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NAS CECIL FIELD, FL
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LETTER OF TRANSMITTAL AND TECHNICAL SYSTEM AUDIT FOR OPERABLE UNIT 9 (OU
9) SITE 36 AND SITE 37 FIELD OPERATIONS NAS CECIL FIELD FL
12/9/1998
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
Document Index Number

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December 9, 1998

Commanding Officer
Attn: Scott Glass
Dept. of Navy
Southern Division
Mail Code 18B12
P.O. Box 190010
North Charleston, South Carolina 29419-9010

Subject: Technical System Audit for Sites 36 and 37; NAS Cecil Field, Jacksonville, FL

Dear Mr. Glass:

During the week of November 16, 1998, the U.S. Environmental Protection Agency, Region 4, Science and Ecosystems Support Division conducted a Technical System Audit of the Site 36/37 field operations. Attached is a copy of the resulting report. No major deficiencies were identified.

If you have any questions, please contact me at 404/562-8539.

Sincerely,

A handwritten signature in cursive script that reads "Deborah A. Vaughn-Wright".

Deborah A. Vaughn-Wright
Remedial Project Manager

cc: Mike Deliz, FL DEP (w/attachment)
Mark Davidson, SOUTHDIV (w/attachment)
Mark Speranza, TTNUS (w/attachment)

U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION 4, SCIENCE and ECOSYSTEMS SUPPORT DIVISION
ATHENS, GEORGIA 30605-2720

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DEC 01 1998

MEMORANDUM

SUBJECT: Technical Systems Audit: NAS Cecil Field
Jacksonville, Florida
SESD Project No: 99-0097.

FROM: Jonathan Vail *J Vail*
Hazardous Waste Section

THRU: Archie Lee, Chief *Archie Lee*
Hazardous Waste Section

TO: Deborah Vaughn-Wright, RPM
BRAC Team
Waste Management Division

During the week of November 16, 1998 I conducted a Technical Systems Audit (Overview) of the Tetra Tech NUS contractors at the above referenced facility. No obvious problems were encountered and all personnel were well experienced.

Technically, Geoprobe techniques were employed to collect temporary well ground water samples, but the contractors called it Direct Push Technology (DPT). I did however, teach the sampling crews the technique to reduce turbidity to a minimum. Although turbidity would not interfere with VOA analysis, (most turbidity values were around 800 to 1000 until they changed to the technique), I showed them a way to get lower turbidity values if they wanted to try (they got lower than 150 most of the time and some a little lower). The crews were using low flow and started with the tubing one foot above the bottom of the screened interval. The better technique is to start the tubing near the bottom of the screen, but at high flow to vacuum the sediment out of the bottom of the temp DPT wells, then move the tubing, (still at high flow purge) to the top of the water column until fairly clear (5-10 mins.) and then lower tubing to near the bottom and decrease to low flow until parameters stabilize.

Please call me at (706) 355-8611, if you have any comments or questions.

cc: Vail, EIB

**EXHIBIT 2.1
REGION 4
HAZARDOUS WASTE FIELD OVERVIEW CHECKLIST**

Facility/Site Name NAS Cecil Field						
Address Jacksonville, FL						
Project No. 98-0097				EPA ID No.		
Facility Contact				Phone No.		
Overview Personnel Jonathan Vail				Date 11/17-18/1998		
State/Contractor Project Leader Tom Dickson						
Affiliation Tetra Tech NUS, Inc.				Phone No. 412 921-7090		
Address 661 Andersen Drive, Pittsburgh, PA 15220-2745						
Sampling Personnel Mark Darrington, Terry Rojahn, Jon Kucera, Abby Wilcox, Murvin Dale, Jimmy Jordan						
Other Personnel & Affiliation TEG (DPT Subcontractors) William Murphy, Eddie Andino, Chris Tranchina, Dennis Wesselhoft; Accutest (Analytical Lab. Subcontractor) Sean Cunningham						
Type of study? RI						
Study plan issued? Yes				Date issued? 10/1998		
Study plan reviewed by the Division? Yes				Acceptable? Yes		
<u>Comments:</u>						
Was study plan followed? Yes						
<u>Comments:</u>						
Was a safety plan prepared for the study? Yes						
<u>Comments:</u>						
Was the safety plan adequate? Yes						
<u>Comments:</u>						
Was the safety plan followed? Yes						
<u>Comments:</u>						
Additional comments or information:						
Checklist sections completed for this overview:	1.X	2.X	3.	4.	5.	6.X
Key: 1. General Procedures 2. Ground Water Sampling 3. Soil, Sediment, Sludge Sampling			4. Surface Water Sampling 5. Waste Sampling 6. Monitoring Well Installation			

SECTION 1 - GENERAL PROCEDURES - SAFETY, RECORDS, QA/QC, CUSTODY, ETC.

1.	Type samples collected? <u>Comments:</u> Ground water from DPT
2.	Were sampling locations properly selected? <u>Comments:</u> Yes
3.	Were sampling locations adequately documented in a bound field log book using indelible ink? Yes <u>Comments:</u>
4.	Were photos taken and a photolog maintained? <u>Comments:</u> No
5.	What field instruments were used during this study? <u>Comments:</u> Horiba U-10 (pH, Temp., spec. cond.) Turbidity meter
6.	Were field instruments properly calibrated and calibrations recorded in a bound field log book? <u>Comments:</u> Yes
7.	Was sampling equipment properly wrapped and protected from possible contamination prior to sample collection? <u>Comments:</u> Yes
8.	Was sampling equipment constructed of Teflon®, glass, or stainless steel? <u>Comments:</u> Polyethylene tubing for peristaltic pumps.
9.	Were samples collected in proper order? (least suspected contamination to most contaminated?) <u>Comments:</u> N/A
10.	Were clean disposable latex or vinyl gloves worn during sampling? <u>Comments:</u> Yes
11.	Were gloves changed for each sample station? <u>Comments:</u> Yes
12.	Was any equipment field cleaned? <u>Comments:</u> DPT Rods
13.	Type of equipment cleaned: <u>Comments:</u> See above
14.	Were proper field cleaning procedures used? <u>Comments:</u> Yes
15.	Were equipment rinse blanks collected after field cleaning? <u>Comments:</u> No, however, I suggested they do at least one per week, even though plan doesn't state to do so.

16.	Were proper sample containers used for samples? <u>Comments:</u> Yes, 40 ml
17.	Were split samples offered to the facility owner or his representative? <u>Comments:</u> No
18.	Was a Receipt for Samples form given to facility representative? <u>Comments:</u> N/A
19.	Were any duplicate samples collected? <u>Comments:</u> Yes
20.	Were samples properly field preserved? <u>Comments:</u> HCl Prepreserved 40 ml vials and iced after collection.
21.	Were preservative blanks utilized? <u>Comments:</u> No
22.	Were field and/or trip blanks utilized? <u>Comments:</u> Yes
23.	Were samples adequately identified with labels or tags? <u>Comments:</u> Labels
24.	Were samples sealed with custody seals after collection? <u>Comments:</u> Did not observe.
25.	What security measures were taken to insure custody of the samples after collection? <u>Comments:</u> Samples were in custody of samplers until given to Accutest Project Man.
26.	Were chain-of-custody and receipt for samples forms properly completed? <u>Comments:</u> Yes
27.	Were any samples shipped to a laboratory? <u>Comments:</u> Yes, daily.
28.	If yes to No. 27, were samples properly packed? <u>Comments:</u> Yes
29.	If shipped to a CLP lab, were Traffic Report Forms properly completed? <u>Comments:</u> N/A
30.	What safety monitoring equipment, protection, and procedures were used prior to and during sampling? <u>Comments:</u> Ear, eye and head protection. Air monitoring of borehole and brathing space.
31.	Was safety monitoring equipment properly calibrated and calibrations recorded in a bound field log book? <u>Comments:</u> Yes

SECTION 2 - SAMPLING - GROUND WATER

1.	Type of wells sampled? (monitoring, potable, industrial, etc.) <u>Comments:</u> DPT Temp.
2.	Were wells locked and protected? <u>Comments:</u> N/A
3.	Were identification marks and measurement points affixed to the wells? <u>Comments:</u> N/A
4.	What were the sizes and construction materials of the well casings? <u>Comments:</u> Nominal 1 3/4 in DPT rods.
5.	Were the boreholes sealed with a concrete pad to prevent surface infiltration? <u>Comments:</u> N/A
6.	Was there a dedicated pump in the well? <u>Comments:</u> Peristaltic.
7.	Was clean plastic sheeting placed around the wells to prevent contamination of sampling equipment and containers? <u>Comments:</u> Yes
8.	Were total depths and depths to water determined before purging? <u>Comments:</u> Yes
9.	What device was used to determine depths? <u>Comments:</u> Electronic water level indicator
10.	Were measurements made to the nearest 0.01 ft? <u>Comments:</u> Yes
11.	Was the measuring device properly cleaned between wells? <u>Comments:</u> Yes
12.	Was the standing water volume in each well determined? <u>Comments:</u> No
13.	How was the volume determined? <u>Comments:</u> N/A
14.	Was a sufficient volume purged prior to sampling? <u>Comments:</u> Yes
15.	How many volumes? <u>Comments:</u> More than 5 at each temp DPT well
16.	How was the purged volume measured? <u>Comments:</u> Graduated cylinder measurement per time elapse.

17.	What was the method of purging? <u>Comments:</u> Peristaltic
18.	Were pH, conductivity, temperature, and turbidity measurements taken and recorded at least once during each well volume purged? <u>Comments:</u> Yes
19.	Were pH, conductivity, temperature, and turbidity readings stable prior to sampling? <u>Comments:</u> Yes
20.	How many wells were sampled? Upgradient? Downgradient? <u>Comments:</u> Plan was for 40 each at site 36 & 37
21.	How were the samples collected? Bailer Pump Other <u>Comments:</u> Peristaltic tubing
22.	If a pump was used, what type? <u>Comments:</u> Peristaltic
23.	If a pump was used, was it properly cleaned before and/or between wells? <u>Comments:</u> Clean tubing
24.	What were the cleaning procedures? <u>Comments:</u>
25.	Did bailers have Teflon® coated wire leaders to prevent rope from coming into contact with water? <u>Comments:</u> N/A
26.	Were bailers open or closed top? <u>Comments:</u> N/A
27.	Was a clean bailer and new rope used at each well? <u>Comments:</u> N/A
28.	Were samples properly transferred from the sampling device to the sample containers? (i.e., volatile sample first - not aerated, etc.) <u>Comments:</u> VOAs only
29.	Was pH of preserved samples checked to insure proper preservation? <u>Comments:</u> N/A
30.	Were samples iced immediately after collection? <u>Comments:</u> Yes
31.	For what analyses were the samples collected? <u>Comments:</u> VOAs only
32.	If samples were split, what were the sample/station numbers for these? <u>Comments:</u>

33.	Are the ground water samples being filtered? <u>Comments:</u> No
34.	If the ground water are being filtered, what procedure is being used? <u>Comments:</u> N/A
35.	Is low flow/low volume sampling being conducted (e.g., is the intake of the pump at the middle of the screen)? <u>Comments:</u> Yes
36.	If low flow/low volume sampling is being conducted, is the water level being measured constantly to insure minimal drawdown of the less than 3 to 4 inches? <u>Comments:</u> No
33.	Other comments or observations. I taught the sampling crews the technique to reduce turbidity to a minimum. The crews were using low flow but started one foot above the bottom of the screened interval. The better technique is to start near the bottom of the screen, but at high flow to suck the sediment out of the bottom of the temp DPT well, then at high flow purge from the top of the water column until clear (5-10 mins.) and then lower tubing to near the bottom and decrease to low flow until parameters stabilize.