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NAS WHITING FIELD
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MONTHLY PROGRESS REPORT FOR PHASE 2A REMEDIAL INVESTIGATIONS DURING
OCTOBER 1993 WITH TRANSMITTAL NAS WHITING FIELD FL
11/10/1993
ABB ENVIRONMENTAL



03.04.00.0020

1D-00200

November 10, 1993

Commanding Officer
ATTN: Jeff Adams, Code 18510
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
Charleston SC 29411-0068

**SUBJECT: Monthly Progress Report
Remedial Investigation - Phase IIA
Naval Air Station Whiting Field, Milton, Florida
Contract Task Order 050
Contract N62467-89-D-0317**

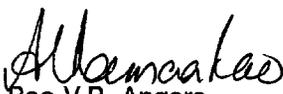
Dear Mr. Adams:

Enclosed please find the monthly progress report for the Remedial Investigation (Phase IIA) work conducted at NAS Whiting Field during October 1993.

If you have any questions, please call me at 904-656-1293 (ext. 314).

Very truly yours,

ABB ENVIRONMENTAL SERVICES INC.


Rao V.R. Angara
Task Order Manager

cc: File: 7560-- (11.2.1)
Eric Blomberg, ABB-ES
Jim Holland, NASWF (w/o attachments)
John Bleiler, ABB-ES
Field Trailer, NASWF
Charlie Manos, ABB-ES (w/o attachments)

ABB Environmental Services Inc.

MONTHLY PROGRESS REPORT
Naval Air Station Whiting Field
October 1993

A. TECHNICAL DESCRIPTION OF TASKS CONDUCTED DURING THIS REPORTING PERIOD

I. Data Validation: All analytical data submitted to C.C. Johnson and Malhotra, for NEESA Level C and Level D validation per USEPA and NEESA validation guidelines, has been received. Data is being added to the NAS Whiting Field database and sorted to prepare data releases for assessment of PARCC parameters for the various sampling events.

II. Elevation and Location Survey: Northwest Florida Engineering has been subcontracted to conduct the elevation and location survey at NAS Whiting Field. The subcontractor has completed the survey for all monitoring wells, except one (WHF-8-1). Upon completion of the survey a report will be submitted to ABB-ES for verifying the data.

III. Monitoring Well Installation: The monitoring well installation program was initiated in January/February 1993. The installation of all monitoring wells has been completed. Per USEPA request, protective curbs will be installed at all flush-mount well locations. Specification are being drafted to complete this task.

IV. Review Comments: USEPA review comments for Technical Memorandum No. 1 were received during this reporting period. A meeting has been scheduled for November 10, 1993 to discuss the Navy responses to these comments.

V. Data Releases: A surface soil data release, covering all sites other than Site 17 and 18, is being prepared to present the data assessment for all media and fractions. This information will be incorporated into the appropriate technical memorandum for agency review.

VI. Groundwater Sampling: The groundwater sampling task was initiated during this reporting period. The shift reports prepared by the Field Operations Leader are attached to the monthly progress report. The sampling task not only includes the collection of groundwater samples but also the measurement of water depth, pH, conductivity, temperature, and turbidity.

An internal (ABB-ES) field audit was conducted by Mr. Gerry Walker (Senior Scientist) to ensure that proper sampling procedures were being followed during sampling collection. A copy of the audit report is presented in Attachment B.

VII. Ecological Survey: Per USEPA recommendation, a habitat survey was conducted in the areas adjacent to Site 15 and 16. The survey include mapping the white-topped pitcher plants and other flora in that area.

B. STATUS OF WORK TO DATE

- Geophysical survey field program has been completed. The final technical report was submitted to the regulatory agencies on February 17, 1993. Response to comments were prepared and presented to the TRC members on 20 May 1993.
- The soil gas survey field program has also been completed. The final technical report was submitted to the regulatory agencies on 10 March 1993.
- The surface water and sediment sampling task has been completed. The Draft Technical Memorandum No. 1 (Surface Water and Sediment Assessment) was submitted to SDIV on 18 March 1993, the Final Draft Technical Memorandum was submitted to the regulatory agencies on 14 April 1993, and the Final document was submitted to all TRC members on 30 July 1993.
- The final record search (part 1) document was submitted to SDIV in September 1992.
- The record search (part 2) was conducted in August 1993. The objective of this task was to obtain information on additional areas identified by the NAS Whiting Field personnel and obtain aerial photographs requested by the regulatory agencies. A report summarizing the findings of this effort was submitted to the Navy in September 1993.
- Test pitting operations (field work), as proposed in RI Phase I Technical Memorandum No. 6, have been completed.
- PCPT/BAT activities were completed on November 4, 1992. Seven PCPT soundings and 14 BAT samples were collected as planned. The Level E data was presented in the January 1993 monthly progress report. A data release presenting the PCPT/BAT analytical data was submitted to the Navy on June 26, 1993.

- Data validation for surface soil, subsurface soil, surface water, and sediment sample data has been completed by C.C. Johnson and Malhotra.
- Elevation and location survey of geophysical survey, soil gas survey, soil sampling locations, test pit locations, PCPT/BAT locations, and soil boring locations has been completed.
- The soil boring program, as proposed in Technical Memorandum No. 6 (Phase I), was completed on 27 January 1993.
- The monitoring well installation program, as proposed in Technical Memorandum No. 6 (Phase I), was initiated in January/February 1993.
- The second TRC meeting was held on 20 May 1993 at NAS Whiting Field. The purpose of the meeting was to discuss the status of the field program and discuss the results and findings presented in the Technical Reports and the Technical Memorandum No. 1. The status of the Clear Creek Floodplain investigation was also discussed during this meeting.
- As requested by the USEPA and FDER, soil samples were collected from the Site 12 (Tetraethyl Lead Site) in August 1993. The samples were submitted to the laboratory (CH2MHILL) for analysis. The data obtained from this sampling episode will assist the 'No Further Action' proposed for Site 12.
- Preliminary water level measurements were recorded (September 1993) at all monitoring well locations during this reporting period. This data was collected to estimate the quantity of IDW which may be generated during the groundwater sampling event.
- Preliminary surface soil data assessments for Sites 17 and 18 have been submitted to the Navy. This information will be incorporated into the appropriate technical memorandum.

C. PROBLEMS ENCOUNTERED DURING REPORTING PERIOD

- None

D. ACTIVITIES PLANNED FOR NEXT MONTH

- TFMR and Monthly Progress Report.
- Groundwater Sampling.
- Complete Monitoring Well Installation Program.
- Data Management and Evaluation.
- Photography/Video Documentation.
- Elevation Location Survey.
- Prepare Data Releases.

E. SCHEDULED DELIVERABLES FOR NOVEMBER 1993

- TFMR
- Monthly Progress Report.

F. CORRESPONDENCE AND DOCUMENTS RECEIVED

- None

G. COST IMPACTS

- None

H. SAMPLING AND ANALYSIS RESULTS

- None

I. LABORATORY MONTHLY PROGRESS REPORTS

- Yes

J. PLANNED CHANGES IN PERSONNEL AND THEIR QUALIFICATIONS

The project team comprises of the following personnel.

Rao Angara, Task Order Manager	Eric Blomberg, Technical Leader
Dr. Willard Murray, Technical Director	Salvatore Consalvi, Field Operations Leader
Kathleen Hodak, Project Assistant	Gopi Kanchibhatla, Associate Engineer
John Bleiler, Senior Scientist (Ecologist)	Keith Peterson, Graphics and Photography
David Daniel, Public Health Specialist	Roger Protzman, Associate Engineer
Felix Rizk, Geologist	Dr. Marland Dulaney, Senior Toxicologist

K. PERCENT COMPLETION

Task	Title	% Complete
1	Project Management	51
2	Field Preparation	62
3	Geophysical Survey	100
4	Soil Gas Survey	100
5	Surface Water and Sediment Sampling	100
6	Test Pitting	100
7	Soil Sampling	85 (Subsurface & Surface Soil Sampling Completed, Data Assessment is ongoing)
8	PCPT/BAT	100
9	Soil Boring and Monitoring Well Installation	88
10	Groundwater Sampling	20
11	Water Level Measurement	8
12	Elevation and Location Survey	73
13	Ecological Survey	60
14	Data Validation	70
15	Photography Support	70
16	Technical Memoranda Preparation	14
17	Contamination Assessment Report	0
18	Groundwater Modeling	0

L. TARGET/ACTUAL COMPLETION DATES (by task)

Task	Title	Scheduled	Actual
1	Project Management	3-30-92 to 4-30-94	Started 3-30-92
2	Field Preparation	4-23-92 to 4-30-94	Started 4-23-92
3	Geophysical Survey	5-28-92 to 5-31-93	5-28-92 to 2-26-93
4	Soil Gas Survey	6-26-92 to 6-30-93	6-26-92 to 3-10-93
5	Surface Water and Sediment Sampling	7-6-92 to 8-1-92	7-6-92 to 8-1-92
6	Test Pitting	9-14-92 to 10-9-92	9-14-92 to 10-9-92
7	Surface Soil Sampling	8-3-92 to 11-10-92	8-3-92 to 10-31-92
8	PCPT/BAT	11-5-92 to 12-28-92	10-12-92 to 11-4-92
9	Soil Boring & Well Installation	1-4-93 to 2-4-94	Started 12-1-92 (Field program completed on 9-30-93)
10	Groundwater Sampling	2-7-94 to 6-30-94	Started 9-20-93
11	Water Level Measurement	5-2-94 to 5-13-94	Started 9-27-93
12	Locational Survey	2-7-94 to 3-30-94	Started 6-30-92
13	Ecological Survey	2-5-94 to 3-13-94	Started 12-1-92
14	Data Validation	6-15-94 to 10-16-94	Started 9-15-92
15	Photography Support	5-4-92 to 6-30-94	Started 5-4-92
16	Technical Memoranda Preparation	9-1-94 to 4-4-95	Started 12-1-92
17	CA Reports	11-16-94 to 11-29-94	Not Started
18	Groundwater Modelling	-----	-----

ATTACHMENT A
SHIFT REPORTS



Inter-Office Correspondence

TO: Rao Angara
cc. Eric Blomberg

FROM: Salvatore Consalvi (FOL)

DATE: 10/18/93

SUBJECT: Groundwater Sampling, Shift I

DURATION: 10/12/93 - 10/15/93

WEATHER: Cool and overcast, 70-80 degrees. Light rain.

ABB-ES Personnel:

Salvatore Consalvi (FOL): 10/12/93 - 10/15/93
Gopi Kanchibhatla (Team Member): 10/12/93 - 10/15/93
Felix Rizk (Team Member): 10/12/93 - 10/15/93
Roger Protzman (Team Member): 10/12/93 - 10/15/93

PURPOSE: To conduct Phase II-A RI groundwater sampling.

1.0 Executive Summary

During Shift I, ABB-ES began the groundwater sampling event for the Phase II-A RI. The first day was spent decontaminating and assembling sampling equipment including a Honda pump to transfer purge water to the tanker. The crew sampled a total of 4 monitoring wells and 4 chambers of the tanker containing development water.

2.0 Health and Safety

Informal health and safety meetings were conducted during sampling. The practice of conducting formal H&S meetings each morning will be resumed prior to sampling next shift.

3.0 Surveying

The FOL contacted Bill Stiffy (Northwest Florida Engineering) to determine if all wells had been surveyed. He mentioned that Ron Rubin was unsure of the location of one monitoring well. Mr. Rubin will contact ABB-ES when he returns from vacation in two weeks.

4.0 Groundwater Sampling

Table 1. presents the monitoring wells sampled along with the physical parameter data. Prior to sampling, all monitoring wells were screened with an OVA. The sampling team tested purge water for pH, conductivity, and temperature after each well volume. Turbidity was analyzed and recorded after completion of purging.

**Table 1. Monitoring Wells Sampled
Shift I**

Well Number	Sample Number	Sample Date	Associated QC Samples	Water Level (TOC)	pH	Conductivity	Temperature	Turbidity
WHF-BKG-2	WHFBKG-2	10-14-93	RB1, TB1	96.8	5.78	73	21.4	3208
WHF-BKG-3	WHFBKG-3	10-14-93	RB1, TB1	72.9	4.91	30	23	347.6
WHF-BKG-1	WHFBKG-1	10-15-93	RB1, TB2	108	4.86	17	22.7	304
WHF-1-3	WHF1-3	10-15-93	RB1, TB2	76.7	4.74	21	22.4	1390
QC SAMPLES								
TB1		10-14-93	--	--	--	--	--	--
RB1		10-14-93	--	--	--	--	--	--
TB2		10-15-93	--	--	--	--	--	--

5.0 Procedural Difficulties

The following procedural difficulties were encountered during the Shift I.

1. As a result of poor communication between field team members, the team failed to properly account for all the necessary equipment thus leaving equipment behind. The problem was brought to the attention of the team members and several suggestions were made to avoid and further mistakes.
2. A crew member failed to unlock a pump before attempting to move the vehicle which contained it. The reel of the pump suffered minor damage.
3. The crew experienced difficulty inserting the purge pump to the water table without first touching bottom and agitating the sediments. If allowed, the crew may place teflon tape at 10 foot intervals beginning at 100 feet to avoid reaching bottom.

5.1 Mechanical Delays

No mechanical delays were experienced during the Shift I of groundwater sampling.

5.2 Weather Delays

None.

5.3 NASWF/Base Issues

No significant issues or difficulties arose during Shift I.

6.0 Deviation from Shift/Work Plan

None.



Inter-Office Correspondence

TO: Rao Angara
cc. Eric Blomberg

FROM: Salvatore Consalvi (FOL)

DATE: 10/22/93

SUBJECT: Groundwater Sampling, Shift II

DURATION: 10/18/93 - 10/22/93

WEATHER: Cool and overcast, 70-80 degrees.

ABB-ES Personnel:

Salvatore Consalvi (FOL): 10/18/93 - 10/22/93
Gopi Kanchibhatla (Team Member): 10/18/93 - 10/22/93
Felix Rizk (Team Member): 10/18/93 - 10/22/93
Roger Protzman (Team Member): 10/18/93 - 10/22/93

PURPOSE: To conduct Phase II-A RI groundwater sampling.

1.0 Executive Summary

During Shift II, ABB-ES continued the groundwater sampling event for the Phase II-A RI. The crew sampled a total of 10 monitoring wells from Sites 2, 17 and 18. Northwest Florida Engineering was contacted to complete the location survey.

2.0 Health and Safety

Health and safety meetings were conducted each morning prior to sampling. No incidents or oversights were reported.

3.0 Surveying

Bill Stiffy (Northwest Florida Engineering) contacted the FOL to schedule a time his employee could meet and learn the location of the final well. Ron Rubin was to call the last day of the shift. Mr. Rubin did not contact ABB-ES before the end of the shift.

4.0 Groundwater Sampling

During Shift II, ABB-ES continued the groundwater sampling event for the RI Phase II-A. The field crew sampled a total of 10 monitoring wells from Sites 2, 17 and 18. Table 1. presents the well numbers, date sampled, and associated QC samples. All monitoring wells were screened with an OVA. The purge team tested purge water for pH, conductivity and temperature after each well volume. Turbidity samples were collected prior to the collection of the metals sample. The physical parameter data is also included in Table 1.

**Table 1. Monitoring Wells Sampled
Shift II**

Well Number	Sample Number	Sample Date	Associate d QC Samples	Water Level (TOC)	pH	Conductivity	Temperature	Turbidity
WHF-1-1	WHF1-1	10-18-93	RB2, TB3	64.7	5.03	20	23	3.92
WHF-1-1S	WHF1-1B	10-18-93	RB2, TB3	64.4	5.04	30	23	374
WHF-1-2	WHF1-2	10-19-93	RB2, TB4	66.1	4.58	30	22	5888
WHF-2-1 (+Dup)	WHF2-1 WHF2-1A	10-19-93	RB2, TB4	78.0	--	--	--	--
WHF-17-1	WHF17-1	10-19-93	RB2, TB4	111.0	4.84	19	24	2.58
WHF-17-1S	WHF17-1B	10-20-93	RB3, TB5	111.0	5.28	33	23	509
WHF-17-2S (+Dup+MS+MSD)	WHF17-2B WHF17-2BA WHF17-2BMS WHF17-2BMSD	10-20-93	RB3, TB5	114.0	5.13	20	25	257
WHF-17-3	WHF17-3	10-21-93	RB3, TB6	118.0	4.87	21.5	22.1	1241
WHF-18-1	WHF18-1	10-21-93	RB3, TB6	93.3	4.77	26.6	24.3	2.97
WHF-18-2S	WHF18-2B	10-21-93	RB3, TB6	95.8	4.45	29	23.8	1370
QC SAMPLES								
	RB2, TB3	10-18-93	--	--	--	--	--	--
	RB3, TB4	10-19-93	--	--	--	--	--	--
	TB5	10-20-93	--	--	--	--	--	--
	TB6	10-21-93	--	--	--	--	--	--

5.0 Procedural Difficulties

5.1 Mechanical Delays

The following mechanical failures were experienced during the sampling operations in Shift II:

1. The impellers on the 100 foot Grundfos pump used as a back-up pump were found to be worn down. Additionally, the purge team reported that duct tape was used on a wire in the pump. The pump will be returned to the Navy CLEAN equipment room for inspection and maintenance.

5.2 Weather Delays

None.

5.3 NASWF/Base Issues

1. Mr. Gary Spence (ODO) expressed concern at how close WHF-17-3 was to the taxiway near Site 17. The FOL recalls a conversation with an ODO (other than Mr. Spence) during the installation of the well which included a brief description of the intended well height. Bumper posts were not discussed. The ODO did not express concern at that time. After discussions with Mr. Eric Blomberg and Mr. Jim Holland, the posts were removed and the well lowered to below 1 foot.

6.0 Deviation from Shift Plan

None.



Inter-Office Correspondence

TO: Rao Angara
cc. Eric Blomberg

FROM: Salvatore Consalvi (FOL)
DATE: 10/29/93
SUBJECT: Groundwater Sampling, Shift III
DURATION: 10/25/93 - 10/29/93

WEATHER: Cool and overcast, 68-75 degrees.

ABB-ES Personnel:

Salvatore Consalvi (FOL): 10/25/93 - 10/29/93
Gopi Kanchibhatla (Assistant FOL): 10/25/93 - 10/27/93
Felix Rizk (Team Member): 10/25/93 - 10/29/93
Roger Protzman (Team Member): 10/25/93 - 10/29/93
Eric Blomberg (Technical Leader): 10/26/93 - 10/29/93
Gerry Walker (Auditor): 10/26/93 - 10/27/93

PURPOSE: To conduct Phase II-A RI groundwater sampling.

1.0 Executive Summary

During Shift III, ABB-ES continued the groundwater sampling event for the Phase II-A RI. The crew sampled a total of 10 monitoring wells from Sites 18, 9, 10 and 11. Mr. Gerry Walker conducted an internal audit of sampling procedures during the event.

2.0 Health and Safety

Health and safety meetings were conducted each morning prior to sampling. No significant oversights were reported. However on 10/28/93, Felix Rizk was splashed on the left side of the face while purging WHF-11-2. A small portion of the water entered the eye but neither skin nor eye irritation resulted. The pump is more difficult to control than the grundfos but with experience incidents of this nature should cease.

3.0 Audits

Gerry Walker conducted a comprehensive internal field audit of groundwater sampling procedures during the shift. Mr. Walker did not report any findings that could seriously compromise the integrity of the samples, however, several findings and suggestions were discussed. In general the findings were very helpful and their implementation should further safeguard the overall accuracy of the event. A majority of the changes were implemented immediately after the informal meetings conducted during the shift.

4.0 Groundwater Sampling

During Shift III, ABB-ES continued the groundwater sampling event for the Phase II-A RI. The crew sampled a total of 10 monitoring wells from Sites 18, 9, 10 and 11. Pertinent sampling data is presented in Table 1.

**Table 1. Monitoring Wells Sampled
Shift III**

Well Number	Sample Number	Sample Date	Associated QC Samples	Water Level (TOC)	pH	Conductivity	Temperature	Turbidity
WHF-18-3	WHF18-3	10-25-93	RB4, TB7	104	4.86	18	22	1192
WHF-9-1	WHF9-1	10-26-93	RB4, TB8	86.7	7.99	33	21.2	12.7
WHF-9-2	WHF9-2	10-26-93	RB4, TB8	100	11.59	1300	24	27.2
WHF-9-3S	WHF9-3B	10-27-93	RB5, TB9	90.8	11.29	345	21.2	612
WHF-10-1	WHF10-1	10-27-93	RB5, TB9	88.1	5.07	19	22	0.96
WHF-10-2	WHF10-2	10-27-93	TB5, TB9	92	5.25	15	22	41
WHF-11-2	WHF11-2	10-28-93	RB5, TB10	93.5	11.94	2060	20.8	167.9
WHF-11-1S	WHF11-1B	10-28-93	RB5, TB10	45.5	5.70	--	--	606.8
WHF-11-3	WHF11-3	10-28-93	RB5, TB10	61.9	7.12	37	19	799
WHF-11-1	WHF11-1	10-29-93	RB6, TB11	51.1	6.04	111	19.9	2.77
QC SAMPLES								
RB4		10-25-93	--	--	--	--	--	--
TB7		10-25-93	--	--	--	--	--	--
TB8		10-26-93	--	--	--	--	--	--
TB9		10-27-93	--	--	--	--	--	--
RB5		10-27-93	--	--	--	--	--	--
TB10		10-28-93	--	--	--	--	--	--
TB11		10-29-93	--	--	--	--	--	--
RB6		10-29-93	--	--	--	--	--	--

5.0 Surveying

Bill Stiffy (Northwest Florida Engineering) contacted the FOL during Shift II to schedule a time his employee could meet and learn the location of the final well. Ron Rubin was to call the last day of the shift. Mr. Rubin contacted ABB-ES before the end of the Shift III and received enough information about WHF-8-1 to complete the survey on the weekend.

6.0 Field Analysis

All monitoring wells were screened with an OVA. The purge team tested purge water for Ph, conductivity and temperature after each well volume. Turbidity samples were collected prior to the collection of the metals sample.

7.0 Procedural Difficulties

7.1 Mechanical Delays

The following mechanical failures were experienced during the groundwater sampling of Shift III:

1. The wiring on the large Grundfos pump used as a back-up pump were frayed, possibly during disassembly in the field. The exposed wire led to an over amperage shutdown. The wire was temporarily repaired with teflon tape however after three more wells the pump was down permanently. The pump will be returned for inspection and repair.
2. The battery on the truck went dead several times during the course of the shift and may need replaced if the problem continues next shift.

7.2 Weather Delays

None.

7.3 NASWF/Base Issues

During Shift II, Gary Spence (ODO) expressed concern at how close WHF-17-3 was to the taxiway near Site 17. After conversations with Eric Blomberg and Jim Holland, the posts were removed and the well lowered to below 1 foot. ABB learned during Shift III that a traditional flush mount will be required. Several potential sub-contractors were contacted to begin the bid process that will add the work to the contract for installation of curbs around the existing flush mounts. Another potential addition to the contract may be to drill holes in any Geraghty and Miller and/or Phase I protective casings which lack weep holes.

8.0 Deviation from Shift Plan

None.

ATTACHMENT B
AUDIT REPORT



Inter-Office Correspondence

TO: Rao Angara
FROM: Gerry Walker
DATE: October 28, 1993
SUBJECT: Groundwater Sampling Field Audit, NAS Whiting Field, Milton, Florida

The purpose of this memorandum is to transmit the findings of a groundwater sampling audit conducted at the Naval Air Station (NAS) Whiting Field, Milton, Florida on October 26 and 27, 1993. The audit was requested by the Task Order Manager and was conducted by an outside party in the form of a Technical Leader not associated with the project.

ABB-ES field personnel present during the audit included:

Eric Blomberg	Technical Leader
Sal Consalvi	Field Operations Leader
Gopi Kanchibhatla	Site Health and Safety Officer
Felix Rizk	Team Member
Roger Protzman	Team Member

Reference documents used in the completion of the audit included: the Remedial Investigation/Feasibility Study Planning Document, NAS Whiting Field, Milton, Florida - Volume II of III Sampling and Analysis Plan, specifically Appendix C - Quality Assurance Program Plan (QAPP); and USEPA Region IV Standard Operating Procedures and Quality Assurance Manual (SOP). In addition, the ABB-ES Standard Operating Procedures document for logbooks and the Investigation Derived Waste Management Plan for NAS Whiting Field were consulted for proper field procedures.

Audit findings are presented in the following sections. Applicable sections of the USEPA Region IV Field Overview Checklist have been completed and are provided as attachments.

AUDIT FINDINGS

General Findings.

1. Overall the groundwater sampling program is being conducted as a well organized event without any major audit findings that could potentially compromise the data.
2. All site log books were current and properly completed following standard practices outlined in ABB-ES Standard Operating Procedures.
3. Proper disposal practices for decontamination water, purge water, and disposable protective clothing was being completed as specified in the Investigation Derived Waste Management Plan for NAS Whiting Field.
4. No findings related to personal safety procedures were noted by the auditor.
5. All corrective actions recommended as a result of the previous audit were implemented and operating during the period of this audit.

Field Decontamination Procedures.

1. Decontamination procedures for the submersible pump used for well purging operations included an alconox and tap water wash followed by a deionized water rinse. The USEPA Region IV SOP indicates that hot water will be used in the process and that a tap water rinse will be completed between the alconox wash and the deionized water rinse. In addition, during the decontamination process the pump was submerged, pumped for a minimum of three hose volumes, and scrubbed on the outside. However the outside discharge hose only received minimum decontamination by running a brush over the exposed portion. A more thorough decontamination of the outer hose including submerging it in the water baths was recommended.
2. The decontamination process for the teflon bailers included: an Alconox and tap water wash, an Alconox and deionized water wash, a deionized water rinse, a 10% nitric acid rinse, a deionized water rinse, an isopropanol rinse, a deionized water rinse, and isopropanol rinse, a deionized water rinse, and minimum 24-hour air dry. The additional alconox and deionized water wash differs from the USEPA Region IV SOP and is probably not warranted.
3. The teflon line used to retrieve sample bailers was decontaminated using an Alconox and tap water wash followed by a deionized water rinse. Because this equipment contacts the water column it should receive the full decontamination process as indicated above for sample bailers. If the lack of a 24 hour drying period between reuse of the equipment is a concern, then attached teflon leaders on all bailers should be used.

Groundwater Purging Procedure.

1. Purging operations were completed using a 2-inch outside diameter submersible pump. The check valve located at the bottom of the submersible pump would not consistently close due the presence of silt in the water. The field crew may be able to continue running the pump during pump retrieval to eliminate the back flow problem.
2. It was observed that the electric generator was not always placed in an upwind direction or at the maximum possible separation distance from the monitoring well and sampling area. Recommendations were made to always observe these factors.
3. The field crew did not consistently collect samples from up gradient wells prior to sampling down-gradient locations. A recommendation was made to follow this procedure.
4. Field vehicles were observed to be parked on all sides and in close proximity to the monitoring well sampling locations. A recommendation was made to limit the vehicles to the upwind side of the sample location and limit the number of vehicles.

Groundwater Sampling.

1. Sample bottle labels were not computer generated and were not completed prior to initiation of the sampling shift. The QAPP indicated that sample labels would be computer generated and would be completed prior the sampling event. This change in procedure should be documented.
2. Following well purging activities it is generally a good procedure to polish purge the well by pulling and discarding several bailers of well water prior to collecting the sample. The field crew only completed this if the check valve in the submersible failed to operate. Recommendation were made to routinely perform this task regardless of the check valve operation.

3. Some of the sample bailers used onsite were attached to the teflon line with a 1.5 foot teflon leader that included a nickel-chromium clamp. The clamp represents a potential source of contamination if lowered in the monitoring well water column. The crew had enough bailers present so that use of these bailers with leaders were not required. In addition, the current attachment system included on the teflon line does not require the use of a teflon leader. It was recommended that these bailers not be used and the teflon leaders either be removed or stainless steel clamps be substituted for the present clamps.
4. The field crew was inconsistent in collection of the groundwater sample from the top of the water column. The USEPA Region IV SOP indicates that when sampling for volatile contaminants the sample will be collected from the top of the water column.
5. The field crew followed the procedure of initially filling VOA vials almost to the top, then filling the VOA vial bottle cap with groundwater and pouring it into the bottle to create a meniscus layer prior to capping the bottle. It was recommended that this procedure be discontinued because sample water was exposed to the cap threads prior to closure.
6. The sampling crew preserved the groundwater samples at the well location at the time of collection and checked the pH of the samples to verify if the appropriate preservation pH had been reached. However in the preservation procedure, the crew used a disposable pipet to directly remove the preservative from the preservative bottle. The QAPP indicates that preservative will be poured into a separate container prior to inserting the pipet to eliminate potential contamination of the entire preservative supply. The use of a disposable pipet probably eliminates this possibility but the change in procedure should be documented.
7. The QAPP indicates that the outside of the sample bottles will be decontaminated prior to shipment. This was not completed by the field crew but was brought to their attention.
8. The QAPP indicates that the physical parameter eH will be measured in the field. The field crew did not have the equipment to complete this field measurement.
9. The field instruments including: OVA and pH, conductivity, and temperature meters were calibrated daily and calibrations were recorded in site log books and individual instrument logs. The crew also completed field calibrations later in the day if discrepancies were noted or field conditions changed.

Exit Briefing

During the course of the field audit suggestions were made to the field crew concerning operating procedures. In addition, an audit debriefing was conducted on-site in which audit findings were reported to the entire field crew and the team discussed the findings and corrective actions.

EXHIBIT 1
REGION IV ESD FIELD OVERVIEW CHECKLIST

Section No. E.2.1
Revision No. 0
Date: 2/1/91
Page 1 of 17

Facility/Site Name NAS Whiting Field

Address Milton Florida

Project No. 7560 EPA ID No. _____

Facility Contact Jim Holland Phone No. (904) - 623 7181

Overview Personnel auditor G Walker ABB-ES Date 10/29/93

State/Contractor Project Leader Rao Angara

Affiliation ABB-ES Phone No. (904) - 656 1293

Address 2590 Executive Center Circle East

Tallahassee Florida 32301

Sampling Personnel Sal Consalvi, Gopi Kanchibhatla, Felix

Rick Roger Protzman Eric Blomberg

Other Personnel & Affiliation _____

Type of study? RI/FS

Study plan issued? Yes Date issued? 6/90

Study plan reviewed by ESD? Yes ___ No ___ Acceptable? Yes ___ No ___

Was study plan followed? Yes No ___

Comments _____

Was a safety plan prepared for the study? Yes No ___

Was the safety plan adequate? Yes No ___

Comments _____

Was the safety plan followed? Yes No ___

Comments _____

Additional Comments or Information _____

EXHIBIT 1
REGION IV ESD FIELD OVERVIEW CHECKLIST

Section No. E.2.1
Revision No. 0
Date: 2/1/91
Page 2 of 17

Checklist sections completed for this overview: 1 2 3 4 5 6
KEY: 1 General Procedures; 2 Ground Water Sampling; 3 Soil, Sediment 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? Groundwater
- 2) Were sampling locations properly selected? Yes No
Comments _____
- 3) Were sampling locations adequately documented in a bound field log book using indelible ink? Yes No
Comments _____
- 4) Were photos taken and a photolog maintained? Yes No
- 5) What field instruments were used during this study? pH/Cond/Temp
meters, water level indicator + OVA
- 6) Were field instruments properly calibrated and calibrations recorded in a bound field log book? Yes No
Comments _____
- 7) Was sampling equipment properly wrapped and protected from possible contamination prior to sample collection? Yes No
Comments _____
- 8) Was sampling equipment constructed of Teflon®, glass, or stainless steel?
Teflon
- 9) Were samples collected in proper order? (least suspected contamination to most contaminated?) Yes No
Comments Facility wide Background samples were collected first but
Site specific upgradient samples were not collected before downgradient
- 10) Were clean disposable latex or vinyl gloves worn during sampling? 1 samples
Yes No
Comments _____
- 11) Were gloves changed for each sample station? Yes No
Comments _____

EXHIBIT 1
REGION IV ESD FIELD OVERVIEW CHECKLIST

Section No. E.2.1
Revision No. 0
Date: 2/1/91
Page 3 of 17

- 12) Was any equipment field cleaned? Yes No
- 13) Type of equipment cleaned? pumps bailers water level indicator
- 14) Were proper field cleaning procedures used? Yes No
Comments minor discrepancies were noted see attached document
- 15) Were equipment rinse blanks collected after field cleaning? Yes No
Comments _____
- 16) Were proper sample containers used for samples? Yes No
Comments _____
- 17) Were split samples offered to the facility owner or his representative? N/A
Yes No
Comments _____
- 18) Was a receipt for samples form given to facility representative? Yes No
- 19) Were any duplicate samples collected? Yes No
Comments _____
- 20) Were samples properly field preserved? Yes No
Comments disposable pipet was inserted in preservative bottle
- 21) Were preservative blanks utilized? Yes No
Comments _____
- 22) Were field and/or trip blanks utilized? Yes No
Comments _____
- 23) Were samples adequately identified with labels or tags? Yes No
Comments _____
- 24) Were samples sealed with custody seals after collection? Yes No
Comments _____
- 25) What security measures were taken to insure custody of the samples after collection?
Samples remained in view of field crew at all times

EXHIBIT 1
REGION IV ESD FIELD OVERVIEW CHECKLIST

Section No. E.2.1
Revision No. 0
Date: 2/1/91
Page 4 of 17

26) Were chain-of-custody and receipt for samples forms properly completed?
Yes No

Comments _____

27) Were any samples shipped to a laboratory? Yes No

28) If yes to No. 27, were samples properly packed? Yes No

Comments _____

29) If shipped to a CLP lab, were Traffic Report Forms properly completed?
Yes No

Comments _____

30) What safety monitoring equipment, protection, and procedures were used prior to and during sampling? OVA air monitoring, Level D
protection

31) Was safety monitoring equipment properly calibrated and calibrations recorded in a bound field log book? Yes No

Comments _____

EXHIBIT 1
REGION IV ESD FIELD OVERVIEW CHECKLIST

Section No. E.2.1
Revision No. 0
Date: 2/1/91
Page 5 of 17

SECTION 2 - SAMPLING - GROUND WATER WELLS

- 1) Type of wells sampled? (monitoring, potable, industrial, etc.) _____
most monitoring
- 2) Were wells locked and protected? Yes No _____
Comments _____
- 3) Were identification marks and measurement points affixed to the wells? Yes _____ No
Comments _____
- 4) What were the sizes and construction materials of the well casings?
2" & 4" ID schedule 40 PVC wells
- 5) Were the boreholes sealed with a concrete pad to prevent surface infiltration? Yes No _____
Comments _____
- 6) Was there a dedicated pump in the well? Yes _____ No
- 7) Was clean plastic sheeting placed around the wells to prevent contamination of sampling equipment and containers? Yes No _____
- 8) Were total depths and depths to water determined before purging? Yes No _____
- 9) What device was used to determine depths? water level indicator
- 10) Were measurements made to the nearest 0.01 ft? Yes No _____
- 11) Was the measuring device properly cleaned between wells? Yes No _____
Comments _____
- 12) Was the standing water volume in each well determined? Yes No _____
- 13) How was the volume determined? measured TD + subtracted ~~the~~ depth to water
- 14) Was a sufficient volume purged prior to sampling? Yes No _____
Comments _____
- 15) How many volumes? 3-5 volumes
- 16) How was the purged volume measured? bucket fill method to determine the pump rate

EXHIBIT 1
REGION IV ESD FIELD OVERVIEW CHECKLIST

Section No. E.2.1
Revision No. 0
Date: 2/1/91
Page 6 of 17

17) What was the method of purging? plumping

18) Were pH, conductivity, and temperature measurements taken and recorded at least once during each well volume purged? Yes No

Comments _____

19) Were pH, conductivity, and temperature readings stable prior to sampling? Yes No

Comments _____

20) How many wells were sampled? 4 Upgradient? Downgradient?

21) How were the samples collected? Bailer Pump Other

Comments _____

22) If pump was used, what type? pump not used for sampling

23) If a pump was used, was it properly cleaned before and/or between wells? Yes No

Comments NA

24) What were the cleaning procedures? NA

25) Did bailers have Teflon[®] coated wire leaders to prevent rope from coming into contact with water? Yes No

26) Were bailers open or closed top? Closed top

27) Was a clean bailer and new rope used at each well? Yes No

Comments _____

28) Were samples properly transferred from the sampling device to the sample containers? (i.e., purgeable sample first - not aerated, etc.) Yes No

Comments Samplers used Sample Cup of VOA and vials to fill bottle

29) Was pH of preserved samples checked to insure proper preservation? Yes No

Comments _____

EXHIBIT 1
REGION IV ESD FIELD OVERVIEW CHECKLIST

Section No. E.2.1
Revision No. 0
Date: 2/1/91
Page 7 of 17

30) Were samples iced immediately after collection? Yes No

31) For what analyses were the samples collected? TCL VOC SVOC
Pesticides/PCBs and TAL Metals

32) If samples were split, what were the sample/station numbers for these?
N/A

Other comments or observations See attached document