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LETTER AND U S NAVY RESPONSE TO COMMENTS TO DRAFT TREATABILITY STUDY WORK PLAN OPERABLE UNIT 2 (OU2) NAS CECIL FIELD FL
12/10/1993
ABB ENVIRONMENTAL

ABB

December 10, 1993

3.5.1 OU 2

Mr. James Hudson
Remedial Project Manager
Federal Facilities Section
Waste Management Division
USEPA Region IV
345 Courtland St. NE
Atlanta, GA 30365

Subject: RI/FS Program, NAS Cecil Field, Operable Unit (OU) 2
Treatability Study Workplan Response to Comments

Dear Mr. Hudson:

On behalf of Southern Division Naval Facilities Engineering Command, ABB Environmental Services Inc. is pleased to forward four copies of the Response to Comments to the Draft Treatability Study Workplan recently developed for OU 2 at NAS Cecil Field, Jacksonville, Fl. These responses are presented in table format and include responses to comments received from USEPA, FDEP, the City of Jacksonville, and NAS Cecil Field.

In order to maintain the project schedule these responses will be incorporated into the Final OU 2 Treatability Study Workplan by December 21, 1993 at which time the Final Workplan will be distributed. If you have any additional comments on these responses please contact Mr. Alan Shoultz, SOUTHDIV E.I.C., no later than December 17, 1993.

Questions or comments should be directed to Mr. Shoultz at (803) 743-0669.

Sincerely,

ABB ENVIRONMENTAL SERVICES, INC.

Robert C. Lunardini, Jr., P.E.
Senior Engineer

Barry Lester, P.E.
Task Order Manager

Enclosure
cc: Mr. Alan Shoultz, SOUTHDIV
Mr. John Dingwall, NAS Cecil Field (2 copies)
Mr. Eric Nuzle, FDEP (3 copies)
Mr. Gerald Young, City of Jacksonville
File

ABB Environmental Services Inc.

2590 Executive Center Circle East
Berkeley Building
Tallahassee, Florida 32301

Telephone (904) 656-1293
Fax (904) 877-0742

RESPONSE TO COMMENTS

Draft Treatability Study Workplan for Operable Unit 2
Naval Air Station Cecil Field, Jacksonville, Florida

Comment Number	Comment	Response
CECIL FIELD COMMENTS - Basit Ghori		
1.	Air stripping and soil vapor extraction are less environmentally protective procedures than other suggested methods. These methods do not actually constitute treatment of the contaminants. They are simply a media change from water to air.	The comment is recognized. These technologies are only two of several technologies being evaluated. Technologies such as carbon filtration and thermal oxidation are available to treat off-gases. These technologies would be evaluated before instituting any remedial action.
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION COMMENTS - Eric Nuzie/Bill Neimes		
1.	Unless site conditions are somewhat homogeneous and can be somewhat controlled, I believe that bench-scale studies provide little information in determining whether a treatment technology will work in the field. I have seen successful results from bench-scale tests in the laboratory only to later fail in the field. Therefore, I believe the only bench-scale test that will provide any useful information is the landfarm treatment simulation test. Landfarming can be controlled in the field similar to that in the laboratory. The other proposed test (i.e., soil vapor extraction and steam injection/SVE simulation, bioventing, biotreatability of groundwater) are redundant steps and any treatability testing should be done in the field.	The concerns about bench-scale tests are valid. However, costs and time are two factors to be considered, especially when a wide range of technologies are being evaluated. Bench-scale testing can provide useful information when considering taking a technology to the pilot-scale level or eliminating it from further consideration. The bench-scale testing is designed to evaluate process feasibility of several technologies at the same time. These data are confirmed for the most promising technologies under field conditions. Site conditions have shown that there may be conditions (i.e., low bacteria numbers) that exist at the OU 2 sites that could limit the effectiveness of the bioremedial technologies including landfarming, bioventing, and groundwater treatment. Testing needs to be conducted to establish the feasibility of biodegradation as well as identify parameters required for field testing such as nutrient requirements. Bench-scale SVE testing has been included to evaluate if sufficient quantities of the petroleum can be removed to meet the treatment levels described in the workplan. ABB-ES concurs that field testing is required before recommending this technology as a remedial action; however, if petroleum removal can not be demonstrated in the laboratory, then it would not be expected to occur in the field.
2.	Table 1-1. The maximum concentration for polynuclear aromatic hydrocarbons was revised from 6 mg/kg to 1 mg/kg during the last rule change (11/30/92).	The table will be changed to reflect the most recent rule change.

RESPONSE TO COMMENTS--continued

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1.	I have found polychlorinated biphenyl (PCB) in the free product and I have enclosed a copy of the laboratory results with this letter. Considering my finds, I believe that the workplan must be revised before I can concur in its application. Specifically, I recommend changes to Tables 1-1 and 1-2. These tables should include PCB as a compound and the appropriate test methods. Further, I do believe that Appendices A and B should be changed to show PCB fingerprint and PCB laboratory procedures.	PCB and appropriate test methods will be added to Tables 1-1 and 1-2. PCBs were not analyzed by ABB-ES' Treatability Laboratory as part of the preliminary soil characterization; however, they were included in the remedial investigation (RI). Results of PCB soil analyses were below the Toxic Substances Control Act (TSCA) threshold of 50 mg/kg (non-detect to 4.0 mg/kg). These results will be incorporated into the workplan. Based on these results PCBs were not included as a target compound for the treatability study. PCB analysis will be included as part of the Treatability Study Workplan (TSWP) initial soil characterization. If PCB's are measured in the site soil at concentrations greater than 50 mg/kg, those analyses will be included as part of the treatability study analysis plan (starting and final time points only). It is important to point out that significant PCB reductions would not be expected under any of the test conditions proposed in this workplan. The remedial technologies identified in this workplan are applicable to the petroleum based material and chlorinated solvent contamination. If significant levels of PCBs are detected in the site soil, other technologies such as off-site disposal, or thermal desorption will need to be considered as a treatment alternative. Those technologies will be evaluated as part of the feasibility study. PCB laboratory procedures will be added to the Appendices.
2.	Site five should be handled as a PCB clean up and not as an oil and solvents clean up. I realize that my free product test produced a result of 28 parts per million (ppm), which is below the 50 ppm threshold of the Toxic Substances Control Act. The Federal Regulations are based upon the concentration of the PCB in the oil when it was discarded in the site, not the concentration of the free product we see today. Unless this oil was pure transformer oil with a concentration of 28 ppm, this site is a PCB site, not an oil disposal site. As appendix A shows us, there is some jet fuel in site five which makes it likely that the concentration of the discarded oil was above 50 ppm. The groundwater needs to be tested in both of the monitoring wells which have free product in them at site five for PCB.	At this point in time, it is impossible to determine the PCB concentration in the oil at the time of disposal. Based on available data (see response No. 1), the designation of Site 5 as an oil disposal site is appropriate for soil and groundwater and consistent with CERCLA guidance. Remedial technologies considered for free product at Site 5 will incorporate the treatment of PCBs. PCB analyses of groundwater were included as part of the RI. No PCBs were detected. One of the two monitoring wells that contained free product contained a visible sheen rather than a layer of oil. The sample from this well was analyzed as groundwater, not free product.
3.	The City of Jacksonville stands ready to offer the laboratory services of its Regulatory and Environmental Services Department to test the free product and groundwater of the two monitoring wells at site five. I believe that the groundwater is contaminated above State and Federal Standards. I offer the City's facilities to confirm this fact and redirect the clean up of OU 2.	The City of Jacksonville laboratory is welcome to provide analytical services to supplement the existing database. However, use of the data in any primary reports will be dependent upon the laboratory's ability to meet data quality objectives agreed to by all Federal Facilities Agreement parties (i.e., Navy, USEPA, and FDEP).

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	General Comments	
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2.	In some instances in the Draft Work Plan, more detail should be given regarding the experimental procedures described in Section 4.0. The particular instances are provided in the Specific Comments section below.	See response to Specific Comments below.
3.	Section 13.0, which deals with the project schedule, was extremely general. A more detailed schedule, such as shown on page 36 of the Guide for Conducting Treatability Studies Under CERCLA should be included in the Draft Work Plan.	A more detailed schedule has been prepared (Attachment A) which addresses the elements specified in the Guide for Conducting Treatability Studies Under CERCLA.
	Specific Comments	
1.	Page 1-6, Table 1-1 and Table 1-2 - Provide the source for the maximum concentration values listed in these tables.	The source for Table 1-1 is Guidelines for Assessment and Remediation of Petroleum Contaminated Soils, Florida Department of Environmental Protection, Division of Waste Management, Bureau of Waste Cleanup, Engineering Support Section, May, 1992. The source for Table 1-2 is Chapter 17-550, Florida Administrative Code, Safe Drinking Water Act, January 1993. These sources will be added to the appropriate tables.
2.	Page 4-2, Paragraph 3 - The test refers to a well that contains free product. Provide a description as to how the presence of free product will be addressed.	An interim remedial action is scheduled for 1994 to address free product removal at Site 5.
3.	Page 4-9, Paragraph 1 - The text states that "a positive control sample will also be prepared containing common garden compost and glucose to measure carbon dioxide production in a system without toxicity." The text should explain what correlation a sample containing common garden compost has to samples collected from the site.	Positive controls are used in the toxicity test to check that the there are no problems with the test system (avoid false negative data) and also to generate carbon dioxide evolution rates under conditions that would be considered "non-toxic." The positive control carbon dioxide data will be compared with the results from the microcosms that contain site soil. If a significant lag in carbon dioxide evolution is observed in the test bottles compared with the positive control, then the results will be interpreted as meaning that soil conditions inhibit bacterial activity.

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4.	Page 4-12, Paragraph 1 - Provide additional information about the landfarming simulation such as the type of jar to be used, whether it will be sealed or open, how the soil moisture will be maintained and how the soil will be mixed.	The landfarming test material will be placed in a 32 ounce glass jar for testing. The jar will be kept sealed during testing. The landfarm test vessel will contain headspace. The contents of the microcosm will be mixed manually three times a week. The soil will be stirred with a glass or stainless steel spatula. The aeration process will take approximately 1 to 2 minutes, which should be enough time to aerate the soil without augmenting petroleum volatilization. The moisture content will be maintained at 30 to 60 percent moisture holding capacity. The microcosms will be prepared at the target moisture level. The microcosms will be weighed at least once a week and water will be added (mixed into the soil) to bring the moisture up to the starting value. The value will be adjusted after each sampling event. The moisture content will also be measured each time a sample is removed for chemical analysis.
5.	Page 5-1, General - This section only lists lab equipment. Other equipment used in the performance of the treatability study should be mentioned such as the type and size of pumps, motors and various other apparatus to be used. Also, a diagram of the various test apparatus should be included for each technology evaluation.	A list of all necessary equipment will be included in the revised TSWP.
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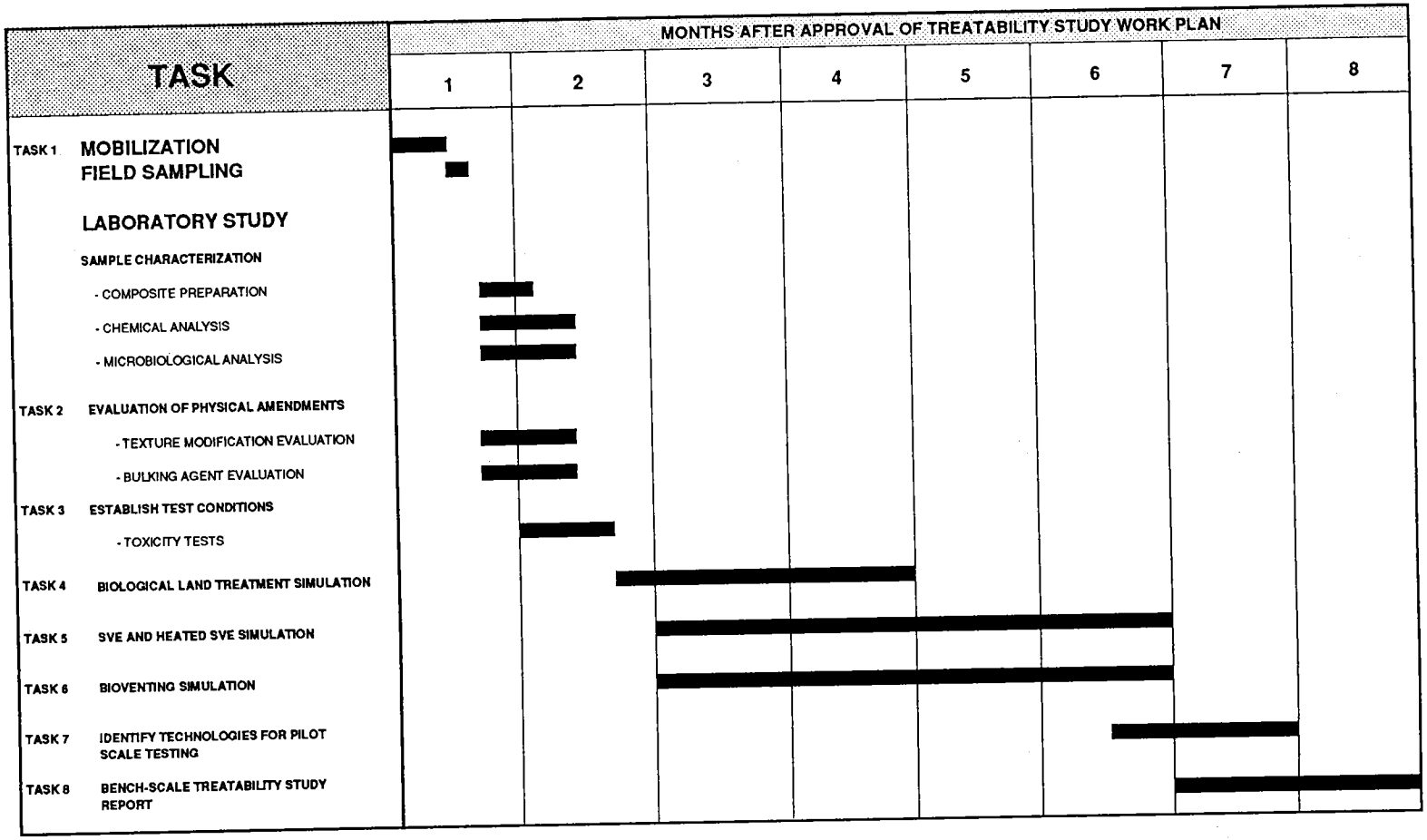

FIGURE 13-1
SCHEDULE FOR BENCH SCALE TREATABILITY EVALUATION

TREATABILITY STUDY WORKPLAN FOR OU 2

NAS CECIL FIELD
JACKSONVILLE, FLORIDA

8500-34

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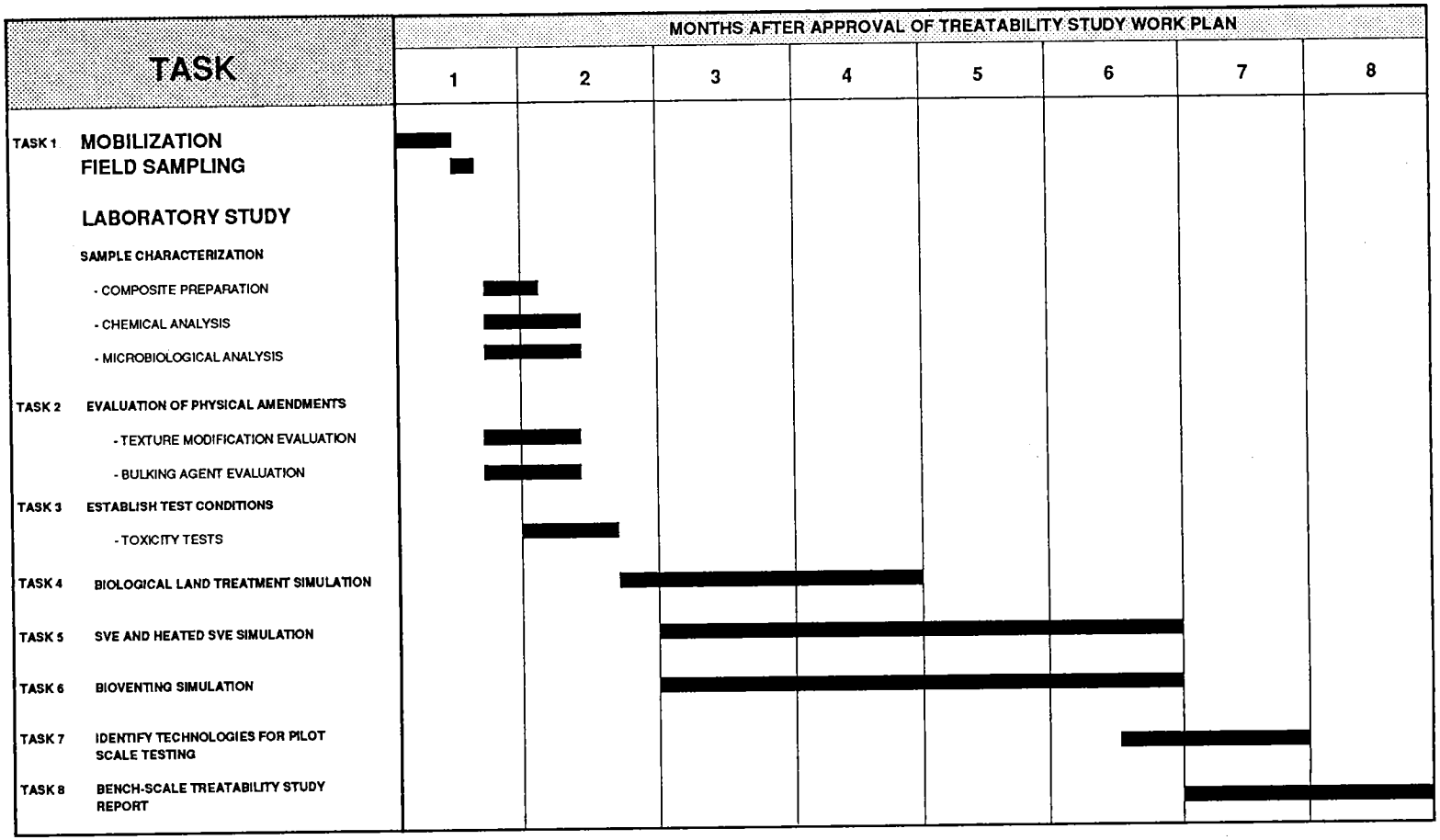

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