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NAS CECIL FIELD
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SAMPLING AND ANALYSIS REPORT FOR FACILITY 201 AND AREA OF INTEREST 27 (AOI 27) BASE REALIGNMENT AND CLOSURE NAS CECIL FIELD FL

7/1/2000

TETRA TECH

Sampling and Analysis Report
for
Facility 201 and Area of Interest 27
Revision 1
Base Realignment and Closure

Naval Air Station Cecil Field
Jacksonville, Florida

Southern Division
Naval Facilities Engineering Command
Contract Number N62467-94-D-0888

Contract Task Order 0078

July 2000

060013/P

SAMPLING AND ANALYSIS REPORT
FOR
FACILITY 201 AND AREA OF INTEREST 27
REVISION 1.0
BASE REALIGNMENT AND CLOSURE

NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT N62467-89-D-0088

Submitted to:
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, South Carolina 29406

Submitted by:
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CONTRACT NUMBER N62467-94-D-0888
CONTRACT TASK ORDER 0078

JULY 2000

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The professional opinions rendered in this decision document identified as Sampling and Analysis Report for Facility 201 and Area of Interest (AOI) 27, Revision 1.0, Naval Air Station Cecil Field, Jacksonville, Florida were developed in accordance with commonly accepted procedures consistent with applicable standards of practice. Decision documents are based on information obtained from others and under the supervision of the signing engineer. If conditions are determined to exist differently than those described in this document, then the undersigned professional engineer should be notified to evaluate the effects of any additional information on the project described in this report.

Mark Speranza 7/27/00

Mark Speranza, P.E.
Professional Engineering No. PE0050304

Mark Speranza

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LIST OF ACRONYMS AND ABBREVIATIONS

ABB-ES	ABB Environmental Services, Inc.
AOI	Area of Interst
BCT	BRAC Cleanup Team
bgs	below ground surface
BRAC	Base Realignment and Closure
CLEAN	Comprehensive Long-Term Environmental Action Navy
CTO	Contract Task Order
EBS	Environmental Baseline Survey
ELCR	excess lifetime cancer risk
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
GCTL	Groundwater Cleanup Target Level
HLA	Harding Lawson Associates
HI	hazard index
HQ	hazard quotient
IBDS	NAS Cecil Field Site-Specific Inorganic Background Data Set
mg/kg	milligram per killogram
NAS	Naval Air Station
PCB	polychlorinated biphenyl
PRE	preliminary risk evaluation
RAC	Remedial Action Contractor
RBC	Risk-Based Concentration
SAO	Sampling and Analysis Outline
SAR	Sampling and Analysis Report
SCTL	Soil Cleanup Target Level
SOUTHNAVFACENGCOM	Southern Division, Naval Facilities Engineering Command
TAL	Target Analyte List
TCL	Target Compound List
TtNUS	Tetra Tech NUS, Inc.
TRPH	total recoverable petroleum hydrocarbons
U.S. EPA	U.S. Environmental Protection Agency

1.0 INTRODUCTION

This Sampling and Analysis Report (SAR) for Facility 201 and Area of Interest (AOI) 27 at Naval Air Station (NAS) Cecil Field in Jacksonville, Florida has been prepared by Tetra Tech NUS, Inc. (TtNUS), for the Department of the Navy, Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM). The work was conducted under the Comprehensive Long-Term Environmental Action Navy (CLEAN) Program, Contract Number N62467-94-D-088, Contract Task Order (CTO) 0078.

Facility 201 and AOI 27 is located north of Cecil Pines Street, formerly 9th Street, and west of an abandoned railway, as shown on Figures 1-1 and 1-2. AOI 27 is a covered shed attached to Facility 201 that has been used by public works maintenance contractors as a temporary storage area for 55-gallon drums of hazardous and nonhazardous waste. Portable waste oil containers have been stored on unimproved ground on the eastern side of Facility 201. Electrical equipment has been stored in a sheltered area on the western side of the Facility 201. Stormwater from AOI 27 and the eastern side of Facility 201 runs off to a drainage swale to the east [ABB Environmental Services, Inc. (ABB-ES), 1994a].

Facility 201 and AOI 27 were color-coded Grey in the NAS Cecil Field Environmental Baseline Survey (EBS) (ABB-ES, 1994a) due to anecdotal accounts that the facility was formerly used to store hazardous substances. A Phase II Sampling and Analysis Outline (SAO) to assess whether surface soil was contaminated by potential releases of hazardous materials handled and stored at Facility 201 and AOI 27 was approved by the Base Realignment and Closure (BRAC) Cleanup Team (BCT) [Harding Lawson Associates (HLA), 1999].

HLA issued a SAR in July 1998 for Facility 201 and AOI 27. The SAR concluded that the contaminated surface soil should be delineated, excavated, and disposed of properly. The SAR recommended that the Facility 201 and AOI 27 color-code should be changed to 5/Yellow, to indicate that a removal action is required.

HLA issued another SAR in June 1999 for the Transportation and Fuel Management Compound and Public Works Maintenance Contractor Area, which included the dig and haul for Facility 201 and AOI 27. The SAR concluded that six of the 17 surface soil samples collected in the area exceeded Florida Department of Environmental Protection (FDEP) Soil Cleanup Target Levels (SCTLs) for residential exposure (FDEP, 1999) and recommended that surface soil within the perimeter of the delineation samples should be excavated to a depth of 1 foot below ground surface (bgs) and removed from the site to reduce the potential for human exposure to elevated concentrations of arsenic and total recovered petroleum hydrocarbon (TRPH) (HLA, 1999).

HLA collected one groundwater sample in the vicinity of AOI 27. The SAR concluded that eleven inorganic analytes were detected. Groundwater Cleanup Target Levels (GCTLs) were not exceeded for these analytes (HLA, 1998a).

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mg/kg	milligram per killogram
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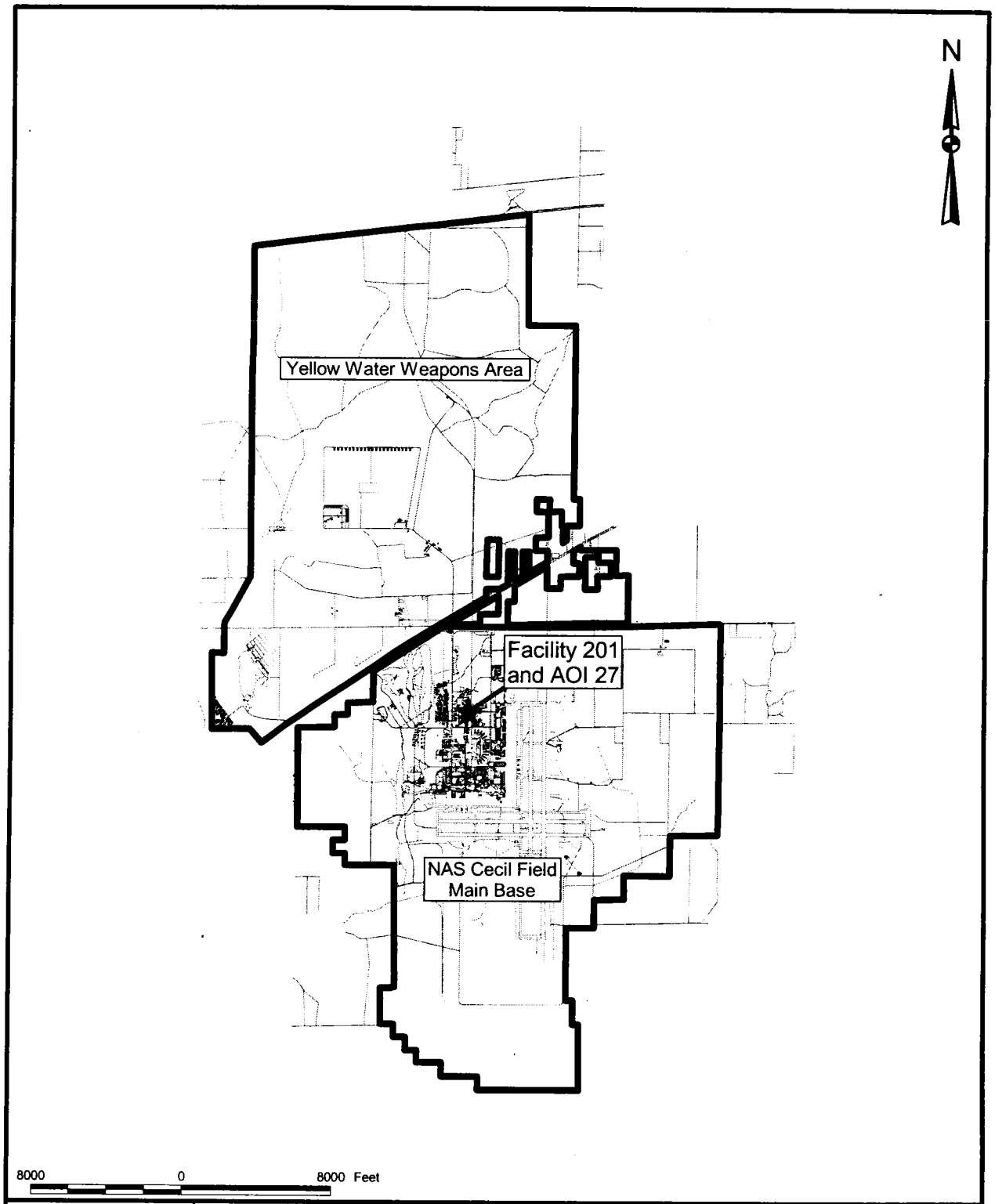
TtNUS	Tetra Tech NUS, Inc.
TRPH	total recoverable petroleum hydrocarbons
U.S. EPA	U.S. Environmental Protection Agency



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CHECKED BY	DATE		APPROVED BY DATE
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 1-1 / REV 0

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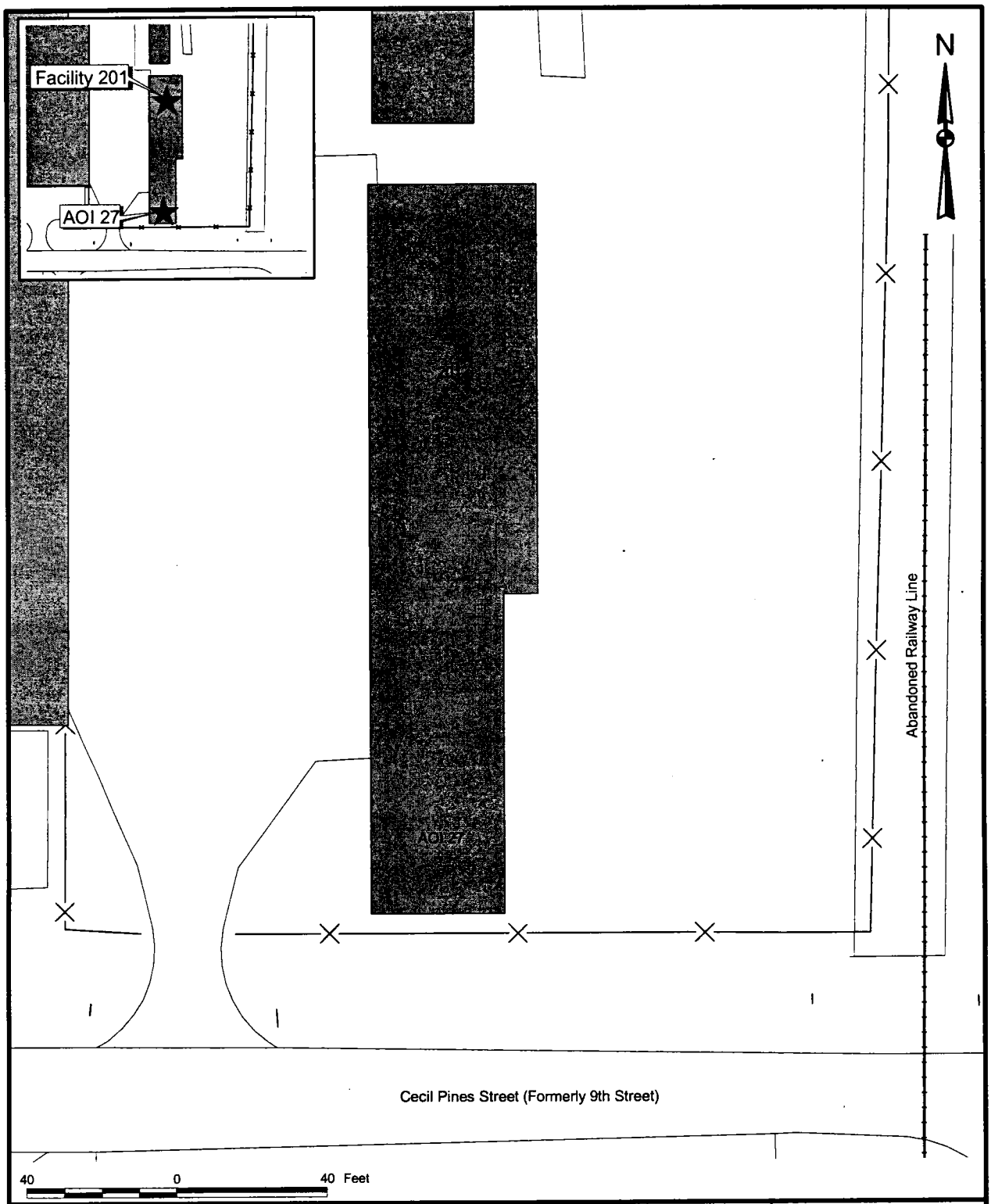

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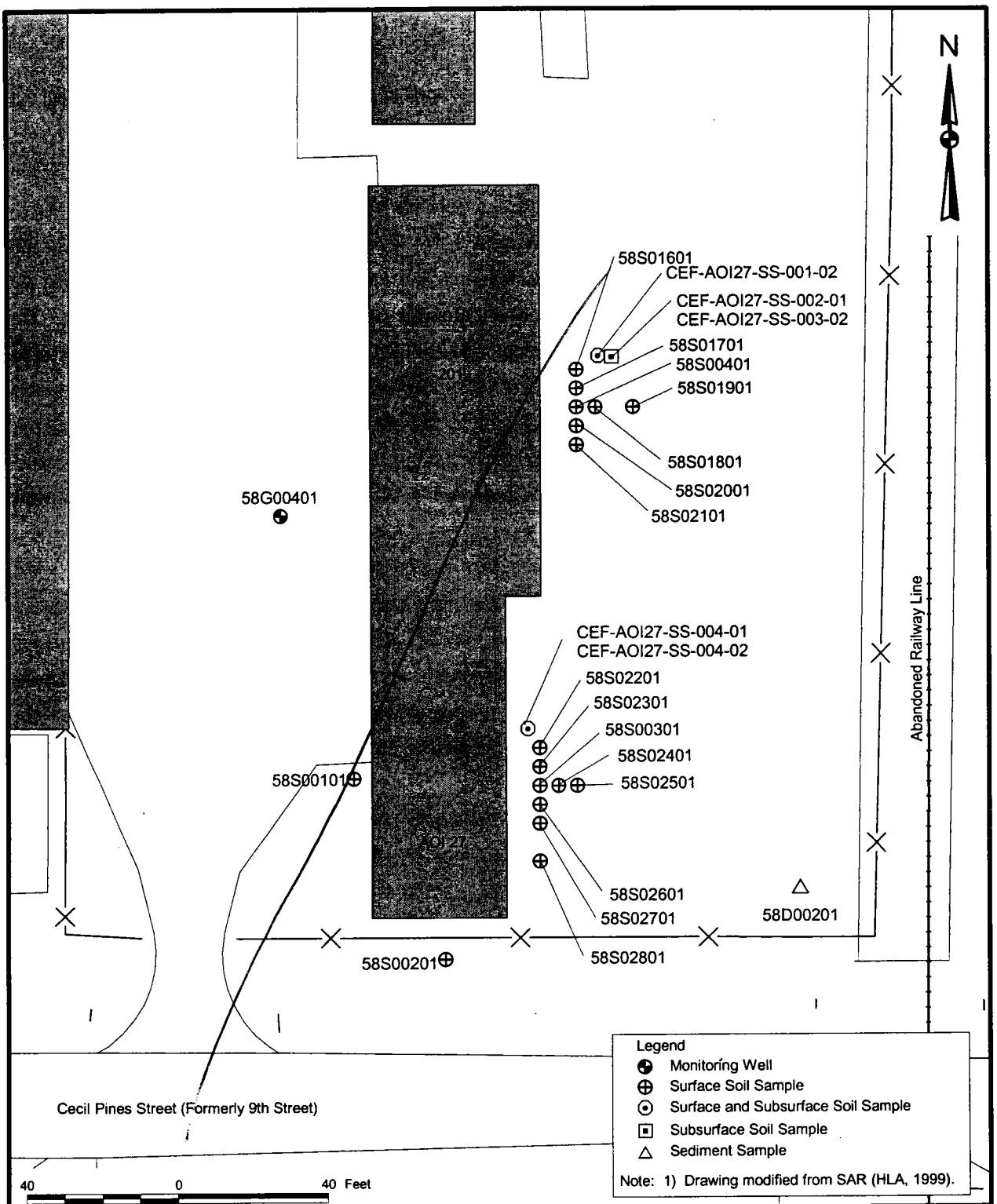
2.0 FIELD INVESTIGATION

The Phase II investigation was conducted by ABB-ES at Facility 201 and AOI 27 to assess potential soil contamination in the vicinity. The sampling event included the collection and analysis of 17 surface soil samples. Surface soil samples were collected adjacent to the southern, eastern, and western sides of AOI 27. Additional surface soil samples were collected from the eastern side of Facility 201, where waste oil containers were reportedly stored, and in the drainage swale downgradient of AOI 27 and Facility 201 (58D00201). The area where the surface soil samples were collected from the drainage swale does not normally contain water. A site plan showing the location of the samples is presented as Figure 2-1. The samples were collected at a depth of 0 to 1 foot bgs. Field activities were undertaken in general conformance with the Project Operations Plan (ABB-ES, 1994b). Four of the soil samples (58S00101, 58S00201, 58S00301 and 58S00401) were analyzed for Target Analyte List (TAL) inorganics, Target Compound List (TCL) organics, pesticides, and polychlorinated biphenyls (PCBs). Three samples (58S00101, 58S00201, and 58S00301) were also analyzed for TRPH. The rest of the soil samples were analyzed for arsenic (HLA, 1999).

One groundwater sample was also collected as part of the Phase II investigation. Groundwater flow in the study area was determined to be to the west-southwest based upon observed groundwater surface elevations in nearby piezometers. One groundwater sample was collected from a shallow groundwater monitoring well installed near the southwest corner (downgradient) of Facility 201. The groundwater sample was analyzed for the TCL organics and TAL inorganics (HLA, 1999).

A supplemental field investigation was conducted by TtNUS to characterize stained soil within the area of excavation identified during the soil removal action conducted by the Remedial Action Contractor (RAC). A total of five soil samples (CEF-AOI27-SS-001-02, -002-01, -003-02, -004-01, -DUP01) were collected in the area of the stained soil and analyzed for TRPH (see Figure 2-1).



DRAWN BY MJJ	DATE 12Jun00	SAMPLE LOCATION MAP FACILITY 201 AND AOI 27 SAMPLING AND ANALYSIS REPORT NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0039
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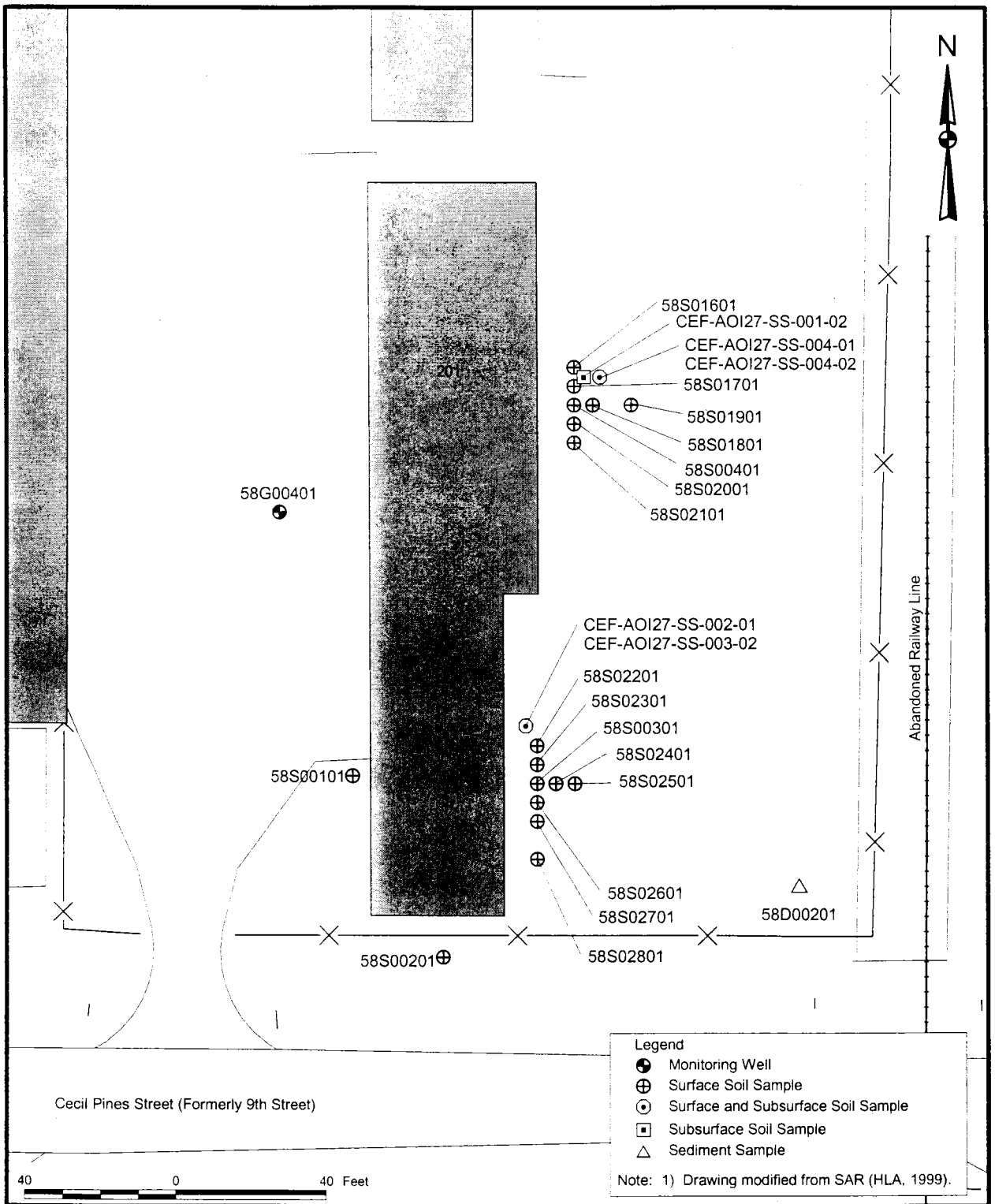

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CHECKED BY	DATE		APPROVED BY DATE
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 2-1 REV 0

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3.0 DATA EVALUATION AND REMOVAL ACTION

A preliminary risk evaluation (PRE) was conducted by HLA to assess potential risks to human and ecological receptors posed by contaminants in surface soil and groundwater. Primary exposure pathways were evaluated to determine those pathways that potentially contribute to human health and ecological risks. The evaluation was conducted in conformance with methodology provided in the U.S. Environmental Protection Agency (U.S. EPA) Region IV memorandum entitled Amended Guidance on Preliminary Risk Evaluations for the Purpose of Reaching a Finding of Suitability to Lease (U.S. EPA, 1994), U.S. EPA Region IV bulletins on ecological risk assessment (U.S. EPA, 1995a, 1995b), and minutes of meetings between the U.S. EPA and FDEP concerning PREs (ABB-ES, 1995).

Concentrations of organic analytes in individual samples are screened against FDEP SCTLs (FDEP, 1999), as proposed in Florida Administrative Code (FAC) Chapter 62-777. Concentrations of inorganic analytes were screened against FDEP SCTLs and the NAS Cecil Field site-specific Inorganic Background Data Set (IBDS) (HLA, 1998b). The remediation goal for any site should never be less than the IBDS values. However, if a FDEP criterion is greater than the IBDS value, the FDEP criterion is regarded as the remediation goal. The IBDS concentrations, shown in Table 3-1, were developed from data collected throughout NAS Cecil Field. No risk evaluation was conducted for inorganic analytes detected below NAS Cecil Field IBDS concentrations.

Table 3-1 presents a summary of analytical results, and Figure 3-1 shows the action level exceedances for Facility 201 and AOI 27.

3.1 HUMAN HEALTH PRELIMINARY RISK EVALUATION

The detected analytes were compared to readily available risk-based screening values to assess the likelihood of adverse human health effects associated with potential exposure to surface soil and groundwater. Risk-based screening values were obtained from U.S. EPA Region III Risk-Based Concentrations (RBCs) (U.S. EPA, 1998) and FDEP criteria (FDEP, 1999). Most screening values published in these references are based on toxicity constants and standard human exposure scenarios and correspond to fixed levels of risk. The designated level of risk for noncarcinogenic chemicals is based on a hazard quotient (HQ) of 1. The level of risk for carcinogenic chemicals is based on an excess lifetime cancer risk (ELCR) of $1x10^{-6}$. Cancer and noncancer risks associated with industrial and residential land use are estimated by dividing the maximum detected analyte concentration by the corresponding U.S. EPA Region III RBC value at the designated level of risk (ELCR of $1x10^{-6}$ or HQ of 1). For noncarcinogens, the HQs are summed to determine the cumulative noncancer risk or hazard index (HI) (HLA, 1998a).

3.1.1 Surface Soil

Arsenic is a naturally-occurring component of soil and, with the exception of samples 58S00301, 58S00401, 58S01701, 58S02401, 58S02601, and 58S02701, the concentrations of arsenic detected in the other samples were below the IBDS value of 2.04 mg/kg. The concentrations of arsenic detected in the samples ranged from 2.1 to 4.9 mg/kg. In addition, the concentrations of TRPH detected in samples 58S00301, 58S02301, and 58S02601 was 5,900, 700, and 450 mg/kg respectively, which exceeds the FDEP SCTL of 340 mg/kg. No other compounds were detected at concentrations in excess of SCTLs (HLA, 1998a). The laboratory analytical data sheets are provided in Appendix A.

Concentrations of detected analytes in surface soil have been compared with RBCs and SCTLs. A cumulative noncancer risk or HI of less than 1 and an ELCR of $1x10^{-5}$ were calculated based upon RBCs for surface soil for all detected compounds and analytes (HLA, 1998a).

Five additional surface soil samples were obtained by TtNUS for characterization of the stained soil observed during the soil removal action. The samples were analyzed for TRPH. The concentrations of TRPH for the samples were below the FDEP criteria (FDEP, 1999). The laboratory analytical data sheets are provided in Appendix B.

The sediment sample (58D00201) concentrations did not exceed the FDEP SCTLs for any of the analyzed compounds. The laboratory analytical data sheet is provided in Appendix A.

3.1.2 Groundwater

Eleven inorganic analytes were detected in the groundwater sample collected in the study area. Calcium and zinc were detected at concentrations in excess of NAS Cecil Field background concentration data set values. GCTLs were not exceeded for these analytes. No organic compounds were detected. There is no HI or ELCR associated with a potential groundwater exposure at this site because no contaminants were detected above background values (HLA, 1998a). The laboratory analytical data sheet is provided in Appendix A.

3.2 ECOLOGICAL PRELIMINARY RISK EVALUATION

Potential exposure pathways and ecological habitat associated with the AOI 27 were characterized by HLA ecological risk assessors in June 1996. AOI 27 is surrounded by areas of maintained grass to the south and east and pavement to the west and is adjoined by Facility 201 to the north (HLA, 1998a).

Ecological receptors that might occasionally use the study area are likely limited to terrestrial species that are tolerant to human and industrial activity. Soil invertebrates are likely present in the maintained grassy areas that are subject to regular mowing. Protected species were not observed and are unlikely to utilize the limited habitat at AOI 27 (HLA, 1998a).

Pathways of potential contaminant exposure for wildlife receptors include direct contact, incidental ingestion of surface soil, and limited terrestrial food-web model exposure to contaminants in surface soil that may bioaccumulate. Pathways for soil invertebrates include direct contact and incidental ingestion of surface soil. Pathways for terrestrial plants include direct contact with surface soil. No complete exposure pathways to groundwater were identified within the study area. Due to the limited extent and significance of the habitat associated with the study area, no further ecological risk evaluation was conducted (HLA, 1998a).

3.3 REMOVAL ACTION

Although no specific source was identified for the elevated concentrations of arsenic and TRPH and they were not detected at concentrations in excess of the criteria in adjacent samples collected to delineate the extent of elevated arsenic and TRPH, the SAR (HLA, 1998a) recommended that surface soil within the perimeter of the delineation samples be excavated to a depth of 1 foot bgs and removed from the site in order to reduce the potential for human exposure to elevated concentrations of arsenic and TRPH.

A source removal was conducted at Facility 201 and AOI 27 on January 26 and 27, 2000, and a total of 19.91 tons of arsenic-contaminated soil were excavated from Facility 201 and 16.66 tons of arsenic- and petroleum-contaminated soil were excavated from AOI 27. The excavated soil was transported and disposed off site on January 26, 2000. Figure 3-2 shows the area where soil was excavated and removed in accordance with the specifications in the SAR (HLA, 1998). The soil was excavated using a mini-excavator and was stockpiled, bermed, and covered before it was loaded into a truck for transportation and disposal. The soil was characterized for disposal by the RAC prior to disposal. The excavated soil was transported by Pritchett Trucking to the Chesser Island Road Landfill, a Subtitle D solid waste disposal facility in Folkston Georgia. (CH2MHill, 2000).

Clean fill material from the Dallas Harts Borrow Pit was used to backfill the excavation. The site was graded and seeded with a mixture of rye and bahia grass. No confirmatory soil sampling was performed, based on the SAR (CH2MHill, 2000).

Detailed information on the remedial activities, including photographs, laboratory results, copies of the soil manifests, certificates of disposal, and certificate of clean fill, is provided in the Source Removal Report (CH2MHill, 2000).

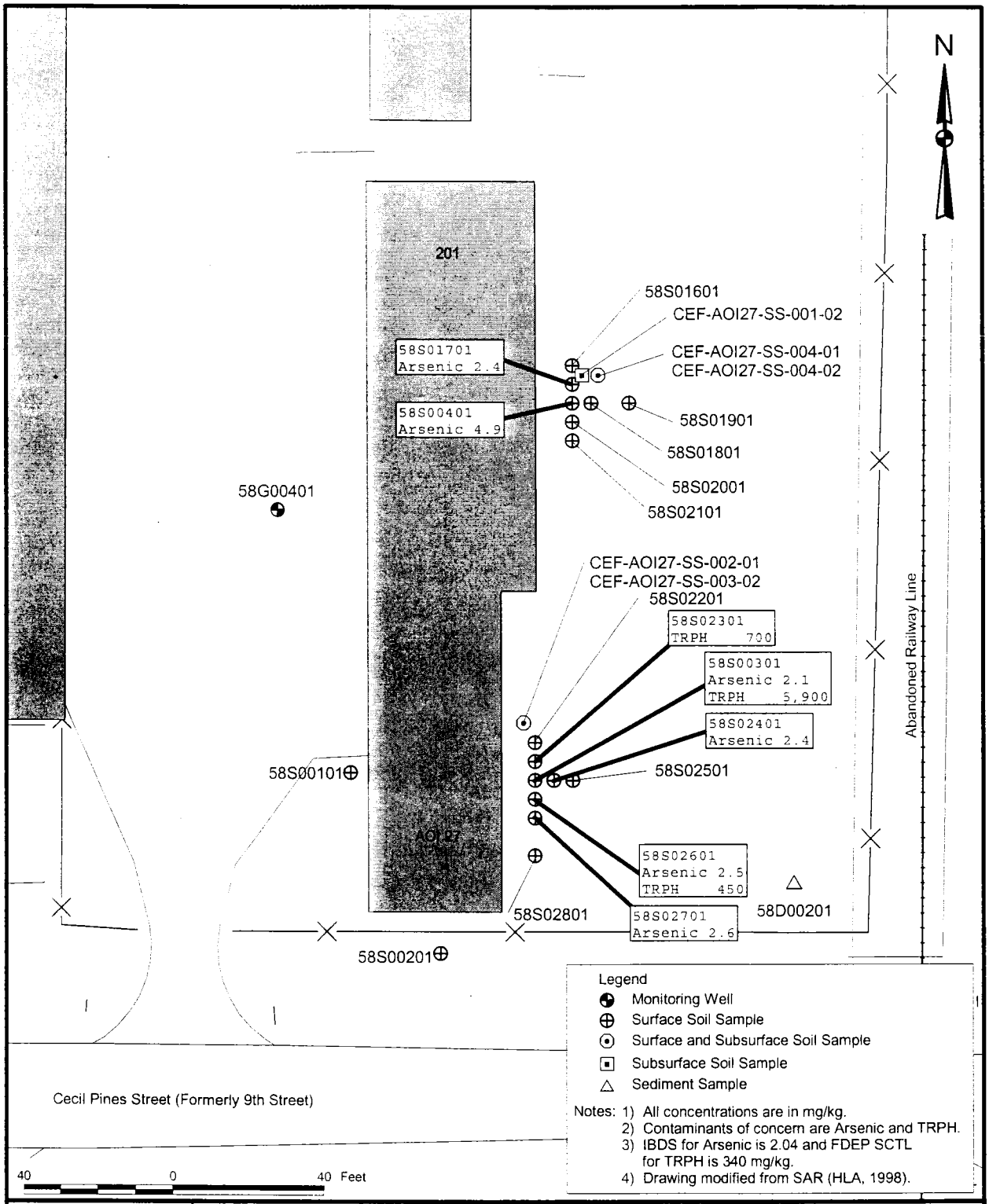
TABLE 3-1

PRELIMINARY HUMAN HEALTH RISK EVALUATION TABLE FOR ANALYTES DETECTED IN SOIL
FACILITY 201 AND AOI 27
SAMPLING AND ANALYSIS REPORT
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Analysis	58S00101	58S00201	58S00301	58S00401	58S01601	58S01701	58S01801	58S01901	58S02001	58S02101	58S02201	58S02301	58S02401	58S02501	58S02601	58S02701	58S02801	CEF-AOI27-SS-001-02	CEF-AOI27-SS-002-01	CEF-AOI27-SS-003-02	CEF-AOI27-SS-004-01	CEF-AOI27-SS-004-02	CEF-AOI27-SS-DUP01	IBDS(1)	FDEP(2) SCTL	USEPA(3) RBC(R)
Inorganics, mg/kg																										
Aluminum	197	190	629	589	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4430	72,000	78,000
Arsenic	0.43 U	1.4 J	2.1 J	4.9	1.6 J	2.4	1 J	0.8 J	1.5 J	1.8 J	0.6 U	2.0	2.4	1.7 J	2.5	2.6	0.5 U	NA	NA	NA	NA	NA	NA	2.04	0.8	0.43
Calcium	1590	592 J	1970	5430	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.44	NC	NC
Chromium	1.2 J	1.2 J	4.0	1.5 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.75	210	230
Copper	0.22 U	0.36 J	3.9 J	8.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.97	110	3100
Iron	93.1	277	847	381	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,486	23,000	23,000
Lead	1.4	2	46.4	17.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	197	400	NC
Manganese	1.6 J	2.3 J	18.2	4.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	22	1,600	1,600
Zinc	3.2	5.3	38.6	67.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	37	23,000	23,000
Petroleum Hydrocarbons, mg/kg																										
TRPH	31	39	5,900	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	92 U	90 U	88 U	89 U	92 U	88 U	NC	340	NC
Pesticides / PCBs, ug/kg																										
4,4-DDE	3.6 U	3.5 U	2.8 J	4.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NC	500	1.9
4.4-DDT	3.6 U	0.67 J	4.6 J	8.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NC	500	1.9

NOTES:
Only detected analytes are reported.
NA - Not Analyzed
NC - No Criteria

1 Background - NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
2 SCTL - Florida Soil Cleanup Target Level, F.A.C. Chapter 62-777 (FDEP, 1999).
3 RBC(R) - Residential Risk-Based Concentration (U.S. EPA, 1998).
Shaded value indicates exceedance of both background and regulatory criteria.



Legend
- Monitoring Well
- Surface Soil Sample
- Surface and Subsurface Soil Sample
- Subsurface Soil Sample
- Sediment Sample

Notes:
1) All concentrations are in mg/kg.
2) Contaminants of concern are Arsenic and TRPH.
3) IBDS for Arsenic is 2.04 and FDEP SCTL for TRPH is 340 mg/kg.
4) Drawing modified from SAR (HLA, 1998).

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COST/SCHEDULE-AREA			APPROVED BY / DATE
SCALE AS NOTED			DRAWING NO. FIGURE 3-1 / REV 0

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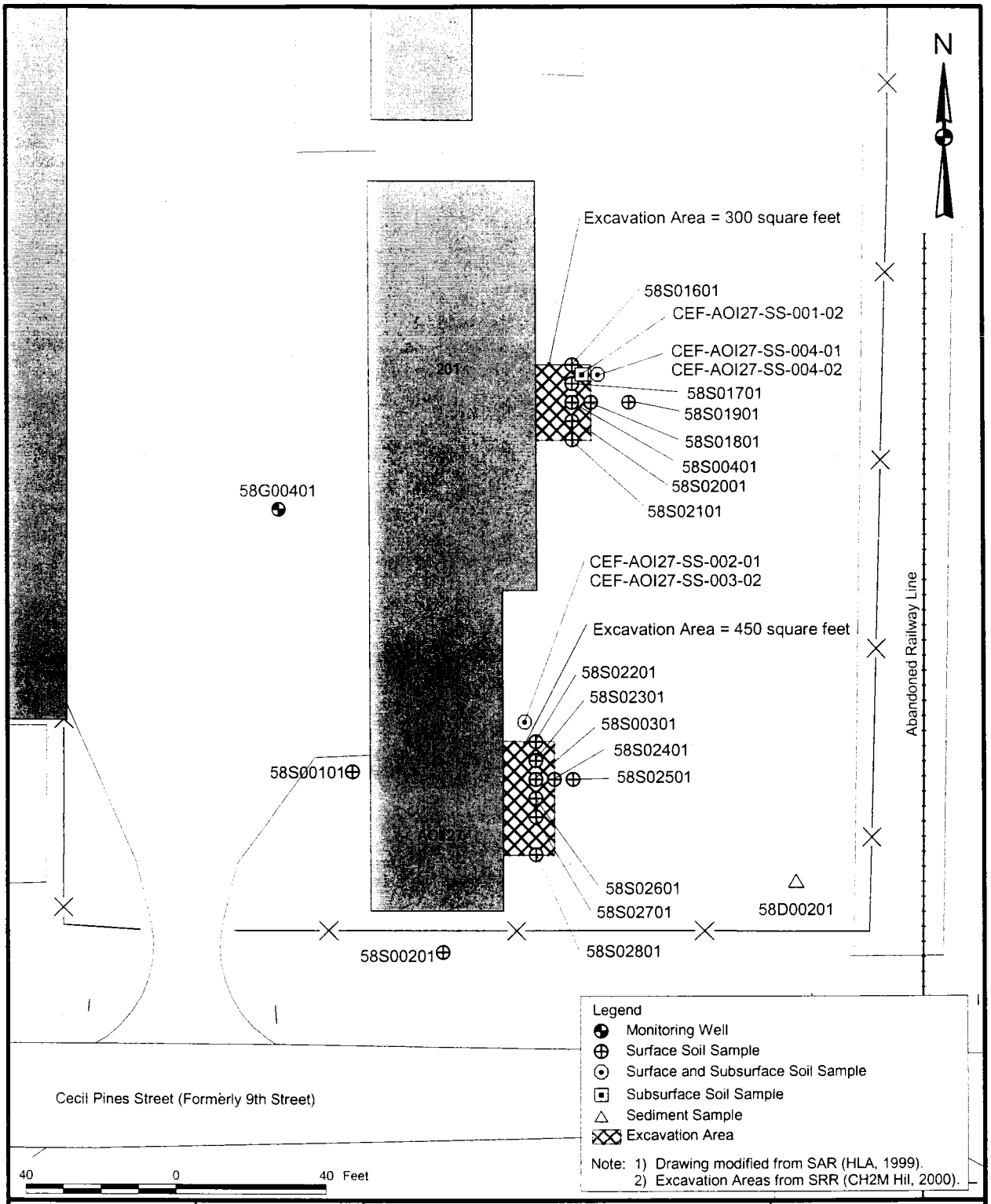

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SCALE AS NOTED			DRAWING NO. FIGURE 3-2 REV 0

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4.0 CONCLUSIONS AND RECOMMENDATIONS

Field investigations determined that arsenic and TRPH contamination was present at Facility 201 and AOI 27, and a removal action was performed on January 26 and 27, 2000 to excavate and dispose off site the soil contaminated above SCTLs. Since the removal action, the soil at Facility 201 and AOI 27 no longer represents a threat to human health or the environment.

Based upon these conclusions, the recommendation for Facility 201 and AOI 27 is No Further Action. It is also recommended that the color-code for Facility 201 and AOI 27 should be changed to Dark Green to denote that releases of hazardous substances have occurred and that remedial actions to protect human health and the environment have been taken. Residual arsenic and TRPH concentrations in surface soil no longer represent a hazard to human health or the environment.

REFERENCES

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CH2MHill, 2000. Source Removal Report, Excavation of Petroleum- and Arsenic-Contaminated Soil at Facility 201 and AOI 27. Prepared for SOUTHNAVFACENGCOM, Charleston, SC. NAS Cecil Field, Jacksonville, FL, March.

FDEP (Florida Department of Environmental Protection), 1999. Contaminant Target Rule, Soil, Groundwater, and Surface Water Target Cleanup Levels. Florida Administrative Code (FAC) 62-777, August.

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HLA, 1998b. Inorganic Background Data Set.

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U.S. EPA. 1995a. Region IV Waste Management Division Preliminary Risk Evaluation, Ecological Risk Assessment, Supplemental Guidance to RAGS: Region IV Bulletin No. 1, November.

U.S. EPA. 1995b. Region IV, Waste Management Division. Chronic Fresh Water/Surface Water Screening Values for Hazardous Waste Sites, Supplemental Guidance to RAGS: Region IV Bulletin Number 2, November.

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APPENDIX A

ABB-ES/HLA Laboratory Analytical Data

A.1

Soil and Sediment Data

NAS CECIL FIELD M COMPOUNDS
SURFACE SOIL -- VOLATILES -- REQUEST NO. 10608

Lab Sample Number:	C8541			C8542			C8543			C85JP		
Site	CECILBRAC3			CECILBRAC3			CECILBRAC3			CECILBRAC3		
Locator	58S00101			58S00201			58S00301			58S00401		
Collect Date:	13-FEB-97			13-FEB-97			13-FEB-97			13-FEB-97		
	VALUE QUAL	UNITS	DL	VALUE QUAL	UNITS	DL	VALUE QUAL	UNITS	DL	VALUE QUAL	UNITS	DL
CLP VOLATILES 90-SOW												
Chloromethane	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
Bromomethane	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
Vinyl chloride	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
Chloroethane	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
Methylene chloride	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
Acetone	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
Carbon disulfide	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
1,1-Dichloroethene	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
1,1-Dichloroethane	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
1,2-Dichloroethene (total)	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
Chloroform	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
1,2-Dichloroethane	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
2-Butanone	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
1,1,1-Trichloroethane	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
Carbon tetrachloride	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
Bromodichloromethane	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
1,2-Dichloropropane	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
cis-1,3-Dichloropropene	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
Trichloroethene	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
Dibromochloromethane	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
1,1,2-Trichloroethane	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
Benzene	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
trans-1,3-Dichloropropene	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
Bromoform	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
4-Methyl-2-pentanone	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
2-Hexanone	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
Tetrachloroethene	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
Toluene	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
1,1,2,2-Tetrachloroethane	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
Chlorobenzene	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
Ethylbenzene	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
Styrene	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11
Xylenes (total)	11 U	ug/kg	11	10 U	ug/kg	10	11 U	ug/kg	11	11 U	ug/kg	11

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

NAS CECIL FIELD -- BFM COMPOUNDS
SURFACE SOIL -- SEMIVOLATILES -- REQUEST NO. 10609

Lab Sample Number:	C8541			C8542			C8543			C85JP		
Site	CECILBRAC3			CECILBRAC3			CECILBRAC3			CECILBRAC3		
Locator	58S00101			58S00201			58S00301			58S00401		
Collect Date:	13-FEB-97			13-FEB-97			13-FEB-97			13-FEB-97		
	VALUE QUAL	UNITS	DL	VALUE QUAL	UNITS	DL	VALUE QUAL	UNITS	DL	VALUE QUAL	UNITS	DL
CLP SEMIVOLATILES 90-SOW												
Phenol	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
bis(2-Chloroethyl) ether	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
2-Chlorophenol	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
1,3-Dichlorobenzene	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
1,4-Dichlorobenzene	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
1,2-Dichlorobenzene	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
2-Methylphenol	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
2,2-oxybis(1-Chloropropane)	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
4-Methylphenol	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
N-Nitroso-di-n-propylamine	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
Hexachloroethane	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
Nitrobenzene	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
Isophorone	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
2-Nitrophenol	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
2,4-Dimethylphenol	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
bis(2-Chloroethoxy) methane	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
2,4-Dichlorophenol	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
1,2,4-Trichlorobenzene	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
Naphthalene	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
4-Chloroaniline	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
Hexachlorobutadiene	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
4-Chloro-3-methylphenol	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
2-Methylnaphthalene	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
Hexachlorocyclopentadiene	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
2,4,6-Trichlorophenol	860 U	ug/kg	860	840 U	ug/kg	840	860 U	ug/kg	860	890 U	ug/kg	890
2,4,5-Trichlorophenol	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
2-Chloronaphthalene	860 U	ug/kg	860	840 U	ug/kg	840	860 U	ug/kg	860	890 U	ug/kg	890
2-Nitroaniline	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
Dimethylphthalate	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
Acenaphthylene	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
2,6-Dinitrotoluene	860 U	ug/kg	860	840 U	ug/kg	840	860 U	ug/kg	860	890 U	ug/kg	890
3-Nitroaniline	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
Acenaphthene	860 U	ug/kg	860	840 U	ug/kg	840	860 U	ug/kg	860	890 U	ug/kg	890
2,4-Dinitrophenol	860 U	ug/kg	860	840 U	ug/kg	840	860 U	ug/kg	860	890 U	ug/kg	890
4-Nitrophenol	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
Dibenzofuran	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
2,4-Dinitrotoluene	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
Diethylphthalate	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
4-Chlorophenyl-phenylether	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
Fluorene	860 U	ug/kg	860	840 U	ug/kg	840	860 U	ug/kg	860	890 U	ug/kg	890
4-Nitroaniline	860 U	ug/kg	860	840 U	ug/kg	840	860 U	ug/kg	860	890 U	ug/kg	890
4,6-Dinitro-2-methylphenol	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
N-Nitrosodiphenylamine	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
4-Bromophenyl-phenylether	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
Hexachlorobenzene	860 U	ug/kg	860	840 U	ug/kg	840	860 U	ug/kg	860	890 U	ug/kg	890
Pentachlorophenol	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	95 J	ug/kg	360
Phenanthrene	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
Anthracene	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
Carbazole	360 U	ug/kg	360	340 U	ug/kg	340	350 U	ug/kg	350	360 U	ug/kg	360
Di-n-butylphthalate												

NAS CECIL FIELD M COMPOUNDS
SURFACE SOIL -- SEMIVOLATILES -- REQUEST NO. 10609

Lab Sample Number:	C8541				C8542				C8543				C85JP			
Site	CECILBRAC3				CECILBRAC3				CECILBRAC3				CECILBRAC3			
Locator	58S00101				58S00201				58S00301				58S00401			
Collect Date:	13-FEB-97				13-FEB-97				13-FEB-97				13-FEB-97			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Fluoranthene	360	U	ug/kg	360	340	U	ug/kg	340	350	U	ug/kg	350	190	J	ug/kg	360
Pyrene	360	U	ug/kg	360	340	U	ug/kg	340	350	U	ug/kg	350	190	J	ug/kg	360
Butylbenzylphthalate	360	U	ug/kg	360	340	U	ug/kg	340	350	U	ug/kg	350	360	U	ug/kg	360
3,3-Dichlorobenzidine	360	U	ug/kg	360	340	U	ug/kg	340	350	U	ug/kg	350	360	U	ug/kg	360
Benzo (a) anthracene	360	U	ug/kg	360	340	U	ug/kg	340	350	U	ug/kg	350	84	J	ug/kg	360
Chrysene	360	U	ug/kg	360	340	U	ug/kg	340	350	U	ug/kg	350	91	J	ug/kg	360
bis(2-Ethylhexyl) phthalate	360	U	ug/kg	360	340	U	ug/kg	340	350	U	ug/kg	350	360	U	ug/kg	360
Di-n-octylphthalate	360	U	ug/kg	360	340	U	ug/kg	340	350	U	ug/kg	350	360	U	ug/kg	360
Benzo (b) fluoranthene	360	U	ug/kg	360	340	U	ug/kg	340	350	U	ug/kg	350	97	J	ug/kg	360
Benzo (k) fluoranthene	360	U	ug/kg	360	340	U	ug/kg	340	350	U	ug/kg	350	39	J	ug/kg	360
Benzo (a) pyrene	360	U	ug/kg	360	340	U	ug/kg	340	350	U	ug/kg	350	71	J	ug/kg	360
Indeno (1,2,3-cd) pyrene	360	U	ug/kg	360	340	U	ug/kg	340	350	U	ug/kg	350	37	J	ug/kg	360
Dibenzo (a,h) anthracene	360	U	ug/kg	360	340	U	ug/kg	340	350	U	ug/kg	350	360	U	ug/kg	360
Benzo (g,h,i) perylene	360	U	ug/kg	360	340	U	ug/kg	340	350	U	ug/kg	350	360	U	ug/kg	360

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

NAS CECIL FIELD -- BFM COMPOUNDS
SURFACE SOIL -- PESTICIDES/PCBs -- REQUEST NO. 10610

Lab Sample Number:	C8541				C8542				C8543				C85JP			
Site	CECILBRAC3				CECILBRAC3				CECILBRAC3				CECILBRAC3			
Locator	58S00101				58S00201				58S00301				58S00401			
Collect Date:	13-FEB-97				13-FEB-97				13-FEB-97				13-FEB-97			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP PESTICIDES/PCBS 90-SOW																
alpha-BHC	1.8	U	ug/kg	1.8	1.7	U	ug/kg	1.7	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
beta-BHC	1.8	U	ug/kg	1.8	1.7	U	ug/kg	1.7	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
delta-BHC	1.8	U	ug/kg	1.8	1.7	U	ug/kg	1.7	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
gamma-BHC (Lindane)	1.8	U	ug/kg	1.8	1.7	U	ug/kg	1.7	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
Heptachlor	1.8	U	ug/kg	1.8	1.7	U	ug/kg	1.7	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
Aldrin	1.8	U	ug/kg	1.8	1.7	U	ug/kg	1.7	.3	J	ug/kg	1.8	.25	J	ug/kg	1.8
Heptachlor epoxide	1.8	U	ug/kg	1.8	1.7	U	ug/kg	1.7	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
Endosulfan I	1.8	U	ug/kg	1.8	1.7	U	ug/kg	1.7	1.8	U	ug/kg	1.8	1.8	U	ug/kg	1.8
Dieldrin	3.6	U	ug/kg	3.6	3.5	U	ug/kg	3.5	3.6	U	ug/kg	3.6	3.7	U	ug/kg	3.7
4,4-DDE	3.6	U	ug/kg	3.6	3.5	U	ug/kg	3.5	2.8	J	ug/kg	3.6	4.5		ug/kg	3
Endrin	3.6	U	ug/kg	3.6	3.5	U	ug/kg	3.5	3.6	U	ug/kg	3.6	3.7	U	ug/kg	3.7
Endosulfan II	3.6	U	ug/kg	3.6	3.5	U	ug/kg	3.5	3.6	U	ug/kg	3.6	3.7	U	ug/kg	3.7
4,4-DDD	3.6	U	ug/kg	3.6	3.5	U	ug/kg	3.5	3.6	U	ug/kg	3.6	3.7	U	ug/kg	3.7
Endosulfan sulfate	3.6	U	ug/kg	3.6	3.5	U	ug/kg	3.5	3.6	U	ug/kg	3.6	3.7	U	ug/kg	3.7
4,4-DDT	3.6	U	ug/kg	3.6	.67	J	ug/kg	3.5	4.6	J	ug/kg	3.6	8.1		ug/kg	3
Methoxychlor	18	U	ug/kg	18	17	U	ug/kg	17	18	U	ug/kg	18	1.1	J	ug/kg	18
Endrin ketone	3.6	U	ug/kg	3.6	3.5	U	ug/kg	3.5	.19	J	ug/kg	3.6	3.7	U	ug/kg	3.7
Endrin aldehyde	3.6	U	ug/kg	3.6	3.5	U	ug/kg	3.5	3.6	U	ug/kg	3.6	3.7	U	ug/kg	3.7
alpha-Chlordane	1.8	U	ug/kg	1.8	1.7	U	ug/kg	1.7	.42	J	ug/kg	1.8	1.8	U	ug/kg	1.8
gamma-Chlordane	1.8	U	ug/kg	1.8	1.7	U	ug/kg	1.7	.4	J	ug/kg	1.8	1.8	U	ug/kg	1.8
Toxaphene	180	U	ug/kg	180	170	U	ug/kg	170	180	U	ug/kg	180	180	U	ug/kg	180
Aroclor-1016	36	U	ug/kg	36	35	U	ug/kg	35	36	U	ug/kg	36	37	U	ug/kg	37
Aroclor-1221	72	U	ug/kg	72	70	U	ug/kg	70	72	U	ug/kg	72	73	U	ug/kg	73
Aroclor-1232	36	U	ug/kg	36	35	U	ug/kg	35	36	U	ug/kg	36	37	U	ug/kg	37
Aroclor-1242	36	U	ug/kg	36	35	U	ug/kg	35	36	U	ug/kg	36	37	U	ug/kg	37
Aroclor-1248	36	U	ug/kg	36	35	U	ug/kg	35	36	U	ug/kg	36	37	U	ug/kg	37
Aroclor-1254	36	U	ug/kg	36	35	U	ug/kg	35	36	U	ug/kg	36	37	U	ug/kg	37
Aroclor-1260	36	U	ug/kg	36	35	U	ug/kg	35	36	U	ug/kg	36	37	U	ug/kg	37

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

NAS CECIL FIELD BFM COMPOUNDS
SURFACE SOIL -- INORGANICS -- REQUEST NO. 10611

Lab Sample Number:	C8541				C8542				C8543				C85JP			
Site	CECILBRAC3				CECILBRAC3				CECILBRAC3				CECILBRAC3			
Locator	58S00101				58S00201				58S00301				58S00401			
Collect Date:	13-FEB-97				13-FEB-97				13-FEB-97				13-FEB-97			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
CLP METALS AND CYANIDE																
Aluminum	197		mg/kg	40	190		mg/kg	40	629		mg/kg	40	589		mg/kg	40
Antimony	.65	U	mg/kg	12	.63	U	mg/kg	12	.86	J	mg/kg	12	.67	U	mg/kg	12
Arsenic	.43	U	mg/kg	2	1.4	J	mg/kg	2	2.1	J	mg/kg	2	4.9		mg/kg	2
Barium	2.7	J	mg/kg	40	1.9	J	mg/kg	40	13.5	J	mg/kg	40	18.1	J	mg/kg	40
Beryllium	.22	U	mg/kg	1	.21	U	mg/kg	1	.21	U	mg/kg	1	.22	U	mg/kg	1
Cadmium	.22	U	mg/kg	1	.21	U	mg/kg	1	.38	J	mg/kg	1	.51	J	mg/kg	1
Calcium	1590		mg/kg	1000	592	J	mg/kg	1000	1970		mg/kg	1000	5430		mg/kg	1000
Chromium	1.2	J	mg/kg	2	1.2	J	mg/kg	2	4		mg/kg	2	1.5	J	mg/kg	2
Cobalt	.22	U	mg/kg	10	.21	U	mg/kg	10	.66	J	mg/kg	10	.22	U	mg/kg	10
Copper	.22	U	mg/kg	5	.36	J	mg/kg	5	3.9	J	mg/kg	5	8.1		mg/kg	5
Iron	93.1		mg/kg	20	277		mg/kg	20	847		mg/kg	20	381		mg/kg	20
Lead	1.4		mg/kg	.6	2		mg/kg	.6	46.4		mg/kg	.6	17.2		mg/kg	.6
Magnesium	29.1	J	mg/kg	1000	23.1	J	mg/kg	1000	177	J	mg/kg	1000	50.9	J	mg/kg	1000
Manganese	1.6	J	mg/kg	3	2.3	J	mg/kg	3	18.2		mg/kg	3	4.2		mg/kg	3
Mercury	.05	U	mg/kg	.1	.05	U	mg/kg	.1	.05	U	mg/kg	.1	.06	J	mg/kg	.1
Nickel	.43	U	mg/kg	8	.42	U	mg/kg	8	.75	J	mg/kg	8	.49	J	mg/kg	8
Potassium	10.1	U	mg/kg	1000	9.9	U	mg/kg	1000	42.9	J	mg/kg	1000	10.4	U	mg/kg	1000
Selenium	.86	U	mg/kg	1	.84	U	mg/kg	1	.86	U	mg/kg	1	.89	U	mg/kg	1
Silver	.22	U	mg/kg	2	.21	U	mg/kg	2	.21	U	mg/kg	2	.22	U	mg/kg	2
Sodium	35	J	mg/kg	1000	23.3	U	mg/kg	1000	38.3	J	mg/kg	1000	24.6	U	mg/kg	1000
Thallium	.65	U	mg/kg	2	.63	U	mg/kg	2	.86	J	mg/kg	2	.67	U	mg/kg	2
Vanadium	.67	J	mg/kg	10	.75	J	mg/kg	10	2	J	mg/kg	10	.89	J	mg/kg	10
Zinc	3.2	J	mg/kg	4	5.3		mg/kg	4	38.6		mg/kg	4	67.2		mg/kg	4
Cyanide	.06	U	mg/kg	.5	.06	U	mg/kg	.5	.06	U	mg/kg	.5	.06	U	mg/kg	.5

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

NAS CECIL FIELD [illegible]M COMPOUNDS
SURFACE SOIL -- TPH -- REQUEST NO. 10612

Lab Sample Number:	A7B1301700				A7B1301700				A7B1301700		
Site	CECILBRAC3				CECILBRAC3				CECILBRAC3		
Locator	58S00101				58S00201				58S00301		
Collect Date:	12-FEB-97				12-FEB-97				12-FEB-97		
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Total petroleum hydrocarbons	31		mg/kg	11	39		mg/kg	10	5900		mg/kg	540

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

NAS CECIL FIELD BFM COMPOUNDS

SURFACE SOIL -- ARSENIC -- REPORT REQUEST NO. 10596

Lab Sample Number:	JR29702				JR29704				JR297010				JR297012			
Site	BRAC				BRAC				BRAC				BRAC			
Locator	58S01601				58S01701				58S01801				58S01901			
Collect Date:	27-AUG-98				27-AUG-98				27-AUG-98				27-AUG-98			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Arsenic	1.6	J	mg/kg	.6	2.4		mg/kg	.6	1	J	mg/kg	.5	.8	J	mg/kg	.5

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

NAS CECIL FIELD [illegible]FM COMPOUNDS
SURFACE SOIL -- ARSENIC -- REPORT REQUEST NO. 10596

Lab Sample Number:	JR29706				JR29708				JR29701				JR29703			
Site	BRAC				BRAC				BRAC				BRAC			
Locator	58S02001				58S02101				58S02201				58S02301			
Collect Date:	27-AUG-98				27-AUG-98				27-AUG-98				27-AUG-98			
	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL	VALUE	QUAL	UNITS	DL
Arsenic	1.5	J	mg/kg	.6	1.8	J	mg/kg	.6	.6	U	mg/kg	.6	2		mg/kg	.6

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

NAS CECIL FIELD -- BFM COMPOUNDS
SURFACE SOIL -- ARSENIC -- REPORT REQUEST NO. 10596

Lab Sample Number:	JR29705			JR29707			JR29709			JR297011		
Site	BRAC			BRAC			BRAC			BRAC		
Locator	58S02401			58S02501			58S02601			58S02701		
Collect Date:	27-AUG-98			27-AUG-98			27-AUG-98			27-AUG-98		
	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL	VALUE	QUAL UNITS	DL
Arsenic	2.4	mg/kg	.5	1.7 J	mg/kg	.6	2.5	mg/kg	.6	2.6	mg/kg	.6

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R = RESULT IS REJECTED AND UNUSABLE

NAS CECIL FIELD [illegible]M COMPOUNDS
SURFACE SOIL -- ARSENIC -- REPORT REQUEST NO. 10596

Lab Sample Number:	JR47321			
Site	BRAC			
Locator	58S02801			
Collect Date:	22-DEC-98			
	VALUE	QUAL	UNITS	DL
Arsenic	.5	U	mg/kg	.5

U = NOT DETECTED J = ESTIMATED VALUE
UJ = REPORTED QUANTITATION LIMIT IS QUALIFIED AS ESTIMATED
R - RESULT IS REJECTED AND UNUSABLE

order	004	005
location	58D00201	58D00201
nsample	58D00201 [02/07/97]	58D00201 [02/08/97]
sample	58D00201	58D00201
sample_dat	02/07/97	02/08/97
top_depth	0	0
bottom_dep	0	0
depth		
sacode	NORMAL	NORMAL
status		
matrix	SD	SD
sort	**c_004**	**c_005**

Volatile Organics (ug/kg)

1,1,1-TRICHLOROETHANE		12 U
1,1,2,2-TETRACHLOROETHANE		12 U
1,1,2-TRICHLOROETHANE		12 U
1,1-DICHLOROETHANE		12 U
1,1-DICHLOROETHENE		12 U
1,2-DICHLOROETHANE		12 U
1,2-DICHLOROETHENE (TOTAL)		12 U
1,2-DICHLOROPROPANE		12 U
2-BUTANONE		12 U
2-HEXANONE		12 U
4-METHYL-2-PENTANONE		12 U
ACETONE		12 U
BENZENE		12 U
BROMODICHLOROMETHANE		12 U
BROMOFORM		12 U
BROMOMETHANE		12 U
CARBON DISULFIDE		12 U
CARBON TETRACHLORIDE		12 U
CHLOROBENZENE		12 U
CHLOROETHANE		12 U
CHLOROFORM		12 U
CHLOROMETHANE		12 U
CIS-1,3-DICHLOROPROPENE		12 U
DIBROMOCHLOROMETHANE		12 U
ETHYLBENZENE		12 U
METHYLENE CHLORIDE		12 U
STYRENE		12 U
TETRACHLOROETHENE		12 U
TOLUENE		12 U
TRANS-1,3-DICHLOROPROPENE		12 U
TRICHLOROETHENE		12 U
VINYL CHLORIDE		12 U
XYLENES, TOTAL		12 U

Semivolatile Organics (ug/kg)

1,2,4-TRICHLOROBENZENE		410 U
1,2-DICHLOROBENZENE		410 U
1,3-DICHLOROBENZENE		410 U
1,4-DICHLOROBENZENE		410 U
2,2'-OXYBIS(1-CHLOROPROPANE)		410 U

2,4,5-TRICHLOROPHENOL		980 U
2,4,6-TRICHLOROPHENOL		410 U
2,4-DICHLOROPHENOL		410 U
2,4-DIMETHYLPHENOL		410 U
2,4-DINITROPHENOL		980 U
2,4-DINITROTOLUENE		410 U
2,6-DINITROTOLUENE		410 U
2-CHLORONAPHTHALENE		410 U
2-CHLOROPHENOL		410 U
2-METHYLNAPHTHALENE		410 U
2-METHYLPHENOL		410 U
2-NITROANILINE		980 U
2-NITROPHENOL		410 U
3,3'-DICHLOROBENZIDINE		410 U
3-NITROANILINE		980 U
4,6-DINITRO-2-METHYLPHENOL		980 U
4-BROMOPHENYL PHENYL ETHER		410 U
4-CHLORO-3-METHYLPHENOL		410 U
4-CHLOROANILINE		410 U
4-CHLOROPHENYL PHENYL ETHER		410 U
4-METHYLPHENOL		410 U
4-NITROANILINE		980 U
4-NITROPHENOL		980 U
ACENAPHTHENE		410 U
ACENAPHTHYLENE		410 U
ANTHRACENE		410 U
BENZO(A)ANTHRACENE		410 U
BENZO(A)PYRENE		58 J
BENZO(B)FLUORANTHENE		90 J
BENZO(G,H,I)PERYLENE		410 U
BENZO(K)FLUORANTHENE		410 U
BIS(2-CHLOROETHOXY)METHANE		410 U
BIS(2-CHLOROETHYL)ETHER		410 U
BIS(2-ETHYLHEXYL)PHTHALATE		48 J
BUTYLBENZYL PHTHALATE		410 U
CARBAZOLE		410 U
CHRYSENE		55 J
DI-N-BUTYL PHTHALATE		410 U
DI-N-OCTYL PHTHALATE		410 U
DIBENZO(A,H)ANTHRACENE		410 U
DIBENZOFURAN		410 U
DIETHYL PHTHALATE		410 U
DIMETHYL PHTHALATE		410 U
FLUORANTHENE		54 J
FLUORENE		410 U
HEXACHLOROBENZENE		410 U
HEXACHLOROBUTADIENE		410 U
HEXACHLOROCYCLOPENTADIENE		410 U
HEXACHLOROETHANE		410 U
INDENO(1,2,3-CD)PYRENE		410 U
ISOPHORONE		410 U
N-NITROSO-DI-N-PROPYLAMINE		410 U

N-NITROSODIPHENYLAMINE		410 U
NAPHTHALENE		410 U
NITROBENZENE		410 U
PENTACHLOROPHENOL		980 U
PHENANTHRENE		410 U
PHENOL		410 U
PYRENE		89 J

Pesticides/PCBs (ug/kg)

4,4'-DDD	20 U	
4,4'-DDE	6.7 J	
4,4'-DDT	20 U	
ALDRIN	10 U	
ALPHA-BHC	10 U	
ALPHA-CHLORDANE	1.5 J	
AROCLOR-1016	200 U	
AROCLOR-1016/1242		
AROCLOR-1221	410 U	
AROCLOR-1232	200 U	
AROCLOR-1242	200 U	
AROCLOR-1248	200 U	
AROCLOR-1254	200 U	
AROCLOR-1260	200 U	
BETA-BHC	10 U	
DELTA-BHC	10 U	
DIELDRIN	20 U	
ENDOSULFAN I	10 U	
ENDOSULFAN II	20 U	
ENDOSULFAN SULFATE	20 U	
ENDRIN	20 U	
ENDRIN ALDEHYDE	20 U	
ENDRIN KETONE	20 U	
GAMMA-BHC (LINDANE)	10 U	
GAMMA-CHLORDANE	10 U	
HEPTACHLOR	10 U	
HEPTACHLOR EPOXIDE	10 U	
METHOXYCHLOR	100 U	
TOTAL PCBS		
TOXAPHENE	1000 U	

Inorganics (mg/kg)

ALUMINUM		3550
ANTIMONY		0.74 U
ARSENIC		0.61 J
BARIUM		6.3 J
BERYLLIUM		0.25 U
CADMIUM		0.38 J
CALCIUM		6130
CHROMIUM		7.7
COBALT		0.25 U
COPPER		6 J
CYANIDE		0.07 U
IRON		1170
LEAD		30.6

MAGNESIUM		126 J
MANGANESE		9
MERCURY		0.06 U
NICKEL		2.1 J
POTASSIUM		31.2 J
SELENIUM		0.99 U
SILVER		0.25 U
SODIUM		28 J
THALLIUM		0.85 J
VANADIUM		5.1 J
ZINC		48.4
Miscellaneous Parameters (mg/kg)		
TOTAL ORGANIC CARBON	12000	
Petroleum Hydrocarbons (mg/kg)		
TPH	86	
TPH (C8-C40)		

A.2

Groundwater Data

Groundwater Data
Appendix Printout

order	**03**
location	CEF-081-04S
nsample	58G00401 [02/04/97]
sample	58G00401
sample_dat	02/04/97
sacode	NORMAL
matrix	GW

sort	**c_03**
Volatile Organics (ug/L)	
1,1,1-TRICHLOROETHANE	10 U
1,1,2,2-TETRACHLOROETHANE	10 U
1,1,2-TRICHLOROETHANE	10 U
1,1-DICHLOROETHANE	10 U
1,1-DICHLOROETHENE	10 U
1,2-DICHLOROETHANE	10 U
1,2-DICHLOROETHENE (TOTAL)	10 U
1,2-DICHLOROPROPANE	10 U
2-BUTANONE	10 U
2-HEXANONE	10 U
4-METHYL-2-PENTANONE	10 U
ACETONE	10 U
BENZENE	10 U
BROMODICHLOROMETHANE	10 U
BROMOFORM	10 U
BROMOMETHANE	10 U
CARBON DISULFIDE	10 U
CARBON TETRACHLORIDE	10 U
CHLOROBENZENE	10 U
CHLOROETHANE	10 U
CHLOROFORM	10 U
CHLOROMETHANE	10 U
CIS-1,3-DICHLOROPROPENE	10 U
DIBROMOCHLOROMETHANE	10 U
ETHYLBENZENE	10 U
METHYLENE CHLORIDE	10 U
STYRENE	10 U
TETRACHLOROETHENE	10 U
TOLUENE	10 U
TRANS-1,3-DICHLOROPROPENE	10 U
TRICHLOROETHENE	10 U
VINYL CHLORIDE	10 U
XYLENES, TOTAL	10 U
Semivolatile Organics (ug/L)	
1,2,4-TRICHLOROBENZENE	10 U
1,2-DICHLOROBENZENE	10 U
1,3-DICHLOROBENZENE	10 U
1,4-DICHLOROBENZENE	10 U
2,2'-OXYBIS(1-CHLOROPROPANE)	10 U
2,4,5-TRICHLOROPHENOL	25 U
2,4,6-TRICHLOROPHENOL	10 U
2,4-DICHLOROPHENOL	10 U
2,4-DIMETHYLPHENOL	10 U
2,4-DINITROPHENOL	25 U
2,4-DINITROTOLUENE	10 U
2,6-DINITROTOLUENE	10 U
2-CHLORONAPHTHALENE	10 U
2-CHLOROPHENOL	10 U

from gw58_sam.xls
from gw58_res.xls

AOI 27
Groundwater Data
Appendix Printout

order	**03**
location	CEF-081-04S
nsample	58G00401 [02/04/97]
sample	58G00401
sample_dat	02/04/97
sacode	NORMAL
matrix	GW

sort	**c_03**
2-METHYLNAPHTHALENE	10 U
2-METHYLPHENOL	10 U
2-NITROANILINE	25 U
2-NITROPHENOL	10 U
3,3'-DICHLOROBENZIDINE	10 U
3-NITROANILINE	25 U
4,6-DINITRO-2-METHYLPHENOL	25 U
4-BROMOPHENYL PHENYL ETHER	10 U
4-CHLORO-3-METHYLPHENOL	10 U
4-CHLOROANILINE	10 U
4-CHLOROPHENYL PHENYL ETHER	10 U
4-METHYLPHENOL	10 U
4-NITROANILINE	25 U
4-NITROPHENOL	25 U
ACENAPHTHENE	10 U
ACENAPHTHYLENE	10 U
ANTHRACENE	10 U
BENZO(A)ANTHRACENE	10 U
BENZO(A)PYRENE	10 U
BENZO(B)FLUORANTHENE	10 U
BENZO(G,H,I)PERYLENE	10 U
BENZO(K)FLUORANTHENE	10 U
BIS(2-CHLOROETHOXY)METHANE	10 U
BIS(2-CHLOROETHYL)ETHER	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	10 U
BUTYLBENZYL PHTHALATE	10 U
CARBAZOLE	10 U
CHRYSENE	10 U
DI-N-BUTYL PHTHALATE	10 U
DI-N-OCTYL PHTHALATE	10 U
DIBENZO(A,H)ANTHRACENE	10 U
DIBENZOFURAN	10 U
DIETHYL PHTHALATE	10 U
DIMETHYL PHTHALATE	10 U
FLUORANTHENE	10 U
FLUORENE	10 U
HEXACHLOROBENZENE	10 U
HEXACHLOROBUTADIENE	10 U
HEXACHLOROCYCLOPENTADIENE	10 U
HEXACHLOROETHANE	10 U
INDENO(1,2,3-CD)PYRENE	10 U
ISOPHORONE	10 U
N-NITROSO-DI-N-PROPYLAMINE	10 U
N-NITROSODIPHENYLAMINE	10 U
NAPHTHALENE	10 U
NITROBENZENE	10 U
PENTACHLOROPHENOL	25 U
PHENANTHRENE	10 U
PHENOL	10 U

from gw58_sam.xls
from gw58 xls

order	**03**
location	CEF-081-04S
nsample	58G00401 [02/04/97]
sample	58G00401
sample_dat	02/04/97
sacode	NORMAL
matrix	GW
sort	**c_03**
PYRENE	10 U
Pesticides/PCBs (ug/L)	
4,4'-DDD	0.1 U
4,4'-DDE	0.1 U
4,4'-DDT	0.1 U
ALDRIN	0.05 U
ALPHA-BHC	0.05 U
ALPHA-CHLORDANE	0.05 U
AROCLOR-1016	1 U
AROCLOR-1221	2 U
AROCLOR-1232	1 U
AROCLOR-1242	1 U
AROCLOR-1248	1 U
AROCLOR-1254	1 U
AROCLOR-1260	1 U
BETA-BHC	0.05 U
DELTA-BHC	0.05 U
DIELDRIN	0.1 U
ENDOSULFAN I	0.05 U
ENDOSULFAN II	0.1 U
ENDOSULFAN SULFATE	0.1 U
ENDRIN	0.1 U
ENDRIN ALDEHYDE	0.1 U
ENDRIN KETONE	0.1 U
GAMMA-BHC (LINDANE)	0.05 U
GAMMA-CHLORDANE	0.05 U
HEPTACHLOR	0.05 U
HEPTACHLOR EPOXIDE	0.05 U
METHOXYCHLOR	0.5 U
TOXAPHENE	5 U
Inorganics (ug/L)	
ALUMINUM	103 J
ANTIMONY	3 U
ARSENIC	2 U
BARIUM	24.3 J
BERYLLIUM	1 U
CADMIUM	1 U
CALCIUM	46500
CHROMIUM	1 U
COBALT	1.4 J
COPPER	1 U
CYANIDE	1.2 U
IRON	36.7 J
LEAD	1 U
MAGNESIUM	3670 J
MANGANESE	48.9
MERCURY	0.1 U
NICKEL	2 U
POTASSIUM	1360 J

from gw58_sam.xls
from gw58_res.xls

AOI 27
Groundwater Data
Appendix Printout

order	**03**
location	CEF-081-04S
nsample	58G00401 [02/04/97]
sample	58G00401
sample_dat	02/04/97
sacode	NORMAL
matrix	GW

sort	**c_03**
SELENIUM	4 U
SILVER	1 U
SODIUM	15500
THALLIUM	3.6 J
VANADIUM	6.3 J
ZINC	53

from gw58_sam.xls
from gw5F xls

APPENDIX B

TtNUS Laboratory Analytical Data

Tetra Tech NUS

INTERNAL CORRESPONDENCE

TO:	**M. SPERANZA**	**DATE:**	**MARCH 6, 2000**
FROM:	**GRETCHEN PHIPPS**	**COPIES:**	**DV FILE**
SUBJECT:	**ORGANIC DATA VALIDATION –TPHs** **CTO 078 - NAS, CECIL FIELD** **SDG – F5809**		
SAMPLES:	6/Soils/		

CEF-AOI27-SS-001-02	CEF-AOI27-SS-002-01
CEF-AOI27-SS-003-02	CEF-AOI27-SS-004-01
CEF-AOI27-SS-004-02	CEF-AOI27-SS-DUP01

Overview

The sample set for CTO 078, NAS Cecil Field, SDG F5809, consists of six (6) soil environmental samples. One (1) unidentified duplicate sample (CEF-AOI27-SS-DUP01) was included within this SDG.

All samples were analyzed for total petroleum hydrocarbons (TPHs). The samples were collected by Tetra Tech NUS on February 2, 2000 and analyzed by Accutest Laboratory. TPH analyses were conducted using the Florida-Pro method.

The data was evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Calibration Verifications
* • Laboratory Blank Analyses
* • Detection Limits

* - All quality control criteria were met for this parameter.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Organic Review", February 1994 and the NFESC document entitles "Navy Installation Restoration Laboratory Quality Assurance Guide." (NFESC 2/96).

The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Gretchen A. Phipps

Tetra Tech NUS
Gretchen A. Phipps

Tetra Tech NUS
Joseph A. Samchuck
Quality Control Officer

Attachments:

1. Appendix A - Qualified Analytical Data
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F5809

SAMPLE NUMBER:	CEF-AOI27-SS-001-02			CEF-AOI27-SS-002-01			CEF-AOI27-SS-003-02			CEF-AOI27-SS-004-01		
SAMPLE DATE:	02/02/00			02/02/00			02/02/00			02/02/00		
LABORATORY ID:	F5809-1			F5809-2			F5809-3			F5809-5		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	90.7 %			93.1 %			95.2 %			93.9 %		
UNITS:	MG/KG			MG/KG			MG/KG			MG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS												
TPH (C8-C40)	92	U		90	U		88	U		89	U	

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F5809

SAMPLE NUMBER:	CEF-AOI27-SS-004-02			CEF-AOI27-SS-DUP01								
SAMPLE DATE:	02/02/00			02/02/00			/ /			/ /		
LABORATORY ID:	F5809-6			F5809-4								
QC_TYPE:	NORMAL			NORMAL								
% SOLIDS:	90.7 %			94.3 %			100.0 %			100.0 %		
UNITS:	MG/KG			MG/KG								
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PETROLEUM HYDROCARBONS												
TPH (C8-C40)	92	U		88	U							

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Report of Analysis

Client Sample ID:	CEF-AOI27-SS-001-02		
Lab Sample ID:	F5809-1	**Date Sampled:**	02/02/00
Matrix:	SO - Soil	**Date Received:**	02/03/00
Method:	FLORIDA-PRO	**Percent Solids:**	90.7
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP06984.D	1	02/12/00	ME	02/09/00	OP1283	GOP325
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	ND	92	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	80%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	CEF-AOI27-SS-002-01		
Lab Sample ID:	F5809-2	**Date Sampled:**	02/02/00
Matrix:	SO - Soil	**Date Received:**	02/03/00
Method:	FLORIDA-PRO	**Percent Solids:**	93.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP06987.D	1	02/12/00	ME	02/09/00	OP1283	GOP325
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	ND	90	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	78%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	CEF-AOI27-SS-003-02		
Lab Sample ID:	F5809-3	**Date Sampled:**	02/02/00
Matrix:	SO - Soil	**Date Received:**	02/03/00
Method:	FLORIDA-PRO	**Percent Solids:**	95.2
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP06988.D	1	02/12/00	ME	02/09/00	OP1283	GOP325
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	ND	88	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	79%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	CEF-AOI27-SS-004-01		
Lab Sample ID:	F5809-5	**Date Sampled:**	02/02/00
Matrix:	SO - Soil	**Date Received:**	02/03/00
Method:	FLORIDA-PRO	**Percent Solids:**	93.9
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP06993.D	1	02/12/00	ME	02/09/00	OP1283	GOP325
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	ND	89	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	78%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	CEF-AOI27-SS-004-02		
Lab Sample ID:	F5809-6	**Date Sampled:**	02/02/00
Matrix:	SO - Soil	**Date Received:**	02/03/00
Method:	FLORIDA-PRO	**Percent Solids:**	90.7
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP06994.D	1	02/12/00	ME	02/09/00	OP1283	GOP325
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	ND	92	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	73%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	CEF-AOI27-SS-DUP01		
Lab Sample ID:	F5809-4	**Date Sampled:**	02/02/00
Matrix:	SO - Soil	**Date Received:**	02/03/00
Method:	FLORIDA-PRO	**Percent Solids:**	94.3
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	OP06989.D	1	02/12/00	ME	02/09/00	OP1283	GOP325
Run #2							

CAS No.	Compound	Result	RL	Units	Q
	TPH (C8-C40)	ND	88	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	77%		40-140%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method bla
N = Indicates presumptive evidence of a compound

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