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NAS WHITING FIELD
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LETTER REGARDING U S NAVY RESPONSE TO U S EPA REGION IV COMMENTS SITE 5,
7, 29, 36, 38, 39, 40, AND POTENTIAL SOURCE OF CONTAMINATION 1485C DRAFT
REMEDIAL INVESTIGATION/ FEASIBILITY STUDY WORK PLAN NAS WHITING FIELD FL
3/24/2000
TETRA TECH NUS

March 24, 2000

Project Number 0052

Mr. Craig Benedikt
Federal Facilities Branch
USEPA Region IV
61 Forsyth Street
Atlanta, Georgia 30303

Reference: Clean Contract No. N62467-94-D-0888
Contract Task Order No. 0079

Subject: Revised Response to EPA Review Comments - Draft Remedial Investigation and Feasibility Study Work Plan for Sites 7, 29, 36, 38, 39, 40, and PSC 1485C Naval Air Station Whiting Field, Milton, Florida

Dear Mr. Benedikt:

On behalf of Southern Division, Naval Facilities Engineering Command, Tetra Tech NUS, Inc. is pleased to submit the Revised Response to Comments for the Draft Remedial Investigation and Feasibility Study Work Plan for Sites 7, 29, 36, 38, 39, 40 and PSC 1485C at Naval Air Station Whiting Field, Milton, Florida. The final edition of this document will be renamed as follows "Final Remedial Investigation and Feasibility Study for Sites 5, 7, 29, 35, 38, 39, 40 and PSC 1485C Naval Air Station Whiting Field, Milton Florida". Revisions to the Response to Comments are a result of discussions during the January 18, 2000 NAS Whiting Field Partnering Team meeting. Copies of this document are also being forwarded to members of the NAS Whiting Field Partnering Team.

If you have any questions, please call myself or Terry Hansen at (850) 385-9899.

Sincerely yours,

Gerald Walker, P.G.
Technical Lead

GAW/gaw

Enclosure

c: Linda Martin, SDIV
Jim Cason, FDEP (electronic copy)
Jim Holland, NAS Whiting Field (electronic copy)
Pat Durbin, NAS Whiting Field (electronic copy)
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Text in italics and line through text are modifications to the original Response to Comments based on discussions with the original parties commenting, during the NAS Whiting Field January 18, 2000 NAS Whiting Field Partnering Team meeting.

**Response to EPA Comments on Draft
Remedial Investigation and Feasibility Study Work Plan for
Sites 7, 29, 36, 38, 39, 40, and PSC 1485C
April 1999**

GENERAL COMMENTS

1. Section 3.0, Technical Approach, contains numerous deficiencies and inadequacies in the monitoring well installations and sampling activities as indicated in the specific comments below. Section 3.0 should be carefully reviewed to ensure that EPA Region IV standard operating procedures are followed.

Response: The section will be carefully reviewed to ensure that, where appropriate, EPA Region IV Standard Operation Procedures are followed.

SPECIFIC COMMENTS

2. **Cover Spline, Outside Cover Page and Inside Cover Page.** The cover spline is titled, "Draft RI/FS Work Plan Sites 7, 29, 36, 38, 39, 40, and PSC 1485C, Naval Air Station, Whiting Field, Milton, Florida." The outside cover page and the inside cover page are titled, "Remedial Investigation and Feasibility Study Work Plan for Sites 7, 29, 36, 38, 39, 40, and PSC 1485C Naval Air Station Whiting Field Milton Florida." The cover spline title should be consistent with the titles for the outside and inside cover pages. This discrepancy in titles should be addressed.

Response: The document cover and title pages will be edited for consistency.

3. **Page 3-8, Third Paragraph.** The text states, "If a liner is used, it is separated into 6-inch long sections (along perforations in the brass liners), and the exposed soil is screened with a flame ionization detector (FID). Samples selected for laboratory analyses will be immediately placed into laboratory-supplied containers. If liners were used, the open ends will be covered with clean Teflon™ tape, capped, and sealed with exterior tape." The preceding statements, concerning the use of liners for sample collection, are contradictory. Either the samples collected in liners will be separated into 6-inch sections and screened with an FID and placed in laboratory containers or the samples will remain in the liners and the open ends sealed with Teflon™ tape, capped and sealed with exterior tape and shipped to the laboratory. The text should clarify which method shall be used during soil sample collection.

Response: The methodology will be revised by deleting the statement " If liners were used, the open ends will be covered with clean Teflon™ tape, capped, and sealed with exterior tape." In addition the statement "(along perforations in the brass liners)" will be deleted.

4. **Page 3-9, Section 3.1.3.3.** The text states, "A fine sand seal at least 4 feet thick, will be installed on top of the 20/30 silica sand. The remainder of the annulus of the borehole will be grouted by pumping a cement/bentonite slurry through a tremie pipe up to 2 feet below land surface (bls). According to Region IV EPA standard operating procedures, a minimum two-foot thick bentonite seal shall be placed on top of the filter pack. This seal shall consist of 30 % solids bentonite pellets which should be allowed to hydrate for a minimum of 8 hours or the manufacturer's recommended hydration time,

whichever is greater. This bentonite seal prevents grout from contaminating the sand packed screened interval of the monitoring well. The monitoring well installation procedure in the text should be changed to include the installation of a bentonite seal in all shallow, intermediate and deep wells installed at the facility.

Response: As indicated in the comment the purpose of the bentonite seal is to prevent grout from contaminating the sand packed screened interval of the monitoring well. In perched and shallow monitoring wells the wells are screened across the water table and the bentonite seal is located above the saturation zone. Because the bentonite seal is located above the saturation zone it is unlikely that complete hydration of the bentonite seal would occur and therefore grout infiltration of the sand pack may occur. A fine sand seal would limit grout infiltration without the concerns of hydration.

On intermediate and deep monitoring wells, the total depth of monitoring wells ranges from 105 to 325 feet below land surface. The installation of bentonite seals in these wells would range from depths of 93 to 313 feet below land surface and 20 to 200 feet below the potentiometric surface. Although bentonite pellets could be tremied above the sand pack through 20 or 40 feet of water column, the pellets cannot be tremied through 200 feet of water without swelling within the tremie line. A fine sand seal would limit grout infiltration of the sand pack and can be tremied to these depths. ~~For consistency of monitoring well installation at the facility, all new monitoring wells will be completed using fine sand seal.~~

The Navy will follow the USEPA's SOP and install bentonite seals in monitoring wells when appropriate for the monitoring well purpose and site conditions. The appropriate monitoring well construction methods will be reviewed on a site by site and monitoring well by monitoring well basis. A field judgement will be made by the onsite Geologist as to whether a bentonite seal or fine sand seal is better suited for the site conditions.

5. **Page 3-11, Section 3.1.3.3.6.** The text states, "Wells will be developed until the following criteria are achieved:

- Stabilization of the following parameters occurs:
 - temperature plus or minus 1 C,
 - pH plus or minus 1 unit, and
 - electrical conductivity plus or minus 5 percent of scale; and
- Turbidity remains within a 10 Nephelometric Turbidity Unit (NTU) range for 2 consecutive readings;
- Accumulated sediment is removed from the well.

The Region IV EPA standard operating procedures recommend that, in addition to stabilization of these parameters, a minimum of 3 well volumes be removed from the monitoring well during development. The text should include these items as part of the well development procedure.

Response: The text will be revised by adding the additional bullet as follows:
a minimum of 3 well volumes be removed from the monitoring well during development.

6. **Page 3-15, Section 3.1.3.6.** The text states, "All measurements will be collected within a 48-hour period of consistent weather conditions to minimize atmospheric/precipitation effects on groundwater conditions." However, groundwater levels should all be collected within a time frame as short as possible, such as within an 8-hour workday or less to allow for the accurate representation of the potentiometric surface. Since the site is in close proximity to the Gulf Coast, groundwater may be under tidal influence. Therefore, tidal influence may need to be taken into consideration when water levels are measured at the site. Section 3.1.3.6 should be amended to address the potential influence of these factors for water level measurements.

Response: The number of monitoring wells to be measured and distance between wells precludes the completion of the groundwater elevation measurement task in a shorter time frame. Historically a four-person crew was needed to complete the task within a 48-hour time period. However, all of the monitoring wells located at a specific site and groups of monitoring wells in close proximity to each other are measured concurrently so that relative groundwater measurements are representative.

Although NAS Whiting Field is located on the Gulf Coast, the facility is located far enough from tidally influenced water bodies (approximately 3 miles from the Blackwater River) and at a high enough elevation (the lowest elevation at the facility is Clear Creek with an approximate elevation of 30 feet mean sea level) to preclude tidal influence of groundwater. Previous studies conducted by ABB-ES have not indicated the presence of tidally influenced groundwater.

7. **Page 3-16, Section 3.1.3.9.** The text states, "Soil samples will be analyzed for their total hydrocarbon content using an organic vapor analyzer (OVA) equipped with an FID." However, according to the instrument description in this section, the FID measures response to general organic vapors in parts per million but is not capable of detecting total hydrocarbon content solely. The text should be changed to address this discrepancy.

Response: The text will be changed to reference total organic vapors instead of total petroleum content.

8. **Page 3-32, Second and Third Paragraph.** The text states, "All of the samples from the excavation contained concentrations of chromium exceeding the TCLP regulatory limit and four of the five samples (excluding the south wall sample) contained lead at concentrations exceeding the TCLP criteria (Conrad, 1998). The soil sample from the abandoned heating-oil tank contained concentrations of benzene and toluene at concentrations exceeding Florida Soil Cleanup Target Levels (F.A.C. Chapter 62-777) and detected concentrations of chromium and lead exceeded the TCLP regulatory limits (Conrad, 1998)." The text does not provide the concentrations of any of the preceding constituents exceeding the TCLP criteria or Florida Soil Cleanup Target Levels and does not identify the valence of the chromium detected (III or VI). The text and/or a table should provide the concentrations of the constituents, lead, chromium, benzene and toluene that exceed the TCLP regulatory limits and Florida Soil Cleanup Target Levels and specify the valence of the chromium.

Response: The historical data requested are summarized in the indicated reference. The reference will be included in an appendix to the Work Plan.

9. **Page 3-46, Source Areas of Concern.** The text states, "The RI/FS investigation at site 1485C will consist of a historic document review and interviews with Base personnel, collection of surface and subsurface soil samples, and the installation and sampling of a monitoring well." The text should provide the rationale for installing only one monitoring well at Site 1485C as opposed to a minimum of three monitoring wells required for determining groundwater flow direction.

Response: ~~The original scope of investigation for Site 1485C was presented to the NAS Partnering Team during a during the November 1998 meeting. Based on Partnering Team comments received at that meeting a single monitoring well was proposed for the site.~~

The rationale for the installation and sampling of single monitoring well included:

- Groundwater at the facility is included in the Site 40 Base-wide groundwater investigation, therefore the point of compliance is not the site boundary but the facility boundary and surface and subsurface soils data can be used to determine if site represents a continuing source to groundwater,
- Additional monitoring wells are located within 500 feet of the site which can be used to determine groundwater flow direction, and
- A single monitoring well installation will reduce site investigation costs.

10. **Page 3-50, Section 3.2.6.2.** The text states, “A detailed time line discussion of the Clear Creek Flood Plain history is provided in Appendix C.” Appendix C is missing from the RI/FS WP and should be included.

Response: The appendix was inadvertently omitted and will be included in the final document.

11. **Page 3-65, QA/QC Sample Summary Table.** The summary table indicates that a trip blank will be included in each cooler shipped only if 10 or more samples are collected. If nine or fewer samples are collected, no trip blanks will be included in the cooler(s). A trip blank should be included in each cooler regardless of how many samples are collected. The text should be amended to include a trip blank per cooler when samples are shipped.

Response: A trip blank will be included with each sample cooler shipped. The text will be modified to reflect this change.

12. **Plate 1, Proposed Monitoring Wells, Monitoring Wells and Site Locations.** The legend in Plate 1 does not provide the symbol for the existing monitoring wells. This symbol should be included in the Plate 1 legend.

Response: The Plate 1 legend will be modified to include the existing monitoring well symbol.