to the ubiquitous distribution of sites within Zone E, several sections with very common language in reference to Zone E were moved to the front of the plan (Treatment Alternatives, Migration Pathways, Potential Receptors, Screening Alternatives, and Radiological Potential).

Comment 8. Because of the high density of Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) in Zone E, the grid-based sampling plan used for the other zones was abandoned. In addition to the SWMU specific sampling locations, 25 supplemental locations were proposed. The supplemental sampling and the abandonment of the grid-based approach should have been mentioned at the outset before the description of planned sampling at the individual SWMUs. This change would add to the clarity of the document.

Response 8. This approach is mentioned in Section 2.1, page 2-3, next to last paragraph. The sentence also references the full explanation in Section 3.

Comment 9. At each site, soil gas will be monitored with a Photoionization Detector (PID). How will the PID information be used? Will the soil gas be sent for analysis if the PID gives a positive reading?

Response 9. The PID information will be used for a dual purpose as described in Section 2.1.4 of the Work Plan. First, qualitative screening as part of the routine health and safety monitoring and soil sampling protocols will be conducted. The PID response will be recorded in the field log book as an indication of whether or not a volatile organic compound source may exist in the subsurface media at any given sampling location. Soil gas samples will not be sent for analysis unless the need arises to correlate soil gas concentrations to indoor air quality issues.

Comment 10. EPA agrees that a mercury vapor detector is a preferred method for finding a source of the vapors. However, if mercury vapor is present, then, for the risk assessment, some quantitative measure of mercury in the ambient air will be needed. This may be a potential data gap and should be kept in mind. If the mercury vapor detector can provide a quantitative measure of mercury in ambient air, this will not be a problem.

Response 10. The vapor detector proposed will provide quantitative results which can be compared to risk threshold values.

SPECIFIC COMMENTS

Comment 1. Table of Contents, Page ii, Section 2.12.3. This section has been omitted.

Response 1. Section 2.13.3 will be added to page ii of the Table of Contents.

Comment 2. Table of Contents, Page viii, Figure 2-05. "Pickling" is misspelled.

Response 2. The spelling of the word Pickling will be corrected on page viii, Figure 2-06 of the Table of Contents.

Comment 3. Table of Contents, Page i, Figure 2-15. "Burning" is misspelled.

Response 3. The spelling of the word Burning will be corrected on page i, Figure 2-15 of the Table of Contents.

Comment 4. Table of Contents, Page i, Figure 2-18. "Building" is misspelled.

Response 4. The spelling of the word Building will be corrected on page i, Figure 2-18 of the Table of Contents.

Comment 5. Table of Contents, Page i, Figure 2-27B. Part of the title is missing.

Response 5. The title of Figure 2-27B on Table of Contents page i will be corrected to show "Dry Dock Discharges, Dry Dock #5".

Comment 6. Table of Contents, Page x, Figure 4-4. The site number is missing.

Response 6. The title of Figure 4-4 on Table of Contents page x will be corrected to show "AOC# 554, Paint Shop".

Comment 7. Table of Contents, Page x, Figures 4-12 and 4-13. The word "Day" is missing.

Response 7. The title of Figures 4-12 and 4-13 on Table of Contents page x will be corrected to show "SWMU# 87, < 90 Day Storage Area and SWMU# 97, Building 236, < 90 Day Storage Area".

Comment 8. Section 2.1.5, Page 2-5, Paragraph 1. "Separated" should be "separate."

Response 8. "Separated" will be changed to "Separate" in Section 2.1.5, page 2-5, paragraph 1.

Comment 9. Section 2.1.5, Page 2-5, Paragraph 3. "Advanced" should be "advance."

Response 9. "Advanced" will be changed to "Advance" in Section 2.1.5, page 2-5, paragraph 3.

Comment 10. Section 2.1.5, page 2-5. EPA recommends that all samples collected in the field be screened with a radiation meter.

Response 10. Section 2.1.5 addresses sampling at sites which have been determined to have radiological potential.

Comment 11. Section 2.2, page 2-6. Based on information available at this time, EPA does not agree that soil-gas monitoring needs to be performed.

Response 11. Soil gas monitoring will be de-bolded in Table 2.1, page 2-6.

Comment 12. Section 2.3.1, page 2-10. Clarify that the comparison of chemical data to the USEPA Region III Risk Based Concentrations identifies Chemicals of Potential Concern (COPCs) for the human health assessment but not for the ecological assessment. Many of the inorganic concentrations for SWMU 21 sediment samples, as shown in Appendix D, exceed the USEPA Region IV sediment screening values, indicating a potential concern for ecological receptors.

Response 12. The work plan will be revised accordingly to clarify that the comparison of the chemical data to the RBCs identifies COPCs for human health assessment and not the ecological assessment which will be addressed in the Zone J RFI.

Comment 13. Section 2.3.4, pages 2-13 and 2-14, Paragraphs 2 and 1 respectively. There is discussion of collecting "DQO Level II (data) to supplement the existing DQO Level III data," and the statement that "samples will not be collected for chemical analysis." Note General Comment 1 above.

Response 13. The sentence "Samples will be analyzed at DQO Level II to supplement the existing DQO Level III data." will be deleted from the work plan. Sample strategy will follow the standard protocol of sample analysis at DQO Level III analysis with a 10 percent split for Level IV.

Comment 14. Section 2.3.4, page 2-14. With respect to the proposed locations of the four sediment samples in the Cooper River, indicate what the dashed/dotted line represents in Figure 2-02.

Response 14. The dashed line represents the shoreline of the Cooper River. Figure 2-02 will be revised to indicate the shoreline.

Comment 15. Page 2-16, Figure 2-02. A shallow well should be placed in the southeast corner of the site. The soil borings should be spread more about the site for better coverage.

Response 15. The sampling approach shown in this figure is based upon filling data gaps in previous data. The sampling locations are concentrated in areas that have not been sampled in the past. Based on the existing data and the proposed additional sampling points, the Navy feels that the concentrated sampling areas are justified. One of the proposed wells will be shifted to the southeast corner of the site.

Comment 16. a. Page 2-21 states that "Based on the site history and the data generated during previous assessments, analytical parameters for soil and groundwater are proposed to be limited to VOCs and inorganics." EPA disagrees with this. In addition to the previous discussion, see also General Comment 1 above. A sampling plan needs to be designed which fully characterizes the soil and groundwater in the vicinity of these SWMUs.

b. The structures and related equipment of SWMUs 22 and 25 need to be sampled to determine whether or not, after demolition, the demolition debris can be disposed of as a hazardous or non-hazardous waste.

c. The exclusion zone needs to be carefully selected to ensure that other persons in the vicinity will not be endangered by sampling and analysis activities.

d. Sometimes inorganics implies inclusion of metals and sometimes metals are identified separately. There needs to be consistency in the use of terminology. This area needs to be investigated for inorganics including cyanides and metals along with the other parameters.

e. Page 2-21 refers to the Final RFI Comprehensive Project Management Plan. What document is intended here.?

Response 16. a. The work plan will be revised to include the full list of analytes in the investigation of this site.

b. The structures that remain in the building will not be addressed in the RFI, but rather in the Process Closure Plan for Building 44.

c. The exclusion zone, as shown in the HASP, will be carefully selected and entry/exit procedures will be strictly enforced during the field investigation of this site.

d. The work plan will be revised to be more consistent in the use of the terms inorganics and metals.

e. The Final RFI Comprehensive Project Management Plan RCRA Facility Investigation, Volume I is the intended document. The work plan will be revised to state such.

Comment 17. Page 2-29, Figure 2-04. The soil boring on the north side of SWMU 23 should be moved inside the SWMU. Two soil borings should be placed inside SWMU 63.

Response 17. The wastewater treatment equipment and subsurface utilities will not permit the soil boring at the north side of SWMU 23 to be moved closer. The last sentence of paragraph 1 on page 2-27 explains that Building 226 has a basement in the area of SWMU 63. It would be impractical, if not impossible, to move these borings due to the fact that the basement floor is below the groundwater level and the treatment tanks limit access to the area.

Comment 18. Section 2.8, page 2-39. Reference is made to sampling in connection with the mercury gauge room. No mention is made of sampling underneath the building floor. The area underneath the floor of this building needs to be sampled also.

Response 18. Section 2.8.4 outlines the sampling strategy for this site including soil borings and groundwater monitoring wells.

Comment 19. Page 2-43, Figure 2-07. Some wipe samples should be collected inside the former gauge room.

Response 19. The work plan will be revised to include wipe samples in the former gauge room.

Comment 20. Section 2.10.3, page 2-49: Clarify the locations of the proposed sediment samples (i.e., Cooper River?).

Response 20. The work plan will be revised to show that the sediment samples are from the Cooper River.

Comment 21 - 22. Figures 2-11 and 2-12, Pages 2-65 and 2-69. "Day" is missing from the title.

Response 21 - 22. The work plan will be revised to include "Day" in the title of these Figures.

Comment 23. Section 2.15.4, page 2-75 and Figure 2-14, page 2-78 identify locations and types of samples underneath the floor of the building but no samples around the building. The soil and groundwater around the building need to be investigated also, similar to Section 2.17.4, Page 2-85, and Figure 2-16, Page 2-88 for Building 13A.

Response 23. The Navy feels that adequate numbers of samples have been proposed to detect any contamination which may be present. Additional sampling, as needed beyond the scope of the originally proposed locations, will be conducted to delineate the extent of contaminants detected.

Comment 24. Section 2.16, page 2-79. The Burning Dump is identified as being located "near Drydock 3." Yet Figure 2-15, Page 2-83 and other places within the RFI Work Plan state that "THE BURNING DUMP WAS LOCATED AT THE PRESENT SITE OF DRY DOCK NO. 3." While part of the Burning Dump might extend underneath Dry Dock 3, it is EPA's understanding that the Burning Dump was also in the area near Dry Dock 3. Therefore, the investigation should be expanded to include this entire area.

Response 24. One additional soil boring will be added to the work plan in response to a previous comment from SCDHEC. It must also be noted that several sites surround this site on three sides, with the Cooper River and Zone J on the fourth side. "At" will be changed to "Near" in the text describing AOC 603 in Figure 2-15.

Comment 25. Page 2-83, Figure 2-15. The northernmost soil boring should be converted to a shallow monitoring well.

Response 25. The work plan will be revised to shift a supplemental well pair located approximately 200 feet to the north-northwest closer to AOC 603.

Comment 26. Section 2.18.4, page 2-90: Figure 2-17 shows 6 proposed sediment sampling locations for SWMU 170 and 171, yet no sediment samples are mentioned in the Text or in Table 2.37, Page 2-91. Please clarify this.

Response 26. The work plan will be revised to include the sediment samples from storm drains in the area. The sediment samples will be included in Section 2.18.4 and Table 2.37.

Comment 27. Section 2.19, pages 2-93 thru 2-96 are missing from copies of the Draft Zone E RFI Work Plan submitted to EPA for review, so EPA cannot comment on this section.

Response 27. Pages 2-93 through 2-96 will be submitted to USEPA and SCDHEC for review.

Comment 28. Page 2-96, Figure 2-18. There is no accompanying text for Figure 2.18.

Response 28. The corresponding text will be submitted to USEPA and SCDHEC for review.

Comment 29. Page 2-108, Figure 2-21. An attempt should be made to place a soil boring in each subsection of the SWMU.

Response 29. The work plan describes, on page 2-106, the fact that western portion of Building 35 is elevated 18-inches above the ground surface. The eastern portion of the Building 35 floor is covered with a thick steel plate that will prevent the installation of soil borings in that area. The work plan will be revised to include a clearer description of these impediments to proximal sample locations.

Comment 30. Section 2.24.4, page 2-114. Soil boring samples need to be collected at the Hobson Avenue door of Building 6, and also near the floor drain in the vicinity of the Zyglo process.

Response 30. Samples have already been proposed at the locations indicated in this comment. Soil samples will be collected during the installation of the groundwater monitoring wells at the door to Building 6 along Hobson Avenue. The location of the Zyglo process is indicated in Figure 2-23 by the hatched area near the central location of the building. Two borings and a sediment sample have already been proposed from this location.

Comment 31. Section 2.24.4, page 2-115. Same as General Comment 1 above.

Response 31. The Navy does not feel that this section has any reference to General Comment 1, rather that USEPA was making reference to General Comment 2b. See response 2b.

Comment 32. Section 2.28, page 2-130.

a. If known, indicate the year(s) that the underground pumps were first used to remove water from the drain system along the drydocks and direct it to the sanitary sewer system.

b. Since water from the drain system is currently pumped out and directed to the sanitary sewer system, clarify the use of the outfalls.

c. If known, indicate the years(s) that the drydock outfalls were first permitted.

Response 32.

a. This will be researched.

b. The work plan will be revised accordingly. The outfalls are to de-water the drydock immediately following the sealing of the caisson. Process water and rainwater are pumped to the sanitary sewer after the drydock is sealed and pumped dry.

c. The dry dock outfalls were first permitted in May 1995. The work plan will be revised to indicate the current permit status.

Comment 33. Section 2.28.1, pages 2-130 and 2-131. If known, indicate whether the releases mentioned in this section might have discharged through the outfalls into the Cooper River or whether they would have been pumped out of the drain system.

Response 33. Both would be the most correct response. There is no definitive way to know which is the most correct.

Comment 34. Pages 2-136 thru 2-140. The figure for AOC 557 is missing. Some text for AOC 556 is also missing.

Response 34. AOC 557 was the latrine at Building 77. This AOC was removed from the RFI with USEPA approval. Table 2.58, page 2-139 will be revised to describe AOC 558 only. This section has been reviewed and there is no text concerning AOC 556. AOC 556 is addressed in Section 2.28.

Comment 35. Section 2.29.3, pages 2-138, and Table 2.58, page 2-137. Mention is made that sediment contamination is a possible concern and that sediment might be sampled if COPCs are detected in the concrete cores and surface wipe samples. Clarify whether these sediment samples would be collected from an intermittent drainage path or a storm drain.

Response 35. The sediments would be collected from the storm drain outfall in the Cooper River immediately south of Building 250 (see Figure 2-28).

Comment 36. Page 2-166, Figure 2-34. Convert one of the soil borings on the east side of AOC 570 to a shallow monitoring well.

Response 36. The Navy does not feel that a soil boring should be converted to a monitoring well due to the fact that there is a shallow groundwater monitoring well directly across Hobson Avenue (upgradient well for AOC 563).

Comment 37. Section 2.36.4, page 2-168, and Table 2.72, page 2-167. The statement is made that "Prior to 1972, water used to capture particulate matter from the [paint] booth was discharged directly into the storm sewer system." Since storm drain sediment samples will be collected for other AOCs and SWMUs, either include the collected of a storm drain sediment sample for AOC #571 or else indicate why such a sample is not needed.

Response 37. The Navy feels that a storm drain sediment sample is not needed due to the length of time that has passed since this operation discharged to the storm sewer.

Comment 38. Section 2.38.4, page 2-176, and Table 2.77, page 2-177, and Figure 2-37. These indicate that two sediment samples will be collected, but the text mentions only one sediment sampling location. Give the location of the second sediment sampling location.

Response 38. The second sentence of the last paragraph on page 2-176 states: "A sediment sample will be taken from the sump **and** floor drain associated with this site. The

work plan text will be revised to state: Two sediment samples will be taken, one from the floor drain, and one from the sump associated with this site.

Comment 39. Page 2-186, Figure 2-39. Convert the soil boring on the northeast corner of the AOC to a shallow monitoring well.

Response 39. The Navy feels that adequate shallow groundwater monitoring well coverage has been established due to the proposed installation of wells at neighboring sites SWMU 84 and AOC 580.

Comment 40. Section 2.42.1, page 2-191, and Section 2.42.2, page 2-192. These state that paint-stripping rinsate was discharged to the nearby storm drain. Since storm drain sediment samples will be collected for other AOCs and SWMUs, either include the collection of a storm drain sediment sample for AOC 583, or else indicate why such a sample is not needed (e.g., if the storm drain is no longer).

Response 40. The work plan will be revised to state that the stormwater drain will be sampled for sediment, if sediment is present at the time of the investigation.

Comment 41. Page 2-206, Figure 2-44. It seems possible that the asbestos shredder required maintenance, lubricants, etc. These soil samples should also be analyzed for organic compounds.

Response 41. This is inconsistent with the technical approach at other sites in the investigation at NAVBASE. The COPC is asbestos which is regulated under TSCA. It was agreed that this site would be investigated as part of the RFI and then turned over to the TSCA program if corrective actions are required. If evidence of other hazardous material releases are observed during the RFI, the regulators will be notified and asked for guidance.

Comment 42. Appendix I, Table I.1. The building numbers and site identification numbers are in random order. Table I.1 would be more user friendly if the locations were in order by building number and/or site identification number.

Response 42. The table will be sorted by building number and site identification number. This will create two tables: Table I.1.a and Table I.1.b.