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NAS CECIL FIELD, FL
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LETTER OF TRANSMITTAL AND U S EPA REGION IV COMMENTS ON DRAFT REMEDIAL
INVESTIGATION FIELD SAMPLING PLAN AND QUALITY ASSURANCE PROGRAM PLAN
FOR OPERABLE UNIT 9 (OU 9) SITE 36 AND SITE 37 NAS CECIL FIELD FL
1/19/1999
U S EPA REGION IV



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

NAS Cecil Field Administrative Record
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4WD-FFB

Commanding Officer
Attn: Scott Glass
BRAC Environmental Coordinator
SOUTHNAVFACENGCOM
Mail Code 18B12
P.O. Box 190010
North Charleston, South Carolina 20419-9010

SUBJECT: Comments on the Remedial Investigation Field Sampling Plan and Quality Assurance Program Plan for Operable Unit 9
Naval Air Station, Cecil Field, Jacksonville, Florida

Dear Mr. Glass:

The Environmental Protection Agency (EPA) has completed its review of the draft documents. The Remedial Investigation work plan was discussed during the October and November 1998, BCT meetings with much of the sampling rationale, sampling points and methodologies discussed and concurred upon at that time. Following a closer review of the draft Sampling Plan, several areas of concern were identified which should be addressed in the final Remedial Investigation Work Plan. Because the Remedial Investigation (RI) is well underway many of the comments may no longer apply, however they should be considered during the remaining portion of the RI investigation. The comments have been divided into major and minor comments. Major comments are those that the EPA feels could affect the Remedial Investigation and the understanding of the environmental conditions at sites 36 and 37. Minor comments are those which address work plan clarity and sampling protocols.

The Quality Assurance Plan for OU9 has been found to be adequate and EPA has no comments regarding this document.

Thank you for the opportunity to review the subject documents. If you have any questions, please feel free to contact me at 404/562-8539.

Sincerely,

A handwritten signature in black ink, appearing to read "Deborah A. Vaughn-Wright". The signature is written in a cursive style with some capital letters.

Deborah A. Vaughn-Wright
Remedial Project Manager

cc: Mike Deliz, FDEP
Mark Davidson, SOUTHDIV, Mail Code 1879
Dave Kruzicki, NAS NAS Cecil Field, Environmental Director
Mark Speranza, TTNUS

**A Comments on Remedial Investigation Field Sampling Plan (RI-FSP)
and Quality Assurance Program Plan (QAPP) for
Site 36 - Control Tower TCE Plume
and
Site 37 - Hangers 13 and 14 TCE Plume
Naval Air Station Cecil Field, Jacksonville, Florida
October 1998**

MAJOR COMMENTS:

1. **Page 2-1, Fourth Paragraph.** References to contaminant concentration ranges detected should be expanded to include, at a minimum, a table depicting the concentrations of contaminants discovered in all the wells sampled for preliminary data. This added detail will allow confirmation of data gaps apparently used to justify the new monitoring points and wells. This comment also applies to Page 2-3, Third Paragraph.
2. **Page 2-5, First Complete Paragraph.** The body of the paragraph indicates that the Hawthorn Group is approximately 200 feet thick, yet an average Hawthorn Formation thickness of 30 feet is used for hydraulic conductivity calculations in the later part of the paragraph. This inconsistency should be addressed. The last sentence indicates the Hawthorn Group may be leaking enough to warrant investigation of potential contamination of the Floridan Aquifer. An explanation as to why the Hawthorn Group is not included in this investigation should be made.
3. **Page 2-5, Second Complete Paragraph.** The discussion of the hydrostratigraphy is too brief to describe the relations each individual unit has with the underlying or overlying neighboring unit. A more detailed discussion of the interrelationships between units should support the rationale for well placement. Further, to better explain the geology and hydrogeology in the brief description on Pages 2-4 and 2-5 a figure depicting the stratigraphic sequence should be included. An explanation as to why the Floridan Aquifer is not included in this investigation should also be made.
4. **Page 2-6, Last Paragraph.** Detail is needed with regard to the statement "identify the extent of groundwater contamination." The statement in the text should be expanded to include delineation of both vertical and horizontal extent of groundwater contamination. Moreover, the explanation should either include the rationale for investigating all of the aquifers that may possibly be affected by the contaminants or should include reasons the investigation is to be limited to the "surficial aquifer system." Additionally, this

“Statement of Problem” should be in the Introduction rather than in the Site Background.

3. **Page 4-2, Third Bullet.** The text refers to a source of “other migration pathways.” These other migration pathways should be described as it is important to have attempted to identify and investigate all migration pathways.
4. **Page 4-9, Fourth Paragraph.** As discussed during the January 7, 1999 telecon regarding second round well locations, an explanation should be included for how the two “rock wells” will be used and the rationale for their locations. Furthermore, none of the provided figures indicate direction of groundwater movement. Therefore, a potentiometric surface map should be included. The reference to “This location” in the last sentence should be also explained.
5. **Page 4-11, Last Partial Paragraph and continued on Page 4-12.** In referring to a previous natural attenuation study, the first sentence on this page states “Thus, additional sampling and analysis in this plume for [monitored] natural attenuation is not expected to be necessary.” By definition, monitored natural attenuation requires periodic monitoring. Therefore, additional sampling should be performed for groundwater geochemical indicator parameters to determine if natural attenuation is still occurring. In addition, the last partial sentence states “Samples from each medium will be analyzed for Target Compound List (TCL) organics and Target Analyte List (TAL) except as noted.” The location of the notation should be stated. Further, the next sentence states that the analyses will provide complete data. The term “complete data” should be qualified. The criteria for the selection of monitoring wells for sampling and analysis should also be stated.
6. **Page 6-2, First Complete Paragraph.** An explanation should be provided as to how cross contamination between the different geological units will be prevented. In addition, the term “volatile sensitive parameters” in the sixth sentence of this paragraph should be explained. If the more common term volatile organic compounds is what is being referred to, the appropriate changes should be made in the text.
7. **Page 7-19, Third Complete Paragraph.** The third sentence of this paragraph describes the collection of samples for dissolved metals analysis. Although there is nothing in EPA Region 4 Guidance to prevent the collection of samples for dissolved metals analysis, EPA Region 4 policy is to collect only samples for total metals analysis. EPA Region 4 will not allow the use of dissolved constituent concentrations in risk assessments or in any other CERCLA decision making processes. Samples for total metals analyses should be collected for these purposes.

8. All data, whether collected during this remedial investigation or during earlier investigations for smaller separate sites prior to the formation of Operable Unit 9, should be used in the overall evaluation of the environmental conditions and feasibility studies related to the contamination identified.

MINOR COMMENTS:

1. **Page ii.** The page numbering in the Table Of Contents is different from that in the text in Sections 2.2.2 through 2.2.4. This inconsistency should be resolved.
2. **Page 1-1.** This page presents a broad discussion of the scope and objective of the RI-FSP and is out of place in the introduction section. The inclusion of this broad discussion here followed by the detailed discussion in Section 4 is confusing and detracts from the smooth flow of the document. The first paragraph of Section 1.1 should be left in place, followed by a reference to Section 4 for details of the scoping process. The second and third paragraphs should be blended with Section 4.
3. **Page 1-2, Second Paragraph through Second Bullet on Page 1-4.** This is a discussion of the USEPA Data Quality Objectives (DQO) Process, but it does not belong in the introduction to the RI-FSP. Because of the importance of this process, it should be included as a separate section and referenced in the document introduction.
4. **Page 2-3.** The sentence which begins on the bottom of this page does not make sense as written. Something was apparently omitted. The sentence should be rewritten for clarity.
5. **Page 2-4, Second Paragraph.** The acronyms 1,1-DCA, PCA, and TCA should be added to the acronym list.
6. **Page 2-4, Third and Fourth Paragraphs.** Clarification should be made as to whether this is a surficial aquifer system of two discrete groundwater transmission zones separated by the blue marl confining unit or the surficial aquifer is a zone of interconnected groundwater transmission media with lensatic blue marl zones. The approximate depth at which the blue marl confining unit is likely to be encountered should be also specified. In addition the particular HLA, 1998 reference cited in the list of References in the last sentence of the first partial paragraph on Page 2-5 should be specified.
9. **Page 3-1, Second Paragraph.** Sal Taylor Creek and Lake Fretwell are described in the

text as receptors. Locations of these receptors should be shown on a figure and the text should provide distances and directions to these receptors so that the importance of these receptors can be assessed. These figures can either be added to the work plan or to the final Remedial Investigation (RI) Report.

10. **Page 3-1, Third Paragraph.** The first sentence states that outfalls were sampled. Clarification should be provided as to which storm sewer outfalls were sampled and which outfall sample contained contaminants. This information should be added either to the work plan or to the final RI report.
11. **Page 3-1, Fifth Paragraph.** The acronyms PAH and TRPH are not listed on the acronym list. These should be added to the list.
12. **Page 4-3, First Bullet.** The next to the last sentence of this bulleted item states “Previous investigations of the groundwater have been narrow in the terms of analytes, but the storm sewer investigation will continue to focus on the VOCs [volatile organic compounds] and TRPH [total recoverable petroleum hydrocarbons].” A rationale should be provided as to why the full suite of analytes specified for groundwater and soil samples are not specified for sediment samples.
13. **Page 4-3, Second Bullet.** The proposed analytical suite for sediment samples should be specified as was done for groundwater, soil, and storm sewer water.
14. **Page 4-9, Third Paragraph.** In the context of this paragraph, it appears that the two rock wells will be installed as part of a well cluster. If this is the case, it should be so stated in the text.
15. **Page 4-10, Second Paragraph.** The benzene did not affect the outfall. The benzene affected the samples of materials collected from the outfall. This should be clarified. In addition, the acronym BEX should be defined.
16. **Page 4-10, Last Partial Paragraph.** There is no SAR conducted by ABB July 1998 or ABB ES July 1998 in the list of references. These items should be added to the references.
17. **Page 4-13, Last Paragraph.** This paragraph states that a groundwater contour map is to be generated for all new and existing monitoring wells that are sampled. The construction of groundwater data maps is best accomplished when all available information on existing conditions of the groundwater is acquired. Therefore,

groundwater elevation data for all groundwater monitoring wells should be collected whether the wells are sampled or not. Elevation data collected from all wells will provide a more precise map. In addition, the last sentence states "One round will be performed." It should be clarified that one round of ground water measurement will be performed.

18. **Page 5-1, Third Paragraph.** The cited U.S. EPA 1998 document is not listed in the references. This item should be added to the references. The acronym COCs is not listed in the acronym list. This item should be added to the list of acronyms.
19. **Page 6-4, First, Second and Third Paragraphs.** The acronyms BCT and PVC do not appear in the list of acronyms and the cited U.S. EPA, 1996b document does not appear in the references. The items should be added to the respective lists.
20. **Page 6-5, Fifth Paragraph.** The term "by affixed" should be explained.
21. **Page 6-8, First and Second Paragraphs.** The specific computer program to be used to estimate the stated parameters should be specified. Additionally, an explanation should be provided as to how the list of existing wells was selected for use in estimating these hydraulic parameters.
22. **Page 6-8, Third Paragraph.** The first sentence states that "Two rounds of water level measurements...will be conducted for the investigation." However, Page 4-13, third paragraph, last sentence states "one round [of water level measurements] will be performed." Furthermore, the entire third paragraph is unclear as to the purpose of the water level measurements. These inconsistencies and details should be clarified.
23. **Page 6-8.** The sentence which begins in the last line of this page does not make sense as written. Something has apparently been omitted. The sentence should be rewritten for clarity.
24. **Page 6-9, First Complete Paragraph.** The cited reference Chapelle, 1996 is not in the reference list and should be added.
25. **Page 6-9, Fourth and Fifth Complete Paragraphs.** Reference credit should be given to both YSI and Hach Corporations for Registered Trademarks.
26. **Page 6-15, Fifth and Sixth Paragraphs.** In lead sentences to both paragraphs it should be stated that the equipment will be decontaminated instead of leaving the subject open by stating it "should be decontaminated."

27. **Page 6-16.** The second sentence on this page states “All decontamination activities take place at a predetermined area within the Depot.” An explanation should be provided as to what the “Depot” is in relation to Naval Air Station Cecil Field.
28. **Page 6-16, Second Paragraph.** In the lead sentence to the paragraph, “is decontaminated” should be changed to “will be decontaminated.”
29. **Page 7-1, Fifth Paragraph.** This paragraph states “Storm sewer water will be collected from catch basins using peristaltic pumps with dedicated rigid Teflon™ and flexible medical grade silastic tubing.” The EISOPQAM specifies the use of a vacuum transfer cap assembly by which the sample is collected into a pre-cleaned glass container before it passes through the silastic tubing in the pump head. This procedure should be specified. However, this procedure should be modified for the collection of samples for VOC analysis. The modification should specify:
- running the pump until the intake tubing is full,
 - turning the pump off,
 - crimping the upper end of the tubing and removing it from the pump and water source, and
 - allowing the tubing to drain gently into the VOC vial.
30. **Page 7-12, Second Paragraph.** The seventh sentence of the paragraph states “All other soil to be analyzed for other parameters (i.e., other TCL organics, TAL metals and cyanide) will then be placed in a cooler of ice.” This procedure is incorrect. All samples for these parameters should be transferred to pre-cleaned intermediate containers, for instance glass bowls, and homogenized thoroughly before containerization. This requirement should be added to the text.
31. **Page 7-13, Second Paragraph.** The term “accuracy” should be changed to “precision.” The acronym PE should be listed in the acronym list.
32. **Page 7-19, First Paragraph.** The term “accuracy” should be changed to “precision.”
33. **Page 7-19, Second Complete Paragraph.** If, as specified here, water quality parameters are to be measured with the Horiba U-10 water checker an explanation should be provided as to why the YSI 6820 and the Hach Field Kit are specified in Section 6-8.

34. Specific sampling events and procedures are discussed in separate locations in the document which leads to some inconsistencies. For example: the last sentence on Page 4-13, states "one round [of measurements] will be performed" while the third paragraph on Page 6-8, states that "two rounds of water-level measurements" will be taken. These types of inconsistencies could be resolved by including and discussing all sampling events and procedures in one section.
35. **Page 6-5, Third Paragraph**. The third sentence of this paragraph states that the bentonite pellet seal will be allowed to hydrate in accordance with the manufacturer's recommendations. This could possibly be an incorrect procedure. According to the U.S. EPA, Region 4 Environmental Investigations Standard Operating Procedures and Quality Assurance Manual dated May 1995 (EISOPQAM), the hydration time should be eight hours or the manufacturer's recommendations, whichever is greater. The RI-FSP should specify the correct procedure.
36. **Page 6-6**. The last sentence of the first complete paragraph on this page and the fourth sentence of the last partial paragraph on this page specify different criteria for determining the completeness of development for monitoring wells. This conflict should be resolved.
In addition, if 20/30 sand is used for the gravel pack (Page 6-5 third paragraph) porosity can be calculated. An explanation for the assumed 30% porosity in the last paragraph should be made. The acronym NTU is not in the acronym list and should be added.