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NAS CECIL FIELD, FL
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TECHNICAL MEMORANDUM FOR NO FURTHER ACTION AT POTENTIAL SOURCE OF CONTAMINATION 39 FLIGHT LINE OUTFALLS NAS CECIL FIELD FL

7/2/2002

TETRA TECH NUS INC

Technical Memorandum
for
No Further Action

Potential Source of Contamination 39
Flightline Outfalls

Naval Air Station Cecil Field
Jacksonville, Florida

Southern Division
Naval Facilities Engineering Command

Contract Number N62467-94-D-0888

Contract Task Order 0078

July 2002

TECHNICAL MEMORANDUM
FOR NO FURTHER ACTION

POTENTIAL SOURCE OF CONTAMINATION 39
FLIGHTLINE OUTFALLS

NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

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

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

JULY 2002

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CERTIFICATION OF TECHNICAL
DATA CONFORMITY

The Contractor, Tetra Tech NUS, Inc., hereby certifies that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. N62467-94-D-0888 are complete and accurate and comply with all requirements of this contract.

DATE: July 2, 2002

COMPANY CERTIFICATION AUTHORIZATION NUMBER: 7988
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Task Order Manager

The professional opinions rendered in this decision document identified as Technical Memorandum for No Further Action, Potential Source of Contamination 39, 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 this project described in this report.

Mark P. Speranza

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

Date: 7/2/02

Mark P. Speranza

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ACRONYMS

ABB-ES	ABB Environmental Services, Inc.
BAF	Bioaccumulation factor
BaP	Benzo(a)pyrene
BaPEq	Benzo(a)pyrene equivalents
BCT	BRAC Cleanup Team
BEHP	bis(2-Ethylhexyl) phthalate
bgs	Below ground surface
BRAC	Base Realignment and Closure
BSAF	Biota-sediment accumulation factor
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CLEAN	Comprehensive Long-Term Environmental Action Navy
COPC	Contaminant of potential concern
CPAH	Carcinogenic polynuclear aromatic hydrocarbon
CTO	Contract Task Order
EBS	Environmental Baseline Survey
EISOPQAM	Environmental Investigations Standard Operating Procedures and Quality Assurance Manual
ELCR	Excess lifetime cancer risk
ER-M	Effects range-median
ESV	Ecological screening value
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FL-PRO	Florida Petroleum Residual Organics
HLA	Harding Lawson Associates
HQ	Hazard Quotient
IBDS	Inorganic Background Data Set
IR	Installation Restoration
LOAEL	Lowest-observable-adverse-effects level
LUCIP	Land Use Control Implementation Plan
mg/kg	Milligram per kilogram
MHSP&E	Ministry of Housing, Spatial Planning, and Environment
NAS	Naval Air Station
NCP	National Oil and Hazardous Substance Pollution Contingency Plan
NOAEL	No-observable-adverse-effects level
OU	Operable Unit

PAH	Polynuclear aromatic hydrocarbon
PCB	Polychlorinated biphenyl
PEL	Probable effects level
ppm	Part per million
PRE	Preliminary risk evaluation
PSC	Potential Source of Contamination
QA/QC	Quality assurance/quality control
RAC	Remedial Action Contractor
RBC	Risk-based concentration
RI	Remedial Investigation
SAO	Sampling and Analysis Outline
SAR	Sampling and Analysis Report
SCTL	Soil Cleanup Target Level
SOUTHNAVFACENGCOM	Southern Division Naval Facilities Engineering Command
SVOC	Semivolatile organic compound
TAL	Target Analyte List
TCL	Target Compound List
TEL	Threshold effects level
TOC	Total organic carbon
TRPH	Total recoverable petroleum hydrocarbons
TRV	Toxicity reference value
TtNUS	Tetra Tech NUS, Inc.
U.S. EPA	United States Environmental Protection Agency
VOC	Volatile organic compound

1.0 INTRODUCTION

This Technical Memorandum for Potential Source of Contamination (PSC) 39, Flightline Outfalls, at Naval Air Station (NAS) Cecil Field, 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-0888, Contract Task Order (CTO) 0078.

TtNUS performed seven sampling events at PSC 39 between June 1999 and April 2000 to supplement the results of a previous investigation and to delineate the extent of contaminated surface water and sediment. The Base Realignment and Closure (BRAC) Cleanup Team (BCT) made a risk management decision to excavate and dispose of polychlorinated biphenyl (PCB)-contaminated sediment at Outfall No. 11. The remaining outfalls associated with PSC 39 were deemed to require no further action. The results of the field investigations were used to develop a Dig and Haul Package (remedial design plan) for a removal action for Outfall No. 11 that consisted of excavation and off-site disposal of the contaminated sediment. The removal action at PSC 39 was conducted under an Action Memorandum (TtNUS, 2001a) in accordance with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requirements for a time-critical removal, as identified in Section 300.415(b)(4)(1) of the National Oil and Hazardous Substance Pollution Contingency Plan (NCP).

This technical memorandum presents information from the previous investigations and summarizes the related field operations, results, conclusions, and recommendations of the PSC investigation conducted by TtNUS during 1999-2001 and the activities related to the removal action, as described in the Source Removal Report for PSC 39, Outfall No. 11 (CH2MHill, 2001). The results of the investigations and the subsequent removal action at Outfall No. 11 indicate that no further action is needed at this site.

2.0 SITE DESCRIPTION

2.1 PHYSICAL SETTING

PSC 39 consists of the stormwater outfalls and drainage ditches near the western edge of the north-south runways and the southern edge of east-west runways (Figure 2-1). The outfalls and ditches convey stormwater runoff from the flightline, various aircraft storage areas, and parts of the southern and eastern portions of the Main Base and drain to Sal Taylor Creek. These outfalls and ditches (collectively referred to as "outfalls") are in undeveloped areas of the base. PSC 39 consists of 16 outfalls (Figure 2-2):

- Seven outfalls and ditches on the eastern side of the north-south runways (Outfall Nos.1 through 6 and Outfall No. 8).
- One outfall on the western side of the north-south runways (Outfall No. 9).
- Four outfalls and ditches on the southern side of the east-west runways (Outfall Nos. 7, 10, 11, and 12).
- Two normally dry ditches on the southern side of the east-west runways (Outfall Nos. 13 and 14)
- The upstream and downstream areas of a culvert at the southern end of the north-south runways (Outfall Nos. 8A and 9A)

Outfall Nos. 1 through 12 are discharge points for water from underground storm sewer systems with channelized ditches that direct surface water from these 12 outfalls eastward (Outfall Nos.1 through 6) or southward (Outfall Nos. 7 through 12), where the ditches eventually drain into Sal Taylor Creek. Shallow pools have formed at each of these 12 outfalls. The location designated as Outfall No. 8A is the area where the Sal Taylor Creek enters a culvert and flows under the north-south runways. The location designated as Outfall No. 9A is at the downstream end of the same culvert, where Sal Taylor Creek exits after flowing approximately 1,900 feet under the north-south runways. The areas designated as Outfall Nos. 13 and 14 are actually dry swales, with no nearby culvert or water source.

2.2 SITE HISTORY

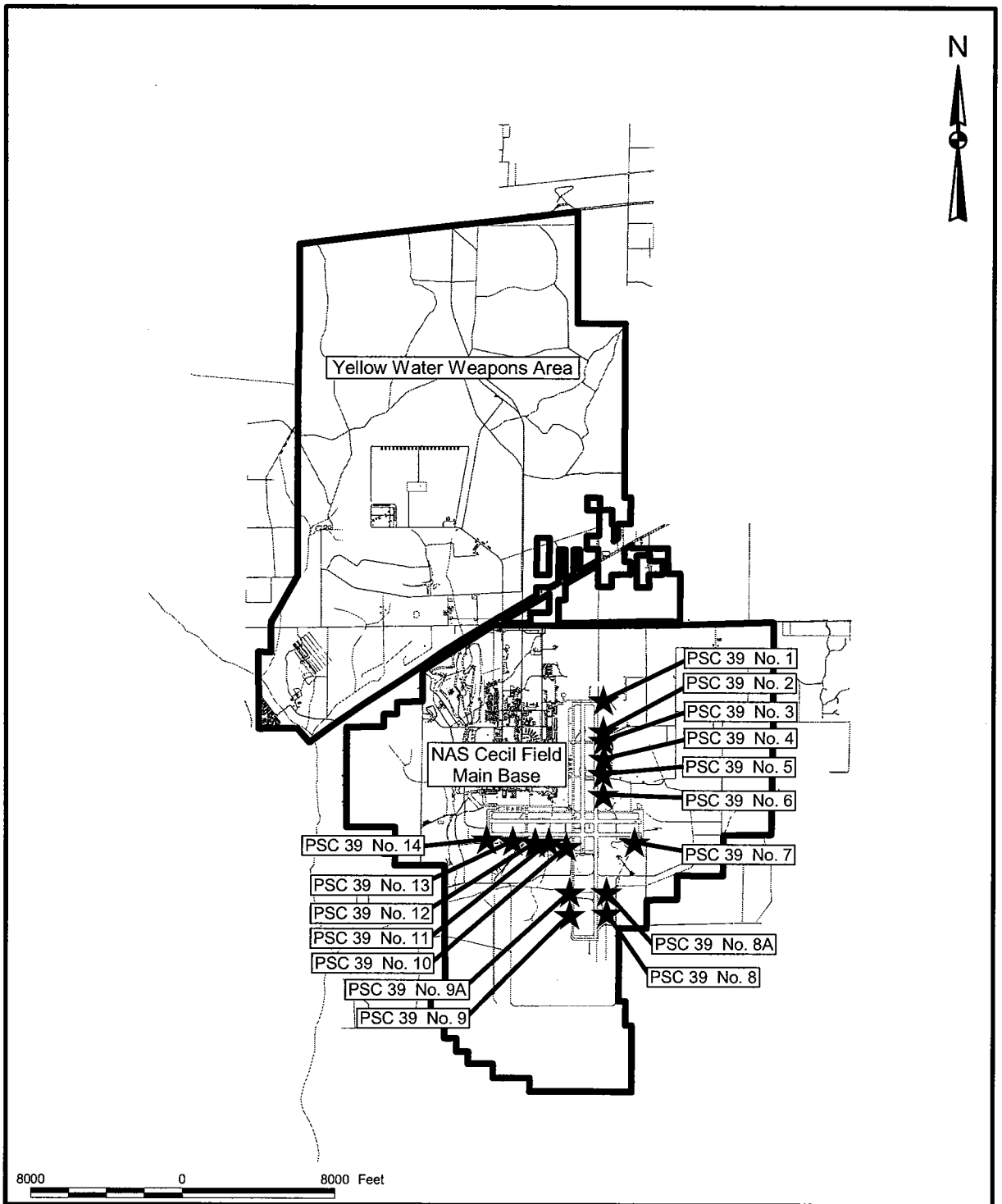
The outfalls and stormwater drainage system have been in their current configurations since the construction of the runways in the 1950s. The stormwater system conveys primarily stormwater, but some non-stormwater discharges to the storm sewer system were identified in an illicit-discharge study

performed by the Navy in 1996 (HLA, 1999). The 19 illicit connections identified in the report were corrected in accordance with the report's recommendations. In accordance with the Clean Water Act, any facility that discharges water to the surface is required to obtain a National Pollutant Discharge Elimination System (NPDES) permit. NAS Cecil Field operated under NPDES permit no. FLR05A089 until September 1999 when the facility was officially closed. The Storm Water Management Plan containing information on the current NPDES permit (4-031-70452-1) is currently being reviewed. The reuse plan calls for continued use of the existing stormwater drainage system; however, the existing system is expected to be upgraded.

Several groundwater contamination plumes have been identified in the areas where stormwater catchments and piping exist. This piping network discharges to the outfalls being evaluated. Figure 2-3 provides the locations of the groundwater plumes and stormwater piping network. To prevent contaminated groundwater associated with the Site 16 plume from infiltrating the system, approximately 75 feet of the 66-inch diameter storm sewer pipe between manholes STM 2-6 and STM 2-7 was relined (TtNUS, 1999). To date, only this section of the stormwater piping system has required repairing.

2.3 SITE GEOLOGY AND HYDROGEOLOGY

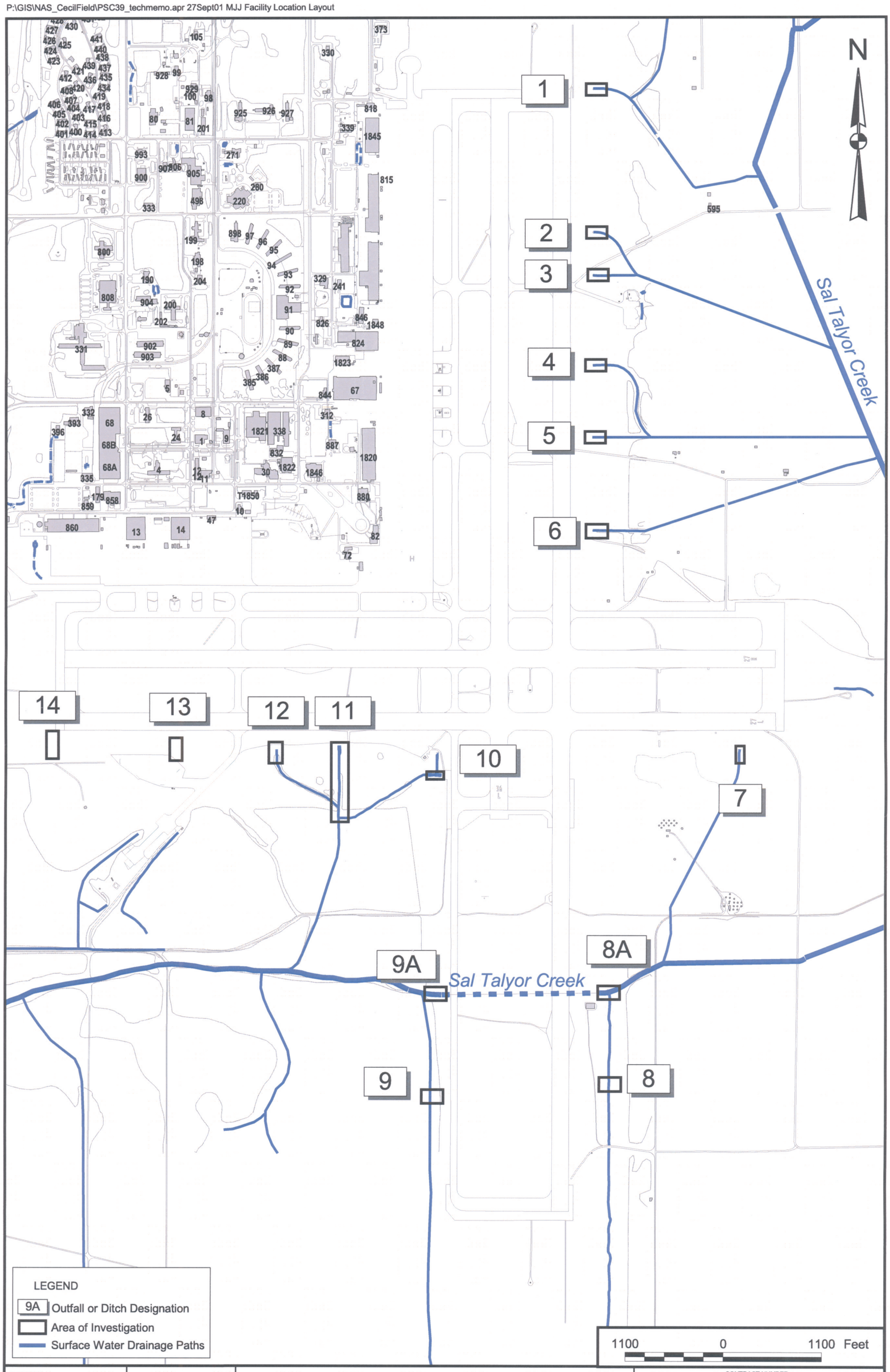
PSC 39 is the near the area of contaminated groundwater associated with Operable Unit (OU) 9, Site 36. No site-specific subsurface investigation was performed as part of the PSC 39 investigation. The geological and hydrogeological characteristics of the site are similar to those described in the RI Report for OU 9, Sites 36 and 37 (TtNUS, 1999b).



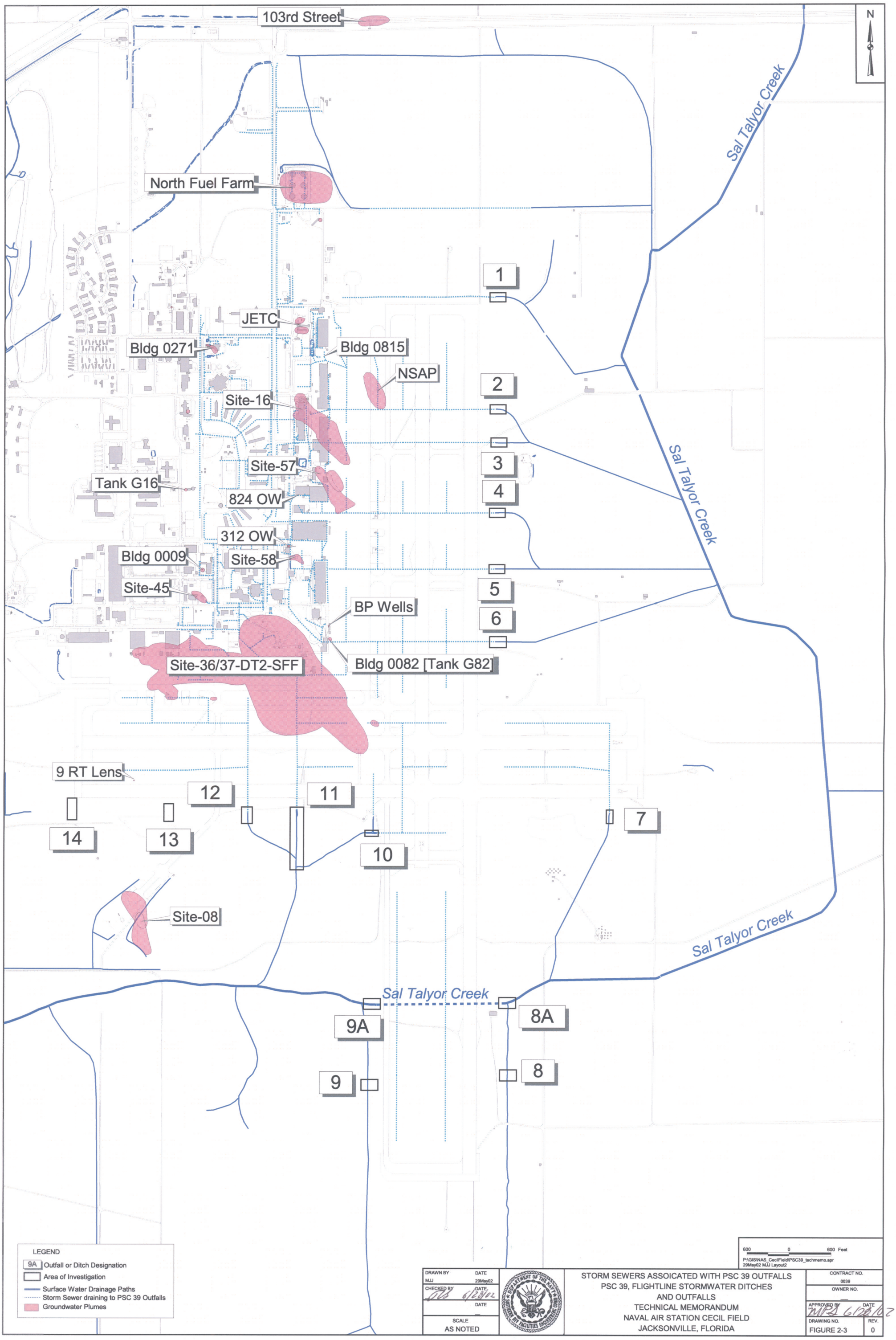
DRAWN BY MJJ — DATE 29Aug00		GENERAL LOCATION MAP PSC 39, FLIGHTLINE STORMWATER DITCHES AND OUTFALLS TECHNICAL MEMORANDUM NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0039
CHECKED BY — DATE 6/26/02			APPROVED BY MPL — DATE 6/28/02
COST/SCHEDULE-AREA			APPROVED BY — DATE
SCALE AS NOTED			DRAWING NO. FIGURE 2-1 — REV 0

P:\GIS\NAS_CecilField\PSC39_techmemo.apr 27Sept01 MJJ Site Location Map Layout

P:\GIS\NAS_CecilField\PSC39_techmemo.apr 27Sept01 MJJ Facility Location Layout



DRAWN BY MJJ	DATE 07/04/99	SITE LAYOUT PSC 39, FLIGHTLINE STORMWATER DITCHES AND OUTFALLS TECHNICAL MEMORANDUM NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0039
CHECKED BY	DATE 6/28/02		APPROVED BY MPA DATE 6/28/02
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 2-2 REV 0


N
103rd Street
North Fuel Farm
Sal Talyor Creek
1
JETC
Bldg 0271
Bldg 0815
NSAP
2
Site-16
3
Site-57
Tank G16
4
824 OW
312 OW
Bldg 0009
Site-58
Site-45
5
BP Wells
6
Site-36/37-DT2-SFF
Bldg 0082 [Tank G82]
9 RT Lens
12
11
7
14
13
10
Site-08
Sal Talyor Creek
Sal Talyor Creek
9A
8A
9
8
LEGEND
9A Outfall or Ditch Designation
Area of Investigation
Surface Water Drainage Paths
Storm Sewer draining to PSC 39 Outfalls
Groundwater Plumes
600 0 600 Feet
P:\GIS\NAS_CecilField\PSC39_techmemo.apr
29May02 MJJ Layout2
DRAWN BY MJJ DATE 29May02
CHECKED BY DATE 6/28/02
DATE
SCALE AS NOTED
STORM SEWERS ASSOICATED WITH PSC 39 OUTFALLS
PSC 39, FLIGHTLINE STORMWATER DITCHES
AND OUTFALLS
TECHNICAL MEMORANDUM
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
CONTRACT NO. 0039
OWNER NO.
APPROVED BY DATE 6/28/02
DRAWING NO. FIGURE 2-3
REV. 0

3.0 PREVIOUS INVESTIGATIONS

Environmental investigations at PSC 39 began in 1999 as part of Phase II Sampling and Analysis Program for Main Base Open Area 18 (MB 18) (HLA, 1999). As part of this initial investigation, 12 surface water and 14 sediment samples were collected from 14 stormwater outfalls located along the runways. Outfall locations 13 and 14 (Figure 2-2) were dry during this investigation, therefore only a sediment sample was collected. The surface water and sediment samples were analyzed volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides and polychlorinated biphenyls (PCBs), polynuclear aromatic hydrocarbons (PAHs), metals, and cyanide. Surface water analytical results are presented in Tables 3-1 through 3-4, and sediment analytical results are presented in Tables 3-5 through 3-8.

Surface water analytical results from the MB 18 investigation were compared to Surface Water Quality Standards, Florida Administrative Code (FAC) Chapter 62-302, and sediment sample analytical results were compared to Probable Effects Level Sediment Quality Assessment Guidelines (McDonald Environmental Sciences, Ltd., 1994). Inorganic contamination was detected in surface water and sediment at several outfalls east of the north-south runways. Inorganic contaminants detected at concentrations in excess of screening criteria included chromium, iron, lead, and thallium. Concentrations of PAHs and PCBs exceeded screening criteria in samples from Outfall No. 11. Sediment at Outfall Nos. 6 and 9 contained chlorinated pesticides at concentrations greater than screening criteria, and sediment at Outfall Nos. 4 and 11 had bis(2-ethylhexyl) phthalate at concentration in excess of its screening criterion. Figures 3-1 and 3-2 present surface water and sediment exceedances, respectively, from the MB 18 Phase II Report. In addition to these exceedances, detection limits for various compounds were elevated in comparison to ecological screening criteria.

Based on these data, the Sampling and Analysis Outline Report (SOAR) for MB-18 (HLA, 1999) recommended that additional evaluation be conducted at the flightline outfalls, designated PSC 39, to determine the downstream extent of contamination and to assess the risks to ecological receptors from contaminated surface water and sediment.

TABLE 3-1

SURFACE WATER ANALYTICAL DATA - PREVIOUS INVESTIGATIONS
VOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 1 OF 2

OUTFALL No.	1	2	3	4	5	6	7	
PARAMETER	85W00101	85W00201	85W00301	85W00401	85W00501	85W00601	85W00701	
							Sample	Duplicate
1,1,1-TRICHLOROETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROPROPANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-BUTANONE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-HEXANONE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-METHYL-2-PENTANONE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
ACETONE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
BENZENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMODICHLOROMETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOFORM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
CARBON DISULFIDE	5.6	1.4	4.2	2.7	2	2.6	34	8.2
CARBON TETRACHLORIDE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBENZENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
CHLOROFORM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROMETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CIS-1,2-DICHLOROETHENE	1 U	1 U	10	1 U	1 U	1 U	1 U	1 U
CIS-1,3-DICHLOROPROPENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
DIBROMOCHLOROMETHANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
ETHYLBENZENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
M+P-XYLENES	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
METHYLENE CHLORIDE	3	3 U	3 U	3 U	3 U	3 U	3 U	3 U
O-XYLENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
STYRENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
TOLUENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRANS-1,2-DICHLOROETHENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRANS-1,3-DICHLOROPROPENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHENE	1 U	1 U	14	1 U	1 U	1 U	1 U	1 U
VINYL CHLORIDE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

TABLE 3-1

SURFACE WATER ANALYTICAL DATA - PREVIOUS INVESTIGATIONS
VOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 2 OF 2

OUTFALL No.	8	9	10	11	12
PARAMETER	85W00801	85W00901	85W01001	85W01101	85W01201
1,1,1-TRICHLOROETHANE	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHENE	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROPROPANE	1 U	1 U	1 U	1 U	1 U
2-BUTANONE	2 U	2 U	2 U	2 U	2 U
2-HEXANONE	2 U	2 U	2 U	2 U	2 U
4-METHYL-2-PENTANONE	2 U	2 U	2 U	2 U	2 U
ACETONE	2 U	2 U	2 U	2 U	2 U
BENZENE	1 U	1 U	1 U	3.9	1 U
BROMODICHLOROMETHANE	1 U	1 U	1 U	1 U	1 U
BROMOFORM	1 U	1 U	1 U	1 U	1 U
BROMOMETHANE	2 U	2 U	2 U	2 U	2 U
CARBON DISULFIDE	50	20	1.6	4	2.4
CARBON TETRACHLORIDE	1 U	1 U	1 U	1 U	1 U
CHLOROBENZENE	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	2 U	2 U	2 U	2 U	2 U
CHLOROFORM	1 U	1 U	1 U	1 U	1 U
CHLOROMETHANE	1 U	1 U	1 U	1 U	1 U
CIS-1,2-DICHLOROETHENE	1 U	1 U	1 U	1 U	1 U
CIS-1,3-DICHLOROPROPENE	1 U	1 U	1 U	1 U	1 U
DIBROMOCHLOROMETHANE	1 U	1 U	1 U	1 U	1 U
ETHYLBENZENE	1 U	1 U	1 U	1 U	1 U
M+P-XYLENES	2 U	2 U	2 U	2 U	2 U
METHYLENE CHLORIDE	3	3 U	3 U	3 U	3 U
O-XYLENE	1 U	1 U	1 U	1.4	1 U
STYRENE	1 U	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	3 U	3 U	3 U	3 U	3 U
TOLUENE	1 U	1 U	1 U	1 U	1 U
TRANS-1,2-DICHLOROETHENE	1 U	1 U	1 U	1 U	1 U
TRANS-1,3-DICHLOROPROPENE	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHENE	1 U	1 U	1 U	1 U	1 U
VINYL CHLORIDE	1 U	1 U	1 U	1 U	1 U

All concentrations in ug/L.
U = Not detected at or above detection limit (associated value).

TABLE 3-2

SURFACE WATER ANALYTICAL DATA - PREVIOUS INVSTIGATIONS
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 1 OF 4

Outfall No.	1	2	3	4	5	6
PARAMETER	85W00101	85W00201	85W00301	85W00401	85W00501	85W00601
1,2,4-TRICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U
1,3-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U
1,4-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U
2,4,5-TRICHLOROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U
2,4,6-TRICHLOROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U
2,4-DICHLOROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U
2,4-DIMETHYLPHENOL	5 U	5 U	5 U	5 U	5 U	5 U
2,4-DINITROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U
2,4-DINITROTOLUENE	5 U	5 U	5 U	5 U	5 U	5 U
2,6-DINITROTOLUENE	5 U	5 U	5 U	5 U	5 U	5 U
2-CHLORONAPHTHALENE	5 U	5 U	5 U	5 U	5 U	5 U
2-CHLOROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U
2-METHYLNAPHTHALENE	5 U	5 U	5 U	5 U	5 U	5 U
2-METHYLPHENOL	5 U	5 U	5 U	5 U	5 U	5 U
2-NITROANILINE	5 U	5 U	5 U	5 U	5 U	5 U
2-NITROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U
3&4-METHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U
3,3'-DICHLOROBENZIDINE	20 U	20 U	20 U	20 U	20 U	20 U
3-NITROANILINE	5 U	5 U	5 U	5 U	5 U	5 U
4,6-DINITRO-2-METHYLPHENOL	5 U	5 U	5 U	5 U	5 U	5 U
4-BROMOPHENYL PHENYL ETHER	5 U	5 U	5 U	5 U	5 U	5 U
4-CHLORO-3-METHYLPHENOL	5 U	5 U	5 U	5 U	5 U	5 U
4-CHLOROANILINE	5 U	5 U	5 U	5 U	5 U	5 U
4-CHLOROPHENYL PHENYL ETHER	5 U	5 U	5 U	5 U	5 U	5 U
4-NITROANILINE	5 U	5 U	5 U	5 U	5 U	5 U
4-NITROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U
ACENAPHTHENE	5 U	5 U	5 U	5 U	5 U	5 U
ACENAPHTHYLENE	5 U	5 U	5 U	5 U	5 U	5 U
ANTHRACENE	5 U	5 U	5 U	5 U	5 U	5 U
BENZO(A)ANTHRACENE	5 U	5 U	5 U	5 U	5 U	5 U
BENZO(A)PYRENE	5 U	5 U	5 U	5 U	5 U	5 U
BENZO(B)FLUORANTHENE	5 U	5 U	5 U	5 U	5 U	5 U
BENZO(G,H,I)PERYLENE	5 U	5 U	5 U	5 U	5 U	5 U

TABLE 3-2

SURFACE WATER ANALYTICAL DATA - PREVIOUS INVSTIGATIONS
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 2 OF 4

Outfall No.	1	2	3	4	5	6
PARAMETER	85W00101	85W00201	85W00301	85W00401	85W00501	85W00601
BENZO(K)FLUORANTHENE	5 U	5 U	5 U	5 U	5 U	5 U
BENZYL BUTYL PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U
BIS(2-CHLOROETHOXY)METHANE	5 U	5 U	5 U	5 U	5 U	5 U
BIS(2-CHLOROETHYL)ETHER	5 U	5 U	5 U	5 U	5 U	5 U
BIS(2-CHLOROISOPROPYL) ETHER	5 U	5 U	5 U	5 U	5 U	5 U
BIS(2-ETHYLHEXYL)PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U
CARBAZOLE	5 U	5 U	5 U	5 U	5 U	5 U
CHRYSENE	5 U	5 U	5 U	5 U	5 U	5 U
DI-N-BUTYL PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U
DI-N-OCTYL PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U
DIBENZO(A,H)ANTHRACENE	5 U	5 U	5 U	5 U	5 U	5 U
DIBENZOFURAN	5 U	5 U	5 U	5 U	5 U	5 U
DIETHYL PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U
DIMETHYL PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U
FLUORANTHENE	5 U	5 U	5 U	5 U	5 U	5 U
FLUORENE	5 U	5 U	5 U	5 U	5 U	5 U
HEXACHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U
HEXACHLOROBUTADIENE	5 U	5 U	5 U	5 U	5 U	5 U
HEXACHLOROCYCLOPENTADIENE	5 U	5 U	5 U	5 U	5 U	5 U
HEXACHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U
INDENO(1,2,3-CD)PYRENE	5 U	5 U	5 U	5 U	5 U	5 U
ISOPHORONE	5 U	5 U	5 U	5 U	5 U	5 U
N-NITROSO-DI-N-PROPYLAMINE	5 U	5 U	5 U	5 U	5 U	5 U
N-NITROSODIPHENYLAMINE	5 U	5 U	5 U	5 U	5 U	5 U
NAPHTHALENE	5 U	5 U	5 U	5 U	5 U	5 U
NITROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U
PENTACHLOROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U
PHENANTHRENE	5 U	5 U	5 U	5 U	5 U	5 U
PHENOL	5 U	5 U	5 U	5 U	5 U	5 U
PYRENE	5 U	5 U	5 U	5 U	5 U	5 U

TABLE 3-2

SURFACE WATER ANALYTICAL DATA - PREVIOUS INVSTIGATIONS
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 3 OF 4

Outfall No.	7		8	9	10	11	12
PARAMETER	85W00701		85W00801	85W00901	85W01001	85W01101	85W01201
	Sample	Duplicate					
1,2,4-TRICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,4,5-TRICHLOROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,4,6-TRICHLOROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,4-DICHLOROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,4-DIMETHYLPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,4-DINITROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,4-DINITROTOLUENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,6-DINITROTOLUENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-CHLORONAPHTHALENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-CHLOROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-METHYLNAPHTHALENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-METHYLPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-NITROANILINE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-NITROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U
3&4-METHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U
3,3'-DICHLOROBENZIDINE	20 U	20 U	20 U	20 U	20 U	20 U	20 U
3-NITROANILINE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4,6-DINITRO-2-METHYLPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-BROMOPHENYL PHENYL ETHER	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-CHLORO-3-METHYLPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-CHLOROANILINE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-CHLOROPHENYL PHENYL ETHER	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-NITROANILINE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-NITROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U
ACENAPHTHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
ACENAPHTHYLENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
ANTHRACENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BENZO(A)ANTHRACENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BENZO(A)PYRENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BENZO(B)FLUORANTHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BENZO(G,H,I)PERYLENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U

TABLE 3-2

SURFACE WATER ANALYTICAL DATA - PREVIOUS INVSTIGATIONS
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 4 OF 4

Outfall No.	7		8	9	10	11	12
PARAMETER	85W00701		85W00801	85W00901	85W01001	85W01101	85W01201
	Sample	Duplicate					
BENZO(K)FLUORANTHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BENZYL BUTYL PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BIS(2-CHLOROETHOXY)METHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BIS(2-CHLOROETHYL)ETHER	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BIS(2-CHLOROISOPROPYL) ETHER	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BIS(2-ETHYLHEXYL)PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CARBAZOLE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CHRYSENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
DI-N-BUTYL PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
DI-N-OCTYL PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
DIBENZO(A,H)ANTHRACENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
DIBENZOFURAN	5 U	5 U	5 U	5 U	5 U	5 U	5 U
DIETHYL PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
DIMETHYL PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
FLUORANTHENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
FLUORENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
HEXACHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
HEXACHLOROBUTADIENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
HEXACHLOROCYCLOPENTADIENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
HEXACHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
INDENO(1,2,3-CD)PYRENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
ISOPHORONE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
N-NITROSO-DI-N-PROPYLAMINE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
N-NITROSODIPHENYLAMINE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
NAPHTHALENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
NITROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
PENTACHLOROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U
PHENANTHRENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
PHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U
PYRENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U

All concentrations in ug/L.
U = Not detected at or above detection limit (associated value).

TABLE 3-3

SURFACE WATER ANALYTICAL DATA - PREVIOUS INVESTIGATIONS
PESTICIDES, POLYCHLORINATED BIPHENYLS, AND TOTAL RECOVERABLE PETROLEUM HYDROCARBONS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
PAGE 1 OF 2

Outfall No.	1	2	3	4	5	6
PARAMETER	85W00101	85W00201	85W00301	85W00401	85W00501	85W00601
Pesticides/PCBs (ug/L)						
4,4'-DDD	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4,4'-DDE	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4,4'-DDT	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ALDRIN	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ALPHA-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ALPHA-CHLORDANE	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1016/1242	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1221	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1232	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1248	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1254	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1260	1 U	1 U	1 U	1 U	1 U	1 U
BETA-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DELTA-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DIELDRIN	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ENDOSULFAN I	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ENDOSULFAN II	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ENDOSULFAN SULFATE	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ENDRIN	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ENDRIN ALDEHYDE	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ENDRIN KETONE	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
GAMMA-BHC (LINDANE)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
GAMMA-CHLORDANE	1 U	1 U	1 U	1 U	1 U	1 U
HEPTACHLOR	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
HEPTACHLOR EPOXIDE	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
METHOXYCHLOR	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
TOXAPHENE	2 U	2 U	2 U	2 U	2 U	2 U
Total Petroleum Hydrocarbons (mg/L)						
TPH (C8-C40)	0.2 U	2.2	0.2 U	0.2 U	1.3	8.2

TABLE 3-3

SURFACE WATER ANALYTICAL DATA - PREVIOUS INVESTIGATIONS
PESTICIDES, POLYCHLORINATED BIPHENYLS, AND TOTAL RECOVERABLE PETROLEUM HYDROCARBONS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
PAGE 2 OF 2

Outfall No.	7		8	9	10	11	12
PARAMETER	85W00701		85W00801	85W00901	85W01001	85W01101	85W01201
	Sample	Duplicate					
Pesticides/PCBs (ug/L)							
4,4'-DDD	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4,4'-DDE	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
4,4'-DDT	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ALDRIN	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ALPHA-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ALPHA-CHLORDANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1016/1242	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1221	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1232	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1248	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1254	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1260	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BETA-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DELTA-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DIELDRIN	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ENDOSULFAN I	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ENDOSULFAN II	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ENDOSULFAN SULFATE	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ENDRIN	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ENDRIN ALDEHYDE	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ENDRIN KETONE	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
GAMMA-BHC (LINDANE)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
GAMMA-CHLORDANE	1 U	1 U	1 U	1 U	1 U	1 U	1 U
HEPTACHLOR	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
HEPTACHLOR EPOXIDE	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
METHOXYCHLOR	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
TOXAPHENE	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Total Petroleum Hydrocarbons (mg/L)							
TPH (C8-C40)	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U

U = Not detected at or above detection limit (associated value).

TABLE 3-4

SURFACE WATER ANALYTICAL DATA - PREVIOUS INVESTIGATIONS
INORGANIC ANALYTES
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 1 OF 2

Outfall No.	1	2	3	4	5	6	7	
PARAMETER	85W00101	85W00201	85W00301	85W00401	85W00501	85W00601	85W00701	
							Sample	Duplicate
ALUMINUM	160	410	310	230	480	840	350	350
ANTIMONY	6 U	6 U	6	6 U	6 U	7	7	7
ARSENIC	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BARIUM	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
BERYLLIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CADMIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM	33000	NA	7500	16000	53000	38000	3200	3200
CHROMIUM	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
COBALT	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
COPPER	57	50 U	54	54	50 U	51	50 U	50 U
IRON	1700	2000	880	320	3100	6400	1700	1700
LEAD	5	5 U	5 U	5 U	11	8	5 U	5 U
MAGNESIUM	840	800	1900	1100	2800	1300	630	610
MANGANESE	10 U	10 U	10	10 U	17	65	10 U	10 U
MERCURY	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
NICKEL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
POTASSIUM	280	160	320	470	710	680	330	330
SELENIUM	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SILVER	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
SODIUM	2400	3000	4500	4000	3700	2700	1600	1600
THALLIUM	4 U	12	4	6	8	7	4 U	4 U
VANADIUM	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
ZINC	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U

TABLE 3-4

SURFACE WATER ANALYTICAL DATA - PREVIOUS INVESTIGATIONS
INORGANIC ANALYTES
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 2 OF 2

Outfall No.	8	9	10	11	12
PARAMETER	85W00801	85W00901	85W01001	85W01101	85W01201
ALUMINUM	85	230	610	120	360
ANTIMONY	7	6 U	5 U	5 U	5 U
ARSENIC	10 U	10 U	10 U	10 U	10 U
BARIUM	100 U	100 U	100 U	100 U	100 U
BERYLLIUM	1 U	1 U	1 U	1 U	1 U
CADMIUM	1 U	1 U	1 U	1 U	1 U
CALCIUM	1700	4800	4600	12000	7100
CHROMIUM	10 U	10 U	10 U	10 U	10 U
COBALT	50 U	50 U	50 U	50 U	50 U
COPPER	50 U	50 U	50 U	50 U	50 U
IRON	98	380	1300	200	1400
LEAD	5 U	5 U	5 U	5 U	5 U
MAGNESIUM	1000	1300	500	1100	630
MANGANESE	10 U	10 U	10 U	10 U	10 U
MERCURY	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
NICKEL	10 U	10 U	10 U	10 U	10 U
POTASSIUM	100 U	160	100 U	590	140
SELENIUM	10 U	10 U	10 U	10 U	10 U
SILVER	10 U	10 U	10 U	10 U	10 U
SODIUM	2600	3800	2200	2500	1700
THALLIUM	4	4 U	2 U	2 U	2 U
VANADIUM	10 U	10 U	10 U	10 U	10 U
ZINC	100 U	100 U	100 U	100 U	100 U

All concentrations in ug/L.
U = Not detected at or above detection limit (associated value).

TABLE 3-5

SEDIMENT ANALYTICAL DATA - PREVIOUS INVESTIGATIONS
VOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 1 OF 2

OUTFALL No.	1	2	3	4	5	6	7	
PARAMETER	85D00101	85D00201	85D00301	85D00401	85D00501	85D00601	85D00701	
							Sample	Duplicate
1,1,1-TRICHLOROETHANE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
1,1,2,2-TETRACHLOROETHANE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
1,1,2-TRICHLOROETHANE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
1,1-DICHLOROETHANE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
1,1-DICHLOROETHENE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
1,2-DICHLOROBENZENE	NA	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
1,2-DICHLOROETHANE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
1,2-DICHLOROPROPANE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
1,3-DICHLOROBENZENE	NA	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
1,4-DICHLOROBENZENE	NA	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
2-BUTANONE	12 U	12 U	12 U	13 U	12 U	13 U	14 U	14 U
2-HEXANONE	12 U	12 U	12 U	13 U	12 U	13 U	14 U	14 U
4-METHYL-2-PENTANONE	12 U	12 U	12 U	13 U	12 U	13 U	14 U	14 U
ACETONE	12 U	12 U	12 U	13 U	12 U	13 U	200	280
BENZENE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
BROMODICHLOROMETHANE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
BROMOFORM	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
BROMOMETHANE	12 U	12 U	12 U	13 U	12 U	13 U	14 U	14 U
CARBON DISULFIDE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	16 J
CARBON TETRACHLORIDE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
CHLOROBENZENE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
CHLOROETHANE	12 U	12 U	12 U	13 U	12 U	13 U	14 U	14 U
CHLOROFORM	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
CHLOROMETHANE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	35
CIS-1,2-DICHLOROETHENE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
CIS-1,3-DICHLOROPROPENE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
DIBROMOCHLOROMETHANE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
ETHYLBENZENE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
M+P-XYLENES	12 U	12 U	12 U	13 U	12 U	13 U	14 U	14 U
METHYLENE CHLORIDE	19 U	19 U	21 J	20 U	18 U	19 U	110	70
O-XYLENE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
STYRENE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
TETRACHLOROETHENE	19 U	19 U	18 U	20 U	18 U	19 U	21 U	20 U
TOLUENE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
TRANS-1,2-DICHLOROETHENE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
TRANS-1,3-DICHLOROPROPENE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
TRICHLOROETHENE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
VINYL CHLORIDE	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U

TABLE 3-5

SEDIMENT ANALYTICAL DATA - PREVIOUS INVESTIGATIONS
VOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 2 OF 2

OUTFALL No.	8	9	10	11	12	13	14
PARAMETER	85D00801	85D00901	85D01001	85D01101	85D01201	85D01301	85D01401
1,1,1-TRICHLOROETHANE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
1,1,2,2-TETRACHLOROETHANE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
1,1,2-TRICHLOROETHANE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
1,1-DICHLOROETHANE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
1,1-DICHLOROETHENE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
1,2-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	2700 U
1,2-DICHLOROETHANE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
1,2-DICHLOROPROPANE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
1,3-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	2700 U
1,4-DICHLOROBENZENE	NA	NA	NA	NA	NA	NA	2700 U
2-BUTANONE	15 U	10 U	14 U	36 J	13 U	18 U	16 U
2-HEXANONE	15 U	10 U	14 U	13 U	13 U	18 U	16 U
4-METHYL-2-PENTANONE	15 U	10 U	14 U	13 U	13 U	18 U	16 U
ACETONE	140	330	14 U	700	420	18 U	230
BENZENE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
BROMODICHLOROMETHANE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
BROMOFORM	8 U	5 U	7 U	6 U	6 U	9 U	8 U
BROMOMETHANE	15 U	10 U	14 U	13 U	13 U	18 U	16 U
CARBON DISULFIDE	27	18 J	90	91	48	300	54
CARBON TETRACHLORIDE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
CHLOROBENZENE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
CHLOROETHANE	15 U	10 U	14 U	13 U	13 U	18 U	16 U
CHLOROFORM	8 U	5 U	7 U	6 U	6 U	9 U	8 U
CHLOROMETHANE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
CIS-1,2-DICHLOROETHENE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
CIS-1,3-DICHLOROPROPENE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
DIBROMOCHLOROMETHANE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
ETHYLBENZENE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
M+P-XYLENES	15 U	10 U	14 U	13 U	13 U	18 U	16 U
METHYLENE CHLORIDE	23 U	85	22 J	21 J	19 U	28 U	180
O-XYLENE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
STYRENE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
TETRACHLOROETHENE	23 U	16 U	20 U	20 U	19 U	28 U	24 U
TOLUENE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
TRANS-1,2-DICHLOROETHENE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
TRANS-1,3-DICHLOROPROPENE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
TRICHLOROETHENE	8 U	5 U	7 U	6 U	6 U	9 U	8 U
VINYL CHLORIDE	8 U	5 U	7 U	6 U	6 U	9 U	8 U

All concentrations in ug/kg.
U = Not detected at or above detection limit (associated value).
J = Estimated concentration.

TABLE 3-6

SEDIMENT ANALYTICAL DATA - PREVIOUS INVESTIGATIONS
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATIONS CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 1 OF 4

OUTFALL No.	1	2	3	4	5	6	7	
PARAMETER	85D00101	85D00201	85D00301	85D00401	85D00501	85D00601	85D00701	
							Sample	Duplicate
1,2,4-TRICHLOROBENZENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
1,2-DICHLOROBENZENE	210 U	NA	NA	NA	NA	NA	NA	NA
1,3-DICHLOROBENZENE	210 U	NA	NA	NA	NA	NA	NA	NA
1,4-DICHLOROBENZENE	210 U	NA	NA	NA	NA	NA	NA	NA
2,4,5-TRICHLOROPHENOL	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
2,4,6-TRICHLOROPHENOL	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
2,4-DICHLOROPHENOL	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
2,4-DIMETHYLPHENOL	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
2,4-DINITROPHENOL	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
2,4-DINITROTOLUENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
2,6-DINITROTOLUENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
2-CHLORONAPHTHALENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
2-CHLOROPHENOL	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
2-METHYLNAPHTHALENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
2-METHYLPHENOL	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
2-NITROANILINE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
2-NITROPHENOL	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
3&4-METHYLPHENOL	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
3,3'-DICHLOROBENZIDINE	830 U	8300 U	8100 U	8800 U	8200 U	8600 U	950 U	900 U
3-NITROANILINE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
4,6-DINITRO-2-METHYLPHENOL	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
4-BROMOPHENYL PHENYL ETHER	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
4-CHLORO-3-METHYLPHENOL	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
4-CHLOROANILINE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
4-CHLOROPHENYL PHENYL ETHER	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
4-NITROANILINE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
4-NITROPHENOL	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
ACENAPHTHENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
ACENAPHTHYLENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
ANTHRACENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
BENZO(A)ANTHRACENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
BENZO(A)PYRENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
BENZO(B)FLUORANTHENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
BENZO(G,H,I)PERYLENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U

TABLE 3-6

SEDIMENT ANALYTICAL DATA - PREVIOUS INVESTIGATIONS
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATIONS CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 2 OF 4

OUTFALL No.	1	2	3	4	5	6	7	
PARAMETER	85D00101	85D00201	85D00301	85D00401	85D00501	85D00601	85D00701	
							Sample	Duplicate
BENZO(K)FLUORANTHENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
BENZYL BUTYL PHTHALATE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
BIS(2-CHLOROETHOXY)METHANE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
BIS(2-CHLOROETHYL)ETHER	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
BIS(2-CHLOROISOPROPYL) ETHER	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
BIS(2-ETHYLHEXYL)PHTHALATE	210 U	2100 U	2000 U	7400	2100 U	2100 U	240 U	230 U
CARBAZOLE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
CHRYSENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
DI-N-BUTYL PHTHALATE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
DI-N-OCTYL PHTHALATE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
DIBENZO(A,H)ANTHRACENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
DIBENZOFURAN	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
DIETHYL PHTHALATE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
DIMETHYL PHTHALATE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
FLUORANTHENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
FLUORENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
HEXACHLOROBENZENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
HEXACHLOROBUTADIENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
HEXACHLOROCYCLOPENTADIENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
HEXACHLOROETHANE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
INDENO(1,2,3-CD)PYRENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
ISOPHORONE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
N-NITROSO-DI-N-PROPYLAMINE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
N-NITROSODIPHENYLAMINE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
NAPHTHALENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
NITROBENZENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
PENTACHLOROPHENOL	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
PHENANTHRENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U
PHENOL	210 U	2100 U	7200	2200 U	2100 U	2100 U	240 U	230 U
PYRENE	210 U	2100 U	2000 U	2200 U	2100 U	2100 U	240 U	230 U

TABLE 3-6

SEDIMENT ANALYTICAL DATA - PREVIOUS INVESTIGATIONS
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATIONS CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 3 OF 4

OUTFALL No.	8	9	10	11	12	13	14
PARAMETER	85D00801	85D00901	85D01001	85D01101	85D01201	85D01301	85D01401
1,2,4-TRICHLOROBENZENE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
1,2-DICHLOROBENZENE	250 U	170 U	230 U	220 U	210 U	310 U	NA
1,3-DICHLOROBENZENE	250 U	170 U	230 U	220 U	210 U	310 U	NA
1,4-DICHLOROBENZENE	250 U	170 U	230 U	220 U	210 U	310 U	NA
2,4,5-TRICHLOROPHENOL	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
2,4,6-TRICHLOROPHENOL	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
2,4-DICHLOROPHENOL	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
2,4-DIMETHYLPHENOL	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
2,4-DINITROPHENOL	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
2,4-DINITROTOLUENE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
2,6-DINITROTOLUENE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
2-CHLORONAPHTHALENE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
2-CHLOROPHENOL	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
2-METHYLNAPHTHALENE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
2-METHYLPHENOL	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
2-NITROANILINE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
2-NITROPHENOL	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
3&4-METHYLPHENOL	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
3,3'-DICHLOROBENZIDINE	1000 U	700 U	910 U	880 U	840 U	1200 U	11000 U
3-NITROANILINE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
4,6-DINITRO-2-METHYLPHENOL	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
4-BROMOPHENYL PHENYL ETHER	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
4-CHLORO-3-METHYLPHENOL	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
4-CHLOROANILINE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
4-CHLOROPHENYL PHENYL ETHER	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
4-NITROANILINE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
4-NITROPHENOL	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
ACENAPHTHENE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
ACENAPHTHYLENE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
ANTHRACENE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
BENZO(A)ANTHRACENE	250 U	170 U	230 U	870	210 U	310 U	2700 U
BENZO(A)PYRENE	250 U	170 U	230 U	680	210 U	310 U	2700 U
BENZO(B)FLUORANTHENE	250 U	170 U	230 U	1000	210 U	310 U	2700 U
BENZO(G,H,I)PERYLENE	250 U	170 U	230 U	570	210 U	310 U	2700 U

TABLE 3-6

SEDIMENT ANALYTICAL DATA - PREVIOUS INVESTIGATIONS
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATIONS CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 4 OF 4

OUTFALL No.	8	9	10	11	12	13	14
PARAMETER	85D00801	85D00901	85D01001	85D01101	85D01201	85D01301	85D01401
BENZO(K)FLUORANTHENE	250 U	170 U	230 U	660	210 U	310 U	2700 U
BENZYL BUTYL PHTHALATE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
BIS(2-CHLOROETHOXY)METHANE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
BIS(2-CHLOROETHYL)ETHER	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
BIS(2-CHLOROISOPROPYL) ETHER	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
BIS(2-ETHYLHEXYL)PHTHALATE	250 U	170 U	230 U	280 J	210 U	310 U	2700 U
CARBAZOLE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
CHRYSENE	250 U	170 U	230 U	930	210 U	310 U	2700 U
DI-N-BUTYL PHTHALATE	250 U	170 U	230 U	220 U	460 J	310 U	2700 U
DI-N-OCTYL PHTHALATE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
DIBENZO(A,H)ANTHRACENE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
DIBENZOFURAN	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
DIETHYL PHTHALATE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
DIMETHYL PHTHALATE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
FLUORANTHENE	250 U	170 U	230 U	2200	230 J	310 U	2700 U
FLUORENE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
HEXACHLOROBENZENE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
HEXACHLOROBUTADIENE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
HEXACHLOROCYCLOPENTADIENE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
HEXACHLOROETHANE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
INDENO(1,2,3-CD)PYRENE	250 U	170 U	230 U	570	210 U	310 U	2700 U
ISOPHORONE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
N-NITROSO-DI-N-PROPYLAMINE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
N-NITROSODIPHENYLAMINE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
NAPHTHALENE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
NITROBENZENE	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
PENTACHLOROPHENOL	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
PHENANTHRENE	250 U	170 U	230 U	840	210 U	310 U	2700 U
PHENOL	250 U	170 U	230 U	220 U	210 U	310 U	2700 U
PYRENE	250 U	170 U	230 U	1600	210 U	310 U	2700 U

All concentrations in ug/kg.
U = Not detected at or above detection limit (associated value).
J = Estimated concentration.

TABLE 3-7

SEDIMENT ANALYTICAL DATA - PREVIOUS INVESTIGATIONS
PESTICIDES, POLYCHLORINATED BIPHENYLS, AND TOTAL RECOVERABLE PETROLEUM HYDROCARBONS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 1 OF 2

OUTFALL No.	1	2	3	4	5	6	7	
PARAMETER	85D00101	85D00201	85D00301	85D00401	85D00501	85D00601	85D00701	
							Sample	Duplicate
Pesticides/PCBs (ug/kg)								
4,4'-DDD	2.1 U	2.1 U	2 U	2.2 U	2 U	17	2.4 U	2.2 U
4,4'-DDE	2.1 U	2.1 U	2 U	2.2 U	2 U	5.9	2.4 U	2.2 U
4,4'-DDT	2.1 U	2.1 U	2 U	2.2 U	2 U	6	2.4 U	2.2 U
ALDRIN	2.1 U	2.1 U	2 U	2.2 U	2 U	2.1 U	2.4 U	2.2 U
ALPHA-BHC	2.1 U	2.1 U	2 U	2.2 U	2 U	2.1 U	2.4 U	2.2 U
ALPHA-CHLORDANE	41 U	41 U	40 U	43 U	41 U	42 U	47 U	44 U
AROCLOR-1016/1242	41 U	41 U	40 U	43 U	41 U	42 U	47 U	44 U
AROCLOR-1221	41 U	41 U	40 U	43 U	41 U	42 U	47 U	44 U
AROCLOR-1232	41 U	41 U	40 U	43 U	41 U	42 U	47 U	44 U
AROCLOR-1248	41 U	41 U	40 U	43 U	41 U	42 U	47 U	44 U
AROCLOR-1254	41 U	41 U	40 U	43 U	41 U	42 U	47 U	44 U
AROCLOR-1260	41 U	41 U	40 U	43 U	41 U	42 U	47 U	44 U
BETA-BHC	2.1 U	2.1 U	2 U	2.2 U	2 U	2.1 U	2.4 U	2.2 U
DELTA-BHC	2.1 U	2.1 U	2 U	2.2 U	2 U	2.1 U	2.4 U	2.2 U
DIELDRIN	2.1 U	2.1 U	2 U	2.2 U	2 U	2.1 U	2.4 U	2.2 U
ENDOSULFAN I	2.1 U	2.1 U	2 U	2.2 U	2 U	2.1 U	2.4 U	2.2 U
ENDOSULFAN II	2.1 U	2.1 U	2 U	2.2 U	2 U	2.1 U	2.4 U	2.2 U
ENDOSULFAN SULFATE	2.1 U	2.1 U	2 U	2.2 U	2 U	2.1 U	2.4 U	2.2 U
ENDRIN	2.1 U	2.1 U	2 U	2.2 U	2 U	2.1 U	2.4 U	2.2 U
ENDRIN ALDEHYDE	2.1 U	2.1 U	2 U	2.2 U	2 U	2.1 U	2.4 U	2.2 U
ENDRIN KETONE	2.1 U	2.1 U	2 U	2.2 U	2 U	2.1 U	2.4 U	2.2 U
GAMMA-BHC (LINDANE)	2.1 U	2.1 U	2 U	2.2 U	2 U	2.1 U	2.4 U	2.2 U
GAMMA-CHLORDANE	41 U	41 U	40 U	43 U	41 U	42 U	47 U	44 U
HEPTACHLOR	2.1 U	2.1 U	2 U	2.2 U	2 U	2.1 U	2.4 U	2.2 U
HEPTACHLOR EPOXIDE	2.1 U	2.1 U	2 U	2.2 U	2 U	2.1 U	2.4 U	2.2 U
METHOXYCHLOR	2.1 U	2.1 U	2 U	2.2 U	2 U	2.1 U	2.4 U	2.2 U
TOXAPHENE	82 U	82 U	80 U	87 U	81 U	85 U	94 U	89 U
Total Petroleum Hydrocarbons (mg/kg)								
TPH (C8-C40)	8.2 U	200	130	550	56	400	48	73

TABLE 3-7

SEDIMENT ANALYTICAL DATA - PREVIOUS INVESTIGATIONS
PESTICIDES, POLYCHLORINATED BIPHENYLS, AND TOTAL RECOVERABLE PETROLEUM HYDROCARBONS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 2 OF 2

OUTFALL No.	8	9	10	11	12	13	14
PARAMETER	85D00801	85D00901	85D01001	85D01101	85D01201	85D01301	85D01401
Pesticides/PCBs (ug/kg)							
4,4'-DDD	2.5 U	1.7 U	2.3 U	22 U	2.1 U	3.1 U	2.7 U
4,4'-DDE	2.5 U	1.7 U	2.3 U	22 U	2.1 U	3.1 U	2.7 U
4,4'-DDT	2.5 U	5	2.3 U	22 U	2.1 U	3.1 U	2.7 U
ALDRIN	2.5 U	1.7 U	2.3 U	22 U	2.1 U	3.1 U	2.7 U
ALPHA-BHC	2.5 U	1.7 U	2.3 U	22 U	2.1 U	3.1 U	2.7 U
ALPHA-CHLORDANE	50 U	34 U	45 U	430 U	42 U	61 U	54 U
AROCLOR-1016/1242	50 U	34 U	45 U	430 U	42 U	61 U	54 U
AROCLOR-1221	50 U	34 U	45 U	430 U	42 U	61 U	54 U
AROCLOR-1232	50 U	34 U	45 U	430 U	42 U	61 U	54 U
AROCLOR-1248	50 U	34 U	45 U	430 U	42 U	61 U	54 U
AROCLOR-1254	50 U	34 U	45 U	430 U	42 U	61 U	54 U
AROCLOR-1260	50 U	34 U	45 U	6200	42 U	61 U	54 U
BETA-BHC	2.5 U	1.7 U	2.3 U	22 U	2.1 U	3.1 U	2.7 U
DELTA-BHC	2.5 U	1.7 U	2.3 U	22 U	2.1 U	3.1 U	2.7 U
DIELDRIN	2.5 U	1.7 U	2.3 U	22 U	2.1 U	3.1 U	2.7 U
ENDOSULFAN I	2.5 U	1.7 U	2.3 U	22 U	2.1 U	3.1 U	2.7 U
ENDOSULFAN II	2.5 U	1.7 U	2.3 U	22 U	2.1 U	3.1 U	2.7 U
ENDOSULFAN SULFATE	2.5 U	1.7 U	2.3 U	22 U	2.1 U	3.1 U	2.7 U
ENDRIN	2.5 U	1.7 U	2.3 U	22 U	2.1 U	4.4	2.7 U
ENDRIN ALDEHYDE	2.5 U	1.7 U	2.3 U	22 U	2.1 U	3.1 U	2.7 U
ENDRIN KETONE	2.5 U	1.7 U	2.3 U	22 U	2.1 U	3.1 U	2.7 U
GAMMA-BHC (LINDANE)	2.5 U	1.7 U	2.3 U	22 U	2.1 U	3.1 U	2.7 U
GAMMA-CHLORDANE	50 U	34 U	45 U	430 U	42 U	61 U	54 U
HEPTACHLOR	2.5 U	1.7 U	2.3 U	22 U	2.1 U	3.1 U	2.7 U
HEPTACHLOR EPOXIDE	2.5 U	1.7 U	2.3 U	22 U	2.1 U	3.1 U	2.7 U
METHOXYCHLOR	2.5 U	1.7 U	2.3 U	22 U	2.1 U	3.1 U	2.7 U
TOXAPHENE	100 U	69 U	90 U	870 U	84 U	120 U	110 U
Total Petroleum Hydrocarbons (mg/kg)							
TPH (C8-C40)	36	6.9 U	150	260	25	98	11 U

U = Not detected at or above detection limit (associated value).

J = Estimated concentration.

TABLE 3-8

SEDIMENT ANALYTICAL DATA - PREVIOUS INVESTIGATIONS
INORGANIC ANALYTES
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 1 OF 2

OUTFALL No.	1	2	3	4	5	6	7	
PARAMETER	85D00101	85D00201	85D00301	85D00401	85D00501	85D00601	85D00701	
							Sample	Duplicate
ALUMINUM	610	610	1700	930	750	2200	1000	920
ANTIMONY	2 U	2 U	2 U	4.7 U	2 U	2 U	3 U	3 U
ARSENIC	0.6 U	0.6 U	0.6 U	1 U	0.6 U	0.6 U	0.7 U	0.7 U
BARIUM	490	32	24 U	75	25 U	26 U	28 U	27 U
BERYLLIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CADMIUM	1 U	1 U	1 U	3	1 U	1 U	1 U	1 U
CALCIUM	6200	2800	4000	14000	11000	740	170	110
CHROMIUM	32	12	5.1	300	1.8	2.2	1 U	1 U
COBALT	6 U	6 U	6 U	6 U	6 U	6 U	7 U	7 U
COPPER	6 U	6 U	22	26	1100	6 U	7 U	7 U
IRON	540	350	2700	1000	700	320	200	180
LEAD	120	36	13	1300	14	5	5.1	4.3
MAGNESIUM	66	52	740	1200	1600	35	36 U	34 U
MANGANESE	2.4	3.2	17	24	6	1.9	1 U	1 U
MERCURY	0.01 U	0.01 U	0.035	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
NICKEL	6 U	6 U	6 U	8.2	6 U	6 U	7 U	7 U
POTASSIUM	210 U	210 U	200 U	220 U	200 U	210 U	240 U	220 U
SELENIUM	2 U	2 U	2 U	3 U	2 U	2 U	3 U	3 U
SILVER	2 U	2 U	2 U	3 U	2 U	2 U	3 U	3 U
SODIUM	19 J	8.1 U	100	34 J	20 J	8.3 U	9.3 U	10 J
THALLIUM	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VANADIUM	1 U	1 U	2	3.7	2	2.2	1 U	1 U
ZINC	6	19	57	76	34	15	23	13

TABLE 3-8

SEDIMENT ANALYTICAL DATA - PREVIOUS INVESTIGATIONS
INORGANIC ANALYTES
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 2 OF 2

OUTFALL No.	8	9	10	11	12	13	14
PARAMETER	85D00801	85D00901	85D01001	85D01101	85D01201	85D01301	85D01401
ALUMINUM	1300	240	2000	2600	1800	9200	10000
ANTIMONY	3 U	2 U	3 U	3 U	2 U	4 U	3 U
ARSENIC	0.8 U	0.5 U	0.7 U	0.6 U	0.6 U	1.5 J	1.5 J
BARIUM	30 U	21 U	27 U	26 U	25 U	37 U	33 U
BERYLLIUM	2 U	1 U	1 U	1 U	1 U	2 U	2 U
CADMIUM	2 U	1 U	1 U	1 U	1 U	2 U	2 U
CALCIUM	120	26	660	3800	10000	1800	790
CHROMIUM	2 U	1 U	2.9	3.7	2.4	9.8	10
COBALT	8 U	5 U	7 U	6 U	6 U	9 U	8 U
COPPER	8 U	5 U	7 U	26	6 U	9 U	20
IRON	650	210	410	1800	1200	830	930
LEAD	2.1	1 U	4	13	4.3	11	11
MAGNESIUM	38 U	26 U	73	290	130	180	150
MANGANESE	1.7	1 U	2.9	21	6.4	9.8	85 U
MERCURY	0.02 U	0.01 U	0.01 U	0.01 J	0.01 U	0.085	0.052
NICKEL	8 U	5 U	7 U	6 U	6 U	9 U	8 U
POTASSIUM	250 U	170 U	230 U	220 U	210 U	310 U	270 U
SELENIUM	3 U	2 U	3 U	3 U	2 U	4 U	3 U
SILVER	3 U	2 U	3 U	3 U	2 U	4 U	3 U
SODIUM	15 J	6.8 J	44	30 J	11 J	30 J	33 J
THALLIUM	2 U	1 U	1 U	1 U	1 U	2 U	2 U
VANADIUM	1.8	1 U	5	2.9	3.7	6.1	6.2
ZINC	12	5 U	15	110	15	9 U	26 U

All concentrations in mg/kg.
U = Not detected at or above detection limit (associated value).
J = Estimated concentration.

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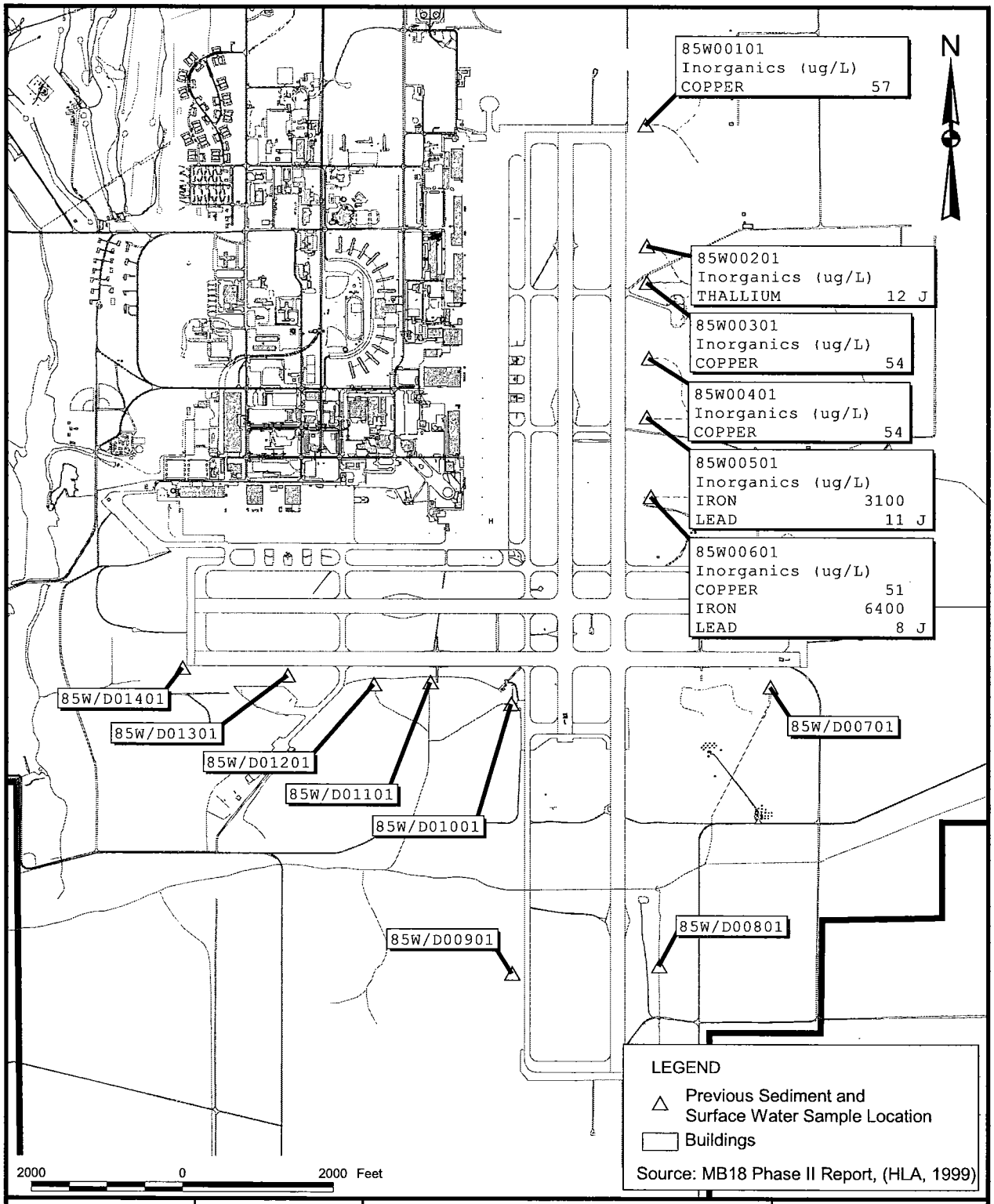
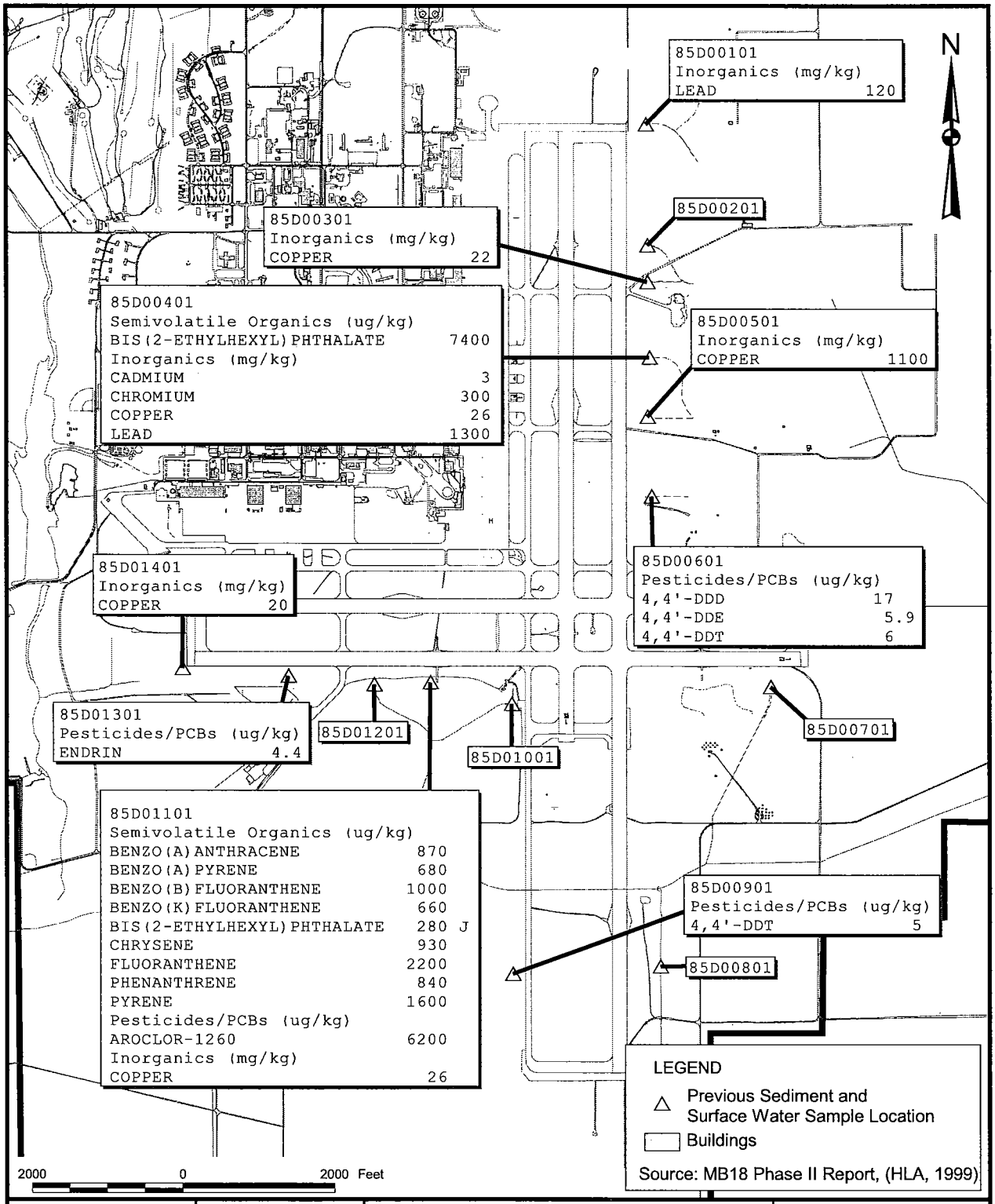


DRAWN BY MJJ DATE 01Sept01		SUMMARY OF ANALYTES IN SURFACE WATER EXCEEDING SCREENING CRITERIA - PREVIOUS INVESTIGATIONS PSC 39, RUNWAY OUTFALLS NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0039
CHECKED BY DATE 6/28/02			APPROVED BY DATE 6/28/02
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 3-1 REV 0

P:\GIS\NAS_CecilField\PSC39_techmemo.apr 30Oct01 MJJ SW Layout



DRAWN BY MJJ	DATE 01Sept01	SUMMARY OF ANALYTES IN SEDIMENT EXCEEDING SCREENING CRITERIA - PREVIOUS INVESTIGATIONS PSC 39, RUNWAY OUTFALLS NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0039
CHECKED BY SLS	DATE 6/28/02		APPROVED BY MPS	DATE 6/28/02
COST/SCHEDULE-AREA			APPROVED BY —	DATE —
SCALE AS NOTED			DRAWING NO. FIGURE 3-2	REV 0

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4.0 FIELD INVESTIGATION

TtNUS conducted seven sampling and analysis events at PSC 39 between June 1999 and April 2000 to delineate the extent of PAH-, PCB-, pesticide, and metals-contaminated surface water and sediment. The field investigation was performed in accordance with the PSC 39 Sampling and Analysis Work Plans (TtNUS, 1999a and TtNUS, 2000b). A total of 20 surface water, 40 sediment, and 6 soil samples were collected over the seven phases of the investigation.

During Phase I, 2 sediment and 18 surface water samples were collected from the 16 outfalls. Two proposed surface water samples were not collected because the locations were dry. Based on previous sampling results, these samples were analyzed for Target Compound List (TCL) SVOCs, PAHs, pesticides, PCBs, and/or Target Analyte List (TAL) inorganics (see Table 4-1). Results of Phase I sampling indicated that the extent of contamination had not been determined at Outfall Nos. 1, 2, 5, 6, and 11.

During Phase II, three surface water samples (SW-102, SW-103, and SW-104) were collected from Outfall Nos. 2, 5, and 6 and four sediment samples (SD-101, SD-105, SD-106, and SD-107) were collected from Outfall Nos. 1, 6, and 11 to delineate the horizontal extent of contamination in these outfall drainage ditches. Sediment from Outfall No. 1 was analyzed for lead, sediment from Outfall No. 6 was analyzed for pesticides, and sediment from Outfall No. 11 was analyzed for PCBs. Surface water from Outfall Nos. 2, 5, and 6 were analyzed for total and dissolved lead and cadmium. Surface water was filtered in the field by passing the samples through a 0.45-micron filter. Results of Phase II sampling indicated that the downstream extent of PCB contamination had not been determined at Outfall No. 11. To further delineate PCB contamination at Outfall No. 11, Phase III sediment samples SD-201 and SD-202 and Phase IV sediment samples SD-301 through SD-305 were collected.

Assessment of analytical results of PAH contamination in sediments from Outfall Nos. 3, 4, and 6 suggested that further sampling should be conducted as a conservative measure to ensure that the downstream extent of contamination had been delineated. To address this issue, one sediment sample was collected from Outfall Nos. 3, 4, and 6 (SD-401, SD-402, and SD-403, respectively) in Phase IV sampling and analyzed for PAHs.

Based on the results of Phase I through V sampling, it was concluded that the downstream extent of contamination at each outfall had been determined. Outfall No. 11 was the only outfall at which sediment removal was recommended based on the ecological risk assessment described in Section 6. Phase VI and VII sampling was then conducted to determine the vertical limits of proposed excavation, including the depth of sediments in the ditch and the height along the bank. In Phase VI, samples SD-501 and

SD-503 were collected at depths of 1 to 2 feet below ground surface (bgs) at the previous sample locations that had the highest concentrations of PCBs. Samples SD-502 and SD-504 were collected from the east and west banks of the ditch, respectively, at a height of approximately 6 to 12 inches above the water line. In Phase VII, sample SD-601 and SD-603 were collected from the eastern and western banks of the ditch, respectively, at a height of approximately 2 feet above the water line. SD-602 was collected at a depth of 1 to 2 feet bgs at the SD-502 location. SD-604 was collected from 2 to 3 feet bgs at the SD-503 location.

Over the seven phases of sampling, seven field duplicate sediment samples and three surface water samples were collected for quality assurance/ quality control (QA/QC) purposes. Sampling locations for the seven phases of field sampling are shown on Figure 4-1 and summarized in Table 4-1. Outfall No. 11 sampling locations are shown in Figure 4-2. Analytical results are discussed in Section 5.0 and are included in Appendix A.

Sediment samples were collected as grab samples using plastic, disposable trowels, and surface water sample bottles were directly filled. Sampling activities were performed in accordance with the procedures described in the U.S. Environmental Protection Agency (U.S. EPA) Region IV Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (EISOPQAM) (U.S. EPA Region IV, 1996c) and the NAS Cecil Field Base-Wide Generic Work Plan (TtNUS, 1998). As agreed by the BCT, no rinsate and trip blanks were collected. In addition, field blanks were not collected because the decontamination of sampling equipment was minimal.

For surface water and sediment samples collected as part of this investigation, TCL SVOC analysis was by U.S. EPA Method SW-846 8270C, PAH analysis was by U.S. EPA Method SW-846 8310, pesticides analysis was by U.S. EPA Method SW-846 8081A, PCB analysis was by U. S. EPA Method SW-846 8082, and TAL inorganics analysis was by U.S. EPA Method SW-846 6010B.

TABLE 4-1
SAMPLING AND ANALYSIS - PSC INVESTIGATION
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 1 OF 2

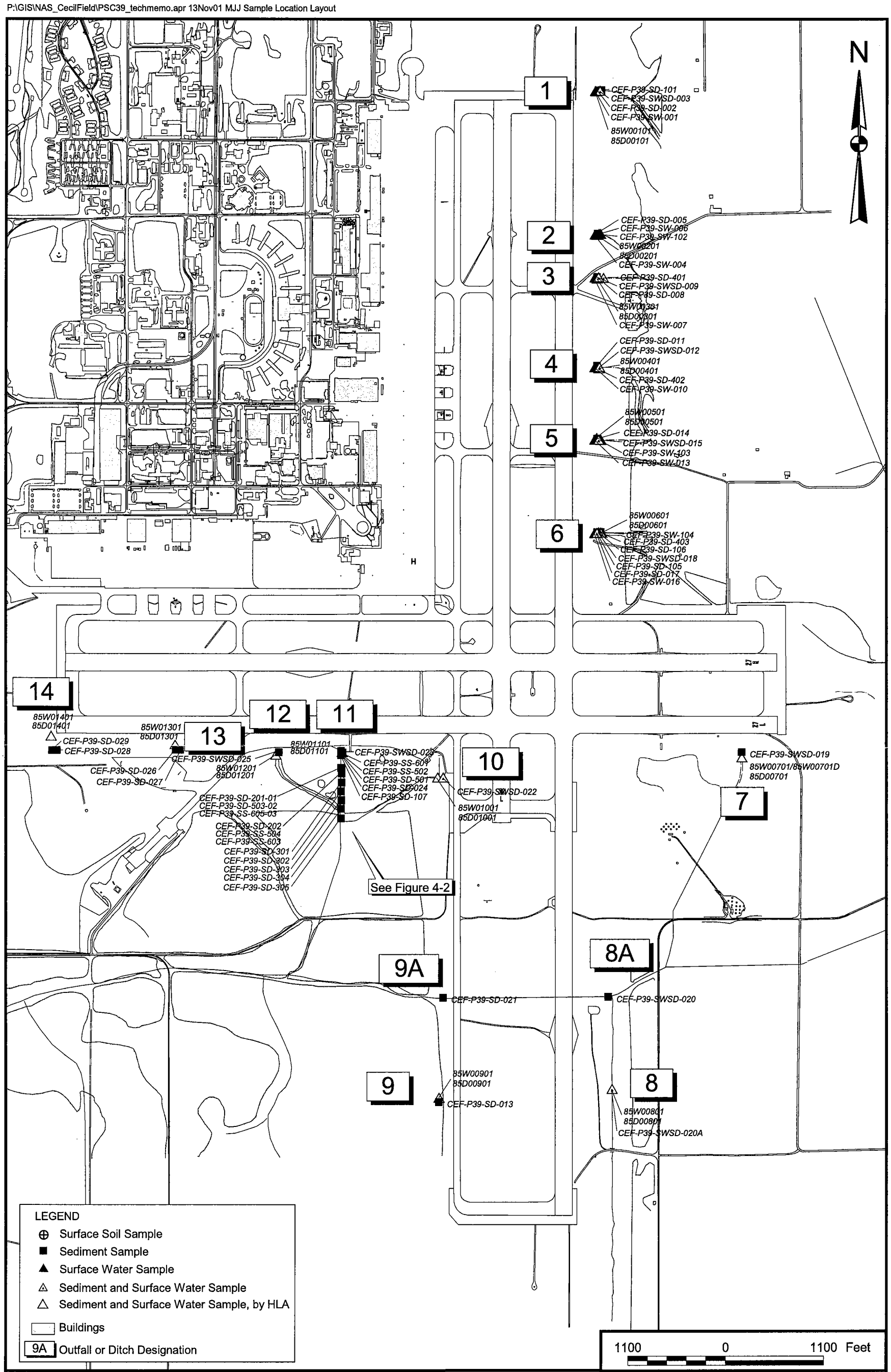
OUTFALL	SAMPLE # CEF-P39-	LOCATION	ANALYSIS				
			SVOCs	PAHs	PESTICIDES	PCBs	METALS
1	SW-001	At outfall discharge	X	X	X	X	X
	SD-002	25 feet downstream of discharge	X	X	X	X	X
	SW-003	50 feet downstream of discharge	X	X	X	X	X
	SD-003		-	-	X	X	X
	SD-101	75 feet downstream of discharge	-	-	-	-	X (Pb)
2	SW-004	At outfall discharge	X	X	X	X	X
	SD-005	25 feet downstream of discharge	X	X	X	X	X
	SW-006	50 feet downstream of discharge	-	-	-	-	X
	SW-102	75 feet downstream of discharge	-	-	-	-	X (Pb & Cd)*
3	SW-007	At outfall discharge	X	X	X	X	X
	SD-008	25 feet downstream of discharge	X	X	X	X	X
	SW-009	50 feet downstream of discharge	-	-	-	-	X
	SD-009		-	-	-	-	X
	SD-401	75 feet downstream of discharge	-	X	-	-	-
4	SW-010	At outfall discharge	X	X	X	X	X
	SD-011	25 feet downstream of discharge	X	X	X	X	X
	SW-012	50 feet downstream of discharge	X	-	-	-	X
	SD-012		X	-	-	-	X
	SD-402	50 feet downstream of discharge	-	X	-	-	-
5	SW-013	At outfall discharge	X	X	X	X	X
	SD-014	25 feet downstream of discharge	X	X	X	X	X
	SW-015	50 feet downstream of discharge	-	-	-	-	X
	SD-015		-	-	-	-	X
	SW-103	75 feet downstream of discharge	-	-	-	-	X (Pb & Cd)*
6	SW-016	At outfall discharge	X	X	X	X	X
	SD-017	25 feet downstream of discharge	X	X	X	X	X
	SW-018	50 feet downstream of discharge	-	-	X	-	X
	SD-018		-	-	X	-	X
	SW-104	75 feet downstream of discharge	-	-	-	-	X (Pb & Cd)*
	SD-105	At CEF-P39-SD-017 location	-	-	X**	-	-
	SD-106	At CEF-P39-SD-018 location	-	-	X**	-	-
	SD-403	75 feet downstream of discharge	-	X	-	-	-
7	SW-019	At outfall discharge	X	X	X	X	X
	SD-019		X	X	X	X	X
8	SW-020A	At previous sample location 85W/D00801	X	X	X	X	X
	SD-020A		X	X	X	X	X
8A	SW-020	At confluence with Sal Taylor Creek downstream of 85W/D00801	X	X	X	X	X
	SD-020		X	X	X	X	X
9	SD-021A	25 feet downstream of previous sample location 85W/D00901	X	X	X	X	X
9A	SD-021	At confluence with Sal Taylor Creek downstream of 85W/D00901	X	X	X	X	X
10	SW-022	At outfall discharge	X	X	X	X	X
	SD-022		X	X	X	X	X

TABLE 4-1
SAMPLING AND ANALYSIS - PSC INVESTIGATION
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

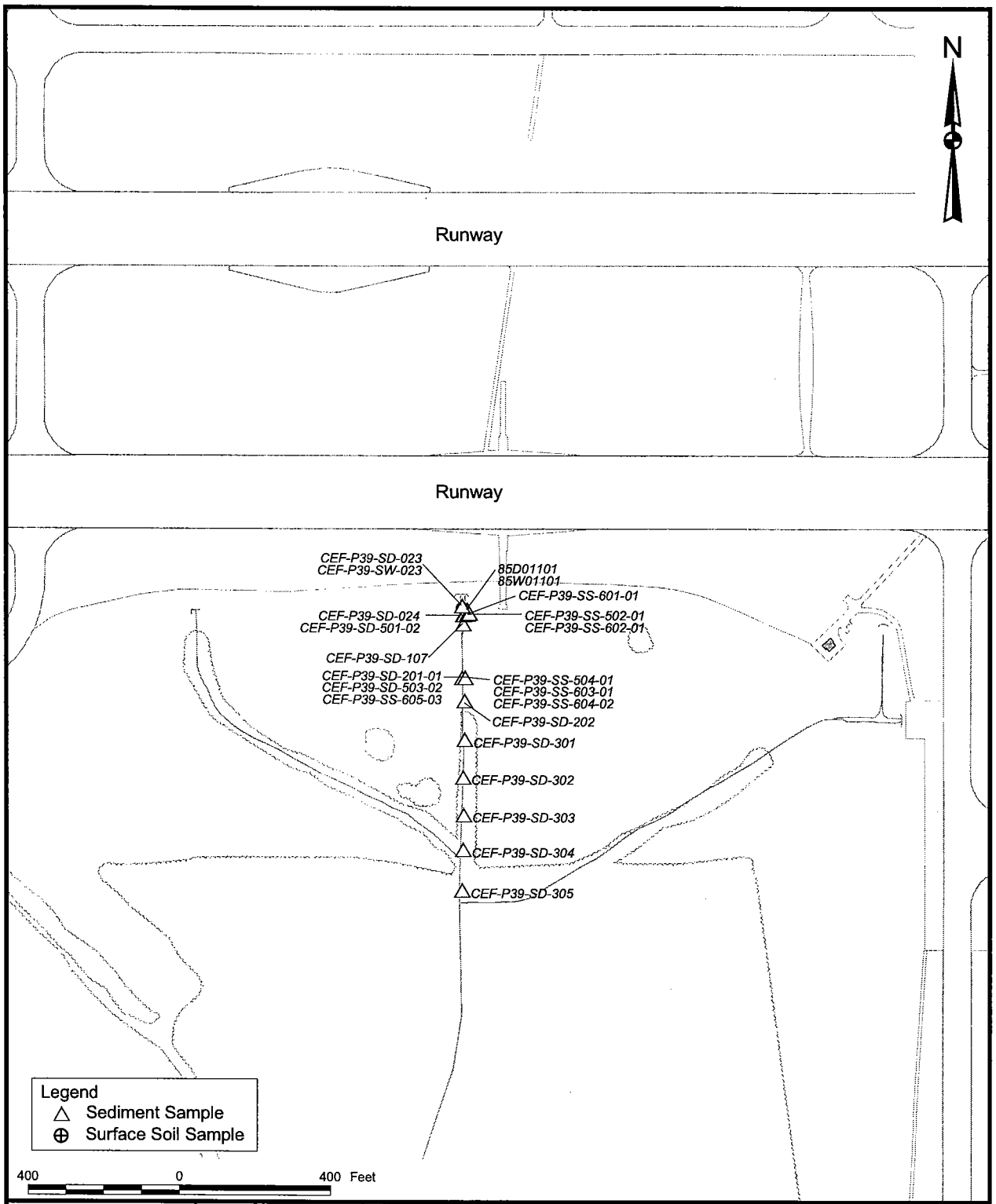
OUTFALL	SAMPLE # CEF-P39-	LOCATION	ANALYSIS				
			SVOCs	PAHs	PESTICIDES	PCBs	METALS
11	SW-023	25 feet downstream of previous sample location 85W/D01101	X	X	X	X	X
	SD-023		X	X	X	X	X
	SD-024	50 feet downstream of 85W/D01101	X	X	-	X	X
	SD-107	75 feet downstream of 85W/D01101	-	-	-	X	-
	SD-201	200 feet downstream of 85W/D01101	-	-	-	X	-
	SD-202	275 feet downstream of 85W/D01101	-	-	-	X	-
	SD-301	375 feet downstream of 85W/D01101	-	-	-	X	-
	SD-302	475 feet downstream of 85W/D01101	-	-	-	X	-
	SD-303	575 feet downstream of 85W/D01101	-	-	-	X	-
	SD-304	675 feet downstream of 85W/D01101	-	-	-	X	-
	SD-305	Downstream of SD-304, several feet upstream of confluence	-	-	-	X	-
	SD-501-02	50 feet from outfall (at SD-024 location), 1 to 2 feet bgs	-	-	-	X	-
	SD-502-01	From east bank, 6 to 12 inches above water level, parallel with SD-024 location	-	-	-	X	-
	SD-503-02	200 feet from outfall (at SD-201 location), 1 to 2 feet bgs	-	-	-	X	-
	SD-504-01	From east bank, 6 to 12 inches above water level, parallel with SD-201 location	-	-	-	X	-
	SD-601-01	From east bank, 2 feet above water level, near SD-502 location	-	-	-	X	-
	SD-602-02	From east bank at SD-502 location, 1 to 2 feet bgs	-	-	-	X	-
	SD-603-01	From east bank, 2 feet above water level, near SD-504 location	-	-	-	X	-
	SD-604-02	From east bank at SD-502 location, 1 to 2 feet bgs	-	-	-	X	-
	SD-605-03	200 feet from outfall (at SD-201 location), 2 to 3 feet bgs	-	-	-	X	-
12	SW-025	At outfall discharge	X	X	X	X	X
	SD-025		X	X	X	X	X
13	SD-026***	25 feet downstream of previous sample location 85W/D01301	X	X	X	X	X
	SD-027	50 feet downstream of previous sample location 85W/D01301	-	-	X	-	-
14	SD-028***	25 feet downstream of previous sample location 85W/D01401	X	X	X	X	X
	SD-029	50 feet downstream of previous sample location 85W/D01401	-	-	-	-	X

SW = Surface water samples.
SD = Sediment samples.
SVOCs = Semivolatile organic compounds.
PAHs = Polynuclear aromatic hydrocarbons.
PCBs = Polychlorinated biphenyls.
bgs = Below ground surface.
* Total and dissolved (filtered) samples were collected.
** Reanalyzed for pesticides to try to achieve lower detection limits.
*** Proposed surface water samples (SW-026 and SW-028) were not collected because the locations were dry.

P:\GIS\NAS_CecilField\PSC39_techmemo.apr 13Nov01 MJJ Sample Location Layout



DRAWN BY MJJ	DATE 07/04/99	SAMPLE LOCATIONS PSC 39, FLIGHTLINE STORMWATER DITCHES AND OUTFALLS TECHNICAL MEMORANDUM NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0039
CHECKED BY RD	DATE 1/13/99		APPROVED BY [illegible] DATE 6/28/02
COST/SCHEDULE-AREA			APPROVED BY [illegible] DATE 6/28/02
SCALE AS NOTED			DRAWING NO. FIGURE 4-1 / REV 0



DRAWN BY MJJ	DATE 29Aug00	SAMPLE LOCATIONS - OUTFALL 11 PSC 39, FLIGHTLINE STORMWATER DITCHES AND OUTFALLS TECHNICAL MEMORANDUM NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0039
CHECKED BY	DATE 6/28/02		APPROVED BY MPJ DATE 6/28/02
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 4-2 REV 0

P:\GIS\NAS_Cecil\Field\PSC39_techmemo.apr 13Nov01 MJJ Sample Location Layout

5.0 NATURE AND EXTENT OF CONTAMINATION

Analytical results for surface water samples collected during the PSC field investigation are shown on Tables 5-1 through 5-3, and results for sediment samples are shown on Tables 5-4 through 5-6. Complete laboratory data are included in Appendix A.

The extent of contamination by organic compounds and inorganic analytes in each outfall was determined during the PSC investigation. Because ecological exposure is of most concern in the outfall areas, the applicable comparison criteria for these data are ecological screening values. The ecological risk assessment, presented in Section 6.0, discusses in detail the comparisons of detected concentrations to ecological screening values. Based on this evaluation, the BCT made a risk management decision that a removal action was required at Outfall No. 11 to excavate sediment with PCB concentrations greater than 1,000 µg/kg. It was decided that no further action was required at the remaining outfalls.

After the downgradient extent of PCB contamination was determined, sampling was conducted to define the vertical limits of the excavation, including the depth within the ditch and the height along the bank of Outfall No. 11.

Based on the results of sampling and analysis and the ecological evaluation, a remedial design (dig and haul package) was prepared for excavation of the delineated PCB contamination (TtNUS, 2001a). One excavation area of approximately 4,950 square feet was delineated based on sample locations where concentrations of PCB in sediment were greater than 1,000 µg/kg. Vertical delineation sampling indicated that the excavation was required to a depth of 2 feet bgs within the channel bottom and to a depth of 1 foot bgs for a distance of 1.5 feet along the channel bank. The estimated volume of soil for this excavation area is approximately 308 cubic yards. The excavation limits are shown in Figure 5-1.

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TABLE 5-1

SURFACE WATER ANALYTICAL DATA - PSC INVESTIGATION
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 1 OF 4

OUTFALL No.	1		2	3	4		5	6
PARAMETER	CEF-P39-							
	SW-001	SW-003	SW-004	SW-007	SW-010	SW-012	SW-013	SW-016
1,2,4-TRICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1-METHYLNAPHTHALENE	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U
2,4,5-TRICHLOROPHENOL	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U
2,4,6-TRICHLOROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,4-DICHLOROPHENOL	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U
2,4-DIMETHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-DINITROPHENOL	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2,4-DINITROTOLUENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2,6-DINITROTOLUENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
2-CHLORONAPHTHALENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-CHLOROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-METHYLNAPHTHALENE	1 U	1 U	1 U	1 U	1 U	5 U	1 U	1 U
2-METHYLPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-NITROANILINE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-NITROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
3,3'-DICHLOROBENZIDINE	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U
3-NITROANILINE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4,6-DINITRO-2-METHYLPHENOL	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
4-BROMOPHENYL PHENYL ETHER	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-CHLORO-3-METHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROANILINE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-CHLOROPHENYL PHENYL ETHER	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-METHYLPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-NITROANILINE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-NITROPHENOL	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U
ACENAPHTHENE	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U
ACENAPHTHYLENE	2 U	2 U	2 U	2 U	2 U	NA	2 U	2 U
ANTHRACENE	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	NA	0.15 U	0.15 U
BENZO(A)ANTHRACENE	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	NA	0.15 U	0.15 U
BENZO(A)PYRENE	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	NA	0.15 U	0.15 U

TABLE 5-1

SURFACE WATER ANALYTICAL DATA - PSC INVESTIGATION
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 2 OF 4

OUTFALL No.	1		2	3	4		5	6
PARAMETER	CEF-P39-							
	SW-001	SW-003	SW-004	SW-007	SW-010	SW-012	SW-013	SW-016
BENZO(B)FLUORANTHENE	0.15 U	0.2 U	0.15 U	0.2 U	0.15 U	NA	0.15 U	0.15 U
BENZO(G,H,I)PERYLENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	NA	0.2 U	0.2 U
BENZO(K)FLUORANTHENE	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	NA	0.15 U	0.15 U
BIS(2-CHLOROETHOXY)METHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BIS(2-CHLOROETHYL)ETHER	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
BIS(2-CHLOROISOPROPYL) ETHER	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BIS(2-ETHYLHEXYL)PHTHALATE	5 U	5 U	3.5 J	5 U	5 U	5 U	5 U	5 U
BUTYLBENZYL PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CARBAZOLE	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U
CHRYSENE	0.15 U	0.15 U	0.2 U	0.15 U	0.15 U	NA	0.15 U	0.15 U
DI-N-BUTYL PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
DI-N-OCTYL PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
DIBENZO(A,H)ANTHRACENE	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	NA	0.25 U	0.25 U
DIBENZOFURAN	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
DIETHYL PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
DIMETHYL PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
FLUORANTHENE	0.2 U	0.23	0.2 U	0.2 U	0.15 U	NA	0.2 U	0.15 U
FLUORENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	NA	0.2 U	0.2 U
HEXACHLOROBENZENE	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
HEXACHLOROBUTADIENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
HEXACHLOROCYCLOPENTADIENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
HEXACHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
INDENO(1,2,3-CD)PYRENE	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	NA	0.15 U	0.15 U
ISOPHORONE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
N-NITROSO-DI-N-PROPYLAMINE	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U
N-NITROSODIPHENYLAMINE	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
NAPHTHALENE	1 U	1 U	1 U	1 U	1 U	NA	1 U	1 U
NITROBENZENE	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U
PENTACHLOROPHENOL	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
PHENANTHRENE	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	NA	0.15 U	0.15 U
PHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
PYRENE	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	NA	0.2 U	0.2 U

TABLE 5-1

SURFACE WATER ANALYTICAL DATA - PSC INVESTIGATION
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 3 OF 4

OUTFALL No.	7		8A	8	10	11	12
PARAMETER	CEF-P39-						
	SW-019		SW-020	SW-020A	SW-022	SW-023	SW-025
	Sample	Duplicate					
1,2,4-TRICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-DICHLOROBENZENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1-METHYLNAPHTHALENE	1 U	1 U	1 U	1.2 U	1 U	1 U	1 U
2,4,5-TRICHLOROPHENOL	4 U	4 U	4 U	4 U	4 U	4 U	4 U
2,4,6-TRICHLOROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2,4-DICHLOROPHENOL	4 U	4 U	4 U	4 U	4 U	4 U	4 U
2,4-DIMETHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-DINITROPHENOL	25 U	25 U	25 U	25 U	25 U	25 U	25 U
2,4-DINITROTOLUENE	0.2 U	0.2 U	0.2 U	5 U	0.2 U	0.2 U	0.2 U
2,6-DINITROTOLUENE	0.2 U	0.2 U	0.2 U	5 U	0.2 U	0.2 U	0.2 U
2-CHLORONAPHTHALENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-CHLOROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-METHYLNAPHTHALENE	1 U	1 U	1 U	1.2 U	1 U	1 U	1 U
2-METHYLPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-NITROANILINE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-NITROPHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U
3,3'-DICHLOROBENZIDINE	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U
3-NITROANILINE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4,6-DINITRO-2-METHYLPHENOL	25 U	25 U	25 U	25 U	25 U	25 U	25 U
4-BROMOPHENYL PHENYL ETHER	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-CHLORO-3-METHYLPHENOL	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-CHLOROANILINE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-CHLOROPHENYL PHENYL ETHER	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-METHYLPHENOL	5 U	5 U	5 U	4 U	5 U	5 U	5 U
4-NITROANILINE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-NITROPHENOL	15 U	15 U	15 U	15 U	15 U	15 U	15 U
ACENAPHTHENE	1 U	1 U	1 U	1.2 U	1 U	1 U	1 U
ACENAPHTHYLENE	2 U	2 U	2 U	1.2 U	2 U	2 U	2 U
ANTHRACENE	0.15 U	0.15 U	0.15 U	1.2 U	0.15 U	0.15 U	0.15 U
BENZO(A)ANTHRACENE	0.15 U	0.15 U	0.15 U	0.18 U	0.15 U	0.15 U	0.15 U
BENZO(A)PYRENE	0.15 U	0.15 U	0.15 U	0.18 U	0.15 U	0.15 U	0.15 U

TABLE 5-1

SURFACE WATER ANALYTICAL DATA - PSC INVESTIGATION
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 4 OF 4

OUTFALL No.	7		8A	8	10	11	12
PARAMETER	CEF-P39-						
	SW-019		SW-020	SW-020A	SW-022	SW-023	SW-025
	Sample	Duplicate					
BENZO(B)FLUORANTHENE	0.15 U	0.15 U	0.15 U	0.18 U	0.15 U	0.15 U	0.15 U
BENZO(G,H,I)PERYLENE	0.2 U	0.2 U	0.2 U	0.18 U	0.2 U	0.2 U	0.2 U
BENZO(K)FLUORANTHENE	0.15 U	0.15 U	0.15 U	0.18 U	0.15 U	0.15 U	0.15 U
BIS(2-CHLOROETHOXY)METHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BIS(2-CHLOROETHYL)ETHER	1.5 U	1.5 U	1.5 U	5 U	1.5 U	1.5 U	1.5 U
BIS(2-CHLOROISOPROPYL) ETHER	5 U	5 U	5 U	5 U	5 U	5 U	5 U
BIS(2-ETHYLHEXYL)PHTHALATE	2.8 J	3.3 J	2.8 J	5 U	5 U	5 U	5 U
BUTYLBENZYL PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
CARBAZOLE	4 U	4 U	4 U	4 U	4 U	4 U	4 U
CHRYSENE	0.15 U	0.15 U	0.15 U	0.18 U	0.15 U	0.15 U	0.15 U
DI-N-BUTYL PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
DI-N-OCTYL PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
DIBENZO(A,H)ANTHRACENE	0.25 U	0.25 U	0.25 U	0.18 U	0.25 U	0.25 U	0.25 U
DIBENZOFURAN	5 U	5 U	5 U	5 U	5 U	5 U	5 U
DIETHYL PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
DIMETHYL PHTHALATE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
FLUORANTHENE	0.2 U	0.2 U	0.2 U	1.2 U	0.2 U	0.15 U	0.15 U
FLUORENE	0.2 U	0.2 U	0.2 U	1.2 U	0.2 U	0.2 U	0.2 U
HEXACHLOROBENZENE	1 U	1 U	1 U	5 U	1 U	1 U	1 U
HEXACHLOROBUTADIENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
HEXACHLOROCYCLOPENTADIENE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
HEXACHLOROETHANE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
INDENO(1,2,3-CD)PYRENE	0.15 U	0.15 U	0.15 U	0.18 U	0.15 U	0.15 U	0.15 U
ISOPHORONE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
N-NITROSO-DI-N-PROPYLAMINE	4 U	4 U	4 U	4 U	4 U	4 U	4 U
N-NITROSODIPHENYLAMINE	5 U	5 U	5 U	5 U	5 U	5 U	5 U
NAPHTHALENE	1 U	1 U	1 U	1.2 U	1 U	1 U	1 U
NITROBENZENE	4 U	4 U	4 U	4 U	4 U	4 U	4 U
PENTACHLOROPHENOL	1 U	1 U	1 U	5 U	1 U	1 U	1 U
PHENANTHRENE	0.15 U	0.15 U	0.15 U	1.2 U	0.15 U	0.15 U	0.15 U
PHENOL	5 U	5 U	5 U	5 U	5 U	5 U	5 U
PYRENE	0.2 U	0.2 U	0.2 U	1.2 U	0.2 U	0.2 U	0.2 U

All concentrations in ug/L.
U = Not detected at or above detection limit (associated value).
J = Estimated concentration.

TABLE 5-2

SURFACE WATER ANALYTICAL DATA - PSC INVESTIGATION
PESTICIDES AND POLYCHLORINATED BIPHENYLS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 1 OF 2

OUTFALL No.	1		2	3	4	5	6	
PARAMETER	CEF-P39-							
	SW-001	SW-003	SW-004	SW-007	SW-010	SW-013	SW-016	SW-018
4,4'-DDD	0.1 UJ	0.1 U	0.1 UJ	0.1 UJ	0.1 UJ	0.1 U	0.1 U	0.4 U
4,4'-DDE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.4 U
4,4'-DDT	0.1 UJ	0.1 U	0.1 UJ	0.1 UJ	0.1 UJ	0.1 U	0.1 U	0.4 UJ
ALDRIN	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.2 U
ALPHA-BHC	0.05 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 UJ	0.2 U
ALPHA-CHLORDANE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.4 U
AROCLOR-1016	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA
AROCLOR-1221	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA
AROCLOR-1232	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA
AROCLOR-1242	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA
AROCLOR-1248	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA
AROCLOR-1254	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA
AROCLOR-1260	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	NA
BETA-BHC	0.05 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 UJ	0.2 U
DELTA-BHC	0.05 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 UJ	0.2 U
DIELDRIN	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.2 U
ENDOSULFAN I	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.2 U
ENDOSULFAN II	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.4 U
ENDOSULFAN SULFATE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.4 U
ENDRIN	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.4 U
ENDRIN ALDEHYDE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.4 U
ENDRIN KETONE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.4 U
GAMMA-BHC (LINDANE)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.2 U
GAMMA-CHLORDANE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.4 U
HEPTACHLOR	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.2 U
HEPTACHLOR EPOXIDE	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.2 U
METHOXYCHLOR	0.2 UJ	0.2 U	0.2 UJ	0.2 UJ	0.2 UJ	0.2 U	0.2 U	0.8 UJ
TOXAPHENE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	10 U

TABLE 5-2

SURFACE WATER ANALYTICAL DATA - PSC INVESTIGATION
PESTICIDES AND POLYCHLORINATED BIPHENYLS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 2 OF 2

OUTFALL No.	7		8A	8	10	11	12
PARAMETER	CEF-P39						
	SW-019		SW-020	SW-020A	SW-022	SW-023	SW-025
	Sample	Duplicate					
4,4'-DDD	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDT	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ALDRIN	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ALPHA-BHC	0.05 UJ	0.05 UJ	0.05 UJ	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ
ALPHA-CHLORDANE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
AROCLOR-1016	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
AROCLOR-1221	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
AROCLOR-1232	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
AROCLOR-1242	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
AROCLOR-1248	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
AROCLOR-1254	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
AROCLOR-1260	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
BETA-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 UJ	0.05 U
DELTA-BHC	0.05 UJ	0.05 UJ	0.05 UJ	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ
DIELDRIN	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ENDOSULFAN I	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ENDOSULFAN II	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDOSULFAN SULFATE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDRIN	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDRIN ALDEHYDE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDRIN KETONE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
GAMMA-BHC (LINDANE)	0.05 UJ	0.05 UJ	0.05 UJ	0.05 U	0.05 UJ	0.05 U	0.05 UJ
GAMMA-CHLORDANE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
HEPTACHLOR	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
HEPTACHLOR EPOXIDE	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
METHOXYCHLOR	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
TOXAPHENE	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U

All concentrations in ug/L.
U = Not detected at or above detection limit (associated value).
J = Estimated concentration.

TABLE 5-3

SURFACE WATER ANALYTICAL DATA - PSC INVESTIGATION
INORGANIC ANALYTES
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 1 OF 4

OUTFALL No.	1			2				3	
	CEF-P39								
PARAMETER	SW-001	SW-003		SW-004	SW-006	SW-102		SW-007	SW-009
		Sample	Duplicate			Unfiltered	Filtered		
ALUMINUM	146 U	621 J	399 J	762 J	2710 J	NA	NA	103 U	142 U
ANTIMONY	2.4 U	2.4 U	2.4 U	2.4 U	4.6 U	NA	NA	2.4 U	2.4 U
ARSENIC	3.4 U	3.4 U	3.4 U	3.4 U	3.4 U	NA	NA	3.4 U	3.4 U
BARIUM	16	19.1	12.1	14.4	34.2	NA	NA	15.6	15.6
BERYLLIUM	0.83 U	0.9 U	1.2 U	0.97 U	2.7 U	NA	NA	2.7 U	2.6 U
CADMIUM	0.33 U	0.33 U	0.6 U	1.3 U	4.2	4 U	0.33 U	0.33 U	0.33 U
CALCIUM	49200 J	49200 J	2250 J	2330 J	3490 J	NA	NA	19300 J	19300 J
CHROMIUM	1.2 U	1.5 U	1.4 U	10.4	9.7	NA	NA	0.68 U	1 U
COBALT	0.8 U	0.8 U	0.8 U	0.8 U	1.1	NA	NA	0.8 U	0.8 U
COPPER	0.75 U	0.75 U	0.75 U	0.75 U	8.9	NA	NA	7.9	7.8
IRON	562 J	3530 J	957 J	1160 J	5900 J	NA	NA	348 J	543 J
LEAD	1.8 U	3.4 U	3.7 U	10.2 U	45	35.5 J	2.5 U	1.6 U	1.6 U
MAGNESIUM	890	915	644	677	950	NA	NA	7140	7070
MANGANESE	7.7	27.1	4.7	5.5	30	NA	NA	26	3.5 U
MERCURY	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	NA	NA	0.25 U	0.25 U
NICKEL	1 U	1 U	1 U	8.4	6 U	NA	NA	1 U	1 U
POTASSIUM	627	421 U	364 U	402 U	1030	NA	NA	1020	878
SELENIUM	3.1 U	2 U	2 U	2 U	2 U	NA	NA	2.2 U	2 U
SILVER	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U	NA	NA	0.96 U	0.96 U
SODIUM	2140	2130	2170	2400	2380	NA	NA	4700	4490
THALLIUM	2.7 U	2.7 U	4 U	2.7 U	2.7 U	NA	NA	2.7 U	2.7 U
VANADIUM	1.1 U	3.4 U	1.2 U	1.7 U	7.8	NA	NA	0.82 U	1 U
ZINC	3.4 U	10.1	40.1	90.9	151	NA	NA	19.6	8 U

TABLE 5-3

SURFACE WATER ANALYTICAL DATA - PSC INVESTIGATION
INORGANIC ANALYTES
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 2 OF 4

OUTFALL No.	4		5					
PARAMETER	CEF-P39-							
	SW-010	SW-012	SW-013	SW-015	SW-103			
					Unfiltered		Filtered	
					Sample	Duplicate	Sample	Duplicate
ALUMINUM	89.9 U	422 J	900 J	8440 J	NA	NA	NA	NA
ANTIMONY	2.4 U	2.4 U	2.4 U	4.5 U	NA	NA	NA	NA
ARSENIC	3.4 U	3.4 U	3.4 U	3.6	NA	NA	NA	NA
BARIUM	14.2	24.6	90.4	94.5	NA	NA	NA	NA
BERYLLIUM	1.9 U	1.1 U	2 U	2.7 U	NA	NA	NA	NA
CADMIUM	0.34 U	2 U	3.4 U	24.2	3.2 U	0.71 U	0.33 U	0.33 U
CALCIUM	25600 J	28900 J	39400 J	49200 J	NA	NA	NA	NA
CHROMIUM	0.94 U	8.2 U	4.6 U	45	NA	NA	NA	NA
COBALT	0.8 U	0.8 U	0.8 U	3.6	NA	NA	NA	NA
COPPER	0.75 U	8.3 U	9	93.4	NA	NA	NA	NA
IRON	344 J	1650 J	3140 J	19600 J	NA	NA	NA	NA
LEAD	1.6 U	10.3	23.8 U	205	22.7 J	5.8 U	2.1 U	3.4 U
MAGNESIUM	7640	8310	8760	10300	NA	NA	NA	NA
MANGANESE	4.8	37	43.5	106	NA	NA	NA	NA
MERCURY	0.25 U	0.06 U	0.25 U	0.25 U	NA	NA	NA	NA
NICKEL	1 U	3 U	2.4 U	21.7	NA	NA	NA	NA
POTASSIUM	962	1300	1370	3810	NA	NA	NA	NA
SELENIUM	2 U	2 U	2 U	4.3 U	NA	NA	NA	NA
SILVER	0.96 U	0.96 U	0.96 U	0.96 U	NA	NA	NA	NA
SODIUM	4290	5070	4760	5530	NA	NA	NA	NA
THALLIUM	2.7 U	2.7 U	2.7 U	2.7 U	NA	NA	NA	NA
VANADIUM	0.95 U	1.7 U	6.7	49.5	NA	NA	NA	NA
ZINC	5 U	82.7	316	1690	NA	NA	NA	NA

TABLE 5-3

SURFACE WATER ANALYTICAL DATA - PSC INVESTIGATION
INORGANIC ANALYTES
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 3 OF 4

OUTFALL No.	6				7	
PARAMETER	CEF-P39-					
	SW-016	SW-018	CEF-P39-SW-104		SW-019	
			Unfiltered	Filtered	Sample	Duplicate
ALUMINUM	679 J	33000 J	NA	NA	3800	3760
ANTIMONY	2.4 U	5.4 U	NA	NA	2.4 U	2.4 U
ARSENIC	4.1	51.2	NA	NA	3.4 U	3.4 U
BARIUM	20	126	NA	NA	15.1	16.2
BERYLLIUM	2 U	4.4 U	NA	NA	1.3 U	1.2 U
CADMIUM	1 U	26.2	0.33 U	0.33 U	0.33 U	0.33 U
CALCIUM	34600 J	50100 J	NA	NA	6230	6220
CHROMIUM	2.4 U	58.7	NA	NA	3.2 U	2.6 U
COBALT	0.8 U	9.2	NA	NA	0.8 U	0.8 U
COPPER	0.75 U	85.3	NA	NA	0.75 U	0.75 U
IRON	5790 J	83400 J	NA	NA	25000	23100
LEAD	4.9 U	177	5 U	1.6 U	6.4 U	7.5 U
MAGNESIUM	1030	2860	NA	NA	709	692
MANGANESE	23.7	119	NA	NA	5.7	9.6
MERCURY	0.25 U	0.25 U	NA	NA	0.25 U	0.25 U
NICKEL	1.6 U	37.9	NA	NA	1.3 U	1 U
POTASSIUM	814	2040	NA	NA	903	890
SELENIUM	2 U	8.1 U	NA	NA	2 U	2 U
SILVER	0.97 U	1.1 U	NA	NA	0.96 U	0.96 U
SODIUM	2680	3240	NA	NA	1850	1720
THALLIUM	2.7 U	2.7 U	NA	NA	2.7 U	2.7 U
VANADIUM	5.3	146	NA	NA	19	17.9
ZINC	43.2	1190	NA	NA	37.7	42.2

TABLE 5-3

SURFACE WATER ANALYTICAL DATA - PSC INVESTIGATION
INORGANIC ANALYTES
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 4 OF 4

OUTFALL No.	8A	8	10	11	12
PARAMETER	CEF-P39-				
	SW-020	SW-020A	SW-022	SW-023	SW-025
ALUMINUM	34.6 U	227 U	2150	1000 J	384
ANTIMONY	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
ARSENIC	3.4 U	4.2 U	3.4 U	3.4 U	3.4 U
BARIUM	19.7	8.3 U	108	22	11.7
BERYLLIUM	1.2 U	0.87 U	1.1 U	2 U	1.1 U
CADMIUM	0.33 U	0.33 U	0.33 U	0.84 U	0.33 U
CALCIUM	14300	1650	2970	12100 J	5190
CHROMIUM	10.4	6 U	1.2 U	2.2 U	0.64 U
COBALT	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
COPPER	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
IRON	351	1220	6900	1950 J	1550
LEAD	1.6 U	3.6 U	1.6 U	9.7 U	1.6 U
MAGNESIUM	3810	880	567	1280	587
MANGANESE	8.1	2.6 U	6.4	20.4	3.7 U
MERCURY	0.25 U	0.06 U	0.25 U	0.25 U	0.06 U
NICKEL	7.1	1.6 U	1 U	1 U	1 U
POTASSIUM	512 U	94.2	1100	1020	293 U
SELENIUM	2 U	2 U	2 U	2.8 U	2 U
SILVER	0.96 U	0.96 U	0.96 U	0.96 U	0.96 U
SODIUM	3910	2290	2010	2380	1750
THALLIUM	3 U	2.7 U	2.7 U	2.7 U	5 U
VANADIUM	0.72 U	0.72 U	18.6	4.8	1.9
ZINC	7.5 U	9.4	44.6	52.5	9.6

All concentrations in ug/L.
U = Not detected at or above detection limit (associated value).
J = Estimated concentration.

TABLE 5-4

SEDIMENT ANALYTICAL DATA - PSC INVESTIGATION
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 1 OF 9

OUTFALL No.	1		2	3			4		
PARAMETER	CEF-P39-								
	SD-002	SD-003	SD-005	SD-008	SD-401		SD-011	SD-012	SD-402
					Sample	Duplicate			
1,2,4-TRICHLOROBENZENE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
1,2-DICHLOROBENZENE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
1,3-DICHLOROBENZENE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
1,4-DICHLOROBENZENE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
1-METHYLNAPHTHALENE	73	42 U	44 U	43 U	200 U	778	43 U	NA	137
2,4,5-TRICHLOROPHENOL	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
2,4,6-TRICHLOROPHENOL	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
2,4-DICHLOROPHENOL	1300 U	210 U	880 U	24000 U	NA	NA	920 U	840 U	NA
2,4-DIMETHYLPHENOL	2900 U	470 U	2000 U	53000 U	NA	NA	2000 U	1900 U	NA
2,4-DINITROPHENOL	7400 U	1200 U	4900 U	130000 U	NA	NA	5100 U	4600 U	NA
2,4-DINITROTOLUENE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
2,6-DINITROTOLUENE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
2-CHLORONAPHTHALENE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
2-CHLOROPHENOL	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
2-METHYLNAPHTHALENE	1300	42 U	44 U	2500	200 U	160 U	350	NA	119
2-METHYLPHENOL	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
2-NITROANILINE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
2-NITROPHENOL	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
3,3'-DICHLOROBENZIDINE	2900 U	470 U	2000 U	53000 U	NA	NA	2000 U	1900 U	NA
3-NITROANILINE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
4,6-DINITRO-2-METHYLPHENOL	2900 U	470 U	2000 U	53000 U	NA	NA	2000 U	1900 U	NA
4-BROMOPHENYL PHENYL ETHER	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
4-CHLORO-3-METHYLPHENOL	2900 U	470 U	2000 U	53000 U	NA	NA	2000 U	1900 U	NA
4-CHLOROANILINE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
4-CHLOROPHENYL PHENYL ETHER	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
4-METHYLPHENOL	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
4-NITROANILINE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA

TABLE 5-4

SEDIMENT ANALYTICAL DATA - PSC INVESTIGATION
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 2 OF 9

OUTFALL No.	1		2	3			4		
PARAMETER	CEF-P39-								
	SD-002	SD-003	SD-005	SD-008	SD-401		SD-011	SD-012	SD-402
					Sample	Duplicate			
4-NITROPHENOL	7400 U	1200 U	4900 U	130000 U	NA	NA	5100 U	4600 U	NA
ACENAPHTHENE	2700	42 U	44 U	3200	200 U	895	280	NA	154
ACENAPHTHYLENE	1100 U	85 U	89 U	450	200 U	160 U	87 U	NA	2120
ANTHRACENE	490	52	6.6 U	520	200 U	160 U	6.5 U	NA	87 U
BENZO(A)ANTHRACENE	1200	26	6.6 U	1400	905	812	63	NA	95.8
BENZO(A)PYRENE	990	57	13	1200	936 J	821 J	80	NA	79.2 J
BENZO(B)FLUORANTHENE	1300	63	14	1300	1200	1270	130	NA	149
BENZO(G,H,I)PERYLENE	650	40	25	910	1040	825	81	NA	123
BENZO(K)FLUORANTHENE	570	29	7.5	680	681	676	67	NA	111
BIS(2-CHLOROETHOXY)METHANE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
BIS(2-CHLOROETHYL)ETHER	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
BIS(2-CHLOROISOPROPYL) ETHER	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
BIS(2-ETHYLHEXYL)PHTHALATE	1500 U	1750	1020	27000 U	NA	NA	5750	649 J	NA
BUTYLBENZYL PHTHALATE	1500 U	203 J	980 U	27000 U	NA	NA	946 J	930 U	NA
CARBAZOLE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
CHRYSENE	950	36	7.5	1400	1080	1050	98	NA	158
DI-N-BUTYL PHTHALATE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
DI-N-OCTYL PHTHALATE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
DIBENZO(A,H)ANTHRACENE	130	11 U	11 U	39	341 J	23 U	11 U	NA	19.1 J
DIBENZOFURAN	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
DIETHYL PHTHALATE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
DIMETHYL PHTHALATE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
FLUORANTHENE	2800	46	24	4700	2510	3160	220	NA	595
FLUORENE	110	8.4 U	8.9 U	450	200 U	177	8.7 U	NA	87 U
HEXACHLOROBENZENE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
HEXACHLOROBUTADIENE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
HEXACHLOROCYCLOPENTADIENE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA

TABLE 5-4

SEDIMENT ANALYTICAL DATA - PSC INVESTIGATION
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 3 OF 9

OUTFALL No.	1		2	3			4		
PARAMETER	CEF-P39-								
	SD-002	SD-003	SD-005	SD-008	SD-401		SD-011	SD-012	SD-402
					Sample	Duplicate			
HEXACHLOROETHANE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
INDENO(1,2,3-CD)PYRENE	570	37	21	900	1110	1310	11	NA	13 U
ISOPHORONE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
N-NITROSO-DI-N-PROPYLAMINE	530 U	84 U	350 U	9600 U	NA	NA	370 U	330 U	NA
N-NITROSODIPHENYLAMINE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
NAPHTHALENE	86	42 U	44 U	310	200 U	160 U	51	NA	87 U
NITROBENZENE	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
PENTACHLOROPHENOL	7400 U	1200 U	4900 U	130000 U	NA	NA	5100 U	4600 U	NA
PHENANTHRENE	1400	8.4 U	6.6 U	3200	1270	1290	66	NA	87 U
PHENOL	1500 U	230 U	980 U	27000 U	NA	NA	1000 U	930 U	NA
PYRENE	2100	48	18	3200	2170	1930	120	NA	342

TABLE 5-4

SEDIMENT ANALYTICAL DATA - PSC INVESTIGATION
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 4 OF 9

OUTFALL No.	5	6		7		8A	8	9A	9
PARAMETER	CEF-P39-								
	SD-014	SD-017	SD-403	SD-019		SD-020	SD-020A	SD-021	SD-21A
				Sample	Duplicate				
1,2,4-TRICHLOROBENZENE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
1,2-DICHLOROBENZENE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
1,3-DICHLOROBENZENE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
1,4-DICHLOROBENZENE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
1-METHYLNAPHTHALENE	47 U	640	100 U	52 U	48 U	93 U	93 U	44 U	87 U
2,4,5-TRICHLOROPHENOL	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
2,4,6-TRICHLOROPHENOL	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
2,4-DICHLOROPHENOL	860 U	1200 U	NA	210 U	250 U	680 U	230 U	190 U	200 U
2,4-DIMETHYLPHENOL	1900 U	2600 U	NA	470 U	560 U	1500 U	500 U	420 U	440 U
2,4-DINITROPHENOL	4800 U	6400 U	NA	1200 U	1400 U	3800 U	1200 U	1100 U	1100 U
2,4-DINITROTOLUENE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
2,6-DINITROTOLUENE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
2-CHLORONAPHTHALENE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
2-CHLOROPHENOL	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
2-METHYLNAPHTHALENE	170	810	100 U	52 U	48 U	93 U	93 U	44 U	87 U
2-METHYLPHENOL	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
2-NITROANILINE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
2-NITROPHENOL	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
3,3'-DICHLOROBENZIDINE	1900 U	2600 U	NA	470 U	560 U	1500 U	500 U	420 U	440 U
3-NITROANILINE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
4,6-DINITRO-2-METHYLPHENOL	1900 U	2600 U	NA	470 U	560 U	1500 U	500 U	420 U	440 U
4-BROMOPHENYL PHENYL ETHER	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
4-CHLORO-3-METHYLPHENOL	1900 U	2600 U	NA	470 U	560 U	1500 U	500 U	420 U	440 U
4-CHLOROANILINE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
4-CHLOROPHENYL PHENYL ETHER	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
4-METHYLPHENOL	960 U	1300 U	NA	230 U	280 U	760 U	NA	210 U	220 U
4-NITROANILINE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U

TABLE 5-4

SEDIMENT ANALYTICAL DATA - PSC INVESTIGATION
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 5 OF 9

OUTFALL No.	5	6		7		8A	8	9A	9
PARAMETER	CEF-P39-								
	SD-014	SD-017	SD-403	SD-019		SD-020	SD-020A	SD-021	SD-21A
				Sample	Duplicate				
4-NITROPHENOL	4800 U	6400 U	NA	1200 U	1400 U	3800 U	1200 U	1100 U	1100 U
ACENAPHTHENE	200	1100	100 U	52 U	48 U	93 U	93 U	44 U	87 U
ACENAPHTHYLENE	96 U	460 U	145	110 U	98 U	190 U	93 U	90 U	87 U
ANTHRACENE	20	65	100 U	7.6 U	7.3 U	14 U	93 U	6.7 U	87 U
BENZO(A)ANTHRACENE	110	460	30.7	15	7.3 U	14	14 U	9	13 U
BENZO(A)PYRENE	110	460	39.6 J	40	9.6	16	14 U	34	13 U
BENZO(B)FLUORANTHENE	160	610	862	34	7.3 U	26	14 U	37	13 U
BENZO(G,H,I)PERYLENE	110	470	16 U	46	10	19 U	14 U	68	13 U
BENZO(K)FLUORANTHENE	77	310	39.3	18	7.3 U	14 U	14 U	14	13 U
BIS(2-CHLOROETHOXY)METHANE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
BIS(2-CHLOROETHYL)ETHER	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
BIS(2-CHLOROISOPROPYL) ETHER	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
BIS(2-ETHYLHEXYL)PHTHALATE	3490	889 J	NA	230 U	280 U	760 U	250 U	210 U	220 U
BUTYLBENZYL PHTHALATE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
CARBAZOLE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
CHRYSENE	250	930	42.1	67	10	56	14 U	27	13 U
DI-N-BUTYL PHTHALATE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
DI-N-OCTYL PHTHALATE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
DIBENZO(A,H)ANTHRACENE	12 U	69	16 U	13 U	12 U	23 U	14 U	11 U	13 U
DIBENZOFURAN	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
DIETHYL PHTHALATE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
DIMETHYL PHTHALATE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
FLUORANTHENE	300	1600	156	11 U	9.8 U	34	14 U	22	13 U
FLUORENE	19	25	100 U	11 U	7.3 U	19 U	93 U	9 U	87 U
HEXACHLOROBENZENE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
HEXACHLOROBUTADIENE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
HEXACHLOROCYCLOPENTADIENE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U

TABLE 5-4

SEDIMENT ANALYTICAL DATA - PSC INVESTIGATION
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 6 OF 9

OUTFALL No.	5	6		7		8A	8	9A	9
PARAMETER	CEF-P39-								
	SD-014	SD-017	SD-403	SD-019		SD-020	SD-020A	SD-021	SD-21A
				Sample	Duplicate				
HEXACHLOROETHANE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
INDENO(1,2,3-CD)PYRENE	95	370	16 U	42	9.9	14 U	14 U	44	13 U
ISOPHORONE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
N-NITROSO-DI-N-PROPYLAMINE	340 U	460 U	NA	84 U	100 U	270 U	250 U	76 U	80 U
N-NITROSODIPHENYLAMINE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
NAPHTHALENE	47 U	130	100 U	52 U	48 U	93 U	93 U	44 U	87 U
NITROBENZENE	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
PENTACHLOROPHENOL	4800 U	6400 U	NA	1200 U	1400 U	3800 U	1200 U	1100 U	1100 U
PHENANTHRENE	81	910	100 U	11 U	9.8 U	19 U	93 U	8.4	87 U
PHENOL	960 U	1300 U	NA	230 U	280 U	760 U	250 U	210 U	220 U
PYRENE	240	1100	85.2	11	9.8 U	27	14 U	22	13 U

TABLE 5-4

SEDIMENT ANALYTICAL DATA - PSC INVESTIGATION
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
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OUTFALL No.	10	11		12	13	14
PARAMETER	CEF-P39-					
	SD-022	SD-023	SD-024	SD-025	SD-026	SD-028
1,2,4-TRICHLOROBENZENE	460 U	980 U	1000 U	460 U	180 U	180 U
1,2-DICHLOROBENZENE	460 U	980 U	1000 U	460 U	180 U	180 U
1,3-DICHLOROBENZENE	460 U	980 U	1000 U	460 U	180 U	180 U
1,4-DICHLOROBENZENE	460 U	980 U	1000 U	460 U	180 U	180 U
1-METHYLNAPHTHALENE	49 U	50 U	47 U	44 U	35 U	35 U
2,4,5-TRICHLOROPHENOL	460 U	980 U	1000 U	460 U	180 U	180 U
2,4,6-TRICHLOROPHENOL	460 U	980 U	1000 U	460 U	180 U	180 U
2,4-DICHLOROPHENOL	410 U	880 U	930 U	410 U	160 U	160 U
2,4-DIMETHYLPHENOL	920 U	2000 U	2100 U	920 U	360 U	350 U
2,4-DINITROPHENOL	2300 U	4900 U	5200 U	2300 U	900 U	880 U
2,4-DINITROTOLUENE	460 U	980 U	1000 U	460 U	180 U	180 U
2,6-DINITROTOLUENE	460 U	980 U	1000 U	460 U	180 U	180 U
2-CHLORONAPHTHALENE	460 U	980 U	1000 U	460 U	180 U	180 U
2-CHLOROPHENOL	460 U	980 U	1000 U	460 U	180 U	180 U
2-METHYLNAPHTHALENE	49 U	660	580	220	35 U	35 U
2-METHYLPHENOL	460 U	980 U	1000 U	460 U	180 U	180 U
2-NITROANILINE	460 U	980 U	1000 U	460 U	180 U	180 U
2-NITROPHENOL	460 U	980 U	1000 U	460 U	180 U	180 U
3,3'-DICHLOROBENZIDINE	920 U	2000 U	2100 U	920 U	360 U	350 U
3-NITROANILINE	460 U	980 U	1000 U	460 U	180 U	180 U
4,6-DINITRO-2-METHYLPHENOL	920 U	2000 U	2100 U	920 U	360 U	350 U
4-BROMOPHENYL PHENYL ETHER	460 U	980 U	1000 U	460 U	180 U	180 U
4-CHLORO-3-METHYLPHENOL	920 U	2000 U	2100 U	920 U	360 U	350 U
4-CHLOROANILINE	460 U	980 U	1000 U	460 U	180 U	180 U
4-CHLOROPHENYL PHENYL ETHER	460 U	980 U	1000 U	460 U	180 U	180 U
4-METHYLPHENOL	460 U	980 U	1000 U	460 U	180 U	180 U
4-NITROANILINE	460 U	980 U	1000 U	460 U	180 U	180 U

TABLE 5-4

SEDIMENT ANALYTICAL DATA - PSC INVESTIGATION
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
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OUTFALL No.	10	11		12	13	14
PARAMETER	CEF-P39-					
	SD-022	SD-023	SD-024	SD-025	SD-026	SD-028
4-NITROPHENOL	2300 U	4900 U	5200 U	2300 U	900 U	880 U
ACENAPHTHENE	49 U	700	690	290	35 U	35 U
ACENAPHTHYLENE	100 U	100 U	95 U	89 U	71 U	71 U
ANTHRACENE	7.4 U	19	23	11	5.3 U	5.3 U
BENZO(A)ANTHRACENE	7.4 U	200	250	110	5.3 U	6.1
BENZO(A)PYRENE	7.4 U	280	350	150	5.4	19
BENZO(B)FLUORANTHENE	7.4 U	340	420	190	7.3	23
BENZO(G,H,I)PERYLENE	10 U	250	330	150	8.6	17
BENZO(K)FLUORANTHENE	7.4 U	170	210	96	5.3 U	11
BIS(2-CHLOROETHOXY)METHANE	460 U	980 U	1000 U	460 U	180 U	180 U
BIS(2-CHLOROETHYL)ETHER	460 U	980 U	1000 U	460 U	180 U	180 U
BIS(2-CHLOROISOPROPYL) ETHER	460 U	980 U	1000 U	460 U	180 U	180 U
BIS(2-ETHYLHEXYL)PHTHALATE	460 U	980 U	1000 U	460 U	180 U	180 U
BUTYLBENZYL PHTHALATE	460 U	980 U	1000 U	460 U	180 U	180 U
CARBAZOLE	460 U	980 U	1000 U	460 U	180 U	180 U
CHRYSENE	7.4 U	300	410	220	7.3	10
DI-N-BUTYL PHTHALATE	460 U	980 U	1000 U	460 U	180 U	180 U
DI-N-OCTYL PHTHALATE	460 U	980 U	1000 U	460 U	180 U	180 U
DIBENZO(A,H)ANTHRACENE	12 U	21	59	13	8.8 U	8.7 U
DIBENZOFURAN	460 U	980 U	1000 U	460 U	180 U	180 U
DIETHYL PHTHALATE	460 U	980 U	1000 U	460 U	180 U	180 U
DIMETHYL PHTHALATE	460 U	980 U	1000 U	460 U	180 U	180 U
FLUORANTHENE	10 U	680	880	220	8.2	18
FLUORENE	10 U	11	9.4 U	8.9 U	7.1 U	7.1 U
HEXACHLOROBENZENE	460 U	980 U	1000 U	460 U	180 U	180 U
HEXACHLOROBUTADIENE	460 U	980 U	1000 U	460 U	180 U	180 U
HEXACHLOROCYCLOPENTADIENE	460 U	980 U	1000 U	460 U	180 U	180 U

TABLE 5-4

SEDIMENT ANALYTICAL DATA - PSC INVESTIGATION
SEMIVOLATILE ORGANIC COMPOUNDS
PSC 39, FLIGHTLINE OUTFALLLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 9 OF 9

OUTFALL No.	10	11		12	13	14
PARAMETER	CEF-P39-					
	SD-022	SD-023	SD-024	SD-025	SD-026	SD-028
HEXACHLOROETHANE	460 U	980 U	1000 U	460 U	180 U	180 U
INDENO(1,2,3-CD)PYRENE	7.4 U	250	320	140	5.7	20
ISOPHORONE	460 U	980 U	1000 U	460 U	180 U	180 U
N-NITROSO-DI-N-PROPYLAMINE	160 U	350 U	370 U	160 U	65 U	63 U
N-NITROSODIPHENYLAMINE	460 U	980 U	1000 U	460 U	180 U	180 U
NAPHTHALENE	49 U	50 U	47 U	44 U	35 U	35 U
NITROBENZENE	460 U	980 U	1000 U	460 U	180 U	180 U
PENTACHLOROPHENOL	2300 U	4900 U	5200 U	2300 U	900 U	880 U
PHENANTHRENE	7.4 U	300	290	66	5.3 U	6.4
PHENOL	460 U	980 U	1000 U	460 U	180 U	180 U
PYRENE	10 U	490	590	210	7.1 U	17

All concentrations in ug/kg.
U = Not detected at or above detection limit (associated value).
J = Estimated concentration.
NA = Not analyzed.

TABLE 5-5

SEDIMENT ANALYTICAL DATA - PSC INVESTIGATION
PESTICIDES AND POLYCHLORINATED BIPHENYLS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 1 OF 5

OUTFALL No.	1		2	3	4	5	6				
	CEF-P39-										
PARAMETER	SD-002	SD-003	SD-005	SD-008	SD-011	SD-014	SD-017	SD-018	SD-105		SD-106
									Sample	Duplicate	
4,4'-DDD	7.4 U	23 U	24 U	53 UJ	51 U	48 UJ	64 UJ	120 UJ	11 U	12 U	4.2 U
4,4'-DDE	7.4 U	23 U	24 U	53 UJ	51 U	48 UJ	64 UJ	120 UJ	11 U	12 U	4.2 U
4,4'-DDT	37 UJ	23 UJ	24 UJ	53 UJ	51 UJ	48 UJ	64 UJ	120 UJ	22 U	24 U	4.2 U
ALDRIN	3.7 U	12 U	12 U	27 U	26 U	24 U	32 U	62 U	5.4 U	6 U	2.1 U
ALPHA-BHC	3.7 U	12 U	12 U	27 U	26 U	24 U	32 U	62 U	5.4 U	6 U	2.1 U
ALPHA-CHLORDANE	7.4 U	23 U	24 U	53 UJ	51 U	48 UJ	64 UJ	120 UJ	11 U	12 U	4.2 U
AROCLOR-1016	74 U	47 U	49 U	53 U	51 U	48 U	64 U	NA	NA	NA	NA
AROCLOR-1221	74 U	47 U	49 U	53 U	51 U	48 U	64 U	NA	NA	NA	NA
AROCLOR-1232	74 U	47 U	49 U	53 U	51 U	48 U	64 U	NA	NA	NA	NA
AROCLOR-1242	74 U	47 U	49 U	53 U	51 U	48 U	64 U	NA	NA	NA	NA
AROCLOR-1248	74 U	47 U	49 U	53 U	51 U	48 U	64 U	NA	NA	NA	NA
AROCLOR-1254	74 U	47 U	49 U	54.4 J	51 U	48 U	64 U	NA	NA	NA	NA
AROCLOR-1260	74 U	47 U	49 U	178 J	51 U	48 U	64 U	NA	NA	NA	NA
BETA-BHC	3.7 U	12 U	12 U	27 UJ	26 U	24 UJ	32 UJ	62 UJ	5.4 U	6 U	2.1 U
DELTA-BHC	3.7 U	12 U	12 U	27 U	26 U	24 U	32 U	62 U	5.4 U	6 U	2.1 U
DIELDRIN	3.7 U	12 U	12 U	27 U	26 U	24 U	32 U	62 U	5.4 U	6 U	2.1 U
ENDOSULFAN I	3.7 U	12 U	12 U	27 UJ	26 U	24 UJ	32 UJ	62 UJ	5.4 U	6 U	2.1 U
ENDOSULFAN II	7.4 UJ	23 UJ	24 UJ	53 UJ	51 UJ	48 UJ	64 UJ	120 UJ	11 U	12 U	4.2 U
ENDOSULFAN SULFATE	7.4 UJ	23 UJ	24 UJ	53 UJ	51 UJ	48 UJ	64 UJ	120 UJ	11 U	12 U	4.2 U
ENDRIN	7.4 U	23 U	24 U	53 UJ	51 U	48 UJ	64 UJ	120 UJ	11 U	12 U	4.2 U
ENDRIN ALDEHYDE	7.4 UJ	23 UJ	24 UJ	53 UJ	51 UJ	48 UJ	64 UJ	120 UJ	11 U	12 U	4.2 U
ENDRIN KETONE	7.4 UJ	23 UJ	24 UJ	53 UJ	51 UJ	48 UJ	64 UJ	120 UJ	11 U	12 U	4.2 U
GAMMA-BHC (LINDANE)	3.7 U	12 U	12 U	27 U	26 U	24 U	32 U	62 U	5.4 U	6 U	2.1 U
GAMMA-CHLORDANE	7.4 U	23 U	24 U	53 UJ	51 U	48 UJ	64 UJ	120 UJ	11 U	12 U	4.2 U
HEPTACHLOR	3.7 U	12 U	12 U	27 U	26 U	24 U	32 U	62 U	5.4 U	6 U	2.1 U
HEPTACHLOR EPOXIDE	3.7 U	12 U	12 U	27 U	26 U	24 U	32 U	62 U	5.4 U	6 U	2.1 U
METHOXYCHLOR	74 UJ	47 UJ	49 UJ	110 UJ	100 UJ	96 UJ	130 UJ	250 UJ	44 U	48 U	8.5 U
TOXAPHENE	370 U	1200 U	1200 U	2700 U	2600 U	2400 U	3200 U	6200 U	540 U	600 U	210 U

TABLE 5-5

SEDIMENT ANALYTICAL DATA - PSC INVESTIGATION
PESTICIDES AND POLYCHLORINATED BIPHENYLS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
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OUTFALL No.	7		8A	8	9A	9	10
	CEF-P39-						
	SD-019		SD-020	SD-020A	SD-021	SD-021A	SD-022
PARAMETER	Sample	Duplicate					
4,4'-DDD	4.7 U	5.6 U	15 U	5 U	4.2 U	4.4 U	4.6 U
4,4'-DDE	4.7 U	5.6 U	15 U	5 U	4.2 U	4.4 U	4.6 U
4,4'-DDT	4.7 UJ	5.6 UJ	15 UJ	5 U	4.2 UJ	4.4 U	4.6 UJ
ALDRIN	2.3 U	2.8 U	7.6 U	2.5 U	2.1 U	2.2 U	2.3 U
ALPHA-BHC	2.3 U	2.8 U	7.6 U	2.5 U	2.1 U	2.2 U	2.3 U
ALPHA-CHLORDANE	4.7 U	5.6 U	15 U	5 U	4.2 U	4.4 U	4.6 U
AROCLOR-1016	47 U	56 U	150 U	50 U	42 U	44 U	46 U
AROCLOR-1221	47 U	56 U	150 U	50 U	42 U	44 U	46 U
AROCLOR-1232	47 U	56 U	150 U	50 U	42 U	44 U	46 U
AROCLOR-1242	47 U	56 U	150 U	50 U	42 U	44 U	46 U
AROCLOR-1248	47 U	56 U	150 U	50 U	42 U	44 U	46 U
AROCLOR-1254	47 U	56 U	150 U	50 U	42 U	44 U	46 U
AROCLOR-1260	47 U	56 U	150 U	50 U	42 U	44 U	46 U
BETA-BHC	2.3 U	2.8 U	7.6 U	2.5 U	2.1 U	2.2 U	2.3 U
DELTA-BHC	2.3 U	2.8 U	7.6 U	2.5 U	2.1 U	2.2 U	2.3 U
DIELDRIN	2.3 U	2.8 U	7.6 U	2.5 U	2.1 U	2.2 U	2.3 U
ENDOSULFAN I	2.3 U	2.8 U	7.6 U	2.5 U	2.1 U	2.2 U	2.3 U
ENDOSULFAN II	4.7 U	5.6 U	15 U	5 U	4.2 U	4.4 U	4.6 U
ENDOSULFAN SULFATE	4.7 U	5.6 U	15 U	5 U	4.2 U	4.4 U	4.6 U
ENDRIN	4.7 U	5.6 U	15 U	5 U	4.2 U	4.4 U	4.6 U
ENDRIN ALDEHYDE	4.7 U	5.6 U	15 U	5 U	4.2 U	4.4 U	4.6 U
ENDRIN KETONE	4.7 U	5.6 U	15 U	5 U	4.2 U	4.4 U	4.6 U
GAMMA-BHC (LINDANE)	2.3 U	2.8 U	7.6 U	2.5 U	2.1 U	2.2 U	2.3 U
GAMMA-CHLORDANE	4.7 U	5.6 U	15 U	5 U	4.2 U	4.4 U	4.6 U
HEPTACHLOR	2.3 U	2.8 U	7.6 U	2.5 U	2.1 U	2.2 U	2.3 U
HEPTACHLOR EPOXIDE	2.3 U	2.8 U	7.6 U	2.5 U	2.1 U	2.2 U	2.3 U
METHOXYCHLOR	9.3 UJ	11 UJ	30 UJ	10 U	8.5 UJ	8.9 U	9.2 UJ
TOXAPHENE	230 U	280 U	760 U	250 U	210 U	220 U	230 U

TABLE 5-5

SEDIMENT ANALYTICAL DATA - PSC INVESTIGATION
PESTICIDES AND POLYCHLORINATED BIPHENYLS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
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OUTFALL No.	11										
	CEF-P39-										
PARAMETER	SD-023	SD-024	SD-107	SD-201	SD-202	SD-301	SD-302	SD-303	SD-304		SD-305
									Sample	Duplicate	
4,4'-DDD	24 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	24 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	24 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	12 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	12 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	24 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	97 U	100 U	97 U	240 U	90 U	43 U	43 U	43 U	51 U	52 U	48 U
AROCLOR-1221	97 U	100 U	97 U	240 U	90 U	43 U	43 U	43 U	51 U	52 U	48 U
AROCLOR-1232	97 U	100 U	97 U	240 U	90 U	43 U	43 U	43 U	51 U	52 U	48 U
AROCLOR-1242	97 U	100 U	97 U	240 U	90 U	43 U	43 U	43 U	51 U	52 U	48 U
AROCLOR-1248	97 U	100 U	97 U	240 U	90 U	43 U	43 U	43 U	51 U	52 U	48 U
AROCLOR-1254	97 U	100 U	239 J	240 U	90 U	43 U	43 U	43 U	51 U	52 U	48 U
AROCLOR-1260	470	907	558 J	1030	553	173	76.4	45.6	333	323	95.4
BETA-BHC	12 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	12 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	12 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	12 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	24 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	24 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	24 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	24 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	24 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	12 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	24 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	12 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	12 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	49 UJ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	1200 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 5-5

SEDIMENT ANALYTICAL DATA - PSC INVESTIGATION
PESTICIDES AND POLYCHLORINATED BIPHENYLS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
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OUTFALL No.	11 (continued)										
	CEF-P39-										
	SD-501		SS-502	SD-503	SS-504	SS-601-01	SS-602-02		SS-603-01	SS-604-02	SD-605-03
PARAMETER	Sample	Duplicate					Sample	Duplicate			
4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ALPHA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AROCLOR-1016	45 U	45 U	210 U	510 U	470 U	37 U	41 U	40 U	180 U	170 U	41 U
AROCLOR-1221	45 U	45 U	210 U	510 U	470 U	37 U	41 U	40 U	180 U	170 U	41 U
AROCLOR-1232	45 U	45 U	210 U	510 U	470 U	37 U	41 U	40 U	180 U	170 U	41 U
AROCLOR-1242	45 U	45 U	210 U	510 U	470 U	37 U	41 U	40 U	180 U	170 U	41 U
AROCLOR-1248	45 U	45 U	210 U	510 U	470 U	37 U	41 U	40 U	180 U	170 U	41 U
AROCLOR-1254	45 U	45 U	210 U	510 U	470 U	37 U	41 U	40 U	180 U	170 U	41 U
AROCLOR-1260	69 J	167 J	1460	1590	990	95.2	41 U	40 U	431	618	41 U
BETA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DELTA-BHC	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIELDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN II	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDOSULFAN SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN ALDEHYDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ENDRIN KETONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-CHLORDANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HEPTACHLOR EPOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHOXYCHLOR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOXAPHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 5-5

SEDIMENT ANALYTICAL DATA - PSC INVESTIGATION
PESTICIDES AND POLYCHLORINATED BIPHENYLS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
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OUTFALL No.	12	13		14
	CEF-P39-			
PARAMETER	SD-025	SD-026	SD-027	SD-028
4,4'-DDD	46 U	18 U	3.9 U	18 U
4,4'-DDE	46 U	18 U	3.9 U	18 U
4,4'-DDT	46 U	18 UJ	3.9 U	18 UJ
ALDRIN	23 U	9 U	2 U	8.8 U
ALPHA-BHC	23 U	9 U	2 U	8.8 U
ALPHA-CHLORDANE	46 U	18 U	3.9 U	18 U
AROCLOR-1016	46 U	36 U	NA	35 U
AROCLOR-1221	46 U	36 U	NA	35 U
AROCLOR-1232	46 U	36 U	NA	35 U
AROCLOR-1242	46 U	36 U	NA	35 U
AROCLOR-1248	46 U	36 U	NA	35 U
AROCLOR-1254	46 U	36 U	NA	35 U
AROCLOR-1260	46 U	36 U	NA	35 U
BETA-BHC	23 U	9 U	2 U	8.8 U
DELTA-BHC	23 U	9 U	2 U	8.8 U
DIELDRIN	23 U	9 U	2 U	8.8 U
ENDOSULFAN I	23 U	9 U	2 U	8.8 U
ENDOSULFAN II	46 U	18 UJ	3.9 U	18 UJ
ENDOSULFAN SULFATE	46 U	18 UJ	3.9 U	18 UJ
ENDRIN	46 U	18 U	3.9 U	18 U
ENDRIN ALDEHYDE	46 U	18 UJ	3.9 U	18 UJ
ENDRIN KETONE	46 U	18 UJ	3.9 U	18 UJ
GAMMA-BHC (LINDANE)	23 U	9 U	2 U	8.8 U
GAMMA-CHLORDANE	46 U	18 U	3.9 U	18 U
HEPTACHLOR	23 U	9 U	2 U	8.8 U
HEPTACHLOR EPOXIDE	23 U	9 U	2 U	8.8 U
METHOXYCHLOR	91 U	36 UJ	7.8 U	35 UJ
TOXAPHENE	2300 U	900 U	200 U	880 U

All concentrations in ug/kg.
U = Not detected at or above detection limit (associated value).
J = Estimated concentration.
NA = Not analyzed.

TABLE 5-6

SEDIMENT ANALYTICAL DATA - PSC INVESTIGATION
INORGANIC ANALYTES
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
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OUTFALL No.	1				2	3		4	
PARAMETER	CEF-P39-								
	SD-002	SD-003		SD-101	SD-005	SD-008	SD-009	SD-011	SD-012
		Sample	Duplicate						
ALUMINUM	1660 J	1290 J	2710 J	NA	1760 J	1490 J	1340 J	2530 J	4420 J
ANTIMONY	0.53 U	0.34 U	0.41 U	NA	3.2 U	0.4 U	0.35 U	4	0.33 U
ARSENIC	0.76 U	0.49 U	0.51	NA	0.51 U	0.55 U	0.5 U	10.9	0.51
BARIUM	9.1 U	5.1 U	53.4	NA	4.3 U	5.9 U	5.9 U	12.9 U	10.1 U
BERYLLIUM	0.51 U	0.26 U	0.33 U	NA	0.21 U	0.45 U	0.33 U	0.4 U	0.33 U
CADMIUM	0.08 U	0.05 U	2.9	NA	1.3	2.6	1.4	6.5	2.3
CALCIUM	1210	605	178	NA	265	894	291	910	1120
CHROMIUM	2.8 U	1.9 U	16.2 J	NA	7.8 J	18.3 J	23.6 J	62.4 J	8.4 J
COBALT	0.22	0.19	0.51	NA	0.29	0.53	0.43	1.2	0.4
COPPER	3 J	1.4 J	15.3 J	NA	5.8 J	10.9 J	6 J	34.2 J	8.6 J
IRON	631	575	513	NA	373	580	366	1110	729
LEAD	8.5 U	3.6 U	144 J	2.4 U	41.2 J	57.4 J	16.7 J	198 J	24.8 J
MAGNESIUM	155	87.2	95.4	NA	89.4	134	99.5	288	188
MANGANESE	3.9	2.4	2.5	NA	1.6	3.6	4.5	12.1	4.5
MERCURY	0.09 U	0.01 U	0.06 U	NA	0.06 U	0.07 U	0.01	0.06 U	0.06 U
NICKEL	0.98 U	0.55 U	4.8	NA	1.8 U	2.5	1.7 U	5.3	2.1
POTASSIUM	54.6 U	36.5 U	45.3 U	NA	40.3 U	40.7 U	40.4 U	87.2 U	58.3 U
SELENIUM	0.45 U	0.29 U	0.29 U	NA	0.3 U	0.33 U	0.29 U	0.31 U	0.35 U
SILVER	0.21 U	0.14 U	0.2 U	NA	0.15 U	0.19 U	0.15 U	0.15 U	0.13 U
SODIUM	34	21.9 U	397	NA	22.5 U	24.5 U	24.5	40.2	30.7
THALLIUM	0.59 U	0.39 U	0.38 U	NA	0.4 U	0.43 U	0.39 U	0.41 U	0.38 U
VANADIUM	3	2	3.7	NA	2.1	3.1	1.9	5.9	5.6
ZINC	15.3 J	10.4 J	90.2 J	NA	36.6 J	99.6 J	96.3 J	178 J	72.2 J

TABLE 5-6

SEDIMENT ANALYTICAL DATA - PSC INVESTIGATION
INORGANIC ANALYTES
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
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OUTFALL No.	5		6		7		8A	8	9A	9
PARAMETER	CEF-P39-									
	SD-014	SD-015	SD-017	SD-018	SD-019		SD-020	SD-020A	SD-021	SD-021A
					Sample	Duplicate				
ALUMINUM	1520 J	2240 J	2330 J	3790 J	1010 J	2520 J	5670 J	2100	3260 J	742
ANTIMONY	0.34 U	0.35 U	0.46 U	0.83 U	0.34 U	0.4 U	1.1 U	0.37 U	0.3 U	0.44 U
ARSENIC	0.5 U	0.55	0.88	1.4	0.48 U	0.67	1.6 U	0.54 U	0.44 U	0.45 U
BARIUM	13.2 U	10 U	8.8 U	20.8 U	7.4	18.9	39	7.2	10.3	5.1
BERYLLIUM	0.29 U	0.32 U	0.36 U	0.52 U	0.25 U	0.43 U	1.3 U	0.23 U	0.28 U	0.13 U
CADMIUM	2.2	1.8	1.1	1.3	0.05 U	0.07 U	1.4 U	0.05 U	0.06 U	0.04 U
CALCIUM	872	1020	3140	525	309	463	3500	123 U	1220	198
CHROMIUM	20.4 J	10.3 J	4.9 J	7.9 J	1.4 U	3.5 J	7.9 U	3.3 U	3.1 J	1.1 U
COBALT	0.53	0.48	0.54	0.65	0.11 U	0.4	0.6	0.12 U	0.41	0.13 U
COPPER	9.7 J	8.6 J	6.8 J	7.3 J	1.9	3.7	9.3	2.6	1.6	1.7
IRON	527	642	1010	873	795 J	1340 J	1600 J	351	1160 J	247
LEAD	52.1 J	35.5 J	12.6 J	24.3 J	6.5	12.3	24.2	3	6.6	0.84 U
MAGNESIUM	163	186	183	116	77.5	354	341	46.1	94.6	24.6
MANGANESE	4.9	5.4	4.4	4.3	1.2 J	5 J	8.4 J	4.4 U	10.2 J	2.4
MERCURY	0.06 U	0.06 U	0.08 U	0.08 U	0.06 U	0.07 U	0.19 U	0.01 U	0.05 U	0.01 U
NICKEL	3.5	5.7	2.7	2.7	0.44 U	1.2 U	3.2 U	0.8 U	0.66 U	0.71 U
POTASSIUM	52.1 U	53.1 U	67.4 U	60.2 U	58 U	45 U	106 U	48.8	60.3 U	28.6 U
SELENIUM	0.29 U	0.29 U	0.4 U	0.69 U	0.29 U	0.34 U	0.92 U	0.73 U	0.26 U	0.27 U
SILVER	0.14 U	0.14 U	0.19 U	0.18 U	0.14 U	0.16 U	0.44 U	0.15 U	0.12 U	0.13 U
SODIUM	41	41.9	62.1	525	390	480	1200	427	295	327 U
THALLIUM	0.39 U	0.38 U	0.52 U	0.51 U	0.38 U	0.45 U	1.2 U	0.42 U	0.34 U	0.35 U
VANADIUM	4	4.5	6.2	10	1.8	4.3	15.7	2.4	2.8	1.1
ZINC	136 J	131 J	62.6 J	87.1 J	18.3 J	33.4 J	63.7 J	6	11.7 J	3.2 U

TABLE 5-6

SEDIMENT ANALYTICAL DATA - PSC INVESTIGATION
INORGANIC ANALYTES
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
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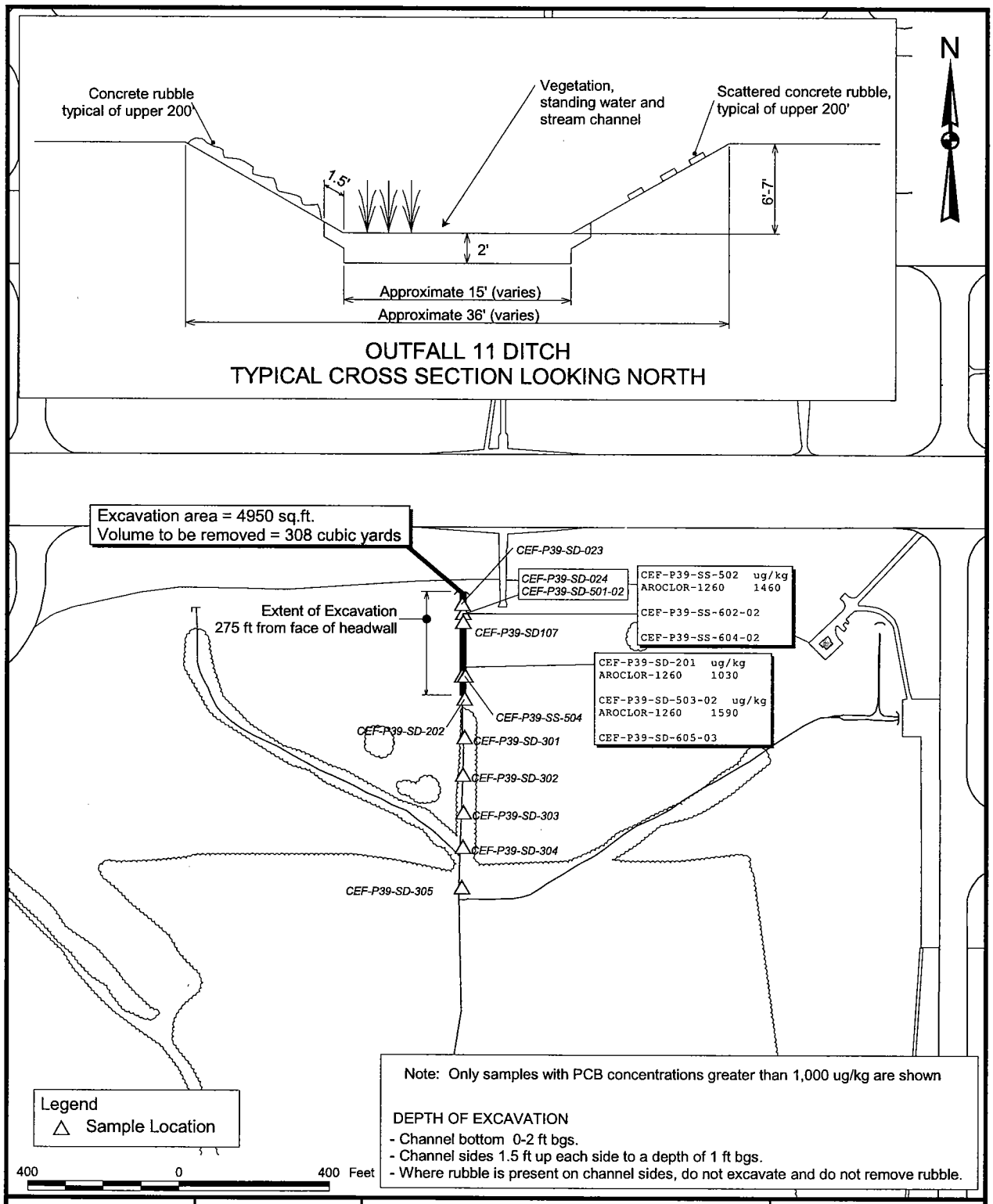
OUTFALL No.	10	11		12	13	14	
PARAMETER	CEF-P39-						
	SD-022	SD-023	SD-024	SD-025	SD-026	SD-028	SD-029
ALUMINUM	3360 J	1710 J	1960 J	1670 J	3880 J	6560 J	1260 J
ANTIMONY	0.33 U	0.35 U	0.37 U	0.33 U	0.26 U	0.25 U	0.24 U
ARSENIC	0.48 U	0.5 U	0.53 U	0.47 U	0.37 U	0.36 U	0.35 U
BARIUM	10.2	4.5 U	5.5 U	9.3	7.8 U	5.6 U	2.2 U
BERYLLIUM	0.28 U	0.27 U	0.28 U	0.31 U	0.25 U	0.25 U	0.28 U
CADMIUM	0.06 U	0.46 U	0.63	0.12 U	0.13 U	0.08 U	0.03 U
CALCIUM	143	622	795	6260	23100	2170	218
CHROMIUM	3.6 J	2.4 U	4.2 J	4.6 J	6 J	7.6 J	1.9 U
COBALT	0.11	0.26	0.31	0.29	0.25	0.33	0.1
COPPER	2.5	3.4 J	5.3 J	2.5	1.7 J	2.1 J	0.55 U
IRON	596 J	577	526	1480 J	574	830	180
LEAD	4.3 U	9.4 J	12.8 J	8.1	4.6 J	6.3 J	1.4 U
MAGNESIUM	66.8	139	158	97.4	215	124	54
MANGANESE	1.7 J	2.4	3.1	3 J	7.6	6.9	0.78
MERCURY	0.06 U	0.06 U	0.06 U	0.06 U	0.05 U	0.04 U	0.04 U
NICKEL	0.51 U	1.3 U	1.6 U	1.5 U	1.1 U	1.9	0.43 U
POTASSIUM	65.2 U	45.9 U	56.6 U	36.2 U	33.8 U	50.2 U	20.6 U
SELENIUM	1.3	0.3 U	0.31 U	0.28 U	0.22 U	0.22 U	0.21 U
SILVER	0.13 U	0.14 U	0.17 U	0.13 U	0.1 U	0.1 U	0.1 U
SODIUM	387	43.2	46.3	361	33.3	31.6	15.6 U
THALLIUM	0.37 U	0.39 U	0.42 U	0.37 U	0.29 U	0.28 U	0.27 U
VANADIUM	4.3	2.6	3.3	3.6	3.4	4.3	1.2
ZINC	16.2 J	51.6 J	44.3 J	27.4 J	5.1 J	7 J	0.08 U

All concentrations in mg/kg.
U = Not detected at or above detection limit (associated value).
J = Estimated concentration.
NA = Not analyzed.


Concrete rubble typical of upper 200'
Vegetation, standing water and stream channel
Scattered concrete rubble, typical of upper 200'
1.5'
6'-7'
2'
Approximate 15' (varies)
Approximate 36' (varies)
OUTFALL 11 DITCH
TYPICAL CROSS SECTION LOOKING NORTH
N
Excavation area = 4950 sq.ft.
Volume to be removed = 308 cubic yards
Extent of Excavation
275 ft from face of headwall
CEF-P39-SD-023
CEF-P39-SD-024
CEF-P39-SD-501-02
CEF-P39-SS-502 ug/kg
AROCLOR-1260 1460
CEF-P39-SS-602-02
CEF-P39-SS-604-02
CEF-P39-SD107
CEF-P39-SD-201 ug/kg
AROCLOR-1260 1030
CEF-P39-SD-503-02 ug/kg
AROCLOR-1260 1590
CEF-P39-SD-605-03
CEF-P39-SS-504
CEF-P39-SD-202
CEF-P39-SD-301
CEF-P39-SD-302
CEF-P39-SD-303
CEF-P39-SD-304
CEF-P39-SD-305
Legend
Sample Location
400 0 400 Feet
Note: Only samples with PCB concentrations greater than 1,000 ug/kg are shown
DEPTH OF EXCAVATION
- Channel bottom 0-2 ft bgs.
- Channel sides 1.5 ft up each side to a depth of 1 ft bgs.
- Where rubble is present on channel sides, do not excavate and do not remove rubble.
DRAWN BY MJJ
DATE 01Apr00
CHECKED BY
DATE 6/28/02
COST/SCHEDULE-AREA
SCALE AS NOTED
EXTENT OF SEDIMENT EXCAVATION - OUTFALL 11
PSC 39, RUNWAY OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
CONTRACT NUMBER 0039
APPROVED BY
DATE 6/28/02
APPROVED BY
DATE
DRAWING NO. FIGURE 5-1
REV 0
P:\GIS\NAS_CecilField\PSC39_techmemo.apr 30Oct01 MJJ Excavation Area Layout

6.0 PRELIMINARY RISK EVALUATIONS

6.1 HUMAN HEALTH RISKS

Exposure to surface water and sediments at PSC 39 would be infrequent relative to typical residential or industrial exposures to soil. Exposure to surface water and sediment would also be of short duration, thereby rendering the dermal uptake of constituents negligible. Moreover, the presence of surface water reduces the adherence of sediments to the skin, further reducing the potential for constituent uptake. Overall, there would be no significant impact to human health as a result of exposure to surface water and sediment from PSC 39. Typically, a Preliminary Risk Evaluation (PRE) entails a comparison of maximum detected concentrations to Florida Department of Environmental Protection (FDEP) risk-based criteria to arrive at quantitative estimates of risk. At PSC 39, surface water and sediment were the only media evaluated. FDEP has no human health risk-based criteria for surface water and sediment; therefore, a qualitative assessment of potential risk to human health was conducted.

6.2 ECOLOGICAL RISK ASSESSMENT

A screening-level ecological risk assessment was conducted to evaluate the potential risks to ecological receptors at PSC 39. The ecological risk assessment was conducted in accordance with the guidance described by U.S. EPA (U.S. EPA, 1997a; 2000) and the Navy (Department of the Navy, 1999) for Steps 1 through 3a of ecological risk assessments. Steps 1-3a consist of the following:

Step 1	Screening-Level Problem Formulation and Ecological Effects Evaluation
Step 2	Screening-Level Exposure Estimate and Risk Calculation
Step 3a	Refinement of Preliminary Contaminants of Concern

A preliminary ecological risk assessment of PSC 39 was submitted to the NAS Cecil Field BCT in April 2000 and was subsequently reviewed by U.S. EPA Region IV. Comments submitted by U.S. EPA Region IV have been incorporated into the current ecological risk assessment, which is presented in the remainder of Section 6.2.

6.2.1 Preliminary Problem Formulation

Environmental Setting

Sixteen outfalls and ditches near the western edge of the north-south runways and the southern edge of east-west runways were included in this assessment. Twelve outfalls are exit points for water from storm sewer systems that drain the runways, various aircraft storage areas, and parts of the main base.

Channelized ditches direct surface water from these 12 outfalls eastward (Outfall Nos.1 through 6), southward (Outfall Nos. 7, 10, 11, 12), or northward (Outfall Nos. 8 and 9) where the ditches eventually drain into Sal Taylor Creek (Figure 2-2). A shallow pool has formed at each of these 12 outfalls. The pools are typically 40 to 60 feet in length and 10 to 15 feet wide. Water depth varies from approximately 6 inches in some pools to approximately 4 feet in others. The flow is stagnant or barely perceptible for most of the outfalls except after rain events.

The ditches in the vicinity of the 12 outfalls discussed above are approximately 6 to 12 feet below the surrounding ground surface. The amount of surface water in the ditches downstream of the pools is variable, depending on recent rainfall, but is generally 3 to 6 inches deep and 1 to 2 feet wide.

Aquatic vegetation in the pools and in the ditches downstream from the pools typically consists of a variety of wetland-associated species such as cattail (*Typha* spp.), pickerelweed (*Pontederia cordata*), arrowhead (*Sagittaria* spp.), and rushes. Pools at some outfalls are almost totally covered with a dense layer of cattail and other emergent aquatic vegetation, resulting in little open water. Other pools are more open, with emergent aquatic vegetation only along the shoreline. The ditches downstream of the pools are typically covered with dense vegetation. The pools and ditches provide limited habitat for minnows, various reptiles, amphibians, piscivorous (fish-eating) birds, and mammals such as the raccoon (*Procyon lotor*).

The banks of the ditches are thickly vegetated with willow (*Salix spp*), elderberry (*Sambucus canadensis*), blackberry (*Rubus spp*), dog fennel (*Eupatorium capillifolium*), saltbush (*Baccharis halimifolia*), wax myrtle (*Myrica cerifera*), and various grasses.

Because all 16 outfalls and ditches are located near active runways, terrestrial habitat in the immediate vicinity of the outfalls (outside the ditches) consists of mowed grass (Figures 6-1 through 6-5). The grassy areas merge with shrubby areas downstream of the outfalls. Vegetation in the shrubby areas is dominated by blackberry, saltbush, gallberry (*Ilex glabra*), bluestem (*Andropogon sp.*), saw palmetto (*Serenoa repens*), wild grape (*Vitis rotundifolia*), greenbrier (*Smilax* sp.), yaupon holly (*Ilex vomitoria*), and sapling pines (*Pinus* sp.). The shrubby habitat merges with forested areas consisting primarily of planted pines and second-growth pines mixed with hardwoods approximately 200 yards downstream of most outfalls. There are no wetland habitats at PSC 39, except along the bottom of the ditches and along Sal Taylor Creek, where a floodplain forest wetland extends outward approximately 100 feet from each bank of the creek.

In addition to the 12 outfalls and ditches discussed above, surface water and sediment samples were collected from Sal Taylor Creek at the point where the creek enters a culvert and flows underneath the

north-south runways. This location has been designated as Outfall No. 8A. A sediment sample was collected from the downstream end of the same culvert, where Sal Taylor Creek exits after flowing approximately 1,900 feet underneath east-west runways. This location has been designated as Outfall No. 9A. Thus, although Outfalls No. 8A and 9A are not actually outfalls, they will be referred to as such herein. Sal Taylor Creek is approximately 12 feet wide and 4 feet deep at each end of the culvert and was flowing at approximately 1 foot per second during the June 1999 sampling event. The creek is free of emergent aquatic vegetation within approximately 50 feet of each end of the culvert, at which point a fairly dense layer of cattail, arrowhead, and pickerelweed has become established. Willows (*Salix* spp.) and red maples (*Acer rubrum*) are found along the banks of the creek near the culverts.

Outfall Nos. 13 and 14 also are not actually outfalls but instead are dry swales with no nearby culvert or water source. Habitat at these two locations consists of mowed grass. Thus, the media samples at these two locations (although originally denoted as sediment samples) were actually surface soil and were treated as such in this risk assessment. Ecological receptors that utilize these areas are those that have become accustomed to aircraft operations, including terrestrial invertebrates, lizards, small rodents, and various birds. Larger animals such as deer occasionally forage in the vicinity of these two areas.

Conceptual Site Model

The conceptual site model for Outfall Nos. 1 through 12 is presented in Figure 6-6, and the conceptual site model for Outfall Nos. 13 and 14 is presented in Figure 6-7. Components of these models, as discussed below, include

- Contaminant source
- Contaminant migration pathways
- Exposure routes
- Assessment and measurement endpoints

<u>Contaminant Source</u>

Numerous chemicals are associated with aircraft operations and maintenance. These include a variety of volatile and semivolatile organic compounds and metals. Pesticides, although not directly associated with aircraft operations and maintenance, have been used throughout the base and in the vicinity of runways and taxiways. Thus, the source of contaminants assessed herein is not a discrete spill event. Instead, it consists of a variety of chemicals.

Contaminant Migration Pathways

The following are pathways at PSC 39 by which contaminants can reach receptors:

- Overland runoff
- Infiltration into groundwater, subsequent discharge to surface water
- Wind erosion (Outfall Nos. 13 and 14 only)

The topography at PSC 39 is nearly flat, but the runways are slightly elevated relative to the surrounding areas. This results in a nearly imperceptible slope downward to the east in the vicinity of Outfall Nos. 1 through 6, and southward near Outfall Nos. 7 through 14. The generally flat or slight slope and the vegetated terrain near the outfalls would serve to minimize overland runoff from the runways and taxiways as a contaminant migration pathway. The vegetated terrain would also minimize the wind erosion pathway. The major contaminant migration pathway is drainage from aircraft operations and maintenance areas and main base areas into storm sewer systems and subsequent exit to surface water at individual outfalls.

Exposure Routes – Aquatic and Semi-Aquatic Organisms (Outfall Nos. 1 through 12)

Exposure pathways associated with Outfalls 1 through 12 include the following:

- Direct contact with surface water and sediments
- Ingestion of surface water; incidental ingestion of sediment
- Consumption of contaminated food items
- Direct contact and uptake by aquatic plants

Exposure Routes – Terrestrial Animals (Outfall Nos. 13 and 14)

Exposure pathways associated with Outfalls 13 and 14 include the following:

- Consumption of contaminated food items
- Incidental ingestion of surface soil
- Dermal contact
- Direct contact and uptake by terrestrial plants

Assessment and Measurement Endpoints

Assessment and measurement endpoints are normally selected based on specific contaminants of potential concern (COPCs) and complete exposure pathways at a particular site. For this ecological risk assessment, however, the exposure pathways and COPCs are similar among outfalls. Thus, the following assessment and measurement endpoints are applicable at PSC 39:

Outfall Nos. 1 through 12

The assessment endpoints consist of the protection of the following groups of receptors from adverse effects of site-related contaminants on growth, survival, and reproduction:

- Benthic invertebrate communities
- Fish communities
- Piscivorous birds
- Piscivorous mammals
- Aquatic vegetation

Measurement endpoints serve as surrogates for assessment endpoints, since they are more easily quantified or observed than assessment endpoints. Measurement endpoints at Outfall Nos. 1 through 12 consisted of contaminant concentrations associated with adverse effects on growth, survival, and reproduction of aquatic organisms (surface water screening levels) and benthic organisms (sediment screening levels). In addition, measurement endpoints for piscivorous birds and mammals were contaminant doses associated with adverse effects on growth, survival, and reproduction of representative receptors.

Outfall Nos. 13 and 14

The assessment endpoints consist of the protection of the following groups of receptors from adverse effects of site-related contaminants on growth, survival, and reproduction:

- Vermivorous birds
- Omnivorous birds
- Carnivorous birds
- Carnivorous mammals
- Herbivorous mammals
- Vermivorous mammals
- Terrestrial vegetation

Measurement endpoints at Outfall Nos. 13 and 14 consisted of contaminant concentrations associated with adverse effects on growth, survival, and reproduction of terrestrial vegetation and soil invertebrates (surface soil screening levels). In addition, measurement endpoints for representative receptor groups were contaminant doses associated with adverse effects on growth, survival, and reproduction of these receptors.

Amphibians and reptiles are absent from the above lists of assessment endpoints since toxicity data for both are sparse, resulting in a small, sporadic toxicity database. A discussion of the uncertainties associated with the absence of toxicity data for amphibians and reptiles is provided in Section 6.2.6.

6.2.2 Preliminary Ecological Effects Evaluation

Maximum concentrations of analytes detected in surface water, sediment, and surface soil were compared to ecologically based screening values (ESVs) to determine if the analytes should be selected as ecological contaminants of potential concern (COPCs). The ESVs used for the initial screening were the lowest of those established by U.S. EPA Region IV (U.S. EPA, 2000; 1999a) and the FDEP (FDEP, 1994; 1996). If ESVs were not available from U.S. EPA Region IV or FDEP, other sources were used.

For each outfall where PAHs were detected, total PAH concentrations were calculated as the sum of detected concentrations of acenaphthene, acenapththylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, fluorene, 2-methylnaphthalene, naphthalene, phenanthrene, fluoranthene, and pyrene. These 13 PAHs are the same compounds that were summed by McDonald (1994) to derive the sediment ESV for total PAHs used by U.S. EPA Region IV and FDEP.

6.2.3 Preliminary Exposure Estimate and Risk Calculation

Exposure point contaminant concentrations in this ecological risk assessment were obtained from samples collected in 1998, 1999, and 2000. The types of chemical analyses conducted on samples collected in 1999 and 2000 are summarized in Table 4-1. Raw data for samples collected in 1998 are presented in Tables 3-1 through 3-8; data for samples collected in 1999 and 2000 are presented in Appendix A.

The preliminary risk calculation step in the ecological risk assessment process compared the maximum concentrations of analytes in each medium to ESVs. Hazard Quotients (HQs), defined as the ratio of the maximum chemical concentration to the ESV (referred to as a “screening HQ”), are presented for each outfall.

For each analyte, if the maximum concentration was less than the ESV, the chemical was not considered further. If the maximum concentration equaled or exceeded the ESV, or if an ESV was not available, the chemical was retained as a COPC. The results of these comparisons are presented in outfall-specific tables.

VOCs were analyzed in samples collected in 1998 by ABB Environmental Services, Inc. Based on the results of these analyses, the NAS Cecil Field BCT determined that potential ecological risks from VOCs were negligible. Thus, subsequent samples collected in 1999 were not analyzed for VOCs. The 1998 samples are included in the data set used herein, and the COPC tables for each outfall include VOCs (where detected). However, VOCs will not be further addressed in this ecological risk assessment.

6.2.4 Refinement of Preliminary Contaminants of Concern

After the initial screening, the consideration of other relevant factors was employed during Step 3a of this assessment. These factors included

- Magnitude of HQ values
- Background concentrations of inorganics at NAS Cecil Field (HLA, 1998)
- Frequency of detection and spatial analysis of detections
- Alternate (often less conservative) screening values
- Toxicological information
- Food chain modeling for bioaccumulative COPCs
- Less conservative input parameters in the food chain modeling (i.e., area-use factors)

The use of less conservative screening guidelines provides balance to the conservative screening-level assessment. For example, most Region IV sediment ecological screening values are based on Threshold Effects Level (TEL) values established by the FDEP (FDEP, 1994). However, the TEL is defined as the concentration below which “sediment-associated contaminants are not considered to represent significant hazards” and values between the TEL and the Probable Effects Level (PEL) represent a range in which “adverse biological effects are possible” (FDEP, 1994). Therefore, it can be misleading to ascribe risk to a sediment contaminant detected at a concentration that exceeds the TEL but is below the PEL. For this reason, when contaminant concentrations exceeded ecological screening values or no Region IV ecological screening value was available, less conservative guidelines are presented.

Consideration of the area-use factor is especially appropriate for an assessment of potential risks at the outfalls. An assumption in the initial food chain modeling (see Section 6.2.4.1) is that the receptors

forage exclusively at the outfalls. However, the largest pools at the outfalls are approximately 60 feet by 15 feet in size (900 square feet or 0.021 acres). The smallest home range of the raccoon is 96 acres (U.S. EPA, 1993). Thus, the area at one outfall would comprise approximately 0.022 percent (0.021 / 96) of a raccoon's total foraging area. Similarly, the combined area of 12 outfalls would comprise only 0.26 percent (12 x 0.022 percent) of the raccoon's foraging area. These area-use factors can be multiplied by the HQ values in the food chain modeling tables to derive less conservative (but more realistic) HQ values for the raccoon. Similar calculations can be used for other representative receptors whose home ranges exceed the areas encompassed by outfall-related contaminants.

Food Chain Modeling

Food chain modeling was conducted as part of COPC refinement. The objective of the food chain modeling was to investigate potential risks to representative receptors from screening-level COPCs that are known to bioaccumulate or biomagnify (U.S. EPA, 2000a). Toxicity reference values (TRVs), which are contaminant doses associated with adverse effects on growth, survival, and reproduction, were obtained for comparison to doses that the receptors may receive in the environment. TRVs were preferentially selected that represent a threshold for sublethal effects, such as impairment of reproduction or growth. Since toxicity data for the specific receptors chosen herein were not available, toxicity data from laboratory species were extrapolated to receptor species. The TRVs were obtained from Oak Ridge National Laboratory wildlife toxicity data (Sample et al., 1996). TRVs used in this ecological risk assessment are presented in Table 6-1.

Food chain modeling was limited to COPCs that are known to bioaccumulate or biomagnify (U.S. EPA, 2000a). U.S. EPA Region IV considers chemicals in this category to consist of those so designated in EPA's (2000b) Appendix to Bioaccumulation Testing and Interpretation for the Purpose of Sediment Quality Assessment, Status and Needs, Chemical-Specific Summary Tables. COPCs at PSC 39 that are known to bioaccumulate or biomagnify consist of pesticides, PCBs, arsenic, cadmium, chromium, copper, lead, selenium, and zinc. Other COPCs are not known to bioaccumulate or biomagnify and were not included in the food chain model.

Representative Receptors – Outfall Nos.1 through 12

The kingfisher (*Ceryle alcyon*) was selected as a representative avian piscivore. The species is common in Florida and its range includes most of North America. Kingfishers are typically found along rivers, streams, seacoasts, and estuaries and along the edges of lakes and ponds. They prefer waters that are free of thick vegetation that obscures the view of the water and water that is not completely overshadowed by trees. Fish, usually less than 18 cm in length, are the preferred prey, commonly comprising about 90 to 95 percent of the diet. Kingfishers will also consume crustaceans and other

aquatic organisms when fish are sparse. Breeding populations in Florida are non-migratory. The area within which kingfishers normally forage is variable, but most studies cited by U.S. EPA (1993) indicate that kingfishers typically forage along 1 to 2 kilometers (3,280 to 6,560 feet) of shoreline.

The raccoon (*Procyon lotor*) was selected as a representative piscivorous mammal. The term "piscivorous" is used here in a broad sense to describe mammals that prey upon not only fish but on a variety of aquatic organisms (e.g., crustaceans). The raccoon is found in a variety of habitats and particularly in swamps, floodplain forests, and marshes. The raccoon is an opportunistic feeder that will consume terrestrial and aquatic plants and animals. Crustaceans are common forage items for raccoons, and fish usually comprise less than three percent of the diet (U.S. EPA, 1993). The size of a raccoon's home range depends on factors such as age, sex, habitat, food sources, and season. A literature review of several studies reported home ranges of up to 6,000 acres, although values of 200 to 600 acres were most common (U.S. EPA, 1993). Raccoon home ranges on a Georgia coastal island were 160 acres for males and 96 acres for females (Lotze, 1979).

Representative Receptors – Outfall Nos. 13 and 14

The cotton mouse (*Peromyscus gossypinus*) was chosen as a representative herbivorous small mammal. It is frequently associated with moist habitats along the wetland/upland interface (Burt and Grossenheider, 1980). It is common in the Southeast and feeds on grasses, sedges, seeds, fruits, grains, and bark. Since its home range is usually less than 1 acre (U.S. EPA, 1993), it could reside permanently in the vicinity of the sites.

The short-tailed shrew (*Blarina carolinensis*) was selected as a representative vermivorous (earthworm-eating) small mammal. It also consumes insects and other soil invertebrates (Burt and Grossenheider, 1980). It can be found in forested areas, brushy areas, and near marshes. The short-tailed shrew has a voracious appetite for its body size and as a result may receive high doses of contaminants relative to other small mammals. Its home range is approximately 0.5 to 2.4 acres (Cothran et al., 1991; U.S. EPA, 1993), allowing it to potentially spend all or much of its time near the sites.

The American robin (*Turdus migratorius*) was chosen as a representative omnivorous bird. Common winter food items include seeds and fruit. Insects and invertebrates, especially earthworms, are eaten more frequently in the spring and summer. The robin is common in Florida and the entire eastern United States in a variety of habitats. During the non-breeding seasons, robins in Florida are joined by migratory individuals from the northern United States, roaming over large areas and usually forming communal roosts within 1 to 2 miles of foraging areas. The home range during breeding season is approximately 0.5 to 2.0 acres (U.S. EPA, 1993).

The American woodcock (*Scolopax minor*) was selected as a representative vermivorous bird. It also consumes insects and other soil invertebrates. The species is common in Florida and the entire eastern United States. Its home range varies from approximately 8 to 185 acres (U.S. EPA, 1993).

The red-tailed hawk (*Buteo jamaicensis*) was selected as a representative avian carnivore. This hawk is common in Florida and the entire eastern United States, and it forages in a variety of habitats. The red-tailed hawk feeds primarily on small mammals but will also consume small birds, lizards, snakes, and insects (U.S. EPA, 1993). Breeding populations in Florida are non-migratory. The home range size is highly variable, depending on the available habitat. Mean home ranges varied from 150 to over 4,300 acres in several studies summarized by U.S. EPA (1993). The habitat at Outfall Nos. 13 and 14 would constitute a minor portion of the hawk's foraging area.

The red fox (*Vulpes vulpes*) was chosen as a representative mammalian carnivore. The red fox is common in Florida and the eastern United States. Its principal food items are small mammals (especially mice and voles) but it also preys on insects and birds. The red fox utilizes many habitat types but prefers deciduous woodlands and edge areas. Home ranges vary from 50 to over 3,000 acres, but most values in the literature are within a range of 140 to 2,100 acres (U.S. EPA, 1993). Thus, the habitat at Outfall Nos. 13 and 14 would constitute a minor portion of the fox's foraging area.

Food Chain Exposure Estimate and Risk Calculation

The following equation was used to estimate contaminant intake from ingestion of bioaccumulative COPCs for representative wildlife species:

$$PD = [(C_{soil} * FI * SA * F) + (C_{food} * F * FA * FI) + (C_{water} * W * FI)]/WR$$

where:

PD	=	predicted dose from the ingestion of food, water, and the incidental ingestion of soil or sediment (mg/kg/day)
C_{soil}	=	concentration in soil or sediment (mg/kg)
FI	=	fractional intake (portion of home range that overlaps affected area; assumed to be 100 percent)
SA	=	portion of diet consisting of soil or sediment
F	=	food consumed (kg/day)
FA	=	portion of diet consisting of prey and/or vegetation
C_{food}	=	contaminant concentration (vegetation or prey; mg/kg)
C_{water}	=	concentration in water (mg/L)
W	=	water consumed (L/day)
WR	=	weight of receptor (kg)

Both maximum and mean COPC concentrations were used in the food chain model. Mean concentrations were calculated using one-half the detection limit for "non-detects."

The following equation (U.S. EPA, 1997b) was used to estimate tissue concentrations of pesticides and PCBs in food items of the raccoon and kingfisher (C_{food}):

$$TBP = BSAF(C_s/f_{oc})f_l$$

where TBP = theoretical bioaccumulation potential (mg/kg)

C_s = chemical concentration in sediment (mg/kg)

BSAF = biota-sediment accumulation factor (ratio of the concentration of a chemical in tissue, normalized to lipid, to the concentration of the chemical in surface sediment, normalized to organic carbon). BSAFs are presented in Table 6-2.

f_{oc} = total organic carbon (TOC) content of sediment expressed as a decimal fraction

f_l = organism lipid content expressed as a decimal fraction

Because BSAFs do not exist for inorganic compounds, concentrations of inorganic COPCs (i.e., metals) in food items of the raccoon and kingfisher were assumed to be equal to sediment concentrations.

Recent sediment samples were not analyzed for TOC. However, the TOC was 0.684 percent and 1.54 percent in two sediment samples collected at Outfall Nos. 11 and 12 in a previous study (TtNUS, 1999b). The average of these two values (1.1 percent) was used herein (i.e., f_{oc} = 0.011).

Site-specific tissue data were not available, so lipid values in food items of the raccoon and kingfisher were assumed as follows. A lipid value of 2.2 percent was used for food items of the raccoon. This was the highest value available from among 12 crustacean species (Sullivan and Otwell, 1992). A lipid value of 3.0 percent was used for food items of the kingfisher and represents a default lipid content in fish that was recommended by U.S. EPA Region IV.

Incidental ingestion of sediment was included in the dose equations for raccoon but was assumed to be negligible for the kingfisher. Incidental ingestion of sediment is negligible for birds of prey (Sample and Suter, 1994). Furthermore, the kingfisher captures prey primarily from the water column, rather than by probing on or near the sediment substrate, and probably ingests negligible amounts of sediment.

Surface soil data were used to estimate concentrations of bioaccumulative COPCs in food items of the shrew, mouse, woodcock, robin, fox, and hawk at Outfall Nos. 13 and 14. Chemical concentrations in terrestrial invertebrates (food items of the shrew, robin, and woodcock) were estimated by multiplying each chemical's surface soil concentration by its associated soil-to-invertebrate bioaccumulation factor (BAF) (Table 6-3). Chemical concentrations in vegetation (food items of the mouse and robin) were estimated by multiplying each chemical's surface soil concentration by its associated soil-to-plant BAF. The resulting estimated concentrations in invertebrates and plants were multiplied by the associated food-to-mammal BAF to derive estimated concentrations in the shrew and mouse, respectively. The estimated mammal concentrations were then used to derive an estimated dose to the hawk and fox. Food of the robin was assumed to consist of 60 percent vegetation and 35 percent invertebrates. Prey items of the hawk and fox were assumed to consist of equal amounts of shrews and mice. Incidental ingestion of surface soil was also included in the dose equations for the shrew, mouse, robin, woodcock, and fox. Incidental ingestion of surface soil is negligible for birds of prey (Sample and Suter, 1994) and, therefore, was not included in the dose equations for the hawk.

Exposure parameters (e.g., body weight, ingestion rate) for the representative receptors are shown in Table 6-4. Wet weight food ingestion rates were calculated as follows (U.S. EPA, 1993):

- Shrew: 0.541 grams food/gram body weight/day (g/g bw/day).
- Cotton mouse: 8.6 g/day; calculated using rodent equation for food ingestion (g/day): 0.621 x $bw^{0.564}$ converted to wet weight assuming 50 percent water content in food items (vegetation).
- Raccoon: 856 g/day; calculated using mammal equation for food ingestion (g/day): 0.235 x $bw^{0.822}$ converted to wet weight assuming 75 percent water content in food items (aquatic organisms).
- Red fox: 0.11 g/g bw/day.
- Woodcock: 0.77 g/g bw/day .
- Robin: 0.89 g/g bw/day.
- Kingfisher: 0.50 g/g bw/day.
- Hawk: 0.112 g/g bw/day.

Water intake rates were calculated as follows (U.S. EPA, 1993):

- Raccoon: 0.083 g/g bw/day
- Kingfisher: 0.11 g/g bw/day

Surface water was absent from Outfall Nos. 13 and 14; therefore, water intake was not included in the dose equations for representative receptors at these locations.

Food chain HQs are presented for each outfall at which bioaccumulative COPCs were identified and are defined as the ratio of the modeled dose to the TRV.

6.2.5 Results and Discussion

The results of the ecological risk assessment are summarized in outfall-specific tables and are discussed below.

6.2.5.1 Outfall No. 1

Sediment concentrations of 14 PAH compounds, two phthalates, and three metals (barium, cadmium, and lead) exceeded ESVs and were retained as COPCs (Table 6-5). Three metals (aluminum, cobalt, and vanadium) were COPCs because ESVs were not available, but maximum concentrations of these metals were less than their NAS Cecil Field background values. Sediment concentrations of all PAHs were highest in sample SD-002, collected 25 feet from the outfall. Concentrations of most PAHs in this sample were greater than their respective PEL values but less than their respective effects range-median (ER-M) values (Tables 6-6 and 6-7). The PEL represents the lower limit of the range of contaminant concentrations that are usually or always associated with adverse effects. The ER-M represents the lower limit of the range of contaminant concentrations that are frequently associated with adverse effects. With the exception of anthracene, concentrations of PAHs in the sediment sample collected 50 feet from the outfall (SD-003) were less than their respective ESVs, indicating that potential ecological risks from these compounds are limited to the area in the immediate vicinity of the outfall. The sediment concentration of anthracene in SD-003 (52 µg/kg) only slightly exceeded the ESV (46.9 µg/kg) and was much less than its PEL and ER-M values.

Aluminum, copper, iron, and lead were the only surface water COPCs, but maximum concentrations of aluminum and lead were less than their NAS Cecil background values (Table 6-7). Screening HQs for these four metals were relatively low, with a maximum HQ of 8.7 (copper).

The kingfisher HQ for cadmium equaled but did not exceed 1.0, based on the maximum sediment concentration and using the no-observable-adverse-effects level (NOAEL) as a TRV (Tables 6-8 and 6-9).

Some food chain HQs exceeded 1.0 for lead. (See Tables 6-8 and 6-9). The maximum HQ for lead using the kingfisher as a representative receptor was elevated (HQ = 63.7). At least two conservative assumptions used in the food chain modeling for lead probably result in considerable overestimates of risk. First, most toxicity studies of dietary exposure use a highly bioavailable form of lead. The mammal and avian NOAELs and LOAELs that are used as TRVs for PSC 39 were based on laboratory studies in which lead acetate was administered in the diet (Sample et al., 1996). Lead acetate is considered to be 100 percent bioavailable (Wixon and Davies, 1993). The bioavailability (i.e., the portion that is absorbed) of environmental lead after ingestion depends upon a variety of factors, including the chemical form of lead, the species of organism, and the age, sex, and nutritional status of the individual (Eisler, 1988). Studies summarized by Wixon and Davies (1993) of laboratory rats indicate that lead in garden soil and roadside soil is 15 to 70 percent bioavailable relative to lead acetate. Absorption rates for environmental lead in birds were not available, but are probably less than 100 percent. Thus, the TRVs used in the food chain model overestimate the potential risks of lead ingestion under field conditions. The extent of any overestimation, however, is uncertain.

A second factor that contributes to the overestimation of lead risk via the food chain is the assumption that concentrations of lead in prey items are equal to sediment concentrations. This assumption was used since BSAFs do not exist for inorganic compounds. Although the ratio of lead concentrations in aquatic prey items to concentrations in sediment is variable, available data indicate that such ratios (i.e., BSAFs) are usually much less than 1.0 (Eisler, 1988).

The extent to which these conservative factors might overestimate lead risks is uncertain, but some overestimation of risks in the food chain model is suggested by data in Table 6-10. Specifically, food chain HQs for the raccoon and kingfisher exceed 1.0 even when NAS Cecil Field background concentrations are used in the model. Although background concentrations of naturally occurring chemicals can pose ecological risks under some environmental conditions, such situations are probably rare. In addition, the second row in Table 6-10 shows that a sediment concentration of 2.25 mg/kg is required to reduce the kingfisher HQ to less than 1.0. A sediment concentration of 2.3 mg/kg results in a kingfisher HQ of 1.02 (both of these HQ values assume a constant surface water concentration of 5.35 µg/l, which is the NAS Cecil Field background value). These sediment concentrations are well below the conservative ESV of 30.2 mg/kg. While it is true that concentrations of some chemicals in sediment could be less than their ESVs and still pose potential ecological risks from biomagnification, this is unlikely for lead, which does not generally biomagnify (Eisler, 1988). With the above factors in mind, the

level of risks due to background conditions needs to be kept in mind in evaluating site-related risks from lead. In addition, the consideration of an area-use factor is important and is discussed below.

Lead was detected in sediment sample 85D00101 (120 mg/kg), collected at Outfall No. 1, and in the duplicate of sample SD-003 (144 mg/kg), collected 50 feet downstream from the outfall. Lead was not detected in sediment samples collected 25 and 75 feet from the outfall or in the original sample SD-003, collected 50 feet from the outfall. Thus, lead was elevated in some sediment samples but not others and was not detected in the sample collected farthest downstream (75 feet from the outfall). The small areal extent of elevated lead concentrations in sediment (worst case, approximately 50 feet of stream) can be compared to the territory size of the kingfisher to obtain an area-use factor for this representative species. The area within which kingfishers normally forage is variable, but most studies cited by U.S. EPA (1993) indicate that kingfishers typically forage along 1 to 2 kilometers (3,280 to 6,560 feet) of shoreline. A conservative estimate of 1 kilometer (3,280 feet) will be assumed. Thus, an area-use factor for the kingfisher at Outfall No. 1 is 0.015 (50 feet ÷ 3,281 feet). This value, when multiplied by a lead HQ of 63.7 for the kingfisher (based on the maximum concentrations of lead in surface water and sediment at Outfall No. 1) results in an HQ of 0.96. The same area-use factor applied to the kingfisher lead HQ of 21.9 (average concentration) results in an HQ of 0.32. Although these HQs are less than 1.0, potential cumulative effects of lead must be considered. Specifically, maximum lead HQs for the kingfisher were greater than 1.0 at Outfall Nos. 1, 2, 3, 4, 5, and 6 (see Sections 6.2.5.2 through 6.2.5.6). Thus, a site-wide area-use factor is applicable for assessing potential risks from lead. Otherwise, adverse impacts to wildlife from site-wide contamination might be obscured by taking an outfall-by-outfall approach.

Fourteen of the 16 outfalls investigated herein have at least some aquatic habitat. The aquatic habitats at some outfalls are covered in dense aquatic vegetation such as cattail, largely preventing the kingfisher from foraging therein. Nevertheless, a conservative estimated shoreline length of 50 feet is assumed for each outfall. As discussed above for Outfall No. 1, and in Sections 6.2.5.2 through 6.2.5.5 for Outfall Nos. 2 through 5, 50 feet is a conservative estimate of the length of stream habitat in which lead is elevated in sediments at Outfalls No. 1 through 5. A site-wide area-use factor for the kingfisher is 14 x 50 feet ÷ 3,281 feet, or 0.21. The kingfisher lead HQ, based on site-wide average surface water and sediment concentrations, is 26.3 (Table 6-10). Applying an area-use factor of 0.21 to an HQ of 26.3 results in an HQ of 5.5. This value does not seem particularly elevated when considering the above discussion regarding the derivation of the TRV and the assumption of a BSAF of 1.0.

The adjusted food chain HQ of 5.5 for lead would decrease to approximately 2.1 when using wading birds instead of the kingfisher to represent piscivorous avian receptors. The kingfisher HQs were calculated using a food ingestion rate of 0.50 gram of food per gram of body weight per day (g/g bw/day). Wading birds such as the great blue heron, little blue heron, snowy egret, tricolored heron, and green heron (all of

which occur at NAS Cecil Field and presumably forage at the outfalls) have lower food ingestion rates than the kingfisher. The estimated food ingestion rate for the great blue heron is 0.18 g/g bw/day (U.S. EPA, 1993) and was derived using Kushlan's (1978) allometric equation for daily food ingestion rate by herons:

$$\log I_f = 0.966 (\log BW) - 0.64$$

where I_f = food ingestion rate (g fresh weight/bird/day)
BW = body weight (g)

Exposure factors for the little blue heron, snowy egret, tricolored heron, and green heron are not provided by U.S. EPA (1993) but, based on average body weights from Dunning (1993) and using Kushlan's equation, the estimated food ingestion rates for each of these species is 0.19 g/g bw/day. Since an ingested dose varies directly with the food ingestion rate, the food chain HQs for wading birds would be 38 percent of the HQ values for the kingfisher (0.19/0.50 = 0.38). The thick emergent aquatic vegetation present at some of the outfalls and in all the streams downstream of the outfalls comprises better habitat for wading birds than for the kingfisher. Nevertheless, the kingfisher was chosen to represent piscivorous birds as a conservative measure; the conservativeness was due to the kingfisher's greater food ingestion rate compared to those of wading birds.

In conclusion, risk to upper-level receptors from lead via the food chain is negligible or minor at worst, considering the conservative assumptions used in the food chain model. There is some potential for risk to benthic receptors, but potential risk is probably minor, considering the maximum sediment HQ is a relatively low 4.77 (Table 6-5). Lead in sediments exceeded its ESV in the sample collected at the outfall and in the duplicate of the sample collected 50 feet from the outfall. Lead was not detected in sediment samples collected 25 and 75 feet from the outfall or in the original sample collected 50 feet from the outfall. Similarly, other COPCs at Outfall No. 1 pose potential risk to benthic and aquatic receptors in the vicinity of the outfall but not to upper-level receptors. PAHs in sediment may pose risks to benthic organisms in the vicinity of the sample collected 25 feet from the outfall, but PAHs pose negligible risks in the vicinity of the sample 50 feet from the outfall.

6.2.5.2 Outfall No. 2

Aluminum, cobalt, and vanadium were COPCs in sediment because ESVs were not available, and sediment COPCs with screening HQs greater than 1.0 consisted of bis(2-ethylhexyl) phthalate (BEHP) (HQ = 5.6), cadmium (HQ = 1.92), and lead (HQ = 1.36). Maximum sediment concentrations of all five metal COPCs were less than their NAS Cecil background (Table 6-11).

Surface water ESVs were not available for carbon disulfide and cobalt, and aluminum, copper, iron, lead, thallium, and zinc were surface water COPCs with HQs ranging from 1.36 (copper) to 34.09 (lead) (Table 6-12). The maximum surface water concentration of cobalt was less than its NAS Cecil Field background value. Maximum surface water concentrations of aluminum, copper, iron, thallium, and zinc were approximately one to three times greater than their respective NAS Cecil Field background values, and the maximum concentration of lead (45 µg/L) was approximately eight times greater than its NAS Cecil background value (5.35 µg/L).

Lead and zinc had food chain HQs greater than 1.0 (Tables 6-13 and 6-14). Maximum food chain HQs were relatively low for zinc (1.26) but were higher for lead (18.2). As discussed in Section 6.2.5.1, several conservative assumptions contribute to typically elevated food chain HQs for lead. In addition, the food chain HQs for metals were calculated by assuming that concentrations in prey were equal to sediment concentrations; this is probably overly conservative. Furthermore, the food chain HQs for zinc would be considerably less than 1.0 when incorporating area-use factors. The food chain HQs for lead at this outfall are less than those calculated using the NAS Cecil background values (Tables 6-10 and 6-13). For the above reasons, potential risks to upper-level receptors from lead and zinc are negligible.

The screening HQ for aluminum in surface water was moderately elevated (HQ = 31.15) based on the ESV of 87 µg/L, but U.S. EPA (1999b) notes that “EPA is aware of field data indicating that many high quality waters in the U.S. contain more than 87 µg/L, when either total recoverable or dissolved is measured." Aluminum toxicity in surface water varies with pH and hardness, neither of which was analyzed in water samples collected at PSC 39.

The maximum surface water concentration of lead was elevated relative to its ESV and to its NAS Cecil Field background value. However, the two hits of lead were in unfiltered water samples. Subsequent to the June 1999 sampling event (in which the first lead hit was detected), two additional surface water samples (one filtered, one unfiltered) were collected in August 1999. Lead was detected in the unfiltered sample, SW-102, at a concentration of 35.5 µg/L but was not detected in the simultaneously collected filtered sample (SW-102-F). Thus, the elevated lead concentrations in two of five samples collected at this outfall are probably the result of particulate lead. The maximum sediment concentration of lead was less than its NAS Cecil Field background value, only slightly exceeded its conservative ESV, and was well below the ER-M and PEL values (Table 6-6).

In summary, potential ecological risks from sediment COPCs are negligible. Elevated concentrations of aluminum and lead in surface water do not appear to pose significant ecological risks for the reasons discussed above. In view of the conservative assumptions used in the model, results of the food chain modeling indicate negligible potential risks to representative higher-level receptors from surface water

and sediment COPCs. For these reasons, surface water and sediment contaminants do not pose significant risks to ecological receptors at this outfall.

6.2.5.3 Outfall No. 3

One VOC, 19 SVOCs (18 PAH compounds and phenol), two PCBs, and six metals were sediment COPCs, either because their maximum concentrations exceeded ESVs or because ESVs were not available (Table 6-15). All six metal COPCs had relatively low screening HQs (less than 3.9). Maximum sediment concentrations of aluminum, cobalt, and vanadium were less than their NAS Cecil background values. Cadmium, copper, and lead were the only metal COPCs whose maximum sediment concentrations exceeded NAS Cecil background values, but the exceedances were slight. Most PAH concentrations were greatest in sample SD-008, collected 25 feet from the outfall (Table 6-15). The screening HQ for acenaphthene was especially elevated (HQ=476.9). Concentrations of 1-methylnaphthalene, benzo(g,h,i)perylene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene were greatest in sample SD-401, collected 75 feet from the outfall. Screening HQs for these four PAHs were relatively low (less than 2.0), except for dibenzo(a,h)anthracene (HQ = 28.3).

Surface water COPCs consisted of carbon disulfide, cis-1,2-dichloroethene, aluminum, copper, and thallium (Table 6-16). Screening HQs for the three metal COPCs were relatively low, and maximum surface water concentrations of aluminum and thallium were less than their NAS Cecil background values.

Aroclor 1260 and lead were the only COPCs with food chain HQ values greater than 1.0 (Tables 6-17 and 6-18). However, the maximum food chain HQ for Aroclor 1260 only slightly exceeded 1.0 and would be much less than 1.0 using area-use factors. The food chain maximum HQ for lead (kingfisher) was moderately elevated (HQ = 25.4) using the maximum sediment concentration of 57.4 mg/kg, detected in sample SD-008, collected 25 feet from the outfall. Lead HQs would be considerably less than 1.0 using the concentration detected in the sediment sample collected 50 feet from the outfall (SD-009: 16.7 mg/kg), and the food chain HQs using average concentrations of lead at this outfall are less than those calculated using NAS Cecil Field background values (Tables 6-10 and 6-18). For the reasons discussed in Section 6.2.5.1, potential risks to upper-level receptors from lead at this outfall are minimal.

In summary, PCBs, PAHs, and some metals pose potential risks to aquatic and sediment-dwelling invertebrates near the outfall. Concentrations of some PAHs in the sample collected 25 feet from the outfall exceeded ER-M and PEL values. Concentrations of some PAHs in the sample collected 75 feet from the outfall exceeded PEL values, but all concentrations in this sample were less than ER-M values. Results of the food chain modeling indicate negligible potential risks to representative higher-level receptors that prey on aquatic and sediment invertebrates. The distance from the outfall/ditch to Sal

Taylor Creek is approximately 3,600 feet. The thick vegetation in the ditch and the generally low flow conditions undoubtedly serve to retard or minimize the migration of site-related contaminants into Sal Taylor Creek.

6.2.5.4 Outfall No. 4

Ten PAH compounds, two phthalates, and 11 metals were retained as COPCs in sediment. Screening HQs were elevated for acenaphthylene (HQ = 361.2), 2-methylnaphthene (HQ = 17.3) acenaphthene (HQ = 41.7), and BEHP (HQ = 40.7) but were relatively low (less than 5.4) for other SVOCs. The single detected concentration of acenaphthylene exceeded its ER-M and PEL, and maximum concentrations of 2-methylnaphthene and acenaphthene exceeded their PEL values but were less than ER-M values (Table 6-6). The maximum concentration of BEHP exceeded its PEL but was well below the ESV proposed by Jones et al. (1997) (Table 6-6).

Maximum concentrations of all inorganic sediment COPCs (except aluminum) were measured either at the outfall or in sample SD-011, collected 25 feet from the outfall. Maximum sediment concentrations of aluminum, antimony, cobalt, iron, and vanadium were less than their respective NAS Cecil background values (Table 6-19). Concentrations of the remaining six metal COPCs (except cadmium) in the sediment sample collected 50 feet from the outfall (SD-012) were less than NAS Cecil background values and less than ESVs (see Appendix A for analytical results).

The concentration of lead in the sediment sample collected at the outfall (85D00401: 1,300 mg/kg) was elevated and exceeded all available guidelines (Table 6-6). The lead concentration in sediment collected 25 feet downstream (SD-011: 198 mg/kg) was also elevated but was less than the ER-M. The lead concentration in the sample collected 50 feet downstream from the outfall (SD-012: 24.8 mg/kg) was less than the NAS Cecil Field background value and less than the most conservative ESV.

Carbon disulfide, aluminum, copper, iron, lead, thallium, and zinc were COPCs in surface water (Table 6-20). The screening HQs for surface water COPCs were relatively low, ranging from 1.4 (zinc) to 8.26 (copper). Maximum surface water concentrations of aluminum and iron were less than NAS Cecil background values. Analyses were conducted only on unfiltered water samples. Thus, the extent to which surface water concentrations were due to suspended particulates is unknown. As discussed by U.S. EPA (1996b), concentrations of dissolved metals, rather than total metals, more closely approximate the bioavailable fraction of metals in the water column.

Arsenic, cadmium, chromium, lead, and zinc had HQ values greater than 1.0 in the food chain modeling (Tables 6-21 and 6-22). The maximum food chain HQs for cadmium and zinc were relatively low (less than 6.2), and the maximum food chain HQ for arsenic was higher (HQ = 18.6). These HQs would be

much less than 1.0 when incorporating an area-use factor. Based on sediment concentrations collected at the outfall (sample 85D00401), maximum food chain HQs were elevated for chromium (HQ=150) and lead (HQ=575) using the kingfisher as a representative receptor and the NOAEL as a toxicity reference value. Sediment concentrations of chromium and lead were not elevated in sample SD-012, collected 50 feet from the outfall (chromium: 8.4 mg/kg; lead: 24.8 mg/kg). The food chain HQs for lead are partially mitigated by factors discussed in Section 6.2.5.1.

In summary, potential ecological risks appear to be limited primarily to sediment invertebrates from PAHs, lead, and chromium. The acenaphthylene sediment concentration was elevated in the sample 50 feet from the outfall. Sediment concentrations of 2-methylnaphthalene and acenaphthene in the sample collected 25 feet from the outfall were elevated relative to the most conservative ESVs but were less than some alternate ESVs. PAHs at these concentrations pose negligible risks to upper-level receptors. Lead and chromium were elevated in sediment only in the immediate vicinity of the outfall. Food chain modeling indicates potential risks to representative higher-level receptors from lead and other metals only if such receptors forage exclusively in the immediate vicinity of the outfall, which does not occur. For these reasons, potential risks to ecological receptors from contaminants at Outfall No. 4 are minimal.

6.2.5.5 Outfall No. 5

BEHP (HQ = 19.18) and seven PAHs were COPCs in sediment (Table 6-23). The screening HQs for the seven PAHs ranged from 1.24 (benzo(a)pyrene) to 29.81 (acenaphthene), but the maximum concentration of total PAHs (1,500 µg/kg) was less than the ESV for total PAHs (1,684 µg/kg). The maximum sediment concentration of acenaphthene (200 µg/kg) was less than the ER-M but greater than the PEL (Table 6-6). Maximum concentrations of all other PAHs were less than the ER-M and PEL values. Sediment ESVs were not available for aluminum, cobalt, and vanadium. Maximum sediment concentrations of these three metals were less than their respective NAS Cecil background values. Cadmium, copper, lead, and zinc were COPCs with HQs that ranged from 1.1 (zinc) to 58.82 (copper).

The maximum sediment concentration of lead (44.6 mg/kg) was relatively low (HQ = 1.73 mg/kg) and was measured in the sample collected 25 feet from the outfall. This concentration was much less than the ER-M and PEL values. The lead concentration in the sediment sample collected 50 feet from the outfall (35.5 mg/kg) was less than the NAS Cecil background value.

Carbon disulfide and 11 metals were COPCs in surface water (Table 6-24). Screening HQs were highest for lead (155.3), aluminum (97.01), cadmium (36.67), and zinc (28.69). Concentrations of all metals (except thallium) were greatest in unfiltered surface water sample SW-015, and concentrations of most metals exceeded their NAS Cecil Field background values. The screening HQ for aluminum in surface

water was based on the ESV of 87 µg/L, but, as discussed in Section 6.2.5.2, aluminum concentrations exceed 87 µg/L in many high-quality waters in the United States (U.S. EPA, 1999b).

The maximum unfiltered surface water concentrations of lead and cadmium were elevated relative to their ESVs and to their NAS Cecil Field background values. In August 1999, two additional surface water samples (one filtered, one unfiltered) were collected for analysis of lead and cadmium. Lead was detected in the unfiltered sample (12.8 µg/L) but not in the simultaneously collected filtered sample. Cadmium was not detected in either the filtered or the unfiltered sample. Thus, the elevated lead and cadmium concentrations could have been the result of particulates. As discussed by U.S. EPA (1996b), concentrations of dissolved metals, rather than total metals, more closely approximate the bioavailable fraction of metals in the water column. Maximum sediment concentrations of both cadmium and lead were only slightly greater than the most conservative ESVs and were much less than alternate ESVs (Table 6-6).

Chromium, copper, lead, and zinc had HQ values greater than 1.0 in the food chain modeling (Tables 6-25 and 6-26). Most food chain HQs were relatively low, but the maximum HQs for copper (HQ = 20.2) and lead (HQ = 23.1) were moderately elevated. As discussed in Section 6.2.5.1, several conservative assumptions in the food chain model contribute to typically elevated food chain HQs for lead. The kingfisher food chain HQs for lead based on maximum concentrations were only slightly greater than those calculated using NAS Cecil Field background values (Tables 6-10 and 6-25). For the reasons discussed in Section 6.2.5.1, potential risks to upper-level receptors from lead are negligible.

The maximum screening HQ for copper in sediment was elevated (HQ = 58.82). This HQ was based on a sediment concentration of 1,100 mg/kg in sample 85D000501, collected at the outfall. The copper concentration in sediment sample SD-014, collected 25 feet downstream from the outfall, was 9.7 mg/kg, and copper was detected in sample SD-015, collected 50 feet downstream from the outfall, at 8.6 mg/kg. Both these latter concentrations are less than the ESV and NAS Cecil Field background values.

In summary, potential ecological risks appear to be limited to benthic organisms from exposure to copper in the immediate vicinity of the outfall. Copper was not elevated in sediment samples collected 25 and 50 feet downstream. Potential risks to benthic organisms from PAHs and other metals are minor at worst. In view of the conservative assumptions used in the food chain model (i.e., area use of 100 percent, metal BSAFs = 1.0), potential risks to upper-level receptors from COPCs are negligible. Overall, since potential risks are limited to extremely small areas at this outfall, the potential risks are considered to be negligible or minor.

6.2.5.6 Outfall No. 6

COPCs in sediment consisted of 15 PAH compounds, one phthalate, 4,4'-DDT and its metabolites 4,4'-DDD and 4,4'-DDE, aluminum, cadmium, cobalt, and vanadium (Table 6-27). Screening HQs were moderately elevated for acenaphthylene, 2-methylnaphthalene, fluoranthene, dibenzo(a,h)anthracene, phenanthrene, and 4,4'-DDD, with HQs ranging from 10.5 to 40. The screening HQ for acenaphthene was especially high (HQ = 163.9). The single detected concentration of acenaphthene (1,100 µg/kg) exceeded the ER-M and PEL values and most other alternate screening guidelines (Table 6-6), but this compound was not detected in sample SD-403 (detection limit = 100 µg/kg), collected 75 feet from the outfall. The maximum concentrations of 17 out of 19 PAHs were in sample SD-017, collected 25 feet from the outfall (Table 6-27). Sediment concentrations of only three PAHs exceeded their ESVs in the sample collected 75 feet from the outfall. At this location, the concentration of fluoranthene (156 µg/kg) slightly exceeded its ESV but was well below the ER-M and PEL; the acenaphthylene concentration (145 µg/kg) slightly exceeded its PEL, but was well below the ER-M value; and alternate ecological sediment guidelines do not exist for benzo(b)fluoranthene (Table 6-6).

4,4'-DDT and its metabolites 4,4'-DDD and 4,4'-DDE exceeded their ESVs in sediment sample 85D000601, collected at the outfall. These pesticides (referred to collectively as DDTR) were not detected in SD-017 or SD-018, collected 25 and 50 feet, respectively, from the outfall. However, DDTR detection limits exceeded the ESVs in these two samples. Specifically, detection limits for all three DDTR compounds were 64 µg/kg in SD-017 and 120 µg/kg in SD-018. Additional samples were subsequently collected and analyzed for pesticides at 25 and 50 feet from the outfall. DDTR was not detected in either of the additional samples, but detection limits, although much lower than in the original samples, were still greater than the ESVs. Detection limits in the additional sample collected at 25 feet (SD-105) were 11.5 µg/kg (4,4'-DDD and 4,4'-DDE) and 23 µg/kg (4,4'-DDT). Detection limits in the additional sample collected at 50 feet (SD-106) were 4.2 µg/kg for all three DDTR compounds. Thus, although the detection limits in the later two sediment samples exceeded the ESVs (1.2 to 2.1 µg/kg), the detection limits were well below most sediment guidelines (Table 6-6).

Maximum sediment concentrations of all four inorganic COPCs were less than their respective NAS Cecil Field background values.

Several metals were COPCs in surface water (Table 6-28). Screening HQs were elevated for aluminum (HQ = 379), cadmium (HQ = 39.7), copper (HQ = 13.0), iron (HQ = 83.4), lead (HQ = 33.1), and zinc (HQ = 20.2). Surface water concentrations of all metal COPCs were greatest in unfiltered surface water sample SW-018, and concentrations of most metals exceeded their NAS Cecil Field background values. The screening HQ for aluminum in surface water was based on the ESV of 87 µg/L, but, as discussed in Section 6.2.5.2, aluminum concentrations exceed 87 µg/L in many high-quality waters in the United

States (U.S. EPA, 1999b). Two additional surface water samples (one filtered, one unfiltered) were collected for analysis of lead and cadmium. Neither lead nor cadmium was detected in the additional samples, and detection limits were less than ESVs (Appendix A). Thus, the elevated lead and cadmium concentrations in sample SW-018 could have been the result of particulate lead. As discussed by U.S. EPA (1996b), concentrations of dissolved metals, rather than total metals, more closely approximate the bioavailable fraction of metals in the water column.

DDTR, arsenic, chromium, lead, and zinc had HQ values greater than 1.0 in the food chain modeling (Tables 6-29 and 6-30). The NOAEL HQs based on maximum concentrations were relatively low (less than 4.9) for all COPCs except 4,4'-DDE (HQ = 22.1) and lead (HQ = 10.8). The HQs for DDTR using average concentrations were higher than HQs using maximum concentrations because the detection limits were high in some samples and HQs were calculated using one-half the detection limit for non-detects. Food chain HQs for all COPCs would be much less than 1.0 when incorporating an area-use factor. In addition, the food chain HQs for lead are partially mitigated by factors discussed in Section 6.2.5.1.

In summary, PAHs in sediment might pose ecological risks to benthic invertebrates, but potential risks are primarily limited to the vicinity of the sample collected 25 feet from the outfall. PAHs were not analyzed in the sediment sample collected 50 feet from the outfall, but sediment concentrations of PAHs in the sample collected 75 feet from the outfall were either less than conservative ESVs or only slightly exceeded their ESVs. PAHs present at these concentrations pose negligible risks to upper-level receptors. DDT and its metabolites may pose ecological risks to benthic invertebrates in the immediate vicinity of the outfall but were not detected in sediments collected 25 and 50 feet downstream. Food chain modeling indicates potential risks to piscivorous birds from DDTR only if such receptors forage exclusively in the immediate vicinity of the outfall, which does not occur. Thus, potential risks to ecological receptors from DDTR are limited to a small area and are probably minor (at worst).

6.2.5.7 Outfall No. 7

Acetone, methylene chloride, aluminum, cobalt, and vanadium were the only COPCs in sediment, and these were COPCs because ESVs were not available (Table 6-31). Maximum concentrations of the three metal COPCs were less than their respective NAS Cecil Field background values.

Surface water COPCs consisted of carbon disulfide, BEHP, aluminum, and iron (Table 6-32). Maximum surface water concentrations of aluminum and iron exceeded their respective NAS Cecil Field background values. The screening HQ for aluminum in surface water was elevated (HQ = 43.6) based on the ESV of 87 µg/L but, as discussed in Section 6.2.5.2, aluminum concentrations exceed 87 µg/L in many high-quality waters in the United States (U.S. EPA, 1999b).

None of the COPCs at this outfall are considered to be bioaccumulative, and, thus, they pose negligible risk via the food chain.

Overall, the sediment data indicate negligible or minor ecological risks. The maximum surface water concentration of aluminum was elevated, but potential ecological risks from aluminum in surface water might be negligible, based on the uncertainty in the ESV. Aluminum concentrations in sediment were well below its NAS Cecil Field background value.

6.2.5.8 Outfall No. 8

Acetone, carbon disulfide, aluminum, and vanadium were the only COPCs in sediment, and these were COPCs because ESVs were not available (Table 6-33). Maximum sediment concentrations of aluminum and vanadium were less than their respective NAS Cecil Field background values.

Surface water COPCs consisted of carbon disulfide, methylene chloride, iron, and thallium (Table 6-34). Surface water screening HQs for iron (1.22) and thallium (1.0) were low, and maximum surface water concentrations of iron and thallium were less than their respective NAS Cecil Field background values.

None of the COPCs at this outfall are considered to be bioaccumulative, and, thus, they pose negligible risk via the food chain.

In summary, SVOCs, pesticides, and PCBs were not detected in any surface water or sediment samples from this outfall. Metals were detected at relatively low concentrations, and all concentrations were less than ESVs and/or less than NAS Cecil Field background values. Thus, ecological risks from surface water and sediment contaminants at this outfall are negligible.

6.2.5.9 Outfall No. 8A

As described in Section 6.2.1, this “outfall” is actually the upstream end of a culvert through which Sal Taylor Creek flows underneath the north-south runways. Aluminum, cobalt, and vanadium were the only COPCs in sediment at this location, and these were COPCs because ESVs were not available (Table 6-35). Sediment concentrations of aluminum and cobalt were less than their respective NAS Cecil Field background values, and the concentration of vanadium in sediment (15.7 mg/kg) slightly exceeded its NAS Cecil Field background value (15 mg/kg). BEHP was the only surface water COPC, with a screening HQ of 9.3 (Table 6-36).

None of the COPCs at this outfall are considered to be bioaccumulative, and, thus, they pose negligible risk via the food chain.

In summary, pesticides and PCBs were not detected in any surface water or sediment samples from this outfall, and BEHP was the only detected SVOC. Due to the relatively low detected concentrations of BEHP and metals, potential ecological risks are negligible or minor at worst.

6.2.5.10 Outfall No. 9

Acetone, carbon disulfide, methylene chloride, aluminum, and vanadium were COPCs in sediment because ESVs were not available (Table 6-37). In addition, 4,4'-DDT was a sediment COPC with a screening HQ of 4.2. Maximum sediment concentrations of aluminum and vanadium were less than their respective NAS Cecil Field background values.

Surface water COPCs consisted of carbon disulfide and aluminum (Table 6-38). The screening HQ for aluminum (2.6) was relatively low, and the maximum surface water concentration of aluminum was less than its NAS Cecil Field background value.

Food chain HQs for 4,4'-DDT were less than 1.0 using the raccoon as representative receptor and were relatively low using the kingfisher as a representative receptor (maximum HQ = 4.07) (Tables 6-39 and 6-40). The kingfisher HQ would be much less than 1.0 when using a more realistic area use factor, since the area at Outfall No. 9 comprises a miniscule portion of the home range of any piscivorous bird. In addition, the single detected concentration of 4,4'-DDT (5 μg/kg) in the sample collected at the outfall was less than the ER-M and most other alternate ESVs (Table 6-6). For the above reasons, potential ecological risks from 4,4'-DDT are minor.

In summary, SVOCs and PCBs were not detected in any surface water or sediment samples collected from this outfall. Metals were detected at relatively low concentrations, and all concentrations were less than ESVs and/or less than NAS Cecil background values. Potential ecological risks from the only detected pesticide (4,4'-DDT) are minor.

6.2.5.11 Outfall No. 9A

As described in Section 6.2.1, this outfall is actually the downstream end of a culvert through which Sal Taylor Creek exits after flowing underneath the north-south runways. Aluminum, cobalt, and vanadium were the only COPCs in sediment at this location, and these were COPCs because ESVs were not available (Table 6-41). Aluminum, cobalt, and vanadium were also the only sediment COPCs at Outfall No. 8A, collected at the upstream end of the culvert. Sediment concentrations of all three COPCs were

less than their respective NAS Cecil Field background values. Surface water was not collected from this location.

None of the COPCs at this outfall are considered to be bioaccumulative, and, thus, they pose negligible risk via the food chain.

In summary, pesticides and PCBs were not detected at this location, and PAH concentrations were much less than their ESVs. Concentrations of all metal COPCs were less than their NAS Cecil Field background values. Therefore, potential ecological risks are negligible.

6.2.5.12 Outfall No. 10

Carbon disulfide, methylene chloride, aluminum, cobalt, selenium, and vanadium were sediment COPCs because ESVs were not available (Table 6-42), but maximum concentrations of the four metal COPCs were less than their NAS Cecil Field background values. Carbon disulfide, aluminum, and iron were COPCs in surface water (Table 6-43). Maximum concentrations of aluminum and iron in surface water were approximately twice their respective NAS Cecil Field background values. The screening HQ for aluminum in surface water was moderately elevated (HQ = 24.7) based on the ESV of 87 µg/L, but, as discussed in Section 6.2.5.2, aluminum concentrations exceed 87 µg/L in many high-quality waters in the United States (U.S. EPA, 1999b). In addition, surface water analyses were conducted only in unfiltered samples. Thus, the moderately elevated surface water concentrations of aluminum were probably due (at least partially) to suspended particulate matter, although the extent to which surface water concentrations resulted from suspended particulates is unknown.

Selenium HQ values were greater than 1.0 in the food chain modeling, but HQs were relatively low, with a maximum HQ of 1.75 (Tables 6-44 and 6-45). Selenium was not detected in surface water and its maximum concentration in sediment was less than its NAS Cecil background value.

In summary, with the exception of aluminum in surface water, COPCs in surface water and sediments collected from Outfall No. 10 were present at concentrations that pose negligible ecological risks. The potential risks from aluminum in surface water are probably negligible or minor at worst, based on the uncertainty in the ESV. Aluminum concentrations in sediment were well below its NAS Cecil Field background value.

6.2.5.13 Outfall No. 11

The preliminary ecological risk assessment of this outfall, submitted to the NAS Cecil Field BCT in April 2000, showed significant potential risk to some ecological receptors due to elevated sediment

concentrations of Aroclor 1260 (maximum concentration 6,200 µg/kg) in the vicinity of the outfall. After additional sediment samples were collected to delineate the downstream extent of elevated Aroclor concentrations, the NAS Cecil Field BCT determined that sediment remediation was warranted. Subsequently, sediment removal was conducted during February 2001 (CH2MHill, 2001). Sediments were removed from the outfall to a point 275 feet downstream of the outfall and replaced with clean fill (Figure 6-8). Analytical data for the fill material is included in Appendix C.

Sediment samples collected downstream from the remediation area were analyzed for PCBs only. Aroclor 1260 was the single PCB compound detected in these samples, and the screening HQ was 15.4 (Table 6-46). The PEL and ER-M values for PCBs (189 µg/kg and 180 µg/kg, respectively) were exceeded in only one sample (CEF-P39-SD-304).

Maximum food chain HQs were relatively low, with values of 3.62 (raccoon) and 4.67 (kingfisher) (Table 6-47). Food chain HQs slightly exceeded 1.0 using average concentrations of Aroclor 1260 (Table 6-48). The ditch/stream downstream of Outfall No. 11 comprises a very small portion of the foraging area of wide-ranging receptors. The relatively low food chain HQs in Tables 6-46 and 6-47 would be well below 1.0 if the sizes of home ranges were incorporated into the food chain modeling.

In summary, sediments were removed from the first 275 feet of the ditch downstream from the outfall. Concentrations of Aroclor 1260 exceed the ESV in sediment samples collected in the first 500 feet downstream from the remediation area. These concentrations might pose risk to benthic receptors. Stream and wetland habitat in this stretch of the ditch is limited to the bottom of the ditch, where water is generally a few inches deep, 1 to 2 feet wide, and covered in thick vegetation. Risk to upper-level receptors via the food chain is negligible. The distance from the sample farthest downstream (CEF-P39-SD-305) to Sal Taylor Creek is approximately 2,400 feet. The thick vegetation in the stream and the generally low flow conditions make it unlikely that remaining PCB contamination will migrate to Sal Taylor Creek.

6.2.5.14 Outfall No. 12

Acetone, carbon disulfide, 3- and 4-methylphenol, 1-methylnaphthalene, aluminum, cobalt, and vanadium were COPCs in sediment because ESVs were not available (Table 6-49). In addition, nine PAH compounds were COPCs in sediment because their maximum concentrations exceeded their respective ESVs. Screening HQs for the PAHs ranged from 1.37 (pyrene) to 43.2 (acenaphthene). Although screening HQ values for a few PAH compounds in sediment were moderately high, maximum concentrations of individual PAHs were less than their respective ER-M and/or PEL values (Table 6-6). The maximum concentration of total PAHs (1510 µg/kg) was less than the ESV for total PAHs

(1684 µg/kg). Maximum sediment concentrations of the metal COPCs were less than NAS Cecil Field background values.

Surface water COPCs consisted of carbon disulfide, aluminum, and iron (Table 6-50). Screening HQs were relatively low for aluminum (4.41) and iron (1.55). Maximum surface water concentrations of aluminum and iron were less than their NAS Cecil Field background values.

In summary, potential ecological risks are limited to sediment-dwelling organisms from exposure to PAHs in sediment. Concentrations of other compounds do not pose significant ecological risks. None of the COPCs at this outfall are considered to be bioaccumulative, and, thus, they pose negligible risk via the food chain.

6.2.5.15 Outfall No. 13

Surface soil COPCs consisted of carbon disulfide, endrin, aluminum, chromium, iron, and vanadium (Table 6-51). Maximum concentrations of iron and vanadium were less than their NAS Cecil Field background soil values.

The screening HQ for chromium (24.5) was elevated, but the ESV (0.4 mg/kg) is based on hexavalent chromium (Efroymson et al., 1997a). The lowest available ESV for total chromium (for which soil samples at this site were analyzed) is 64 mg/kg (Table 6-52). Chromium concentrations at the site were well below this value.

The screening HQ for aluminum (184) was elevated. The soil ESV of 50 mg/kg is based on toxicity to plants (Efroymson et al., 1997a). Thus, potential toxicity to plants could exist in the area from which the maximum aluminum concentration of 9,200 mg/kg was collected. An ESV of 600 mg/kg has been established for the protection of soil microorganisms (Efroymson et al., 1997b); this ESV would result in a screening HQ of 15.3. No other soil ESVs were available for aluminum.

Endrin and chromium had HQ values greater than 1.0 in the food chain modeling (Tables 6-53 and 6-54). Maximum HQs were relatively low for endrin (2.41) and for chromium (2.86). As shown in Tables 6-53 and 6-54, endrin food chain HQs using average concentrations were slightly greater than those using maximum concentrations. This incongruity is the result of using one-half the detection limit for non-detected samples to calculate the average. Specifically, endrin was detected in one sample at 4.4 µg/kg, and endrin was not detected in two other soil samples where the detection limits were 3.9 µg/kg and 18 µg/kg. The average, calculated by assuming a value of one-half the detection limit, resulted in an average concentration that was slightly greater than the maximum detected concentration.

Endrin was previously detected (4.4 µg/g) at this site; this prompted additional sampling in 1999. Endrin was not detected in 1999, although the endrin detection limits in the two samples collected in 1999 (3.9 and 18 µg/kg) exceeded the U.S. EPA Region IV screening value (1 µg/kg). Nevertheless, these detection limits were well below the U.S. EPA Region IV screening value for total pesticides (100 µg/kg). The food chain HQs for endrin slightly exceeded 1.0 for the woodcock and robin and would be much less than 1.0 if area use factors were considered for these wide-ranging representative receptors.

In summary, the maximum concentration of aluminum suggests potential plant toxicity. However, plants at this site consist of a monoculture of mowed turf grass; this habitat type will continue as long as the runways remain in use. Ecological risks from aluminum are probably minimal, since habitat in the area consists of mowed grass near an active runway, providing only marginal ecological resources. There was no evidence of surface water flow in the swale at this site. This condition, combined with the soil cover of turf grass, greatly reduces the probability of contaminant migration to other areas. Aluminum poses negligible risks to upper-level receptors via the food chain. For the above reasons, potential ecological risks are considered to be negligible or minor.

6.2.5.16 Outfall No. 14

Surface soil COPCs consisted of acetone, carbon disulfide, aluminum, chromium, iron, and vanadium. Concentrations of iron and vanadium were less than NAS Cecil background soil values (Table 6-55). The screening HQ for chromium (25.0) was elevated, but the ESV (0.4 mg/kg) is based on hexavalent chromium (Efroymson et al., 1997a). The lowest available ESV for total chromium (for which soil samples at this site were analyzed) is 64 mg/kg (Table 6-52). Chromium concentrations at the site were well below this value.

The screening HQ for aluminum (200) was elevated. The soil ESV of 50 mg/kg is based on toxicity to plants (Efroymson et al., 1997a). Thus, potential toxicity to plants could exist in the area from which the maximum aluminum concentration of 10,000 mg/kg was collected. An ESV of 600 mg/kg has been established for the protection of soil microorganisms (Efroymson et al., 1997b); this ESV would result in a screening HQ of 16.7. Other soil ESVs were not available for this evaluation.

Chromium food chain HQs were greater than 1.0 for the robin (HQ = 1.41) and woodcock (HQ = 2.92) (Tables 6-56 and 6-57). These HQs would be much less than 1.0 if area-use factors were considered for these wide-ranging representative receptors.

In summary, the maximum concentration of aluminum suggests potential plant toxicity. However, plants at this site consist of a monoculture of mowed turf grass; this habitat type will continue as long as the runways remain in use. Ecological risks from aluminum are probably minimal, since habitat in the area

consists of mowed grass near an active runway, providing only marginal ecological resources. There was no evidence of surface water flow in the swale at this site. This condition, combined with the soil cover of turf grass, greatly reduces the probability of contaminant migration to other areas. Aluminum poses negligible risks to upper-level receptors via the food chain. For the above reasons, potential ecological risks are considered to be negligible.

6.2.6 Uncertainties

Uncertainty in the Preliminary Problem Formulation

- The soil infiltration-to-groundwater migration pathway and subsequent discharge into surface water were assumed to be minimal and were not investigated at Outfall Nos. 13 and 14. Potential risks may be underestimated.

- Representative species used in the food chain modeling included some species with home ranges much larger than the sites being investigated. However, the resulting overestimate of potential risks was partially mitigated by applying area use factors.

Uncertainty in the Ecological Effects Characterization

- Laboratory-derived NOAELs and LOAELs may not adequately represent toxicity thresholds for receptors under field conditions. In addition, NOAELs and LOAELs derived for species used in toxicity tests may not adequately represent toxicity thresholds for other species. These uncertainties may overestimate or underestimate potential risks.

- Data for investigating toxicity to reptiles and amphibians from oral ingestion of contaminants are sparse. Thus, potential risks via the food chain were not evaluated for reptiles and amphibians.

- Some contaminants were present for which no suitable toxicity guidelines were available.

Uncertainty in the Exposure Assessment

- The risk assessment for each outfall was based on a small number of samples. Generally, two to four surface water and two to four sediment samples were collected and analyzed. Although this is a small number of samples (especially where only one or two samples were available), the pools below the outfalls are small in areal extent. Therefore, the number of samples for this assessment appears to be adequate to determine the magnitude and extent of contamination.

- Dermal and inhalation exposure were not evaluated, potentially underestimating risks. However, these exposure routes are usually miniscule.

- Literature-based BSAFs and BAFs often vary between species and sites. This can overestimate or underestimate potential risks.

Uncertainty in the Risk Characterization

- This uncertainty results from the combination of the above uncertainties. For example, there are no sediment ESVs for aluminum, the surface water ESV for aluminum may be overly conservative (EPA, 1999b), and several conservative assumptions contribute to typically elevated food chain HQs for aluminum. Thus, aluminum concentrations in surface water and/or sediment were elevated relative to some toxicity thresholds, even when concentrations were much less than background concentrations. Similarly, the assessment of risks to upper-level receptors via the food chain is hindered by uncertainties such as the derivation of the TRV, the lack of a BSAF, and the choice of the best species to represent piscivorous receptors. A weight-of-evidence approach to assess risks was used to reduce the overall uncertainty in these situations.

- Uncertainty in risk characterization also results from the lack of data regarding the toxicity of multiple chemicals. For example, sediment concentrations of PAHs and one or more metals were elevated at several outfalls. When assessed individually, concentrations of these contaminants appear to pose negligible or minor potential risks to ecological receptors. The extent to which these same concentrations might contribute to cumulative toxicity is uncertain. Furthermore, the effects of exposure to chemical mixtures may be greater (synergism) or less than (antagonism) expected based on the effects of exposure to each chemical individually. Thus, chemical interactions might result in underestimation or overestimation of potential risks.

6.2.7 Summary and Conclusions

Several inorganic and organic compounds were present in PSC 39 surface water, sediment, and surface soil samples at concentrations that exceeded U.S. EPA Region IV and/or FDEP ecological screening values and were, therefore, retained as COPCs. Several other compounds were retained as COPCs because screening levels were not available. Most COPCs were eliminated as COCs in Step 3a of the risk assessment process for one or more reasons, such as concentrations comparable to background values (metals), concentrations comparable to alternative guideline values, and spatial analysis of detections.

Surface water contaminants do not pose significant risks to ecological receptors at any outfall.

Conclusions regarding sediment contaminants are as follows:

Outfall Nos. 2, 7, 8, 8A, 9, 9A, 10: Negligible ecological risks based on comparisons to toxicity screening values and food chain modeling results.

Outfall No. 1: Negligible risks to upper-level receptors. Lead and PAHs in sediment might pose ecological risks to benthic invertebrates but only in a small area near the outfall. Lead was not detected 75 feet from the outfall, and PAH concentrations were not elevated 50 feet from the outfall.

Outfall No. 3: Negligible risks to upper-level receptors. PAHs in sediment might pose ecological risks to benthic invertebrates but only in a small area near the outfall. Concentrations of most PAHs were not elevated 75 feet from the outfall. PCBs and some metals might also pose ecological risks to benthic invertebrates near the outfall.

Outfall No. 4: Negligible risks to upper-level receptors. Lead and chromium in sediment might pose ecological risks to benthic invertebrates but only in a small area near the outfall. Lead and chromium were not elevated 50 feet from the outfall. PAHs in sediment pose potential ecological risks to benthic invertebrates, but potential risks from most PAHs appear to be limited to the vicinity of the sample collected 25 feet from the outfall.

Outfall No. 5: Negligible risks to upper-level receptors. Copper in sediment might pose ecological risks to benthic invertebrates but only in a small area near the outfall. Copper was not elevated in samples collected 25 and 50 feet from the outfall. Acenaphthene in sediment might pose ecological risks to benthic invertebrates in the vicinity of the sample collected 25 feet from the outfall. Acenaphthene was not detected in the sediment sample collected at the outfall.

Outfall No. 6: Negligible risks to upper-level receptors. PAHs in sediment might pose ecological risks to benthic invertebrates but potential risks are primarily limited to the vicinity of the sample collected 25 feet from the outfall. DDT and its metabolites might pose minor ecological risks to benthic invertebrates in the immediate vicinity of the outfall, but were not detected in sediments collected 25 and 50 feet downstream.

Outfall No. 11: Sediment remediation was recently conducted as a result of elevated PCBs in sediment. Analytical data in remaining samples consist only of PCBs. Aroclor 1260 might pose ecological risks to benthic invertebrates, but risk to upper-level receptors via the food chain is negligible. The distance from the sample farthest downstream to Sal Taylor Creek is approximately 2,400 feet. The thick vegetation in

the stream and the generally low flow conditions make it unlikely that remaining PCB contamination will migrate to Sal Taylor Creek.

Outfall No. 12: Negligible risks to upper-level receptors. A few PAHs in sediment might pose ecological risks to benthic invertebrates, but maximum concentrations were less than their respective ER-M and/or PEL values.

Outfall Nos. 13 and 14: Negligible risks to upper-level receptors. The maximum concentrations of aluminum in surface soil might be toxic to plants, but plant toxicity data for aluminum are sparse. Plants at both locations are limited to frequently mowed grasses. The lack of surface water flow at these locations, combined with the soil cover of turf grass, greatly reduces the probability of contaminant migration to other areas. For these reasons, potential ecological risks are considered to be negligible.

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TABLE 6-1

TOXICITY REFERENCE VALUES (TRVs)
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
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Chemical	Test Species	Endpoint	Study Duration	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	Reference
PESTICIDES/PCBs						
4,4'-DDD[a]	rat	reproduction	2 years	0.8	4	Fitzhugh, 1948 [c]
	brown pelican	reproduction	5 years	0.0028[b]	0.028	Anderson et al., 1975 [c]
4,4'-DDE[a]	rat	reproduction	2 years	0.8	4	Fitzhugh, 1948 [c]
	brown pelican	reproduction	5 years	0.0028[b]	0.028	Anderson et al., 1975 [c]
4,4'-DDT	rat	reproduction	2 years	0.8	4	Fitzhugh, 1948 [c]
	brown pelican	reproduction	5 years	0.0028[b]	0.028	Anderson et al., 1975 [c]
Aroclor-1254	ring-necked pheasant	reproduction	17 weeks	0.18[b]	1.8	Dahlgren et al., 1972 [c]
	old field mouse	reproduction	12 months	0.068[b]	0.68	McCoy et al., 1995 [c]
Aroclor-1260[d]	ring-necked pheasant	reproduction	17 weeks	0.18[b]	1.8	Dahlgren et al., 1972 [c]
	old field mouse	reproduction	12 months	0.068[b]	0.68	McCoy et al., 1995 [c]
Endrin	mouse	reproduction	120 days	0.092[b]	0.92	Good & Ware, 1969 [c]
	screech owl	reproduction	> 83 days	0.01[b]	0.1	Fleming et al., 1982 [c]
INORGANICS						
Arsenic	mouse	reproduction	3 generations	0.126[b]	1.26	Schroeder & Mitchner, 1971 [c]
	brown-headed cowbird	mortality	7 months	2.46	7.38	USFWS, 1969 [c]
Cadmium	rat	reproduction	6 weeks	1	10	Sutou et al., 1980 [c]
	mallard duck	reproduction	90 days	1.45	20	White & Finley, 1978 [c]
Chromium	black duck	reproduction	10 months	1	5	Haseltine et al., unpublished data [c]
	rat	body weight, food consumption	1 year	3.28	NA	MacKenzie et al., 1958 [c]
Copper	mink	reproduction	357 days	11.7	15.14	Aulerich et al., 1982 [c]
	1-day old chicks	growth, mortality	10 weeks	47	61.7	Mehring et al., 1960 [c]

TABLE 6-1

TOXICITY REFERENCE VALUES (TRVs)
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 2 OF 2

Chemical	Test Species	Endpoint	Study Duration	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	Reference
Lead	rat	reproduction	3 generations	8	80	Azar et al., 1973 [c]
	Japanese quail	reproduction	12 weeks	1.13	11.3	Edens et al., 1976 [c]
Selenium	rat	reproduction	1 year, 2 generations	0.2	0.33	Rosenfeld & Beath, 1954 [c]
	mallard duck	reproduction	100 days	0.4	0.8	Heinz et al., 1989 [c]
Zinc	rat	reproduction	days 1-16 of gestation	160	320	Schlinker & Cox, 1968 [c]
	white leghorn hens	reproduction	44 weeks	14.5	131	Stahl et al., 1990 [c]

NA Not available.
a 4,4'-DDT used as a surrogate.
b NOAEL not determined (adverse effects at all test concentrations); NOAEL estimated by multiplying the LOAEL by 0.1.
c See Sample et al (1996) for full citations and details of the cited study.
d Aroclor-1254 used as a surrogate.
Note: Dietary NOAELs and LOAELs for the frog were not available for pesticides, PCBs, or metals.

TABLE 6-2

BIOTA-SEDIMENT ACCUMULATION FACTORS FOR ECOLOGICAL CHEMICALS OF POTENTIAL CONCERN (COPCs) PSC 39, FLIGHTLINE OUTFALLS NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA

COPC	BSAF	BSAF SOURCE
Pesticides/PCBs		
4,4'-DDD	0.28	Cook, 1995
4,4'-DDE	7.7	Cook, 1995
4,4'-DDT	1.67	Cook, 1995
Aroclor-1254	1.85	Cook, 1995
Aroclor-1260	1.85	Cook, 1995

BSAF = Biota-sediment accumulation factor.
COPC = Contaminant of potential concern.

TABLE 6-3

BIOACCUMULATION FACTORS
OUTFALL NOs. 13 and 14
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Chemical	Bioaccumulation Factor[a]					
	Terrestrial Invertebrate	Invertebrate Source	Terrestrial Plant	Plant Source	Mammal	Mammal Source
Pesticides/PCBs (mg/kg)						
Endrin[b]	6.7[c]	Korschgen, 1970	0.03[d]	(Lichtenstein and Schultz, 1965)	0.1[e]	Korschgen, 1970
Metals						
Chromium	0.306	Sample et al., 1998	0.0015	Baes et al., 1984	0.28	Baes et al., 1984

a Bioaccumulation factors (BAFs) consist of concentrations in tissue/concentrations in soil for invertebrates and plants and concentrations in tissue/concentrations in food for mammals.
b Aldrin + dieldrin used as a surrogate for endrin.
c Average of four values for aldrin and dieldrin concentrations in soil versus concentrations in earthworms (wet weight).
d Based on nomogram of BAFs developed from aldrin and dieldrin concentrations in soil versus concentrations in crops; converted from dry weight to wet weight plant concentration assuming 70% water content.
e Based on a nomogram of BAFs developed from aldrin and dieldrin concentrations in invertebrates versus animals feeding on invertebrates; assumed invertebrate concentration = 29.5 µg/kg (i.e., invertebrate BAF * maximum soil concentration).

TABLE 6-4

EXPOSURE PARAMETERS FOR REPRESENTATIVE ECOLOGICAL RECEPTORS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIA

Receptor	Representative Group	Body Weight[1] (grams)	Water Ingestion[1] (grams/day)	Food Ingestion[1,2] (grams/day)	Assumed Diet for Exposure Assessment[1]	Home Range[1] (acres)
Short-tailed shrew (*Blarina carolinensis*)	Insectivorous mammal	9.7[3]	NA	5.2	90% invertebrates 10% soil[4]	0.96[1] to 2.4[3]
Cotton mouse (*Peromyscus gossypnius*)	Herbivorous Mammal	31[5]	NA	8.6	98% vegetation 2% soil[6]	0.05 to 0.3[6]
Raccoon (*Procyon lotor*)	Omnivorous Mammal	3990	331	856	90.6% aquatic invertebrates 9.4% sediment	96 TO 160
Red fox (*Vulpes vulpes*)	Predatory Mammal	4530	NA	498	97.2% prey 2.8% soil	140 to 2100
American robin (*Turdus migratorius*)	Omnivorous Bird	77.3	NA	69	35% invertebrates 60% vegetation 5% soil[7]	0.5 to 2.1 (nesting season)
American woodcock (*Scolopax minor*)	Vermivorous Bird	197	NA	152	89.6% invertebrates 10.4% soil	8 to 185
Belted kingfisher (*Ceryle alcyon*)	Piscivorous Bird	136	15	68	100% fish	1 to 2 km[8]
Red-tailed hawk (*Buteo jamaicensis*)	Carnivorous Bird	1126	NA	126	100% prey soil, sediment: none[7]	940 to 2440

NA = Not applicable because surface water is not present at the locations where this species was used as a representative receptor (Outfall Nos. 13 and 14).

1 Exposure parameters are from U.S. EPA (1993) unless otherwise noted.

2 Food ingestion includes intended food items and incidentally ingested soil or sediment. For example, a shrew would be expected to consume 4.7 g invertebrates plus 0.5 g soil per day. See Section 7.4.2.1 of text for ingestion formulas.

3 Cothran et al. (1991).

4 Incidental soil ingestion data for the shrew could not be located. A value of 10% was estimated based on the range of values for other mammals presented by U.S. EPA (1993).

5 Lowery (1974).

6 Based on deer mouse (*Peromyscus maniculatus*).

7 Sample and Suter (1994).

8 Kilometers of shoreline (home range acreage not available).

TABLE 6-5

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SEDIMENT - OUTFALL NO. 1
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Analyte	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Semivolatile Organic Compounds (ug/kg)								
1-METHYLNAPHTHALENE	1/2	73	73	CEF-P39-SD-002	NA	20.2[a,b]	3.61	Yes
2-METHYLNAPHTHALENE	1/3	1300	1300	CEF-P39-SD-002	NA	20.2[a,b]	64.36	Yes
ACENAPHTHENE	1/3	2700	2700	CEF-P39-SD-002	NA	6.71[a,b]	402.38	Yes
ANTHRACENE	2/3	52	490	CEF-P39-SD-002	NA	46.9[a,b]	10.45	Yes
BENZO(A)ANTHRACENE	2/3	26	1200	CEF-P39-SD-002	NA	74.8[a,b]	16.04	Yes
BENZO(A)PYRENE	2/3	57	990	CEF-P39-SD-002	NA	88.8[a,b]	11.15	Yes
BENZO(B)FLUORANTHENE	2/3	63	1300	CEF-P39-SD-002	NA	655[a]	1.98	Yes
BENZO(G,H,I)PERYLENE	2/3	40	650	CEF-P39-SD-002	NA	655[a]	0.99	No
BENZO(K)FLUORANTHENE	2/3	29	570	CEF-P39-SD-002	NA	655[a]	0.87	No
BIS(2-ETHYLHEXYL)PHTHALATE	1/3	1750	1750	CEF-P39-SD-003	NA	182[a,b]	9.62	Yes
BUTYLBENZYL PHTHALATE	1/2	203	203	CEF-P39-SD-003	NA	182[a,b]	1.12	Yes
CHRYSENE	2/3	36	950	CEF-P39-SD-002	NA	108[a,b]	8.80	Yes
DIBENZO(A,H)ANTHRACENE	1/3	130	130	CEF-P39-SD-002	NA	6.22[a,b]	20.90	Yes
FLUORANTHENE	2/3	46	2800	CEF-P39-SD-002	NA	113[a,b]	24.78	Yes
FLUORENE	1/3	110	110	CEF-P39-SD-002	NA	21.2[a,b]	5.19	Yes
INDENO(1,2,3-CD)PYRENE	2/3	37	570	CEF-P39-SD-002	NA	655[a]	0.87	No
NAPHTHALENE	1/3	86	86	CEF-P39-SD-002	NA	34.6[a,b]	2.49	Yes
PHENANTHRENE	1/3	1400	1400	CEF-P39-SD-002	NA	86.7[a,b]	16.15	Yes
PYRENE	2/3	48	2100	CEF-P39-SD-002	NA	153[a,b]	13.73	Yes
TOTAL PAHs	2/3	265	14256	CEF-P39-SD-002	NA	1684[a,b]	8.47	Yes
Inorganics (mg/kg)								
ALUMINUM	4/4	610	2710	CEF-P39-SD-003	10,200	NA	NA	Yes
ARSENIC	1/4	0.51	0.51	CEF-P39-SD-003	2.62	7.24[a,b]	0.07	No
BARIUM	2/4	53.4	490	85D00101	36.1	40[c]	12.25	Yes
CADMIUM	1/4	2.9	2.9	CEF-P39-SD-003	2.05	0.676[a]	4.29	Yes
CHROMIUM	2/4	16.2	32	85D00101	16	52.3[a,b]	0.61	No
COBALT	3/4	0.19	0.51	CEF-P39-SD-003	3	NA	NA	Yes
COPPER	3/4	1.4	15.3	CEF-P39-SD-003	12.5	18.7[a,b]	0.82	No
IRON	4/4	513	631	CEF-P39-SD-002	3,330	20000[d]	0.03	No
LEAD	2/5	120	144	CEF-P39-SD-003	44.6	30.2[a]	4.77	Yes
MANGANESE	4/4	2.4	3.9	CEF-P39-SD-002	17	460[d]	0.01	No
NICKEL	1/4	4.8	4.8	CEF-P39-SD-003	7	15.9[a,b]	0.30	No
VANADIUM	3/4	2	3.7	CEF-P39-SD-003	15	NA	NA	Yes
ZINC	4/4	6	90.2	CEF-P39-SD-003	92.1	124[a,b]	0.73	No

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a = U.S. EPA, 1999a.
b = FDEP, 1994.
c = Baudo et al., 1990.
d = Ontario MOE lowest effect level (Jones et al., 1997).

TABLE 6-6

ECOLOGICAL GUIDELINES FOR SEDIMENT CHEMICALS OF POTENTIAL CONCERN
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 1 OF 3

COPC	U.S. EPA Region IV ESV	ER-M	PEL	PEC	UET	Ontario MOE	Other
SEMIVOLATILE ORGANIC COMPOUNDS (µg/kg)							
1-Methylnaphthalene	NA	NA	NA	NA	NA	NA	130[a]
2-Methylnaphthalene	20.2	670	201	NA	NA	NA	NA
3&4-Methylphenol	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	6.71	500	88.9	NA	290	NA	620[b]; 1300[c]
Acenapththylene	5.87	640	128	NA	160	NA	NA
Anthracene	46.9	1100	245	547.7	260	220/3700	220[a]; 1800[c]
Benzo(a)anthracene	74.8	1600	693	4200	500	320/14800	110[a]
Benzo(a)pyrene	88.8	1600	763	393.7	700	370/14400	140[a]
Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA
Benzo(g,h,i)perylene	NA	NA	NA	6300	300	170/3200	NA
Benzo(k)fluoranthene	NA	NA	NA	NA	13,400	240/13400	NA
Bis(2-ethylhexyl)phthalate	182	NA	2647	NA	750	NA	890,000[a]
Butylbenzyl phthalate	NA	NA	NA	NA	NA	NA	11,000[a,c]
Carbazole	NA	NA	NA	NA	NA	NA	NA
Chrysene	108	2800	846	5200	800	NA	NA
Dibenzo(a,h)anthracene	6.22	260	NA	28.2	100	60/1300	NA
Fluoranthene	113	5100	1494	834.3	1500	750/10200	2900[b]; 6200[c]
Fluorene	21.2	540	144	651.9	300	190/1600	540[c,d]
Indeno(1,2,3-cd)pyrene	NA	NA	NA	836.7	330	200/3200	NA
N-nitrosodiphenylamine	NA	NA	NA	NA	NA	NA	NA
Naphthalene	34.6	2100	391	687	600	NA	240[a]; 470[c]; 480[d]
Phenanthrene	86.7	1500	544	NA	800	560/9500	850[b]; 1800[a,c]

TABLE 6-6

ECOLOGICAL GUIDELINES FOR SEDIMENT CHEMICALS OF POTENTIAL CONCERN
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 2 OF 3

COPC	U.S. EPA Region IV ESV	ER-M	PEL	PEC	UET	Ontario MOE	Other
Phenol	NA	NA	NA	NA	48	NA	NA
Pyrene	153	2600	1398	3225	1000	490/8500	NA
Total PAHs	1684	44792	16770	13660	12000	4000/100000	NA
PESTICIDES/PCBs (µg/kg)							
4,4'-DDD	1.22	20	7.81	NA	60	8/60	NA
4,4'-DDE	2.07	27	374	NA	50	5/190	NA
4,4'-DDT	1.19	46.1[e]	4.77	NA	50	8/710	NA
Aroclor-1254	21.6[f]	180[f]	189[f]	244.7[f]	26	70/5300[f]	810[a]
Aroclor-1260	21.6[f]	180[f]	189[f]	244.7[f]	26	70/5300[f]	NA
INORGANICS (mg/kg)							
Aluminum	NA	NA	NA	58030	NA	NA	NA
Arsenic	7.24	70	41.6	57	17	6/33	NA
Barium	NA	NA	NA	NA	NA	NA	40[g], 48[h]
Cadmium	0.676	9.6	4.21	11.7	3.0	0.6/10	NA
Cobalt	NA	NA	NA	NA	NA	NA	50[i]
Copper	18.7	270	108	77.7	86	16/110	NA
Chromium	52.3	370	160	159	95	26/110	NA
Iron	NA	NA	NA	NA	40,000	20,000/40,000	NA
Lead	30.2	218	112	396	127	31/250	NA
Manganese	NA	NA	NA	1081	1100	460/1110	NA
Selenium	NA	NA	NA	NA	NA	NA	NA
Vanadium	NA	NA	NA	NA	NA	NA	NA
Zinc	124	410	271	1532	520	120/820	NA

TABLE 6-6

ECOLOGICAL GUIDELINES FOR SEDIMENT CHEMICALS OF POTENTIAL CONCERN
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 3 OF 3

NA = Not available.
ER-M = Effects range-median (Long et al., 1995), except 4,4'-DDD from Long and Morgan (1991).
PEL = Probable Effects Level (FDEP, 1994).
PEC = Probable Effects Concentration; Assessment and Remediation of Contaminated Sediments Program (U.S. EPA 1996a).
UET = Upper Effects Threshold (Buchman, 1999).
MOE = Ontario Ministry of the Environment: Lowest effect level / Severe effect level (Persaud, et al., 1993).
a. Derived from secondary chronic valve using equilibrium partitioning approach (Jones et al., 1997).
b. Sediment Quality Criteria (U.S. EPA, 1996b).
c. Sediment Quality Advisory Level (U.S. EPA, 1997b).
d. Sediment Quality Benchmark (U.S. EPA, 1996b).
e. ER-M for total DDT (Long et al., 1995).
f. Total PCBs.
g. Baudo et al., 1990.
h. Apparent effects threshold in marine sediment (Buchman, 1999).
i. Open water disposal guideline, Ontario Ministry of the Environment (Giesy and Hoeke, 1990).

TABLE 6-7

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SURFACE WATER - OUTFALL NO. 1
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Volatile Organic Compounds (ug/L)								
CARBON DISULFIDE	1/1	5.6	5.6	85W00101	NA	NA	NA	NA
METHYLENE CHLORIDE	1/1	3	3	85W0010	NA	NA	NA	NA
Semivolatile Organic Compounds (ug/L)								
FLUORANTHENE	1/3	0.23	0.23	CEF-P39-SW-003	NA	39.8[a]	0.01	No
Inorganics (ug/L)								
ALUMINUM	3/4	160	621	CEF-P39-SW-003	1,040	87[a]	7.14	Yes
BARIUM	3/4	12.1	19.1	CEF-P39-SW-003	43.7	10000[c]	0.002	No
COPPER	1/4	57	57	85W00101	7.35	6.54[a]	8.72	Yes
IRON	4/4	562	3530	CEF-P39-SW-003	3,030	1000[a,b]	3.53	Yes
LEAD	1/4	5	5	85W00101	5.35	1.32[a]	3.79	Yes
MANGANESE	3/4	4.7	27.1	CEF-P39-SW-003	49.3	80[d]	0.34	No
ZINC	2/4	10.1	40.1	CEF-P39-SW-003	51.4	58.91[a]	0.68	No

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a = U.S. EPA, 1999a.
b = FDEP, 1996.
c = EPA, 1995.

TABLE 6-8

RESULTS OF FOOD CHAIN MODELING
MAXIMUM CONCENTRATIONS
OUTFALL NO. 1
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Raccoon		Kingfisher	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Inorganics				
CADMIUM	6.22E-01	6.22E-02	**1.00E+00**	7.25E-02
COPPER	2.81E-01	2.17E-01	1.63E-01	1.24E-01
LEAD	**3.86E+00**	3.86E-01	**6.37E+01**	**6.37E+00**

HQ = Hazard Quotient.
Bolded values are HQs equal to or greater than 1.0.

TABLE 6-9

RESULTS OF FOOD CHAIN MODELING
MEAN CONCENTRATIONS
OUTFALL NO. 1
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Raccoon		Kingfisher	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Inorganics				
CADMIUM	1.86E-01	1.86E-02	2.99E-01	2.17E-02
COPPER	1.04E-01	8.05E-02	6.04E-02	4.60E-02
LEAD	**1.33E+00**	1.33E-01	**2.19E+01**	**2.19E+00**

HQ = Hazard Quotient.
Bolded values are HQs greater than 1.0.

TABLE 6-10

**FOOD CHAIN HAZARD QUOTIENTS (HQs)
USING VARIOUS LEAD CONCENTRATIONS
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA**

Scenario	Lead Concentration		Raccoon HQs		Kingfisher HQs	
	Sediment (mg/kg)	Surface Water (µg/L)	NOAEL	LOAEL	NOAEL	LOAEL
NAS Cecil Field IBDS Value	44.60	5.35	**1.20**	0.120	**19.7**	**1.97**
Highest sediment concentration resulting in kingfisher HQ < 1.0	2.25	5.35	0.0604	0.00604	0.996	0.0996
Sitewide average (all outfalls)	59.36	16.41	**1.59**	0.159	**26.3**	**2.63**
Sitewide average without maximum sediment concentration[a]	23.90	16.41	0.641	0.0641	**10.6**	**1.06**

a Maximum sediment concentration = 1300 mg/kg (sample 85D00401) at Outfall No. 4.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).

TABLE 6-11

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SEDIMENT - OUTFALL NO. 2
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Semivolatile Organic Compounds (ug/kg)								
BENZO(A)PYRENE	1/2	13	13	CEF-P39-SD-005	NA	88.8[a,b]	0.15	No
BENZO(B)FLUORANTHENE	1/2	14	14	CEF-P39-SD-005	NA	655[a]	0.02	No
BENZO(G,H,I)PERYLENE	1/2	25	25	CEF-P39-SD-005	NA	655[a]	0.04	No
BENZO(K)FLUORANTHENE	1/2	7.5	7.5	CEF-P39-SD-005	NA	655[a]	0.01	No
BIS(2-ETHYLHEXYL)PHTHALATE	1/2	1020	1020	CEF-P39-SD-005	NA	182[a,b]	5.60	Yes
CHRYSENE	1/2	7.5	7.5	CEF-P39-SD-005	NA	108[a,b]	0.07	No
FLUORANTHENE	1/2	24	24	CEF-P39-SD-005	NA	113[a,b]	0.21	No
INDENO(1,2,3-CD)PYRENE	1/2	21	21	CEF-P39-SD-005	NA	655[a]	0.03	No
PYRENE	1/2	18	18	CEF-P39-SD-005	NA	153[a,b]	0.12	No
TOTAL PAHs	1/2	62.5	62.5	CEF-P39-SD-005	NA	1684[a,b]	0.37	No
Inorganics (mg/kg)								
ALUMINUM	2/2	610	1760	CEF-P39-SD-005	10,200	NA	NA	Yes
BARIUM	1/2	32	32	85D00201	36.1	40[c]	0.80	No
CADMIUM	1/2	1.3	1.3	CEF-P39-SD-005	2.05	0.676[a]	1.92	Yes
CHROMIUM	2/2	7.8	12	85D00201	16	52.3[a,b]	0.23	No
COBALT	1/2	0.29	0.29	CEF-P39-SD-005	3	NA	NA	Yes
COPPER	1/2	5.8	5.8	CEF-P39-SD-005	12.5	18.7[a,b]	0.31	No
IRON	2/2	350	373	CEF-P39-SD-005	3,330	20000[d]	0.02	No
LEAD	2/2	36	41.2	CEF-P39-SD-005	44.6	30.2[a]	1.36	Yes
MANGANESE	2/2	1.6	3.2	85D00201	17	460[d]	0.007	No
VANADIUM	1/2	2.1	2.1	CEF-P39-SD-005	15	NA	NA	Yes
ZINC	2/2	19	36.6	CEF-P39-SD-005	92.1	124[a,b]	0.30	No

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a = U.S. EPA, 1999a.
b = FDEP, 1994.
c = Baudo et al., 1990.
d = Ontario MOE lowest effect level (Jones et al., 1997).

TABLE 6-12

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SURFACE WATER - OUTFALL NO. 2
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Volatile Organic Compounds (µg/L)								
CARBON DISULFIDE	1/1	1.4	1.4	85W00201	NA	NA	NA	Yes
Semivolatile Organic Compounds (ug/L)								
BIS(2-ETHYLHEXYL)PHTHALATE	1/2	3.5	3.5	CEF-P39-SW-004	NA	0.3[a]	11.67	Yes
Inorganics (ug/L)								
ALUMINUM	3/3	410	2710	CEF-P39-SW-006	1,040	87[a]	31.15	Yes
BARIUM	2/3	14.4	34.2	CEF-P39-SW-006	43.7	10000[c]	0.003	No
CHROMIUM	2/3	9.7	10.4	CEF-P39-SW-004	4.75	11[a,b]	0.95	No
COBALT	1/3	1.1	1.1	CEF-P39-SW-006	10.5	NA	NA	Yes
COPPER	1/3	8.9	8.9	CEF-P39-SW-006	7.35	6.54[a]	1.36	Yes
IRON	3/3	1160	5900	CEF-P39-SW-006	3,030	1000[a,b]	5.90	Yes
LEAD	2/5	35.5	45	CEF-P39-SW-006	5.35	1.32[a]	34.09	Yes
MANGANESE	2/3	5.5	30	CEF-P39-SW-006	49.3	80[d]	0.38	No
NICKEL	1/3	8.4	8.4	CEF-P39-SW-004	20	87.71[a]	0.10	No
THALLIUM	1/3	12	12	85W00201	10.1	4[a]	3.00	Yes
VANADIUM	1/3	7.8	7.8	CEF-P39-SW-006	4.5	19[d]	0.41	No
ZINC	2/3	90.9	151	CEF-P39-SW-006	51.4	58.91[a]	2.56	Yes

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a = U.S. EPA, 1999a.
b = FDEP, 1996.
c = U.S. EPA, 1995.
d = U.S. EPA, 1996b.

TABLE 6-13

RESULTS OF FOOD CHAIN MODELING
MAXIMUM CONCENTRATIONS
OUTFALL NO. 2
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Raccoon		Kingfisher	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Inorganics				
Cadmium	2.79E-01	2.79E-02	4.48E-01	3.25E-02
Copper	1.06E-01	8.22E-02	6.17E-02	4.70E-02
Lead	**1.11E+00**	1.11E-01	**1.82E+01**	**1.82E+00**
Zinc	4.92E-02	2.46E-02	**1.26E+00**	1.40E-01

HQ = Hazard Quotient.
Bolded values are HQs greater than 1.0.

TABLE 6-14

RESULTS OF FOOD CHAIN MODELING
MEAN CONCENTRATIONS
OUTFALL NO. 2
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Raccoon		Kingfisher	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Inorganics				
Cadmium	1.93E-01	1.93E-02	3.10E-01	2.25E-02
Copper	8.08E-02	6.24E-02	4.68E-02	3.57E-02
Lead	**1.04E+00**	1.04E-01	**1.71E+01**	**1.71E+00**
Zinc	3.73E-02	1.87E-02	9.59E-01	1.06E-01

HQ = Hazard Quotient.
Bolded values are HQs greater than 1.0.

TABLE 6-15

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SEDIMENT - OUTFALL NO. 3
PSC 39, RUNWAY OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 1 OF 2

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Screening Level	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Volatile Organic Compounds (µg/kg)								
METHYLENE CHLORIDE	1/1	21	21	85D00301	NA	NA	NA	Yes
Semivolatile Organic Compounds (ug/kg)								
1-METHYLNAPHTHALENE	1/2	439	439	CEF-P39-401	NA	NA	NA	Yes
2-METHYLNAPHTHALENE	1/3	2500	2500	CEF-P39-SD-008	NA	20.2[a,b]	123.76	Yes
ACENAPHTHENE	2/3	497.5	3200	CEF-P39-SD-008	NA	6.71[a,b]	476.90	Yes
ACENAPHTHYLENE	1/3	450	450	CEF-P39-SD-008	NA	5.87[a]	76.66	Yes
ANTHRACENE	1/3	520	520	CEF-P39-SD-008	NA	46.9[a,b]	11.09	Yes
BENZO(A)ANTHRACENE	2/3	858.5	1400	CEF-P39-SD-008	NA	74.8[a,b]	18.72	Yes
BENZO(A)PYRENE	2/3	878.5	1200	CEF-P39-SD-008	NA	88.8[a,b]	13.51	Yes
BENZO(B)FLUORANTHENE	2/3	1235	1300	CEF-P39-SD-008	NA	655[a]	1.98	Yes
BENZO(G,H,I)PERYLENE	2/3	910	932.5	CEF-P39-401	NA	655[a]	1.42	Yes
BENZO(K)FLUORANTHENE	2/3	678.5	680	CEF-P39-SD-008	NA	655[a]	1.04	Yes
CHRYSENE	2/3	1065	1400	CEF-P39-SD-008	NA	108[a,b]	12.96	Yes
DIBENZO(A,H)ANTHRACENE	2/3	39	176.25	CEF-P39-401	NA	6.22 [a,b]	28.34	Yes
FLUORANTHENE	2/3	2835	4700	CEF-P39-SD-008	NA	113[a,b]	41.59	Yes
FLUORENE	2/3	138.5	450	CEF-P39-SD-008	NA	21.2[a,b]	21.23	Yes
INDENO(1,2,3-CD)PYRENE	2/3	900	1210	CEF-P39-401	NA	655[a]	1.85	Yes
NAPHTHALENE	1/3	310	310	CEF-P39-SD-008	NA	34.6[a,b]	8.96	Yes
PHENANTHRENE	2/3	1280	3200	CEF-P39-SD-008	NA	86.7[a,b]	36.91	Yes
PHENOL	1/2	7200	7200	85D00301	NA	NA	NA	Yes
PYRENE	2/3	2050	3200	CEF-P39-SD-008	NA	153[a,b]	20.92	Yes
TOTAL PAHs	2/3	9674	22569	CEF-P39-SD-008	NA	1684[a,b]	13.40	Yes

TABLE 6-15

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SEDIMENT - OUTFALL NO. 3
PSC 39, RUNWAY OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 2 OF 2

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Screening Level	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Pesticides/PCBs (ug/kg)								
AROCLOR-1254	1/2	54.4	54.4	CEF-P39-SD-008	NA	21.6[a,b]	2.52	Yes
AROCLOR-1260	1/2	178	178	CEF-P39-SD-008	NA	21.6[a,b]	8.24	Yes
Inorganics (mg/kg)								
ALUMINUM	3/3	1340	1700	85D00301	10,200	NA	NA	Yes
CADMIUM	2/3	1.4	2.6	CEF-P39-SD-008	2.05	0.676[a,b]	3.85	Yes
CHROMIUM	3/3	5.1	23.6	CEF-P39-SD-009	16	52.3[a,b]	0.45	No
COBALT	3/3	0.43	0.53	CEF-P39-SD-008	3	NA	NA	Yes
COPPER	3/3	6	22	85D00301	12.5	18.7[a,b]	1.18	Yes
IRON	3/3	366	2700	85D00301	3.33	20000[c]	0.14	No
LEAD	3/3	13	57.4	CEF-P39-SD-008	44.6	30.2[a]	1.90	Yes
MANGANESE	3/3	3.6	17	85D00301	17	460[c]	0.04	No
MERCURY	2/3	0.01	0.035	85D00301	0.305	0.13[a]	0.27	No
NICKEL	1/3	2.5	2.5	CEF-P39-SD-008	7	15.9[a,b]	0.16	No
VANADIUM	3/3	1.9	3.1	CEF-P39-SD-008	15	NA	NA	Yes
ZINC	3/3	57	99.6	CEF-P39-SD-008	92.1	124[a,b]	0.80	No

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a. U.S. EPA, 1999a.
b. FDEP, 1994.
c. Ontario MOE lowest effect level (Jones et al., 1996).

TABLE 6-16

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SURFACE WATER - OUTFALL NO. 3
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Volatile Organic Compound (µg/L)								
CARBON DISULFIDE	1/1	4.2	4.2	85W00301	N/A	N/A	N/A	Yes
TRICHLOROETHENE	1/1	14	14	85W00301	N/A	80.7[b]	0.17	No
cis-1,2-DICHLOROETHENE	1/1	10	10	85W00301	N/A	N/A	N/A	Yes
Inorganics (ug/L)								
ALUMINUM	1/3	310	310	85W00301	1,040	87[a]	3.56	Yes
ANTIMONY	1/3	6	6	85W00301	46	160[a]	0.03	No
BARIUM	2/3	15.6	15.6	CEF-P39-SW-007	43.7	10000[c]	0.002	No
COPPER	3/3	7.8	54	85W00301	7.35	6.54[a]	8.26	Yes
IRON	3/3	348	880	CEF-P39-SW-009	3,030	1000[a,b]	0.54	No
MANGANESE	2/3	10	26	CEF-P39-SW-007	49.3	80[d]	0.33	No
THALLIUM	1/3	4	4	85W00301	10.1	4.0[a]	1.00	Yes
ZINC	1/3	19.6	19.6	CEF-P39-SW-007	51.4	58.91[a]	0.33	No

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a. U.S. EPA, 1996.
b. FDEP, 1996.
c. U.S. EPA, 1995.
d. U.S. EPA, 1996b.

TABLE 6-17

RESULTS OF FOOD CHAIN MODELING
MAXIMUM CONCENTRATIONS
OUTFALL NO. 3
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION
CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Raccoon		Kingfisher	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Pesticides/PCBs				
AROCLOR-1254	5.91E-01	5.91E-02	1.51E-01	1.51E-02
AROCLOR-1260	**1.94E+00**	1.94E-01	4.94E-01	4.94E-02
Inorganics				
CADMIUM	5.58E-01	5.58E-02	8.97E-01	6.50E-02
COPPER	4.04E-01	3.12E-01	2.34E-01	1.78E-01
LEAD	**1.54E+00**	1.54E-01	**2.54E+01**	**2.54E+00**

HQ = Hazard Quotient.
Bolded values are HQs greater than 1.0.

TABLE 6-18

RESULTS OF FOOD CHAIN MODELING
MEAN CONCENTRATIONS
OUTFALL NO. 3
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Raccoon		Kingfisher	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Pesticides/PCBs				
AROCLOR-1254	4.04E-01	4.04E-02	5.21E-01	5.21E-02
AROCLOR-1260	**1.08E+00**	1.08E-01	1.39E+00	1.39E-01
Inorganics				
CADMIUM	3.22E-01	3.22E-02	5.17E-01	3.75E-02
COPPER	2.38E-01	1.84E-01	1.38E-01	1.05E-01
LEAD	7.79E-01	7.79E-02	**1.28E+01**	**1.28E+00**

HQ = Hazard Quotient
Bolded values are HQs greater than 1.0

TABLE 6-19

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SEDIMENT - OUTFALL NO. 4
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Screening Level	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Semivolatile Organic Compounds (ug/kg)								
1-METHYLNAPHTHALENE	1/2	137	137	CEF-P39-SD-402	NA	NA	NA	Yes
2-METHYLNAPHTHALENE	2/4	119	350	CEF-P39-SD-011	NA	20.2[a,b]	17.33	Yes
ACENAPHTHENE	2/4	154	280	CEF-P39-SD-011	NA	6.71[a,b]	41.73	Yes
ACENAPHTHYLENE	1/4	2120	2120	CEF-P39-SD-402	NA	5.87 [a]	361.16	Yes
BENZO(A)ANTHRACENE	2/4	63	95.8	CEF-P39-SD-402	NA	74.8[a,b]	1.3	Yes
BENZO(A)PYRENE	2/4	79.2	80	CEF-P39-SD-011	NA	88.8[a,b]	0.9	No
BENZO(B)FLUORANTHENE	2/4	130	149	CEF-P39-SD-402	NA	655[a]	0.2	No
BENZO(G,H,I)PERYLENE	2/4	81	123	CEF-P39-SD-402	NA	655[a]	0.2	No
BENZO(K)FLUORANTHENE	2/4	67	111	CEF-P39-SD-402	NA	655[a]	0.2	No
BIS(2-ETHYLHEXYL)PHTHALATE	3/3	649	7400	85D00401	NA	182[a,b]	40.66	Yes
BUTYLBENZYL PHTHALATE	1/2	946	946	CEF-P39-SD-011	NA	NA	NA	Yes
CHRYSENE	2/4	98	158	CEF-P39-SD-402	NA	108[a,b]	1.5	Yes
DIBENZO(A,H)ANTHRACENE	1/4	19.1	19.1	CEF-P39-SD-402	NA	6.22 [ab]	3.1	Yes
FLUORANTHENE	2/4	220	595	CEF-P39-SD-402	NA	113[a]	5.3	Yes
INDENO(1,2,3-CD)PYRENE	1/4	11	11	CEF-P39-SD-011	NA	655[a]	0.02	No
NAPHTHALENE	1/4	51	51	CEF-P39-SD-011	NA	34.6[a,b]	1.47	Yes
PHENANTHRENE	1/4	66	66	CEF-P39-SD-011	NA	86.7[a,b]	0.76	No
PYRENE	2/4	120	342	CEF-P39-SD-402	NA	153[a,b]	2.2	Yes
TOTAL PAHs	2/3	1328	3682	CEF-P39-SD-402	NA	1684[a,b]	8.67	Yes
Inorganics (mg/kg)								
ALUMINUM	3/3	930	4420	CEF-P39-SD-012	10,200	NA	NA	Yes
ANTIMONY	1/3	4	4	CEF-P39-SD-011	15.1	2[a]	2.00	Yes
ARSENIC	2/3	0.51	10.9	CEF-P39-SD-011	2.62	7.24[a,b]	1.51	Yes
BARIUM	1/3	10.1	75	85D00401	36.1	40[c]	1.88	Yes
CADMIUM	3/3	2.3	6.5	CEF-P39-SD-011	2.05	0.676[a,b]	9.62	Yes
CHROMIUM	3/3	8.4	300	85D00401	16	52.3[a,b]	5.74	Yes
COBALT	2/3	0.4	1.2	CEF-P39-SD-011	3	NA	NA	Yes
COPPER	3/3	8.6	34.2	CEF-P39-SD-011	12.5	18.7[a,b]	1.83	Yes
IRON	3/3	729	1110	CEF-P39-SD-011	3,330	20000[d]	0.06	No
LEAD	3/3	24.8	1300	85D00401	44.6	30.2[a]	43.05	Yes
MANGANESE	3/3	4.5	24	85D00401	17	460[d]	0.05	No
NICKEL	3/3	2.1	8.2	85D00401	7	15.9[a,b]	0.5	No
VANADIUM	3/3	3.7	5.9	CEF-P39-SD-011	15	NA	NA	Yes
ZINC	3/3	72.2	178	CEF-P39-SD-011	92.1	124[a,b]	1.44	Yes

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a. U.S. EPA, 1999a.
b. FDEP, 1994.
c. Baudo et al., 1990.
d. Ontario MOE lowest effect level (Jones et al., 1996).

TABLE 6-20

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SURFACE WATER - OUTFALL NO. 4
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
VolatileOrganic Compounds (µg/L)								
CARBON DISULFIDE	1/1	2.7	2.7	85W00401	NA	NA	NA	Yes
Inorganics (ug/kg)								
ALUMINUM	2/3	230	422	CEF-P39-SW-012	1,040	87[a]	4.85	Yes
BARIUM	2/3	14.2	24.6	CEF-P39-SW-012	43.7	10000[c]	0.002	No
COPPER	1/3	54	54	85W00401	7.35	6.54[a]	8.26	Yes
IRON	3/3	320	1650	CEF-P39-SW-012	3,030	1000[a,b]	1.65	Yes
LEAD	1/3	10.3	10.3	CEF-P39-SW-012	5.35	1.32[a]	7.80	Yes
MANGANESE	2/3	4.8	37	CEF-P39-SW-012	49.3	80[d]	0.06	No
THALLIUM	1/3	6	6	85W00401	2.67	4[a]	1.5	Yes
ZINC	1/3	82.7	82.7	CEF-P39-SW-012	51.4	58.91[a]	1.4	Yes

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a. U.S. EPA, 1999a.
b. FDEP, 1996.
c. U.S. EPA, 1995.
d. U.S. EPA, 1996b.

TABLE 6-21

RESULTS OF FOOD CHAIN MODELING
MAXIMUM CONCENTRATIONS
OUTFALL NO. 4
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Raccoon		Kingfisher	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Inorganics				
ARSENIC	**1.86E+01**	**1.86E+00**	**2.22E+00**	7.38E-01
CADMIUM	**1.39E+00**	1.39E-01	**2.24E+00**	1.63E-01
CHROMIUM	**1.96E+01**	**1.96E+00**	**1.50E+02**	**3.00E+01**
COPPER	6.27E-01	4.85E-01	3.64E-01	2.77E-01
LEAD	**3.49E+01**	**3.49E+00**	**5.75E+02**	**5.75E+01**
ZINC	2.39E-01	1.19E-01	**6.14E+00**	6.79E-01

HQ = Hazard Quotient.
Bolded values are HQs greater than 1.0.

TABLE 6-22

RESULTS OF FOOD CHAIN MODELING
MEAN CONCENTRATIONS
OUTFALL NO. 4
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Raccoon		Kingfisher	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Inorganics				
ARSENIC	**6.76E+00**	6.76E-01	8.07E-01	2.69E-01
CADMIUM	8.44E-01	8.44E-02	**1.36E+00**	9.83E-02
CHROMIUM	**8.08E+00**	8.08E-01	**6.18E+01**	**1.24E+01**
COPPER	4.21E-01	3.25E-01	2.44E-01	1.86E-01
LEAD	**1.36E+01**	**1.36E+00**	**2.25E+02**	**2.25E+01**
ZINC	1.46E-01	7.29E-02	**3.75E+00**	4.15E-01

HQ = Hazard Quotient
Bolded values are HQs greater than 1.0

TABLE 6-23

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SEDIMENT - OUTFALL NO. 5
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Semivolatile Organic Compounds (ug/kg)								
2-METHYLNAPHTHALENE	1/2	170	170	CEF-P39-SD-014	NA	20.2[a,b]	8.42	Yes
ACENAPHTHENE	1/2	200	200	CEF-P39-SD-014	NA	6.71[a,b]	29.81	Yes
ANTHRACENE	1/2	20	20	CEF-P39-SD-014	NA	46.9[a,b]	0.43	No
BENZO(A)ANTHRACENE	1/2	110	110	CEF-P39-SD-014	NA	74.8[a,b]	1.47	Yes
BENZO(A)PYRENE	1/2	110	110	CEF-P39-SD-014	NA	88.8[a,b]	1.24	Yes
BENZO(B)FLUORANTHENE	1/2	160	160	CEF-P39-SD-014	NA	655[a]	0.24	No
BENZO(G,H,I)PERYLENE	1/2	110	110	CEF-P39-SD-014	NA	655[a]	0.17	No
BENZO(K)FLUORANTHENE	1/2	77	77	CEF-P39-SD-014	NA	655[a]	0.12	No
BIS(2-ETHYLHEXYL)PHTHALATE	1/2	3490	3490	CEF-P39-SD-014	NA	182[a,b]	19.18	Yes
CHRYSENE	1/2	250	250	CEF-P39-SD-014	NA	108[a,b]	2.31	Yes
FLUORANTHENE	1/2	300	300	CEF-P39-SD-014	NA	113[a,b]	2.65	Yes
FLUORENE	1/2	19	19	CEF-P39-SD-014	NA	21.2[a,b]	0.90	No
INDENO(1,2,3-CD)PYRENE	1/2	95	95	CEF-P39-SD-014	NA	655[a]	0.15	No
PHENANTHRENE	1/2	81	81	CEF-P39-SD-014	NA	86.7[a,b]	0.93	No
PYRENE	1/2	240	240	CEF-P39-SD-014	NA	153[a,b]	1.57	Yes
TOTAL PAHs	1/2	1500	1500	CEF-P39-SD-014	NA	1684[a,b]	0.89	No
Inorganics (mg/kg)								
ALUMINUM	3/3	750	2240	CEF-P39-SD-015	10,200	NA	NA	Yes
ARSENIC	1/3	0.55	0.55	CEF-P39-SD-015	2.62	7.24[a,b]	0.08	No
CADMIUM	2/3	1.8	2.2	CEF-P39-SD-014	2.05	0.676[a,b]	3.25	Yes
CHROMIUM	3/3	1.8	20.4	CEF-P39-SD-014	16	52.3[a,b]	0.39	No
COBALT	2/3	0.48	0.53	CEF-P39-SD-014	3	NA	NA	Yes
COPPER	3/3	8.6	1100	85D00501	12.5	18.7[a,b]	58.82	Yes
IRON	3/3	527	700	85D00501	3,330	20000[c]	0.04	No
LEAD	3/3	14	52.1	CEF-P39-SD-014	44.6	30.2[a]	1.73	Yes
MANGANESE	3/3	4.9	6	85D00501	17	460[c]	0.01	No
NICKEL	2/3	3.5	5.7	CEF-P39-SD-015	7	15.9[a,b]	0.36	No
VANADIUM	3/3	2	4.5	CEF-P39-SD-015	15	NA	NA	Yes
ZINC	3/3	34	136	CEF-P39-SD-014	92.1	124[a,b]	1.10	Yes

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a = U.S. EPA, 1999a.
b = FDEP, 1994.
c = Ontario MOE lowest effect level (Jones et al., 1997).

TABLE 6-24

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SURFACE WATER - OUTFALL NO. 5
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Volatile Organic Compounds (ug/L)								
CARBON DISULFIDE	1/1	2	2	85W00501 [05/06/98]	NA	NA	NA	Yes
Inorganics (ug/L)								
ALUMINUM	3/3	480	8440	CEF-P39-SW-015	1,040	87[a]	97.01	Yes
ARSENIC	1/3	3.6	3.6	CEF-P39-SW-015	5.45	50[b]	0.07	No
BARIUM	2/3	90.4	94.5	CEF-P39-SW-015	43.7	10000[c]	0.01	No
CADMIUM	1/5	24.2	24.2	CEF-P39-SW-015	2.25	0.66[a]	36.67	Yes
CHROMIUM	1/3	45	45	CEF-P39-SW-015	4.75	11[a,b]	4.09	Yes
COBALT	1/3	3.6	3.6	CEF-P39-SW-015	10.5	NA	NA	Yes
COPPER	2/3	9	93.4	CEF-P39-SW-015	7.35	6.54[a]	14.28	Yes
IRON	3/3	3100	19600	CEF-P39-SW-015	3030	1000[a,b]	19.60	Yes
LEAD	3/5	11	205	CEF-P39-SW-015	5.35	1.32[a]	155.30	Yes
MANGANESE	3/3	17	106	CEF-P39-SW-015	49.3	80[d]	1.33	Yes
NICKEL	1/3	21.7	21.7	CEF-P39-SW-015	20	87.71[a]	0.25	No
THALLIUM	1/3	8	8	85W00501 [05/06/98]	10.1	4.0[a]	2.00	Yes
VANADIUM	2/3	6.7	49.5	CEF-P39-SW-015	4.5	19[d]	2.61	Yes
ZINC	2/3	316	1690	CEF-P39-SW-015	51.4	58.91[a]	28.69	Yes

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a = U.S. EPA, 1999a
b = FDEP, 1996
c = U.S. EPA, 1995
d = U.S. EPA, 1996

TABLE 6-25

RESULTS OF FOOD CHAIN MODELING
MAXIMUM CONCENTRATIONS
OUTFALL NO. 5
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Raccoon		Kingfisher	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Inorganics				
Cadmium	4.74E-01	4.74E-02	7.60E-01	5.51E-02
Chromium	**1.34E+00**	1.34E-01	**1.02E+01**	**2.04E+00**
Copper	**2.02E+01**	**1.56E+01**	**1.17E+01**	**8.91E+00**
Lead	**1.40E+00**	1.40E-01	**2.31E+01**	**2.31E+00**
Zinc	1.83E-01	9.16E-02	**4.70E+00**	5.21E-01

HQ = Hazard Quotient.
Bolded values are HQs greater than 1.0.

TABLE 6-26

RESULTS OF FOOD CHAIN MODELING
MEAN CONCENTRATIONS
OUTFALL NO. 5
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Raccoon		Kingfisher	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Inorganics				
Cadmium	3.22E-01	3.22E-02	5.18E-01	3.75E-02
Chromium	7.09E-01	7.09E-02	**5.42E+00**	**1.08E+00**
Copper	**6.84E+00**	**5.28E+00**	**3.97E+00**	**3.02E+00**
Lead	9.09E-01	9.09E-02	**1.50E+01**	**1.50E+00**
Zinc	1.35E-01	6.74E-02	**3.46E+00**	3.84E-01

HQ = Hazard Quotient.
Bolded values are HQs greater than 1.0.

TABLE 6-27

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SEDIMENT - OUTFALL NO. 6
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 1 OF 2

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Semivolatile Organic Compounds (ug/kg)								
1-METHYLNAPHTHALENE	1/2	640	640	CEF-P39-SD-017	NA	NA	NA	Yes
2-METHYLNAPHTHALENE	1/3	810	810	CEF-P39-SD-017	NA	20.2[a,b]	40.10	Yes
ACENAPHTHENE	1/3	1100	1100	CEF-P39-SD-017	NA	6.71[a,b]	163.93	Yes
ACENAPHTHYLENE	1/3	145	145	CEF-P39-SD-403	NA	5.87 [ab]	24.70	Yes
ANTHRACENE	1/3	65	65	CEF-P39-SD-017	NA	46.9[a,b]	1.39	Yes
BENZO(A)ANTHRACENE	2/3	30.7	460	CEF-P39-SD-017	NA	74.8[a,b]	6.15	Yes
BENZO(A)PYRENE	2/3	39.6	460	CEF-P39-SD-017	NA	88.8[a,b]	5.18	Yes
BENZO(B)FLUORANTHENE	2/3	610	862	CEF-P39-SD-403	NA	655[a]	1.32	Yes
BENZO(G,H,I)PERYLENE	1/3	470	470	CEF-P39-SD-017	NA	655[a]	0.72	No
BENZO(K)FLUORANTHENE	2/3	39.3	310	CEF-P39-SD-017	NA	655[a]	0.47	No
BIS(2-ETHYLHEXYL)PHTHALATE	1/2	889	889	CEF-P39-SD-017	NA	182[a,b]	4.88	Yes
CHRYSENE	2/3	42.1	930	CEF-P39-SD-017	NA	108[a,b]	8.61	Yes
DIBENZO(A,H)ANTHRACENE	1/3	69	69	CEF-P39-SD-017	NA	6.22[a,b]	11.09	Yes
FLUORANTHENE	2/3	156	1600	CEF-P39-SD-017	NA	113[a,b]	14.16	Yes
FLUORENE	1/3	25	25	CEF-P39-SD-017	NA	21.2[a,b]	1.18	Yes
INDENO(1,2,3-CD)PYRENE	1/3	370	370	CEF-P39-SD-017	NA	655[a]	0.56	No
NAPHTHALENE	1/3	130	130	CEF-P39-SD-017	NA	34.6[a,b]	3.76	Yes
PHENANTHRENE	1/3	910	910	CEF-P39-SD-017	NA	86.7[a,b]	10.50	Yes
PYRENE	2/3	85.2	1100	CEF-P39-SD-017	NA	153[a,b]	7.19	Yes
TOTAL PAHs	2/3	499	7659	CEF-P39-SD-018	NA	1684[a,b]	4.55	Yes
Pesticides/PCBs (ug/kg)								
4,4'-DDD	1/5	17	17	85D00601	NA	1.22[a]	13.93	Yes
4,4'-DDE	1/5	5.9	5.9	85D00601	NA	2.07[a]	2.85	Yes
4,4'-DDT	1/5	6	6	85D00601	NA	1.19[a]	5.04	Yes

TABLE 6-27

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SEDIMENT - OUTFALL NO. 6
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 2 OF 2

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Inorganics (mg/kg)								
ALUMINUM	3/3	2200	3790	CEF-P39-SD-018	10,200	NA	NA	Yes
ARSENIC	2/3	0.88	1.4	CEF-P39-SD-018	2.62	7.24[a,b]	0.19	No
CADMIUM	2/3	1.1	1.3	CEF-P39-SD-018	2.05	0.676[a]	1.92	Yes
CHROMIUM	3/3	2.2	7.9	CEF-P39-SD-018	16	52.3[a,b]	0.15	No
COBALT	2/3	0.54	0.65	CEF-P39-SD-018	3	NA	NA	Yes
COPPER	2/3	6.8	7.3	CEF-P39-SD-018	12.5	18.7[a,b]	0.39	No
IRON	3/3	320	1010	CEF-P39-SD-017	3,330	20000[c]	0.05	No
LEAD	3/3	5	24.3	CEF-P39-SD-018	44.6	30.2[a]	0.80	No
MANGANESE	3/3	1.9	4.4	CEF-P39-SD-017	17	460[c]	0.01	No
NICKEL	2/3	2.7	2.7	CEF-P39-SD-017 & -018	7	15.9[a,b]	0.17	No
VANADIUM	3/3	2.2	10	CEF-P39-SD-018	15	NA	NA	Yes
ZINC	3/3	15	87.1	CEF-P39-SD-018	92.1	124[a,b]	0.70	No

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).

a = EPA, 1999a
b = FDEP, 1994
c = Ontario MOE lowest effect level (Jones et al, 1997)

TABLE 6-28

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SURFACE WATER - OUTFALL NO. 6
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Volatile Organic Compounds (ug/L)								
CARBON DISULFIDE	1/1	2.6	2.6	85W00601	NA	NA	NA	NA
Inorganics (ug/L)								
ALUMINUM	3/3	679	33000	CEF-P39-SW-018	1,040	NA	NA	Yes
ANTIMONY	1/3	7	7	85W00601	46	160[a]	0.03	No
ARSENIC	2/3	4.1	51.2	CEF-P39-SW-018	5.45	50[d]	1.02	Yes
BARIUM	2/3	20	126	CEF-P39-SW-018	43.7	10000[c]	0.01	No
CADMIUM	1/4	26.2	26.2	CEF-P39-SW-018	2.25	0.66[a]	39.70	Yes
CHROMIUM	1/3	58.7	58.7	CEF-P39-SW-018	4.75	11[a,b]	5.34	Yes
COBALT	1/3	9.2	9.2	CEF-P39-SW-018	10.5	NA	NA	Yes
COPPER	2/3	51	85.3	CEF-P39-SW-018	7.35	6.54[a]	13.04	Yes
IRON	3/3	5790	83400	CEF-P39-SW-018	3,030	1000[b]	83.40	Yes
LEAD	2/4	8	177	CEF-P39-SW-018	5.35	5.35[a]	33.08	Yes
MANGANESE	3/3	23.7	119	CEF-P39-SW-018	49.3	80[d]	1.49	Yes
NICKEL	1/3	37.9	37.9	CEF-P39-SW-018	20	87.71[a]	0.43	No
THALLIUM	1/3	7	7	85W00601	10.1	4[a]	1.75	Yes
VANADIUM	2/3	5.3	146	CEF-P39-SW-018	4.5	19[d]	7.68	Yes
ZINC	2/3	43.2	1190	CEF-P39-SW-018	51.4	58.91[a]	20.20	Yes

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a = U.S. EPA, 1999a.
b = FDEP, 1996.
c = U.S. EPA, 1995.
d = U.S. EPA, 1996b.

TABLE 6-29

RESULTS OF FOOD CHAIN MODELING
MAXIMUM CONCENTRATIONS
OUTFALL NO. 6
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Raccoon		Kingfisher	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Pesticides/PCBs				
4,4'-DDD	2.74E-03	5.48E-04	**2.32E+00**	2.32E-01
4,4'-DDE	8.89E-04	4.44E-03	**2.21E+01**	**2.21E+00**
4,4'-DDT	5.02E-03	1.00E-03	**4.88E+00**	4.88E-01
Inorganics				
Arsenic	**2.42E+00**	2.42E-01	2.87E-01	9.56E-02
Cadmium	2.81E-01	2.81E-02	4.50E-01	3.26E-02
Chromium	5.18E-01	5.18E-02	**3.96E+00**	7.91E-01
Copper	1.34E-01	1.04E-01	7.79E-02	5.93E-02
Lead	6.53E-01	6.53E-02	**1.08E+01**	**1.08E+00**
Zinc	1.17E-01	5.87E-02	**3.01E+00**	3.33E-01

HQ = Hazard Quotient.
Bolded values are HQs greater than 1.0.

TABLE 6-30
RESULTS OF FOOD CHAIN MODELING
MEAN CONCENTRATIONS
OUTFALL NO. 6
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Raccoon		Kingfisher	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Pesticides/PCBs				
4,4'-DDD	3.30E-03	6.59E-04	**2.79E+00**	2.79E-01
4,4'-DDE	2.80E-03	1.40E-02	**6.97E+01**	**6.97E+00**
4,4'-DDT	1.72E-02	3.43E-03	**1.67E+01**	**1.67E+00**
Inorganics				
Arsenic	**1.48E+00**	1.48E-01	1.76E-01	5.86E-02
Cadmium	2.08E-01	2.08E-02	3.34E-01	2.42E-02
Chromium	3.28E-01	3.28E-02	**2.50E+00**	5.00E-01
Copper	1.05E-01	8.10E-02	6.07E-02	4.63E-02
Lead	3.75E-01	3.75E-02	**6.18E+00**	6.18E-01
Zinc	7.38E-02	3.69E-02	**1.90E+00**	2.10E-01

HQ = Hazard Quotient.
Bolded values are HQs greater than 1.0.

TABLE 6-31

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SEDIMENT - OUTFALL NO. 7
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Volatile Organic Compounds (ug/kg)								
ACETONE	1/1	200	200	85D00701	NA	NA	NA	Yes
METHYLENE CHLORIDE	1/1	110	110	85D00701	NA	NA	NA	Yes
Semivolatile Organic Compounds (ug/kg)								
BENZO(A)ANTHRACENE	1/3	15	15	CEF-P39-SD-019	NA	74.8[a,b]	0.20	No
BENZO(A)PYRENE	2/3	9.6	40	CEF-P39-SD-019	NA	88.8[a,b]	0.45	No
BENZO(B)FLUORANTHENE	1/3	34	34	CEF-P39-SD-019	NA	655[a]	0.05	No
BENZO(G,H,I)PERYLENE	2/3	10	46	CEF-P39-SD-019	NA	655[a]	0.07	No
BENZO(K)FLUORANTHENE	1/3	18	18	CEF-P39-SD-019	NA	655[a]	0.03	No
CHRYSENE	2/3	10	67	CEF-P39-SD-019	NA	108[a,b]	0.62	No
INDENO(1,2,3-CD)PYRENE	2/3	9.9	42	CEF-P39-SD-019	NA	655[a]	0.04	No
PYRENE	1/3	11	11	CEF-P39-SD-019	NA	153[a,b]	0.06	No
TOTAL PAHs	1/3	76.3	76.3	CEF-P39-SD-019	NA	1684[a,b]	0.05	No
Inorganics (mg/kg)								
ALUMINUM	3/3	1000	2520	CEF-P39-SD-019	10,200	NA	NA	Yes
ARSENIC	1/3	0.67	0.67	CEF-P39-SD-019	2.62	72.4[a,b]	0.01	No
BARIUM	2/3	7.4	18.9	CEF-P39-SD-019	36.1	40[c]	0.47	No
CHROMIUM	1/3	3.5	3.5	CEF-P39-SD-019	16	52.3[a,b]	0.07	No
COBALT	1/3	0.4	0.4	CEF-P39-SD-019	3	NA	NA	Yes
COPPER	3/3	1.9	3.7	CEF-P39-SD-019	12.5	18.7[a,b]	0.20	No
IRON	3/3	200	1340	CEF-P39-SD-019	3,330	20000[d]	0.07	No
LEAD	2/3	5.1	12.3	CEF-P39-SD-019	44.6	30.2[a]	0.41	No
MANGANESE	2/3	1.2	5	CEF-P39-SD-019	17	460[d]	0.01	No
VANADIUM	2/3	1.8	4.3	CEF-P39-SD-019	15	NA	NA	Yes
ZINC	3/3	18.3	33.4	CEF-P39-SD-019	92.1	124[a,b]	0.27	No

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a. U.S. EPA, 1999a.
b. FDEP, 1994.
c. Baudo et al., 1990.
d. Ontario MOE lowest effect level (Jones et al., 1996).

TABLE 6-32

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SURFACE WATER- OUTFALL NO. 7
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Volatile Organic Compounds (ug/L)								
CARBON DISULFIDE	2/2	8.2	34	85W00701	NA	NA	NA	Yes
Semivolatile Organic Compounds (ug/L)								
BIS(2-ETHYLHEXYL)PHTHALATE	2/4	2.8	3.3	CEF-P39-SW-019	NA	0.3[a]	11.0	Yes
Inorganics (ug/L)								
ALUMINUM	4/4	350	3800	CEF-P39-SW-019	1,040	87[a]	43.6	Yes
ANTIMONY	2/4	7	7	85W00701	46	160[a]	0.04	No
BARIUM	2/4	15.1	16.2	CEF-P39-SW-019	43.7	10000[c]	0.002	No
IRON	4/4	1700	25000	CEF-P39-SW-019	3,030	1000[a,b]	25.0	Yes
MANGANESE	2/4	5.7	9.6	CEF-P39-SW-019	49.3	80[d]	0.12	No
VANADIUM	2/4	17.9	19	CEF-P39-SW-019	4.5	19[d]	0.97	No
ZINC	2/4	37.7	42.2	CEF-P39-SW-019	51.4	58.91[a]	0.72	No

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a = U.S. EPA, 1999a.
b = FDEP, 1996.
c = U.S. EPA, 1995.
d = U.S. EPA, 1996.

TABLE 6-33

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SEDIMENT - OUTFALL NO. 8
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Volatile Organic Compounds (ug/kg)								
Acetone	1/1	140	140	85D00801	NA	NA	NA	Yes
Carbon Disulfide	1/1	27.0	27.0	85D00801	NA	NA	NA	Yes
Inorganics (mg/kg)								
Aluminum	2/2	1300	2100	CEF-P39-SD-020A	10,200	NA	NA	Yes
Barium	1/2	7.2	7.2	CEF-P39-SD-020A	36.1	40[c]	0.18	No
Copper	1/2	2.6	2.6	CEF-P39-SD-020A	12.5	18.7[a,b]	0.14	No
Iron	2/2	351	650	85D00801	3,330	20000[d]	0.03	No
Lead	2/2	2.1	3.0	CEF-P39-SD-020A	44.6	30.2[a]	0.10	No
Manganese	1/2	1.7	1.7	85D00801	17.0	460[d]	0.004	No
Vanadium	2/2	1.8	2.4	CEF-P39-SD-020A	15.0	NA	NA	Yes
Zinc	2/2	6.0	12.0	85D00801	92.1	124[a,b]	0.10	No

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a. U.S. EPA, 1999a.
b. FDEP, 1994.
c. Baudo et al., 1990.
d. Ontario MOE lowest effect level (Jones et al., 1996).

TABLE 6-34

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SURFACE WATER - OUTFALL NO. 8
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Volatile Organic Compounds (ug/L)								
Carbon Disulfide	1/1	50	50	85W00801	NA	NA	NA	Yes
Methylene Chloride	1/1	3	3	85W00801	NA	NA	NA	Yes
Inorganics (ug/L)								
Aluminum	1/2	85	85	85W00801	1,040	87[a]	0.98	No
Antimony	1/2	7	7	85W00801	46	160[a]	0.04	No
Iron	2/2	98	1220	CEF-P39-SW-020A	3,030	1000[a,b]	1.22	Yes
Thallium	1/2	4	4	85W00801	10.1	4.0[a]	1.00	Yes
Zinc	1/2	9.4	9.4	CEF-P39-SW-020A	51.4	58.91[a]	0.16	No

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a = U.S. EPA, 1999a.
b = FDEP, 1996.

TABLE 6-35

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SEDIMENT - OUTFALL NO. 8A
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Concentration	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
Semivolatile Organic Compounds (ug/kg)						
Benzo(a)anthracene	1/1	14	NA	74.8[a,b]	0.19	No
Benzo(a)pyrene	1/1	16	NA	88.8[a,b]	0.18	No
Benzo(b)fluoranthene	1/1	26	NA	655[a]	0.04	No
Chrysene	1/1	56	NA	108[a,b]	0.52	No
Fluoranthene	1/1	34	NA	113[a,b]	0.30	No
Pyrene	1/1	27	NA	153[a,b]	0.18	No
Total PAHs	1/1	147	NA	1684[a,b]	0.51	No
Inorganics (mg/kg)						
Aluminum	1/1	5670	10,200	NA	NA	Yes
Barium	1/1	39	36.1	40[c]	0.98	No
Cobalt	1/1	0.6	3.0	NA	NA	Yes
Copper	1/1	9.3	12.5	18.7[a,b]	0.50	No
Iron	1/1	1600	3,330	20000[d]	0.08	No
Lead	1/1	24.2	44.6	30.2[a]	0.80	No
Manganese	1/1	8.4	17.0	460[d]	0.02	No
Vanadium	1/1	15.7	15.0	NA	NA	Yes
Zinc	1/1	63.7	92.1	124[a,b]	0.51	No

Note: Sample CEF-P39-SD-020 was the only sediment sample collected at this outfall.
NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a. U.S. EPA, 1999a.
b. FDEP, 1994.
c. Baudo et al., 1990.
d. Ontario MOE lowest effect level (Jones et al., 1996).

TABLE 6-36

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SURFACE WATER - OUTFALL NO. 8A
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Concentration	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
Semivolatile Organic Compounds (ug/L)						
bis(2-Ethylhexyl)phthalate	1/1	2.8	NA	0.3[a]	9.33	Yes
Inorganics (ug/L)						
Barium	1/1	19.7	43.7	10000[c]	0.002	No
Chromium	1/1	10.4	4.75	11[a,b]	0.95	No
Iron	1/1	351	3,030	1000[a,b]	0.35	No
Manganese	1/1	8.1	49.3	80[d]	0.10	No
Nickel	1/1	7.1	20	87.71[a]	0.08	No

Note: Sample CEF-P39-SW-020 was the only surface water sample collected at this outfall.
NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a = U.S. EPA, 1999a.
b = U.S. FDEP, 1996.
c = U.S. EPA, 1995.
d = U.S. EPA, 1996.

TABLE 6-37

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SEDIMENT - OUTFALL NO. 9
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Volatile Organic Compounds (ug/kg)								
Acetone	1/1	330	330	85D00901	NA	NA	NA	Yes
Carbon Disulfide	1/1	18	18	85D00901	NA	NA	NA	Yes
Methylene Chloride	1/1	85	85	85D00901	NA	NA	NA	Yes
Pesticides (ug/kg)								
4,4'-DDT	1/2	5	5	85D00901	NA	1.19[a,b]	4.20	Yes
Inorganics (mg/kg)								
Aluminum	2/2	240	742	CEF-P39-SD-021	10,200	NA	NA	Yes
Barium	1/2	5.1	5.1	CEF-P39-SD-021	36.1	40[c]	0.13	No
Copper	1/2	1.7	1.7	CEF-P39-SD-021	12.5	18.7[a,b]	0.09	No
Iron	2/2	210	247	CEF-P39-SD-021	3,330	20000[d]	0.01	No
Manganese	1/2	2.4	2.4	CEF-P39-SD-021	17	460[d]	0.01	No
Vanadium	1/2	1.1	1.1	CEF-P39-SD-021	15	NA	NA	Yes

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a. U.S. EPA, 1999a.
b. FDEP, 1994.
c. Baudo et al., 1990.
d. Ontario MOE lowest effect level (Jones et al., 1996).

TABLE 6-38

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SURFACE WATER - OUTFALL NO. 9
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Concentration	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
Volatile Organic Compounds (ug/L)						
Carbon disulfide	1/1	20	NA	NA	NA	Yes
Inorganics (ug/L)						
Aluminum	1/1	230	1,040	87[a]	2.64	Yes
Iron	1/1	380	3,030	1000[a,b]	0.38	No

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a = U.S. EPA, 1999a.
b = FDEP, 1996.

TABLE 6-39

RESULTS OF FOOD CHAIN MODELING
AQUATIC RECEPTORS
MAXIMUM CONCENTRATIONS
OUTFALL NO. 9
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Raccoon		Kingfisher	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Pesticides/PCBs				
4,4'-DDT	4.18E-03	8.37E-04	**4.07E+00**	4.07E-01

HQ = Hazard Quotient.
Bolded values are HQs greater than 1.0.

TABLE 6-40

RESULTS OF FOOD CHAIN MODELING
AQUATIC RECEPTORS
MEAN CONCENTRATIONS
OUTFALL NO. 9
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Raccoon		Kingfisher	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Pesticides/PCBs				
4,4'-DDT	3.01E-03	6.02E-04	**2.93E+00**	2.93E-01

HQ = Hazard Quotient.
Bolded values are HQs greater than 1.0.

TABLE 6-41

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SEDIMENT - OUTFALL NO. 9A
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Concentration	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
Semivolatile Organic Compounds (ug/kg)						
Benzo(a)anthracene	1/1	9	NA	74.8[a,b]	0.12	No
Benzo(a)pyrene	1/1	34	NA	88.8[a,b]	0.38	No
Benzo(b)fluoranthene	1/1	37	NA	655[a]	0.06	No
Benzo(g,h,i)perylene	1/1	68	NA	655[a]	0.10	No
Benzo(k)fluoranthene	1/1	14	NA	655[a]	0.02	No
Chrysene	1/1	27	NA	108[a,b]	0.25	No
Fluoranthene	1/1	22	NA	113[a,b]	0.19	No
Indeno(1,2,3-cd)pyrene	1/1	44	NA	655[a]	0.07	No
Phenanthrene	1/1	8.4	NA	86.7[a,b]	0.10	No
Pyrene	1/1	22	NA	153[a,b]	0.14	No
Total PAHs	1/1	122.4	NA	1684[a,b]	0.07	No
Inorganics (mg/kg)						
Aluminum	1/1	3260	10,200	NA	NA	Yes
Barium	1/1	10.3	36.1	40[c]	0.26	No
Chromium	1/1	3.1	16.0	52.3[a,b]	0.06	No
Cobalt	1/1	0.41	3.0	NA	NA	Yes
Copper	1/1	1.6	12.5	18.7[a,b]	0.09	No
Iron	1/1	1160	3,330	20000[d]	0.06	No
Lead	1/1	6.6	44.6	30.2[a]	0.22	No
Manganese	1/1	10.2	17.0	460[e]	0.02	No
Vanadium	1/1	2.8	15.0	NA	NA	Yes
Zinc	1/1	11.7	92.1	124[a,b]	0.09	No

Note: Sample CEF-P39-SD-021 was the only sediment sample collected at this outfall.
a = U.S. EPA Region IV ESVs (U.S. EPA, 1999)
b = TEL (FDEP, 1994)
c = Baudo et al., 1990
d = ORNL screening level (Jones et al., 1996)
e = Ontario Sediment Quality Guideline (OME, 1992)

TABLE 6-42

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SEDIMENT - OUTFALL NO. 10
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Volatile Organic Compounds (µg/kg)								
CARBON DISULFIDE	1/1	90	90	85D01001	NA	NA	NA	Yes
METHYLENE CHLORIDE	1/1	22	22	85D01001	NA	NA	NA	Yes
Inorganics (mg/kg)								
ALUMINUM	2/2	2000	3360	CEF-P39-SD-022	10,200	NA	NA	Yes
BARIUM	1/2	10.2	10.2	CEF-P39-SD-022	36.1	40[c]	0.26	No
CHROMIUM	2/2	2.9	3.6	CEF-P39-SD-022	16	52.3[a,b]	0.07	No
COBALT	1/2	0.11	0.11	CEF-P39-SD-022	3	NA	NA	Yes
COPPER	1/2	2.5	2.5	CEF-P39-SD-022	12.5	18.7[a,b]	0.13	No
IRON	2/2	410	596	CEF-P39-SD-022	3,330	20000[d]	0.03	No
LEAD	1/2	4	4	85D01001	44.6	30.2[a]	0.14	No
MANGANESE	2/2	1.7	2.9	85D01001	17	460[d]	0.002	No
SELENIUM	1/2	1.3	1.3	CEF-P39-SD-022	2.27	NA	NA	Yes
VANADIUM	2/2	4.3	5	85D01001	15	NA	NA	Yes
ZINC	2/2	15	16.2	CEF-P39-SD-022	92.1	124[a,b]	0.13	No

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a. U.S. EPA, 1999a.
b. FDEP, 1994.
c. Baudo et al., 1990.
d. Ontario MOE lowest effect level (Jones et al., 1996).

TABLE 6-43

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SURFACE WATER - OUTFALL NO. 10
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Volatiles (µg/L)								
CARBON DISULFIDE	1/1	1.6	1.6	85W01001	NA	NA	NA	Yes
Inorganics (ug/L)								
ALUMINUM	2/2	610	2150	CEF-P39-SW-022	1,040	87[a]	24.71	Yes
BARIUM	1/2	108	108	CEF-P39-SW-022	43.7	10000[c]	0.01	No
IRON	2/2	1300	6900	CEF-P39-SW-022	3,030	1000[a,b]	6.90	Yes
MANGANESE	1/2	6.4	6.4	CEF-P39-SW-022	49.3	80[d]	0.08	No
VANADIUM	1/2	18.6	18.6	CEF-P39-SW-022	4.5	19[d]	0.98	No
ZINC	1/2	44.6	44.6	CEF-P39-SW-022	51.4	58.91[a]	0.76	No

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a. U.S. EPA, 1999a.
b. FDEP, 1996.
c. U.S. EPA, 1995.
d. U.S. EPA, 1996b.

TABLE 6-44

RESULTS OF FOOD CHAIN MODELING
AQUATIC RECEPTORS
MAXIMUM CONCENTRATIONS
OUTFALL NO. 10
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Raccoon		Kingfisher	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Inorganics				
SELENIUM	**1.39E+00**	8.45E-01	**1.63E+00**	8.13E-01

HQ = Hazard Quotient.

Bolded values are HQs greater than 1.0.

TABLE 6-45
RESULTS OF FOOD CHAIN MODELING
AQUATIC RECEPTORS
MEAN CONCENTRATIONS
OUTFALL NO.10
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Raccoon		Kingfisher	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Inorganics				
SELENIUM	**1.50E+00**	9.10E-01	**1.75E+00**	8.75E-01

HQ = Hazard Quotient.
Bolded values are HQs greater than 1.0.

TABLE 6-46

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
PSC 39, FLIGHTLINE OUTFALLS
SEDIMENT - OUTFALL NO. 11
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Analyte	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Screening Level	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Pesticides/PCBs (ug/kg)								
AROCLOR-1260	5 / 6	45.6	333	CEF-P39-SD-304	NA	21.6[a,b]	15.4	Yes

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a. U.S. EPA, 1999a.
b. FDEP, 1994.

TABLE 6-47

RESULTS OF FOOD CHAIN MODELING
MAXIMUM CONCENTRATIONS
OUTFALL NO. 11
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Raccoon		Kingfisher	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Pesticides/PCBs				
AROCLOR-1260	**3.62E+00**	3.62E-01	**4.67E+00**	4.67E-01

HQ = Hazard Quotient.
Bolded values are HQs greater than 1.0.

TABLE 6-48

RESULTS OF FOOD CHAIN MODELING
MEAN CONCENTRATIONS
OUTFALL NO. 11
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Raccoon		Kingfisher	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Pesticides/PCBs				
AROCLOR-1260	**1.34E+00**	1.34E-01	**1.73E+00**	1.73E-01

HQ = Hazard Quotient.
Bolded values are HQs greater than 1.0.

TABLE 6-49

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SEDIMENT - OUTFALL NO. 12
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 1 OF 2

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Volatile Organic Compounds (ug/kg)								
ACETONE	1/1	420	420	85D01201	NA	NA	NA	Yes
CARBON DISULFIDE	1/2	48	48	85D01201	NA	NA	NA	Yes
Semivolatile Organic Compounds (ug/kg)								
1-METHYLNAPHTHALENE	1/2	134	134	CEF-37-SD-F002-1	NA	NA	NA	Yes
2-METHYLNAPHTHALENE	2/3	110	220	CEF-P39-SD-025	NA	20.2[a]	10.89	Yes
3&4-METHYLPHENOL	1/2	41.8	41.8	CEF-37-SD-F002-1	NA	NA	NA	Yes
ACENAPHTHENE	2/3	149	290	CEF-P39-SD-025	NA	6.71[a,b]	43.22	Yes
ACENAPHTHYLENE	1/3	114	114	CEF-37-SD-F002-1	NA	5.87[a,b]	19.40	Yes
ANTHRACENE	2/3	11	22.3	CEF-37-SD-F002-1	NA	46.9[a,b]	0.48	No
BENZO(A)ANTHRACENE	2/3	110	368	CEF-37-SD-F002-1	NA	74.8[a,b]	4.92	Yes
BENZO(A)PYRENE	2/3	24.1	150	CEF-P39-SD-025	NA	88.8[a,b]	1.69	Yes
BENZO(B)FLUORANTHENE	1/3	190	190	CEF-P39-SD-025	NA	655[a]	0.29	No
BENZO(G,H,I)PERYLENE	1/3	150	150	CEF-P39-SD-025	NA	655[a]	0.23	No
BENZO(K)FLUORANTHENE	2/3	96	543	CEF-37-SD-F002-1	NA	655[a]	0.83	No
CHRYSENE	1/3	220	220	CEF-P39-SD-025	NA	108[a,b]	2.04	Yes
DIBENZO(A,H)ANTHRACENE	2/3	13	114	CEF-37-SD-F002-1	NA	6.22[a,b]	18.33	Yes
DI-N-BUTYL PHTHALATE	2/3	53.1	460	85D01201	NA	11,000[e]	0.04	No
DI-N-OCTYL PHTHALATE	1/3	104	104	CEF-37-SD-F002-1	NA	182[a,b]	0.57	No
FLUORANTHENE	2/3	220	230	85D01201	NA	113[a,b]	2.04	Yes
INDENO(1,2,3-CD)PYRENE	1/3	140	140	CEF-P39-SD-025	NA	655[a]	0.21	No
PHENANTHRENE	2/3	28.2	66	CEF-P39-SD-025	NA	86.7[a,b]	0.76	No
PYRENE	1/3	210	210	CEF-P39-SD-025	NA	153[a,b]	1.37	Yes
TOTAL PAHs	3/3	230	1510	CEF-P39-SD-025	NA	1684[a,b]	0.90	No

TABLE 6-49

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SEDIMENT - OUTFALL NO. 12
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA
PAGE 2 OF 2

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Inorganics(mg/kg)								
ALUMINUM	3/3	1670	1850	CEF-37-SD-F002-1	10,200	NA	NA	Yes
BARIUM	2/3	8.6	9.3	CEF-P39-SD-025	36.1	40[c]	0.23	No
CADMIUM	1/3	0.1	0.1	CEF-P39-SD-025	2.05	0.676[a]	0.15	No
CHROMIUM	3/3	2.4	4.6	CEF-P39-SD-025	16	52.3[a,b]	0.09	No
COBALT	1/3	0.29	0.29	CEF-P39-SD-025	3	NA	NA	Yes
COPPER	2/3	2.5	5.1	CEF-37-SD-F002-1	12.5	18.7[a,b]	0.27	No
IRON	3/3	344	1480	CEF-P39-SD-025	3,330	20000[d]	0.07	No
LEAD	3/3	4.3	8.1	CEF-P39-SD-025	44.6	30.2[a]	0.27	No
MANGANESE	3/3	1.8	6.4	85D01201	17	460[d]	0.01	No
NICKEL	1/3	1.1	1.1	CEF-37-SD-F002-1	7	15.9[a,b]	0.09	No
VANADIUM	3/3	2.2	3.7	85D01201	15	NA	NA	Yes
ZINC	3/3	15	27.4	CEF-P39-SD-025	92.1	124[a,b]	0.22	No

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a. U.S. EPA, 1999a.
b. FDEP, 1994.
c. Baudo et al., 1990.
d. Ontario MOE lowest effect level (Jones et al., 1996).
e = Sediment Quality Benchmark (U.S EPA, 1996).

TABLE 6-50

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SURFACE WATER - OUTFALL NO. 12
PSC 39, FLIGHTLINE OUTFALLS
NAVAL IAR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Volatile Organic Compounds (ug/L)								
CARBON DISULFIDE	1/2	2.4	2.4	85D01201	NA	NA	NA	Yes
Inorganics (ug/L)								
ALUMINUM	2/2	360	384	CEF-P39-SW-025	1,040	87[a]	4.41	Yes
BARIUM	1/2	11.7	11.7	CEF-P39-SW-025	43.7	10000[c]	0.001	No
IRON	2/2	1400	1550	CEF-P39-SW-025	3,030	1000[a,b]	1.55	Yes
VANADIUM	1/2	1.9	1.9	CEF-P39-SW-025	4.5	19[d]	0.10	No
ZINC	1/2	9.6	9.6	CEF-P39-SW-025	51.4	58.91[a]	0.16	No

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a = U.S. EPA, 1999a.
b = FDEP, 1996.
c = U.S. EPA, 1995.
d = U.S. EPA, 1996.

TABLE 6-51

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SURFACE SOIL - OUTFALL NO. 13
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Volatiles (µg/kg)								
CARBON DISULFIDE	1/1	300	300	85D01301	NA	NA	NA	Yes
Semivolatile Organic Compounds (ug/kg)								
BENZO(A)PYRENE	1/2	5.4	5.4	CEF-P39-SD-026	NA	100	0.05	No
BENZO(B)FLUORANTHEN	1/2	7.3	7.3	CEF-P39-SD-026	NA	100	0.07	No
BENZO(G,H,I)PERYLENE	1/2	8.6	8.6	CEF-P39-SD-026	NA	100	0.09	No
CHRYSENE	1/2	7.3	7.3	CEF-P39-SD-026	NA	100	0.07	No
FLUORANTHENE	1/2	8.2	8.2	CEF-P39-SD-026	NA	100	0.08	No
INDENO(1,2,3-CD)PYRENE	1/2	5.7	5.7	CEF-P39-SD-026	NA	100	0.06	No
TOTAL PAHs	1/2	20.9	20.9	CEF-P39-SD-026	NA	1000[a]	0.02	No
Pesticides/PCBs (ug/kg)								
ENDRIN	1/3	4.4	4.4	85D01301	NA	1	4.40	Yes
Inorganics (mg/kg)								
ALUMINUM	2/2	3880	9200	85D01301	4,430	50	184.00	Yes
ARSENIC	1/2	1.5	1.5	85D01301	2.04	10	0.15	No
CHROMIUM	2/2	6	9.8	85D01301	7.75	0.4	24.50	Yes
COBALT	1/2	0.25	0.25	CEF-P39-SD-026	3.11	20	0.01	No
COPPER	1/2	1.7	1.7	CEF-P39-SD-026	5.97	40	0.04	No
IRON	2/2	574	830	85D01301	1,490	200	4.15	Yes
LEAD	2/2	4.6	11	85D01301	197	50	0.22	No
MANGANESE	2/2	7.6	9.8	85D01301	22	100	0.10	No
MERCURY	1/2	0.085	0.085	85D01301	0.16	0.1	0.85	No
VANADIUM	2/2	3.4	6.1	85D01301	6.3	2	3.05	Yes
ZINC	1/2	5.1	5.1	CEF-P39-SD-026	37	50	0.10	No

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a. U.S. EPA, 1999a.
Benzo(a)pyrene screening value was used as a surrogate for high molecular weight PAHs when screening values were unavailable.

TABLE 6-52

ECOLOGICAL GUIDELINES FOR SURFACE SOIL CONTAMINANTS OF POTENTIAL CONCERN PSC 39, FLIGHTLINE OUTFALLS NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA

COPC	U.S. EPA Region IV ESV	ORNL[a] Earthworms/ Microorganisms	ORNL Soil Phytotoxicity	Beyer (1990) "A" Value	Beyer (1990) "B" Value	Dutch (1994) Target	Dutch (1994) Intervention	Other
PESTICIDES/PCBs (µg/kg)								
Endrin	1.0	NA	NA	NA	NA	1.0	NA	NA
METALS (mg/kg)								
Aluminum	50	600	50	NA	NA	NA	NA	NA
Chromium	0.4[b]	0.4[b]	1.0[b]	100[c]	250[c]	100[c]	380[c]	64[c,d]
Iron	200	200	NA	NA	NA	NA	NA	NA
Vanadium	2.0	20	2.0	NA	NA	NA	NA	130[d]

ESV = Ecological screening value.
ORNL = Oak Ridge National Laboratory.
NA = Not Available.
a. Lowest of earthworm and micro-organism screening values.
b. Hexavalent chromium.
c. Total chromium.
d. Canadian Council of Ministers of the Environment (CCME, 1997) soil quality guideline.

TABLE 6-53

RESULTS OF FOOD CHAIN MODELING
MAXIMUM CONCENTRATIONS
OUTFALL NO. 13
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Shrew		Robin		Hawk		Woodcock		Fox		Mouse	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Pesticides/PCBs												
Endrin	1.57E-01	1.57E-02	9.48E-01	9.48E-02	1.66E-02	1.66E-03	**2.07E+00**	2.07E-01	1.87E-03	1.87E-04	6.55E-04	6.55E-05
Inorganics												
Chromium	6.01E-01	6.01E-02	**1.38E+00**	2.76E-01	4.72E-02	9.44E-03	**2.86E+00**	5.72E-01	2.29E-02	2.29E-03	1.78E-02	1.78E-03

HQ = Hazard Quotient.
Bolded values are HQs greater than 1.0.

TABLE 6-54
RESULTS OF FOOD CHAIN MODELING
MEAN CONCENTRATIONS
OUTFALL NO. 13
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Shrew		Robin		Hawk		Woodcock		Fox		Mouse	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Pesticides/PCBs												
Endrin	1.83E-01	1.83E-02	**1.10E+00**	1.10E-01	1.93E-02	1.93E-03	**2.41E+00**	2.41E-01	2.17E-03	2.17E-04	7.62E-04	7.62E-05
Inorganics												
Chromium	4.85E-01	4.85E-02	**1.11E+00**	2.23E-01	3.81E-02	7.61E-03	**2.31E+00**	4.61E-01	1.85E-02	1.85E-03	1.43E-02	1.43E-03

HQ = Hazard Quotient
Bolded values are HQs greater than 1.0

TABLE 6-55

SELECTION OF CONTAMINANTS OF POTENTIAL CONCERN
SURFACE SOIL - OUTFALL NO. 14
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Parameter	Frequency of Detection	Range of Detections		Location of Maximum Detection	IBDS Value	Ecological Screening Value	Maximum Hazard Quotient	Selected as COPC (Yes/No?)
		Minimum	Maximum					
Volatile Organic Compounds (ug/kg)								
Acetone	1/1	230	230	85D01401	NA	NA	NA	Yes
Carbon Disulfide	1/1	54	54	85D01401	NA	NA	NA	Yes
Methylene Chloride	1/1	180	180	85D01401	NA	2000	0.09	No
Semivolatile Organic Compounds (ug/kg)								
BENZO(A)ANTHRACENE	1/2	6.1	6.1	CEF-P39-SD-028	NA	100	0.06	No
BENZO(A)PYRENE	1/2	19	19	CEF-P39-SD-028	NA	100	0.19	No
BENZO(B)FLUORANTHENE	1/2	23	23	CEF-P39-SD-028	NA	100	0.23	No
BENZO(G,H,I)PERYLENE	1/2	17	17	CEF-P39-SD-028	NA	100	0.17	No
BENZO(K)FLUORANTHENE	1/2	11	11	CEF-P39-SD-028	NA	100	0.11	No
CHRYSENE	1/2	10	10	CEF-P39-SD-028	NA	100	0.10	No
FLUORANTHENE	1/2	18	18	CEF-P39-SD-028	NA	100	0.18	No
INDENO(1,2,3-CD)PYRENE	1/2	20	20	CEF-P39-SD-028	NA	100	0.20	No
PHENANTHRENE	1/2	6.4	6.4	CEF-P39-SD-028	NA	100	0.06	No
PYRENE	1/2	17	17	CEF-P39-SD-028	NA	100	0.17	No
TOTAL PAHs	1/2	76.5	76.5	CEF-P39-SD-028	NA	1000[a]	0.08	No
Inorganics (mg/kg)								
ALUMINUM	3/3	1260	10000	85D01401	4,430	50	200.00	Yes
ARSENIC	1/3	1.5	1.5	85D01401	2.04	10	0.15	No
CHROMIUM	2/3	7.6	10	85D01401	7.75	0.4	25.00	Yes
COBALT	2/3	0.1	0.33	CEF-P39-SD-028	3.11	20	0.02	No
COPPER	2/3	2.1	20	85D01401	5.97	40	0.50	No
IRON	3/3	180	930	85D01401	1,490	200	4.65	Yes
LEAD	2/3	6.3	11	85D01401	197	50	0.22	No
MANGANESE	2/3	0.78	6.9	CEF-P39-SD-028	22	100	0.07	No
MERCURY	1/3	0.052	0.052	85D01401	0.16	0.1	0.52	No
NICKEL	1/3	1.9	1.9	CEF-P39-SD-028	3.89	30	0.06	No
VANADIUM	3/3	1.2	6.2	85D01401	6.3	2	3.10	Yes
ZINC	1/3	7	7	CEF-P39-SD-028	37	50	0.14	No

NA = Not available.
IBDS = NAS Cecil Field Inorganic Background Data Set (HLA, 1998).
a. U.S. EPA, 1999a.
Benzo(a)pyrene screening level value was used as a surrogate for high molecular weight PAHs when screening values were unavailable.

TABLE 6-56

RESULTS OF FOOD CHAIN MODELING
MAXIMUM CONCENTRATIONS
OUTFALL NO. 14
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Shrew		Robin		Hawk		Woodcock		Fox		Mouse	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Inorganics												
Chromium	6.14E-01	6.14E-02	**1.41E+00**	2.82E-01	4.82E-02	9.63E-03	**2.92E+00**	5.84E-01	2.34E-02	2.34E-03	1.82E-02	1.82E-03

HQ = Hazard Quotient.
Bolded values are HQs greater than 1.0.

TABLE 6-57

RESULTS OF FOOD CHAIN MODELING
MEAN CONCENTRATIONS
OUTFALL NO. 14
PSC 39, FLIGHTLINE OUTFALLS
NAVAL AIR STATION CECIL FIELD
JACKSONVILLE, FLORIDA

Ecological Contaminant of Potential Concern	Shrew		Robin		Hawk		Woodcock		Fox		Mouse	
	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ	NOAEL HQ	LOAEL HQ
Inorganics												
Chromium	3.79E-01	3.79E-02	8.72E-01	1.74E-01	2.98E-02	5.96E-03	**1.80E+00**	3.61E-01	1.45E-02	1.45E-03	1.12E-02	1.12E-03

HQ = Hazard Quotient.
Bolded values are HQs greater than 1.0.

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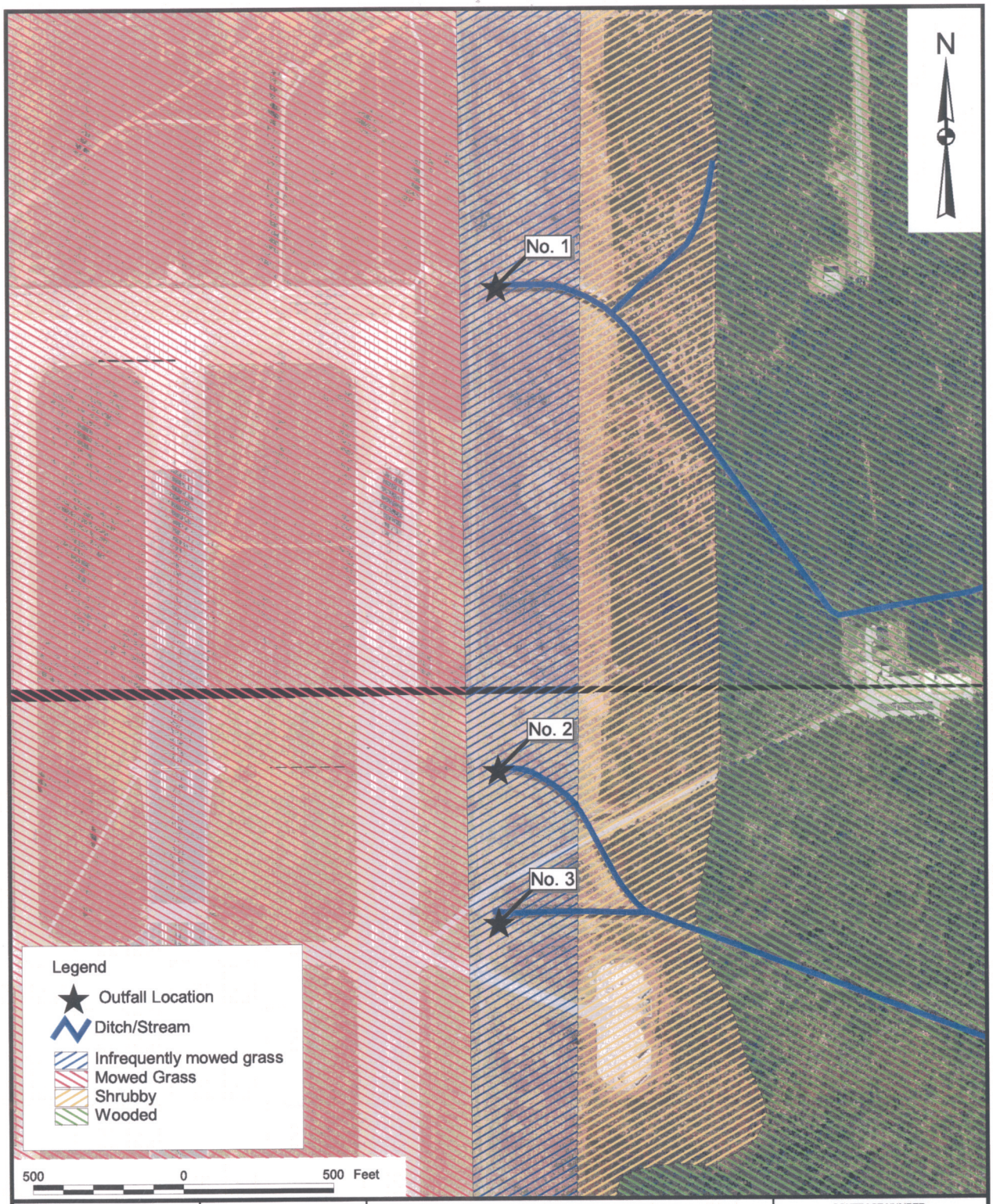
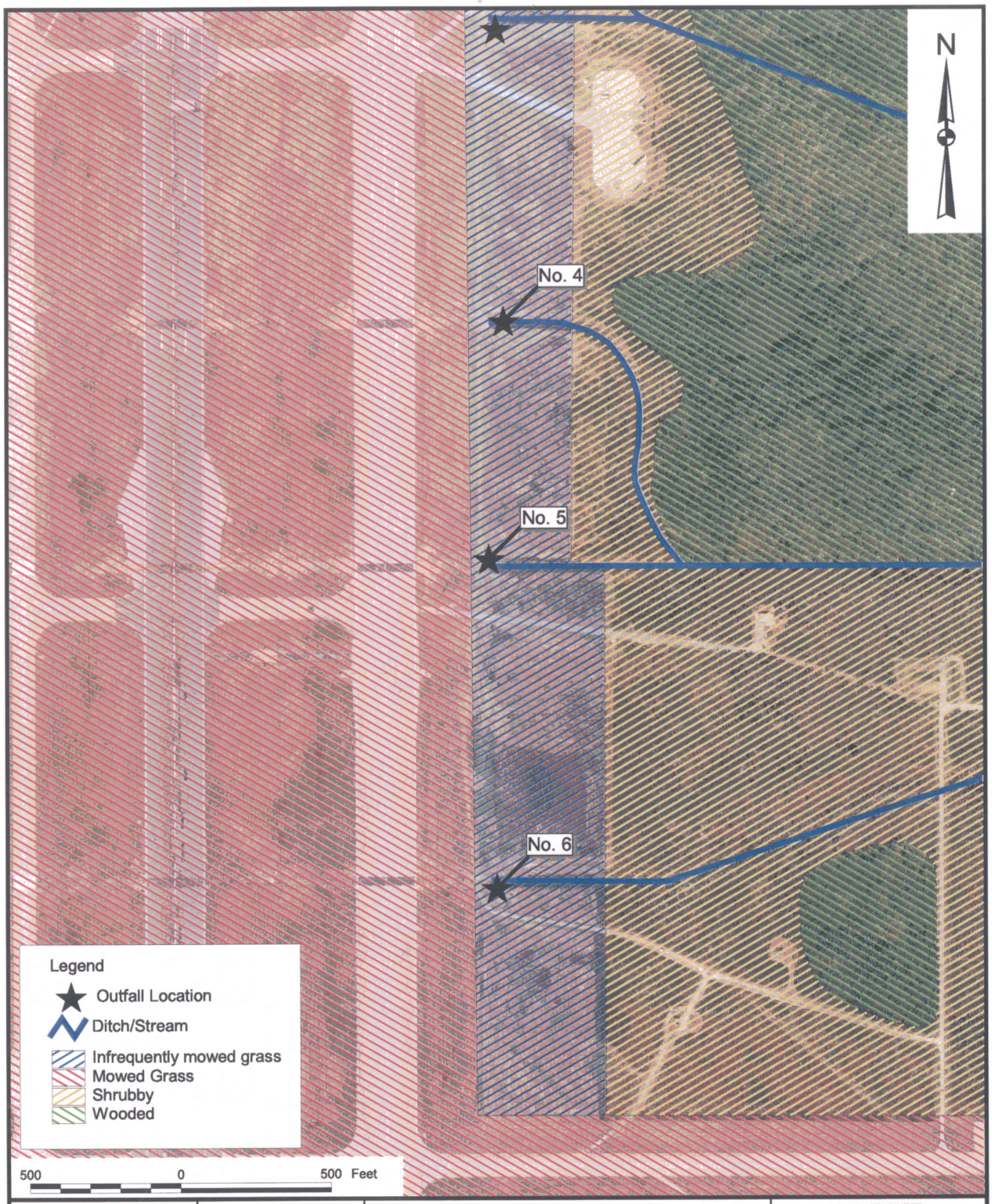


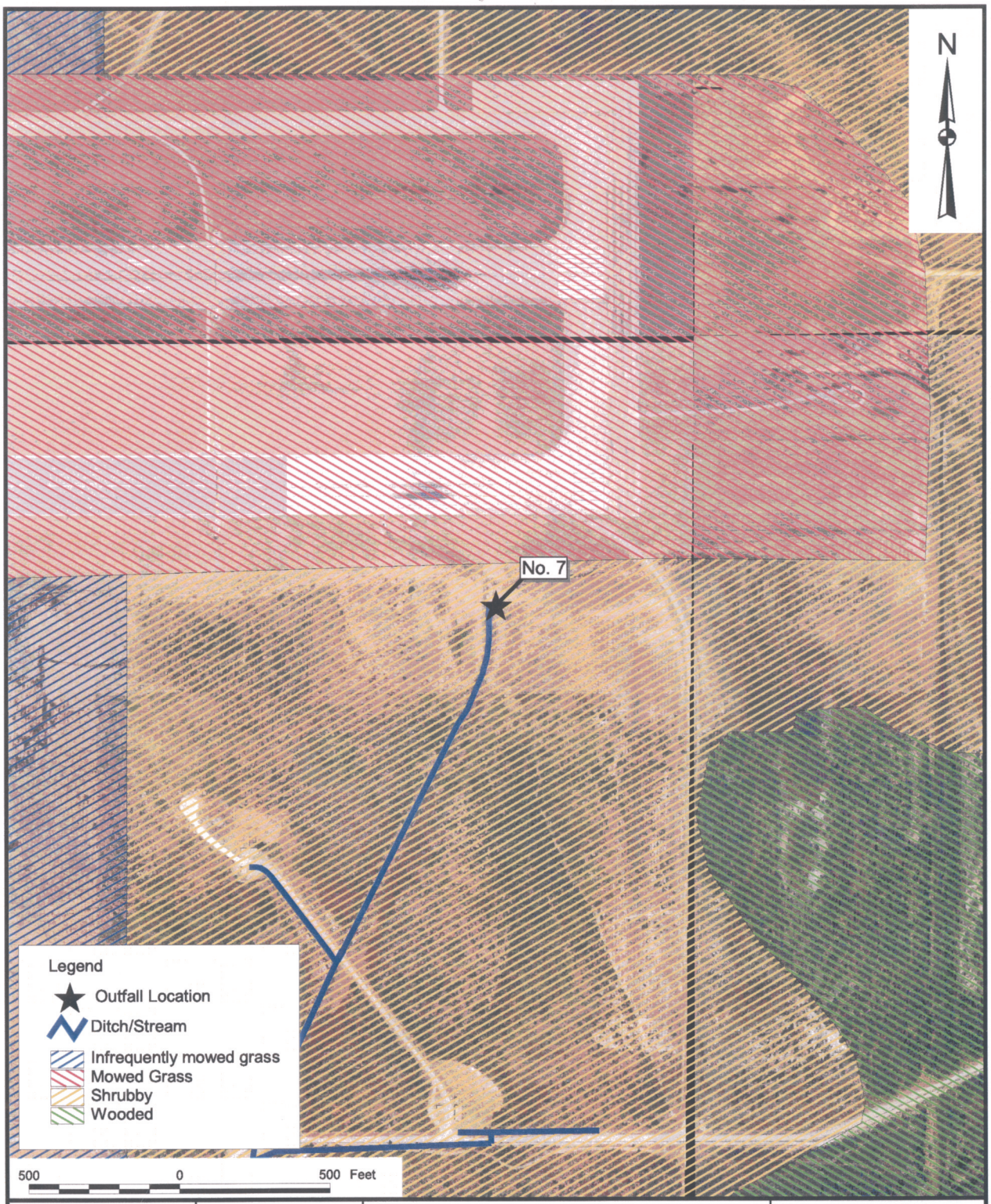
DRAWN BY MJJ	DATE 25Aug00	HABITAT MAP OUTFALL NOs. 1, 2, AND 3 PSC 39, RUNWAY OUTFALLS TECHNICAL MEMORANDUM NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0039
CHECKED BY	DATE 6/28/02		APPROVED BY MPS DATE 6/28/02
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 6-1 REV 0

P:\GIS\NAS_CecilField\PSC39_techmemo.apr 13Nov01 MJJ AerialPhotoArea1 Layout



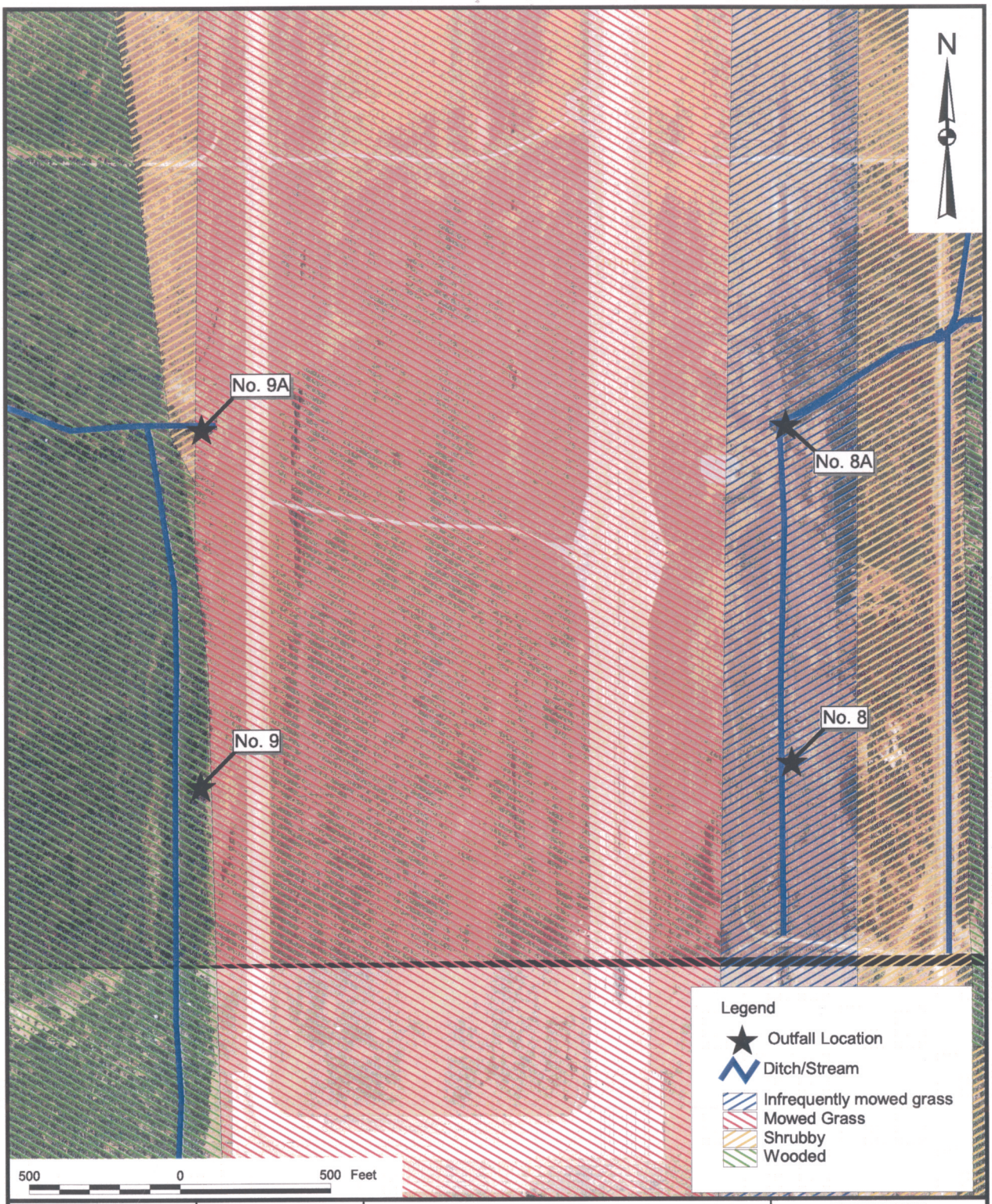
DRAWN BY MJJ	DATE 25Aug00	HABITAT MAP OUTFALL NOs. 4, 5, AND 6 PSC 39, RUNWAY OUTFALLS TECHNICAL MEMORANDUM NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0039
CHECKED BY JLS	DATE 6/28/02		APPROVED BY MPD DATE 6/28/02
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 6-2 REV 0

P:\GIS\NAS_CecilField\PSC39_techmemo.apr 13Nov01 MJJ AerialPhotoArea3 Layout



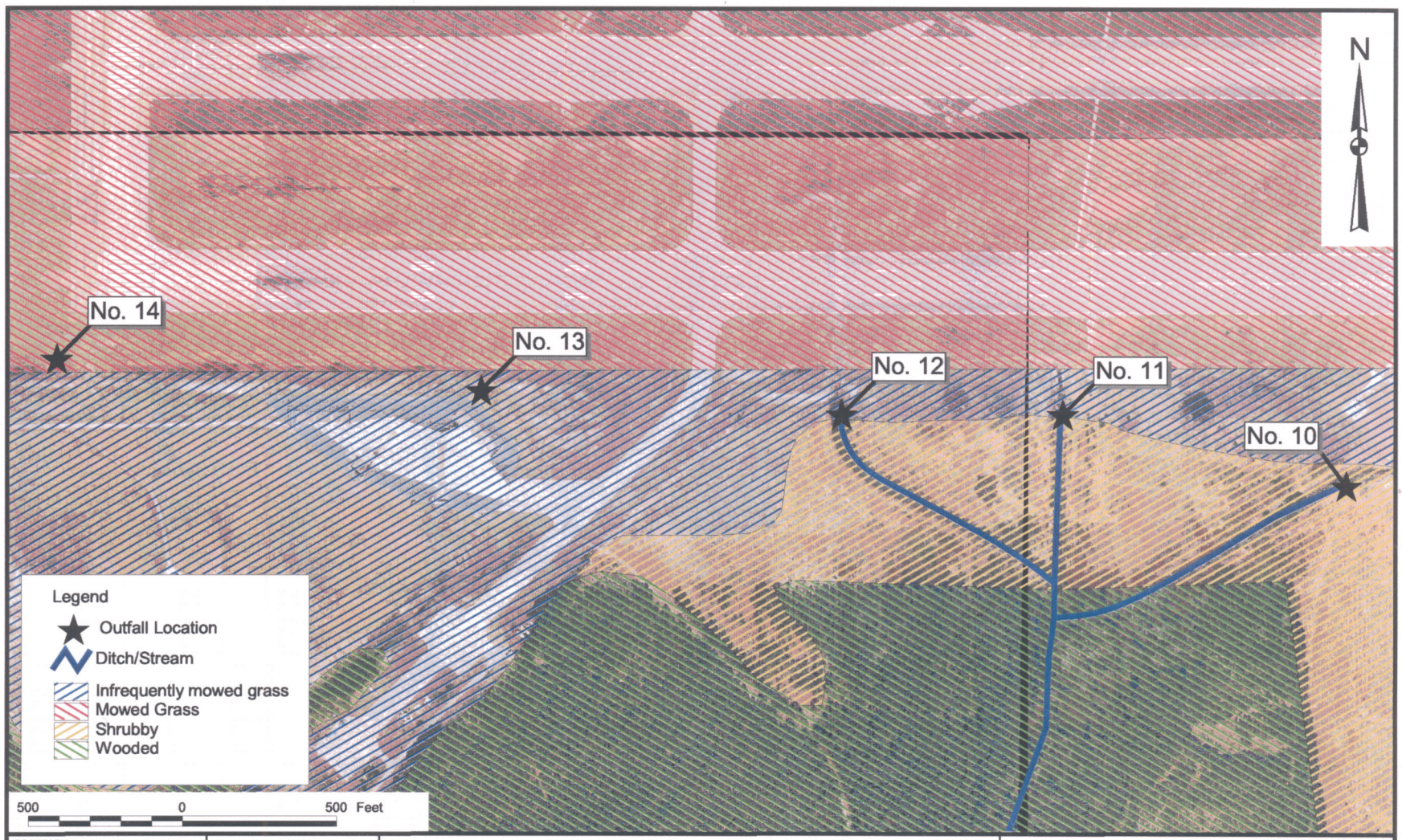
DRAWN BY MJJ	DATE 25Aug00	HABITAT MAP OUTFALL NO. 7 PSC 39, RUNWAY OUTFALLS TECHNICAL MEMORANDUM NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0039
CHECKED BY RS	DATE 6/28/02		APPROVED BY MPJ DATE 6/28/02
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 6-3 REV 0

P:\GIS\NAS_CecilField\PSC39_techmemo.apr 13Nov01 MJJ AerialPhotoArea2 Layout



DRAWN BY MJJ	DATE 25Aug00	HABITAT MAP OUTFALL NOs. 8, 8A, 9, AND 9A PSC 39, RUNWAY OUTFALLS TECHNICAL MEMORANDUM NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0039
CHECKED BY	DATE 6/28/02		APPROVED BY MPD DATE 6/28/02
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 6-4 REV 0

P:\GIS\NAS_CecilField\PSC39_techmemo.apr 13Nov01 MJJ AerialPhotoArea5 Layout



DRAWN BY MJJ	DATE 25Aug00	HABITAT MAP OUTFALL NOs. 10, 11, 12, 13, AND 14 PSC 39, RUNWAY OUTFALLS TECHNICAL MEMORANDUM NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0039
CHECKED BY JCB	DATE 6/28/02		APPROVED BY MPJ DATE 6/28/02
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 6-5 REV 0

P:\GIS\NAS_CecilField\PSC39_techmemo.apr 13Nov01 MJJ AerialPhotoArea4 Layout

FIGURE 6-6

CONCEPTUAL SITE MODEL FOR ECOLOGICAL RISK ASSESSMENT AT PSC 39 RUNWAY OUTFALLS OUTFALLS 1 THROUGH 12 NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA

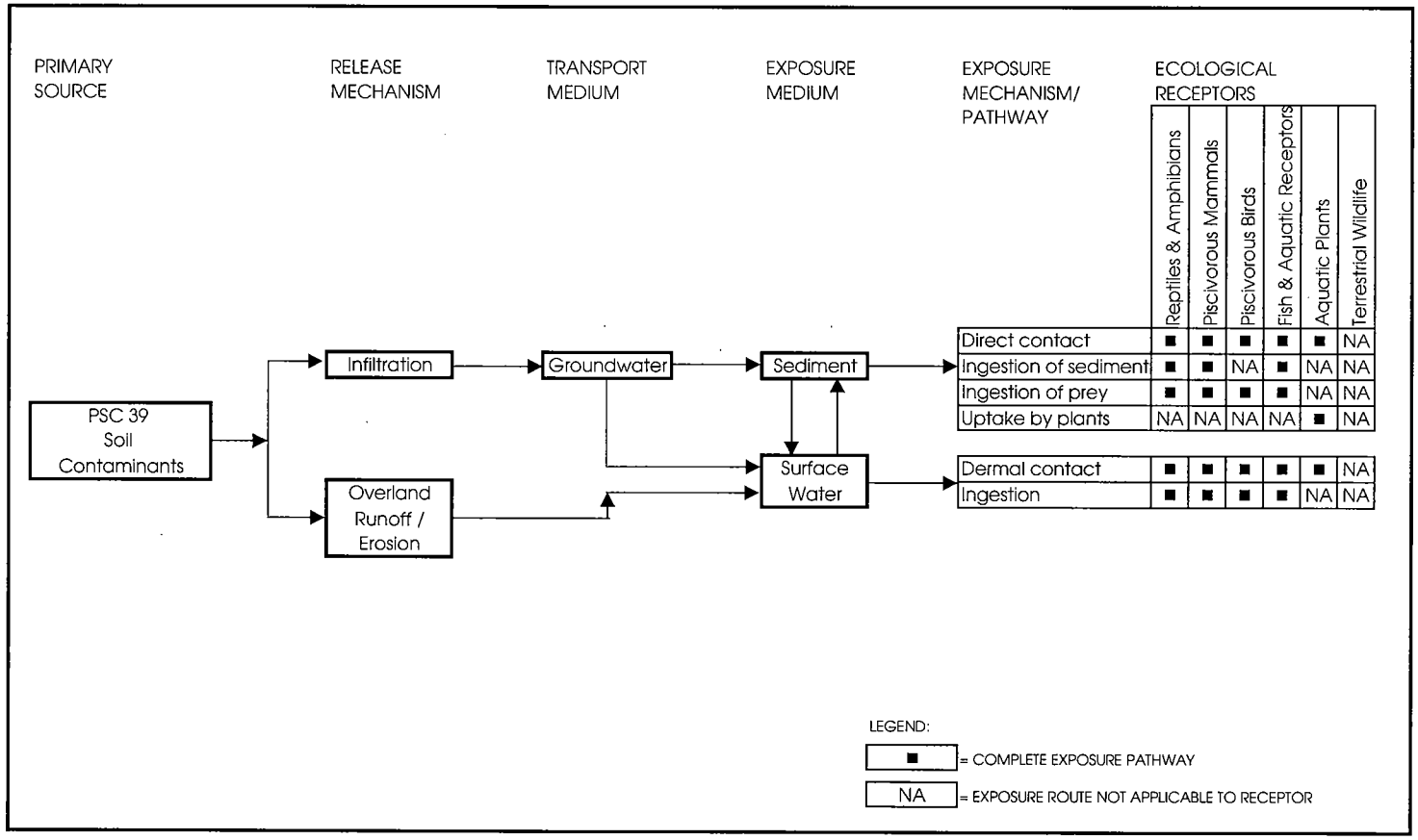
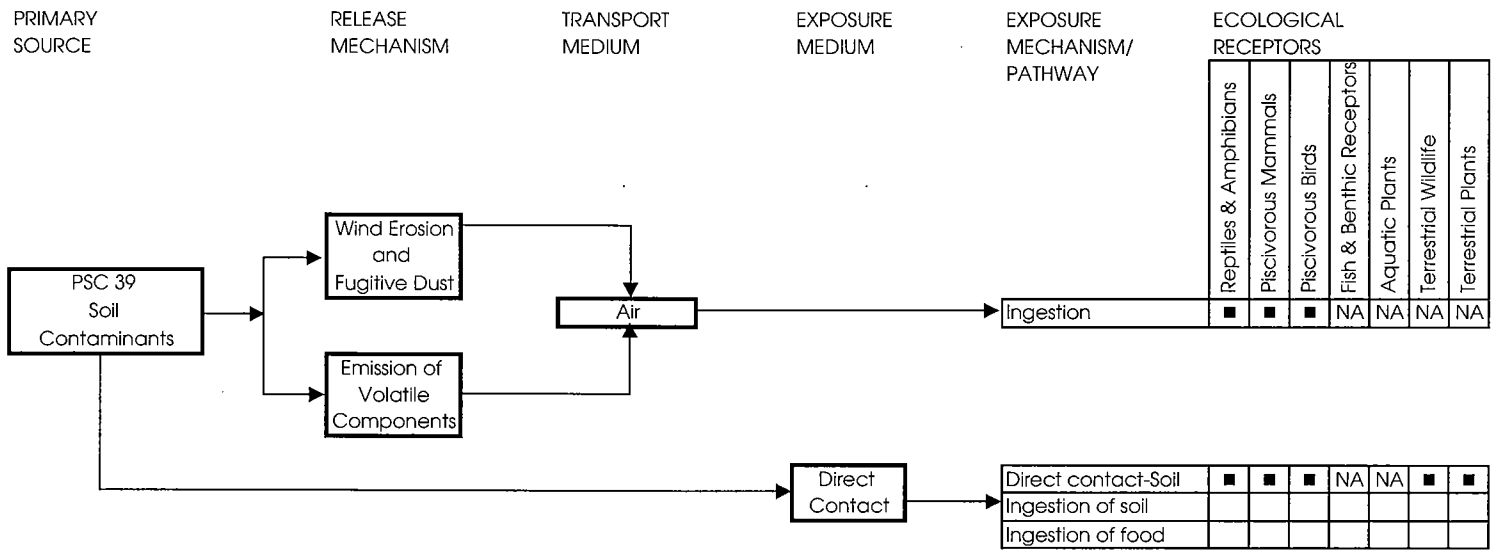


FIGURE 6-7

CONCEPTUAL SITE MODEL FOR ECOLOGICAL RISK ASSESSMENT AT PSC 39 RUNWAY OUTFALLS OUTFALLS 13 AND 14 NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA

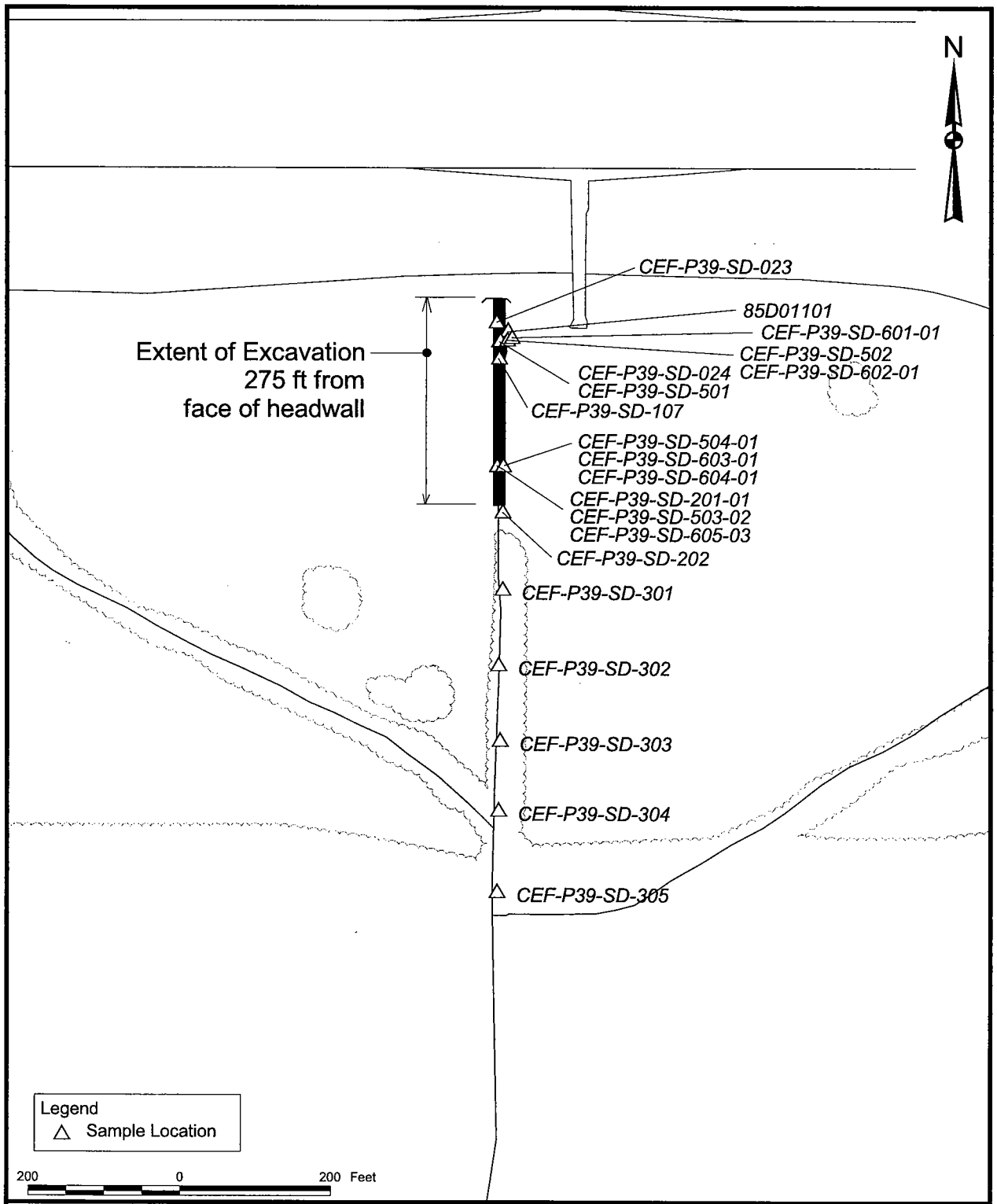


NOTE: Although infiltration to groundwater and subsequent discharge into surface water are theoretically possible, this pathway was assumed to be minimal, and is not shown above. In addition, the inhalation and dermal contact exposure routes were not investigated.

LEGEND:

■ = COMPLETE EXPOSURE PATHWAY

NA = EXPOSURE ROUTE NOT APPLICABLE TO RECEPTOR



DRAWN BY MJJ	DATE 01Apr00	SEDIMENT REMEDIATION AREA - OUTFALL 11 PSC 39, RUNWAY OUTFALLS NAVAL AIR STATION CECIL FIELD JACKSONVILLE, FLORIDA	CONTRACT NUMBER 0039
CHECKED BY JDS	DATE 6/28/02		APPROVED BY MRB DATE 6/28/02
COST/SCHEDULE-AREA			APPROVED BY DATE
SCALE AS NOTED			DRAWING NO. FIGURE 6-8 REV 0

P:\GIS\NAS_CecilField\PSC39_techmemo.apr 30Oct01 MJJ Post Excavation Area Layout

7.0 REMEDIAL ACTIVITIES

The Navy's Remedial Action Contractor (RAC), CH2M Hill Constructors, Inc. (CH2M Hill), conducted a source removal at PSC 39, Outfall No. 11 from February 19 through 22, 2001. A total of 390.66 tons of PCB-contaminated sediment were excavated. The depth of the excavation was hand measured, as outlined in the Removal Action Design Package, included as part of the Action Memorandum for PSC 39 (TtNUS, 2001a). Figure 5-1 presents the area of sediment excavation at PSC 39, Outfall No. 11. Samples for waste characterization were collected prior to the start of excavation activities. PCB concentrations were less than 50 parts per billion (ppb); therefore, the excavated material could be disposed as nonhazardous. Sediment was excavated using a long-stick hydraulic track excavator and was stockpiled on and covered with 10-millimeter visqueen in a secondary containment area. When transport trucks were available, the excavated sediment was transported by Beaver Bulk Trucking to the Broadhurst Landfill in Jessup, Georgia (CH2MHill, 2001).

The material used to backfill the excavation was certified clean fill brought in from the Coxwell Crystal Springs Pit. As specified in the Removal Design Action Plan, Reseeding Requirements section, the channel bottom and side slopes of the ditch were graded and seeded with hydro-seed containing switchgrass and deertongue grass, and a geotextile coconut fiber was placed over the seeded area. Heavy rains washed out the geotextile mesh and backfill materials after completion of these activities. The backfill materials were replaced, the site was again graded and seeded, and concrete rip-rap was installed in the ditch to prevent further washouts. A total of 386.85 tons of 10-inch by 15-inch concrete rip-rap was installed with a long-stick excavator in the channel bottom and along the side slopes of Outfall No. 11 between April 10 and April 17, 2001. Following installation of the rip-rap, the area around the site was restored to its original condition. No confirmatory sampling was performed based on the specifications outlined in the Removal Action Design Package for PSC 39 (TtNUS, 2001a).

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, 2001).

8.0 CONCLUSIONS AND RECOMMENDATIONS

The fourteen flightline stormwater outfalls at NAS Cecil Field, identified as PSC 39, are currently operating and are expected to remain in operation in the foreseeable future to handle the stormwater runoff associated with airport runways. The limited extent and relatively low level of contamination that remains at some of the outfalls is typical of the contamination loading (PAHs and metals) seen in the sediments and surface water at operating airports. The remaining contamination at these discharge points do not pose risks to higher level organisms based on area use factors. In addition, future upgrades to the existing stormwater system by the City are planned which will remove or further limit the exposure to the remaining contamination. The upgrades will widen and deepen the stormwater conveyance system.

Exposure to surface water and sediment at PSC 39 would be infrequent, relative to exposures to soil and water by residents or industrial receptors. Moreover, any contact to surface water or sediment would result in negligible intake of constituents. Therefore, no significant risks to human health would be expected as a result of exposure to surface water and sediments at PSC 39.

Several inorganic and organic compounds were present at Outfall Nos. 1 through 12 in surface water and sediment samples at concentrations that exceeded U.S. EPA Region IV and/or FDEP ecological screening values and were, therefore, retained as COPCs. Several other compounds were retained as COPCs because screening levels were not available. A few inorganic and organic compounds were present at Outfall Nos. 13 and 14 in surface soil samples at concentrations that exceeded U.S. EPA Region IV and/or FDEP ecological screening values and were, therefore, retained as COPCs. Most COPCs at Outfall Nos. 1 through 14 were eliminated as COPCs in Step 3a of the risk assessment process for one or more reasons, such as concentrations comparable to background values (metals), concentrations comparable to alternative guideline values, and spatial analysis of detections. The data indicate that surface water contaminants do not pose significant risks to ecological receptors at any outfall. Conclusions regarding sediment and surface soil contaminants follow.

OUTFALL NOs. 2, 7, 8, 8A, 9, 9A, AND 10

Negligible ecological risks exist at these outfalls based on comparisons to toxicity screening values and food chain modeling results. Thus, no further sampling or remediation is recommended. It is recommended that the color classification for these outfalls be changed from grey to light green to denote that releases of hazardous substances have occurred, but at concentrations that do not require a removal or response action.

OUTFALL NOs. 1, 3, 4, 5, 6, AND 12

Comparisons of estimated doses to toxicity reference values (food chain modeling) indicate that negligible risks to upper-level receptors exist at these outfalls. PAH concentrations in sediment might pose ecological risks to benthic invertebrates, but only in the immediate vicinity of the outfall. PAH concentrations were not elevated 50 feet downstream (or 5 feet for some outfalls). Potential ecological risks to benthic invertebrates exist from lead in sediment at Outfall No. 1, lead and chromium at Outfall No. 4, copper at Outfall No. 5, and DDT at Outfall No. 6. However, these potential risks exist only within approximately the first 25 to 50 feet downstream of the outfalls. In addition, assessments of the data indicate that potential risks apply only to benthic invertebrates and not to upper-level receptors that prey upon these invertebrates. For this reason, and based on the small area within which elevated contaminants exist, ecological risks at these outfalls are considered to be negligible. Therefore, no further sampling or remediation is recommended at these outfalls. It is recommended that the color classification for these outfalls be changed from grey to light green to denote that releases of hazardous substances have occurred, but at concentrations that do not require a removal or response action.

OUTFALL NO. 11

Sediment remediation was conducted at Outfall No. 11 to address elevated levels of PCBs in sediment. Analytical data for remaining samples consist of PCB results only. Aroclor 1260 might pose ecological risks to benthic invertebrates, but risks to upper-level receptors via the food chain are negligible. The distance from the farthest downstream sample at PSC 39 to Sal Taylor Creek is approximately 2,400 feet. The thick vegetation in the outfall ditch and the generally low flow conditions make it unlikely that remaining PCB contamination will migrate to Sal Taylor Creek. It is recommended that the color classification for Outfall No. 11 be changed from grey to dark green to denote that releases of hazardous substances have occurred and remedial actions have been taken to protect human health and the environment.

OUTFALL NOs. 13 AND 14

The maximum concentration of aluminum in surface soil at each of these outfalls suggests potential plant toxicity, but plant toxicity data for aluminum are sparse. Habitat at both outfalls consists of mowed grass near an active runway, providing only marginal ecological resources. This habitat type will continue as long as the runways remain in use. Aluminum does not bioaccumulate or biomagnify and, thus, poses no risk to upper-level receptors via the food chain. There is no visual evidence of surface water flow in the swales at these outfalls (These are not actually outfalls; they are dry swales). The lack of surface water, combined with the soil cover of turf grass, greatly reduces the probability of contaminant migration to other areas. For these reasons, potential ecological risks are considered to be negligible. Therefore, no

further sampling or remediation is recommended at these outfalls. It is recommended that the color classification for these outfalls be changed from grey to light green to denote that releases of hazardous substances have occurred, but at concentrations that do not require a removal or response action.

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APPENDIX A

ANALYTICAL LABORATORY DATA

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

PITT-07-9-032

TO: **MR. M. SPERANZA** **DATE: JULY 19, 1999**

FROM: **JUSTIN ORBICH** **CC: DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION –SVOA/PAH/PEST/PCB**
CTO 078 – NAS CECIL FIELD
SDG F4285

SAMPLES: 5/Aqueous

CEF-P39-SW-019
CEF-P39-SW-020
CEF-P39-SW-022
CEF-P39-SW-025
CEF-P39-SW-DU02

6/Solid

CEF-P39-SD-019
CEF-P39-SD-020
CEF-P39-SD-021
CEF-P39-SD-022
CEF-P39-SD-025
CEF-P39-SD-DU02

OVERVIEW

The sample set for CTO 078, SDG F4285, Naval Air Station (NAS) Cecil Field; Florida consists of five (5) aqueous environmental samples and six (6) solid environmental samples. The environmental samples were analyzed for Target Compound List (TCL) semivolatile, pesticide/PCBs, and Polynuclear Aromatic Hydrocarbon (PAH) organic compounds. Two (2) field duplicate pairs (CEF-P39-SW-019/CEF-P39-SW-DU02 and CEF-P39-SD-019/CEF-P39-SD-DU02) was included within this SDG.

The samples were collected by Tetra Tech, NUS on June 9th, 1999 and analyzed by Accutest Laboratories. The PAH samples were analyzed by Accutest Southeast subcontracted Lab. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW 846 Method 8270C, 8081A, 8082, and 8310 analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
  • Initial/continuing calibrations
* • Laboratory method/field quality control blank results
* • Detection Limits
* • Field Duplicate Precision

The symbol (*) indicates that all quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified analytical results are presented in Appendix A.

SEMIVOLATILE FRACTION

All quality control parameters were met for this fraction.

PAH FRACTION

All quality control parameters were met for this fraction.

PESTICIDE FRACTION

The initial calibration Percent Relative Standard Deviation (%RSD) exceeded the 20% quality control limit for 4,4'-DDT on 6/17/99 at 1307 on column II. No action was warranted since only nondetected results were reported and the %RSD was within the quality control limits on column I.

The continuing calibration %Ds exceeded the 15% quality control limits for alpha-BHC, gamma-BHC, and delta-BHC on 6/17/99 at 1651 on both columns. The nondetected results were qualified as estimated (UJ), in the affected samples.

The continuing calibration %Ds exceeded the 15% quality control limits for 4,4'-DDT and Methoxychlor on 6/24/99 at 0415 on both columns. The nondetected results were qualified as estimated (UJ), in the affected samples.

In sample CEF-P39-SD-025, elevated detection limits were reported due to a 10X dilution.

PCB FRACTION

All quality control parameters were met for this fraction.

EXECUTIVE SUMMARY

Laboratory performance: Several pesticide continuing calibration %Ds exceeded the quality control limits.

Other Factors Affecting Data Quality: Sample, CEF-P39-SD-025, was analyzed at a dilution in the pesticide fraction.

MEMO TO: MR. M. SPERANZA
DATE: JULY 19, 1999 – PAGE 3

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1994), and the NFESC guidelines "Navy Installation Restoration Program Laboratory Quality Assurance Guide" (February, 1996). The text of this report has been formulated to address only those problems affecting data quality.

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

Justin Orbich

Chemist/Data Validator
Tetra Tech, NUS

Joseph A. Samchuck

Data Validation Quality Assurance Officer
Tetra Tech, NUS

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

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
N = Internal Standard Noncompliance
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCB D% between columns for positive results
V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = % Solid content is less than 30%

DATA QUALIFIER DEFINITIONS:

U	-	Value is a nondetected result as reported by the laboratory and should not be considered present.
J	-	Positive result is estimated as a result of a value below the CRQL or a technical noncompliance.
UJ	-	Nondetected result is considered to be estimated as a result of technical noncompliances.

APPENDIX A

Qualified Analytical Results

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4285

SAMPLE NUMBER:	CEF-P39-SW-019			CEF-P39-SW-020			CEF-P39-SW-022			CEF-P39-SW-025		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4285-7			F4285-6			F4285-3			F4285-1		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/L			UG/L			UG/L			UG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
1,2,4-TRICHLOROBENZENE	5	U		5	U		5	U		5	U	
1,2-DICHLOROBENZENE	5	U		5	U		5	U		5	U	
1,3-DICHLOROBENZENE	5	U		5	U		5	U		5	U	
1,4-DICHLOROBENZENE	5	U		5	U		5	U		5	U	
2,4,5-TRICHLOROPHENOL	4	U		4	U		4	U		4	U	
2,4,6-TRICHLOROPHENOL	5	U		5	U		5	U		5	U	
2,4-DICHLOROPHENOL	4	U		4	U		4	U		4	U	
2,4-DIMETHYLPHENOL	10	U		10	U		10	U		10	U	
2,4-DINITROPHENOL	25	U		25	U		25	U		25	U	
2,4-DINITROTOLUENE	0.2	U		0.2	U		0.2	U		0.2	U	
2,6-DINITROTOLUENE	0.2	U		0.2	U		0.2	U		0.2	U	
2-CHLORONAPHTHALENE	5	U		5	U		5	U		5	U	
2-CHLOROPHENOL	5	U		5	U		5	U		5	U	
2-METHYLNAPHTHALENE	5	U		5	U		5	U		5	U	
2-METHYLPHENOL	5	U		5	U		5	U		5	U	
2-NITROANILINE	5	U		5	U		5	U		5	U	
2-NITROPHENOL	5	U		5	U		5	U		5	U	
3,3'-DICHLOROBENZIDINE	7.5	U		7.5	U		7.5	U		7.5	U	
3-NITROANILINE	5	U		5	U		5	U		5	U	
4,6-DINITRO-2-METHYLPHENOL	25	U		25	U		25	U		25	U	
4-BROMOPHENYL PHENYL ETHER	5	U		5	U		5	U		5	U	
4-CHLORO-3-METHYLPHENOL	10	U		10	U		10	U		10	U	
4-CHLOROANILINE	5	U		5	U		5	U		5	U	
4-CHLOROPHENYL PHENYL ETHER	5	U		5	U		5	U		5	U	
4-METHYLPHENOL	5	U		5	U		5	U		5	U	
4-NITROANILINE	5	U		5	U		5	U		5	U	
4-NITROPHENOL	15	U		15	U		15	U		15	U	
BIS(2-CHLOROETHOXY)METHANE	5	U		5	U		5	U		5	U	
BIS(2-CHLOROETHYL)ETHER	1.5	U		1.5	U		1.5	U		1.5	U	
BIS(2-CHLOROISOPROPYL) ETHER	5	U		5	U		5	U		5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	2.8	J	P	2.8	J	P	5	U		5	U	
BUTYLBENZYL PHTHALATE	5	U		5	U		5	U		5	U	
CARBAZOLE	4	U		4	U		4	U		4	U	
DI-N-BUTYL PHTHALATE	5	U		5	U		5	U		5	U	

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4285

SAMPLE NUMBER:	CEF-P39-SW-019			CEF-P39-SW-020			CEF-P39-SW-022			CEF-P39-SW-025		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4285-7			F4285-6			F4285-3			F4285-1		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/L			UG/L			UG/L			UG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
DI-N-OCTYL PHTHALATE	5	U		5	U		5	U		5	U	
DIBENZOFURAN	5	U		5	U		5	U		5	U	
DIETHYL PHTHALATE	5	U		5	U		5	U		5	U	
DIMETHYL PHTHALATE	5	U		5	U		5	U		5	U	
HEXACHLOROBENZENE	1	U		1	U		1	U		1	U	
HEXACHLOROBUTADIENE	5	U		5	U		5	U		5	U	
HEXACHLOROCYCLOPENTADIENE	5	U		5	U		5	U		5	U	
HEXACHLOROETHANE	5	U		5	U		5	U		5	U	
ISOPHORONE	5	U		5	U		5	U		5	U	
N-NITROSO-DI-N-PROPYLAMINE	4	U		4	U		4	U		4	U	
N-NITROSODIPHENYLAMINE	5	U		5	U		5	U		5	U	
NITROBENZENE	4	U		4	U		4	U		4	U	
PENTACHLOROPHENOL	1	U		1	U		1	U		1	U	
PHENOL	5	U		5	U		5	U		5	U	

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4285

SAMPLE NUMBER:	CEF-P39-SW-DU02			
SAMPLE DATE:	06/09/99	/ /	/ /	/ /
LABORATORY ID:	F4285-10			
QC_TYPE:	NORMAL			
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/L			
FIELD DUPLICATE OF:	CEF-P39-SW-019			

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
1,2,4-TRICHLOROBENZENE	5	U										
1,2-DICHLOROBENZENE	5	U										
1,3-DICHLOROBENZENE	5	U										
1,4-DICHLOROBENZENE	5	U										
2,4,5-TRICHLOROPHENOL	4	U										
2,4,6-TRICHLOROPHENOL	5	U										
2,4-DICHLOROPHENOL	4	U										
2,4-DIMETHYLPHENOL	10	U										
2,4-DINITROPHENOL	25	U										
2,4-DINITROTOLUENE	0.2	U										
2,6-DINITROTOLUENE	0.2	U										
2-CHLORONAPHTHALENE	5	U										
2-CHLOROPHENOL	5	U										
2-METHYLNAPHTHALENE	5	U										
2-METHYLPHENOL	5	U										
2-NITROANILINE	5	U										
2-NITROPHENOL	5	U										
3,3'-DICHLOROBENZIDINE	7.5	U										
3-NITROANILINE	5	U										
4,6-DINITRO-2-METHYLPHENOL	25	U										
4-BROMOPHENYL PHENYL ETHER	5	U										
4-CHLORO-3-METHYLPHENOL	10	U										
4-CHLOROANILINE	5	U										
4-CHLOROPHENYL PHENYL ETHER	5	U										
4-METHYLPHENOL	5	U										
4-NITROANILINE	5	U										
4-NITROPHENOL	15	U										
BIS(2-CHLOROETHOXY)METHANE	5	U										
BIS(2-CHLOROETHYL)ETHER	1.5	U										
BIS(2-CHLOROISOPROPYL) ETHER	5	U										
BIS(2-ETHYLHEXYL)PHTHALATE	3.3	J	P									
BUTYLBENZYL PHTHALATE	5	U										
CARBAZOLE	4	U										
DI-N-BUTYL PHTHALATE	5	U										

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4285

SAMPLE NUMBER:	CEF-P39-SW-DU02			
SAMPLE DATE:	06/09/99	/ /	/ /	/ /
LABORATORY ID:	F4285-10			
QC_TYPE:	NORMAL			
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/L			
FIELD DUPLICATE OF:	CEF-P39-SW-019			

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
DI-N-OCTYL PHTHALATE	5	U										
DIBENZOFURAN	5	U										
DIETHYL PHTHALATE	5	U										
DIMETHYL PHTHALATE	5	U										
HEXACHLOROBENZENE	1	U										
HEXACHLOROBUTADIENE	5	U										
HEXACHLOROCYCLOPENTADIENE	5	U										
HEXACHLOROETHANE	5	U										
ISOPHORONE	5	U										
N-NITROSO-DI-N-PROPYLAMINE	4	U										
N-NITROSODIPHENYLAMINE	5	U										
NITROBENZENE	4	U										
PENTACHLOROPHENOL	1	U										
PHENOL	5	U										

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4285

SAMPLE NUMBER:	CEF-P39-SD-019			CEF-P39-SD-020			CEF-P39-SD-021			CEF-P39-SD-022		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4285-9			F4285-8			F4285-5			F4285-4		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	71.3 %			22.1 %			78.6 %			72.2 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
1,2,4-TRICHLOROBENZENE	230	U		760	U		210	U		460	U	
1,2-DICHLOROBENZENE	230	U		760	U		210	U		460	U	
1,3-DICHLOROBENZENE	230	U		760	U		210	U		460	U	
1,4-DICHLOROBENZENE	230	U		760	U		210	U		460	U	
2,4,5-TRICHLOROPHENOL	230	U		760	U		210	U		460	U	
2,4,6-TRICHLOROPHENOL	230	U		760	U		210	U		460	U	
2,4-DICHLOROPHENOL	210	U		680	U		190	U		410	U	
2,4-DIMETHYLPHENOL	470	U		1500	U		420	U		920	U	
2,4-DINITROPHENOL	1200	U		3800	U		1100	U		2300	U	
2,4-DINITROTOLUENE	230	U		760	U		210	U		460	U	
2,6-DINITROTOLUENE	230	U		760	U		210	U		460	U	
2-CHLORONAPHTHALENE	230	U		760	U		210	U		460	U	
2-CHLOROPHENOL	230	U		760	U		210	U		460	U	
2-METHYLPHENOL	230	U		760	U		210	U		460	U	
2-NITROANILINE	230	U		760	U		210	U		460	U	
2-NITROPHENOL	230	U		760	U		210	U		460	U	
3,3'-DICHLOROBENZIDINE	470	U		1500	U		420	U		920	U	
3-NITROANILINE	230	U		760	U		210	U		460	U	
4,6-DINITRO-2-METHYLPHENOL	470	U		1500	U		420	U		920	U	
4-BROMOPHENYL PHENYL ETHER	230	U		760	U		210	U		460	U	
4-CHLORO-3-METHYLPHENOL	470	U		1500	U		420	U		920	U	
4-CHLOROANILINE	230	U		760	U		210	U		460	U	
4-CHLOROPHENYL PHENYL ETHER	230	U		760	U		210	U		460	U	
4-METHYLPHENOL	230	U		760	U		210	U		460	U	
4-NITROANILINE	230	U		760	U		210	U		460	U	
4-NITROPHENOL	1200	U		3800	U		1100	U		2300	U	
BIS(2-CHLOROETHOXY)METHANE	230	U		760	U		210	U		460	U	
BIS(2-CHLOROETHYL)ETHER	230	U		760	U		210	U		460	U	
BIS(2-CHLOROISOPROPYL) ETHER	230	U		760	U		210	U		460	U	
BIS(2-ETHYLHEXYL)PHTHALATE	230	U		760	U		210	U		460	U	
BUTYLBENZYL PHTHALATE	230	U		760	U		210	U		460	U	
CARBAZOLE	230	U		760	U		210	U		460	U	
DI-N-BUTYL PHTHALATE	230	U		760	U		210	U		460	U	
DI-N-OCTYL PHTHALATE	230	U		760	U		210	U		460	U	

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4285

SAMPLE NUMBER:	CEF-P39-SD-019			CEF-P39-SD-020			CEF-P39-SD-021			CEF-P39-SD-022		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4285-9			F4285-8			F4285-5			F4285-4		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	71.3 %			22.1 %			78.6 %			72.2 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
DIBENZOFURAN	230	U		760	U		210	U		460	U	
DIETHYL PHTHALATE	230	U		760	U		210	U		460	U	
DIMETHYL PHTHALATE	230	U		760	U		210	U		460	U	
HEXACHLOROBENZENE	230	U		760	U		210	U		460	U	
HEXACHLOROBUTADIENE	230	U		760	U		210	U		460	U	
HEXACHLOROCYCLOPENTADIENE	230	U		760	U		210	U		460	U	
HEXACHLOROETHANE	230	U		760	U		210	U		460	U	
ISOPHORONE	230	U		760	U		210	U		460	U	
N-NITROSO-DI-N-PROPYLAMINE	84	U		270	U		76	U		160	U	
N-NITROSODIPHENYLAMINE	230	U		760	U		210	U		460	U	
NITROBENZENE	230	U		760	U		210	U		460	U	
PENTACHLOROPHENOL	1200	U		3800	U		1100	U		2300	U	
PHENOL	230	U		760	U		210	U		460	U	

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4285

SAMPLE NUMBER:	CEF-P39-SD-025			CEF-P39-SD-DU02								
SAMPLE DATE:	06/09/99			06/09/99			/ /			/ /		
LABORATORY ID:	F4285-2			F4285-11								
QC_TYPE:	NORMAL			NORMAL								
% SOLIDS:	72.8 %			59.4 %			100.0 %			100.0 %		
UNITS:	UG/KG			UG/KG								
FIELD DUPLICATE OF:				CEF-P39-SD-019								
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
1,2,4-TRICHLOROBENZENE	460	U		280	U							
1,2-DICHLOROBENZENE	460	U		280	U							
1,3-DICHLOROBENZENE	460	U		280	U							
1,4-DICHLOROBENZENE	460	U		280	U							
2,4,5-TRICHLOROPHENOL	460	U		280	U							
2,4,6-TRICHLOROPHENOL	460	U		280	U							
2,4-DICHLOROPHENOL	410	U		250	U							
2,4-DIMETHYLPHENOL	920	U		560	U							
2,4-DINITROPHENOL	2300	U		1400	U							
2,4-DINITROTOLUENE	460	U		280	U							
2,6-DINITROTOLUENE	460	U		280	U							
2-CHLORONAPHTHALENE	460	U		280	U							
2-CHLOROPHENOL	460	U		280	U							
2-METHYLPHENOL	460	U		280	U							
2-NITROANILINE	460	U		280	U							
2-NITROPHENOL	460	U		280	U							
3,3'-DICHLOROBENZIDINE	920	U		560	U							
3-NITROANILINE	460	U		280	U							
4,6-DINITRO-2-METHYLPHENOL	920	U		560	U							
4-BROMOPHENYL PHENYL ETHER	460	U		280	U							
4-CHLORO-3-METHYLPHENOL	920	U		560	U							
4-CHLOROANILINE	460	U		280	U							
4-CHLOROPHENYL PHENYL ETHER	460	U		280	U							
4-METHYLPHENOL	460	U		280	U							
4-NITROANILINE	460	U		280	U							
4-NITROPHENOL	2300	U		1400	U							
BIS(2-CHLOROETHOXY)METHANE	460	U		280	U							
BIS(2-CHLOROETHYL)ETHER	460	U		280	U							
BIS(2-CHLOROISOPROPYL) ETHER	460	U		280	U							
BIS(2-ETHYLHEXYL)PHTHALATE	460	U		280	U							
BUTYLBENZYL PHTHALATE	460	U		280	U							
CARBAZOLE	460	U		280	U							
DI-N-BUTYL PHTHALATE	460	U		280	U							
DI-N-OCTYL PHTHALATE	460	U		280	U							

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4285

SAMPLE NUMBER:	CEF-P39-SD-025			CEF-P39-SD-DU02								
SAMPLE DATE:	06/09/99			06/09/99			/ /			/ /		
LABORATORY ID:	F4285-2			F4285-11								
QC_TYPE:	NORMAL			NORMAL								
% SOLIDS:	72.8 %			59.4 %			100.0 %			100.0 %		
UNITS:	UG/KG			UG/KG								
FIELD DUPLICATE OF:				CEF-P39-SD-019								
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
DIBENZOFURAN	460	U		280	U							
DIETHYL PHTHALATE	460	U		280	U							
DIMETHYL PHTHALATE	460	U		280	U							
HEXACHLOROBENZENE	460	U		280	U							
HEXACHLOROBUTADIENE	460	U		280	U							
HEXACHLOROCYCLOPENTADIENE	460	U		280	U							
HEXACHLOROETHANE	460	U		280	U							
ISOPHORONE	460	U		280	U							
N-NITROSO-DI-N-PROPYLAMINE	160	U		100	U							
N-NITROSODIPHENYLAMINE	460	U		280	U							
NITROBENZENE	460	U		280	U							
PENTACHLOROPHENOL	2300	U		1400	U							
PHENOL	460	U		280	U							

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4285

SAMPLE NUMBER:	CEF-P39-SW-019			CEF-P39-SW-020			CEF-P39-SW-022			CEF-P39-SW-025		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4285-7			F4285-6			F4285-3			F4285-1		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/L			UG/L			UG/L			UG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	1	U		1	U		1	U		1	U	
2-METHYLNAPHTHALENE	1	U		1	U		1	U		1	U	
ACENAPHTHENE	1	U		1	U		1	U		1	U	
ACENAPHTHYLENE	2	U		2	U		2	U		2	U	
ANTHRACENE	0.15	U		0.15	U		0.15	U		0.15	U	
BENZO(A)ANTHRACENE	0.15	U		0.15	U		0.15	U		0.15	U	
BENZO(A)PYRENE	0.15	U		0.15	U		0.15	U		0.15	U	
BENZO(B)FLUORANTHENE	0.15	U		0.15	U		0.15	U		0.15	U	
BENZO(G,H,I)PERYLENE	0.2	U		0.2	U		0.2	U		0.2	U	
BENZO(K)FLUORANTHENE	0.15	U		0.15	U		0.15	U		0.15	U	
CHRYSENE	0.15	U		0.15	U		0.15	U		0.15	U	
DIBENZO(A,H)ANTHRACENE	0.25	U		0.25	U		0.25	U		0.25	U	
FLUORANTHENE	0.2	U		0.2	U		0.2	U		0.15	U	
FLUORENE	0.2	U		0.2	U		0.2	U		0.2	U	
INDENO(1,2,3-CD)PYRENE	0.15	U		0.15	U		0.15	U		0.15	U	
NAPHTHALENE	1	U		1	U		1	U		1	U	
PHENANTHRENE	0.15	U		0.15	U		0.15	U		0.15	U	
PYRENE	0.2	U		0.2	U		0.2	U		0.2	U	

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4285

SAMPLE NUMBER:	CEF-P39-SW-DU02			
SAMPLE DATE:	06/09/99	/ /	/ /	/ /
LABORATORY ID:	F4285-10			
QC_TYPE:	NORMAL			
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/L			
FIELD DUPLICATE OF:	CEF-P39-SW-019			

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	1	U										
2-METHYLNAPHTHALENE	1	U										
ACENAPHTHENE	1	U										
ACENAPHTHYLENE	2	U										
ANTHRACENE	0.15	U										
BENZO(A)ANTHRACENE	0.15	U										
BENZO(A)PYRENE	0.15	U										
BENZO(B)FLUORANTHENE	0.15	U										
BENZO(G,H,I)PERYLENE	0.2	U										
BENZO(K)FLUORANTHENE	0.15	U										
CHRYSENE	0.15	U										
DIBENZO(A,H)ANTHRACENE	0.25	U										
FLUORANTHENE	0.2	U										
FLUORENE	0.2	U										
INDENO(1,2,3-CD)PYRENE	0.15	U										
NAPHTHALENE	1	U										
PHENANTHRENE	0.15	U										
PYRENE	0.2	U										

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4285

SAMPLE NUMBER:	CEF-P39-SD-019			CEF-P39-SD-020			CEF-P39-SD-021			CEF-P39-SD-022		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4285-9			F4285-8			F4285-5			F4285-4		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	71.3 %			22.1 %			78.6 %			72.2 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	52	U		93	U		44	U		49	U	
2-METHYLNAPHTHALENE	52	U		93	U		44	U		49	U	
ACENAPHTHENE	52	U		93	U		44	U		49	U	
ACENAPHTHYLENE	110	U		190	U		90	U		100	U	
ANTHRACENE	7.6	U		14	U		6.7	U		7.4	U	
BENZO(A)ANTHRACENE	15			14			9			7.4	U	
BENZO(A)PYRENE	40			16			34			7.4	U	
BENZO(B)FLUORANTHENE	34			26			37			7.4	U	
BENZO(G,H,I)PERYLENE	46			19	U		68			10	U	
BENZO(K)FLUORANTHENE	18			14	U		14			7.4	U	
CHRYSENE	67			56			27			7.4	U	
DIBENZO(A,H)ANTHRACENE	13	U		23	U		11	U		12	U	
FLUORANTHENE	11	U		34			22			10	U	
FLUORENE	11	U		19	U		9	U		10	U	
INDENO(1,2,3-CD)PYRENE	42			14	U		44			7.4	U	
NAPHTHALENE	52	U		93	U		44	U		49	U	
PHENANTHRENE	11	U		19	U		8.4			7.4	U	
PYRENE	11			27			22			10	U	

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4285

SAMPLE NUMBER:	CEF-P39-SD-025	CEF-P39-SD-DU02		
SAMPLE DATE:	06/09/99	06/09/99	/ /	/ /
LABORATORY ID:	F4285-2	F4285-11		
QC_TYPE:	NORMAL	NORMAL		
% SOLIDS:	72.8 %	59.4 %	100.0 %	100.0 %
UNITS:	UG/KG	UG/KG		
FIELD DUPLICATE OF:		CEF-P39-SD-019		

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	44	U		48	U							
2-METHYLNAPHTHALENE	220			48	U							
ACENAPHTHENE	290			48	U							
ACENAPHTHYLENE	89	U		98	U							
ANTHRACENE	11			7.3	U							
BENZO(A)ANTHRACENE	110			7.3	U							
BENZO(A)PYRENE	150			9.6								
BENZO(B)FLUORANTHENE	190			7.3	U							
BENZO(G,H,I)PERYLENE	150			10								
BENZO(K)FLUORANTHENE	96			7.3	U							
CHRYSENE	220			10								
DIBENZO(A,H)ANTHRACENE	13			12	U							
FLUORANTHENE	220			9.8	U							
FLUORENE	8.9	U		7.3	U							
INDENO(1,2,3-CD)PYRENE	140			9.9								
NAPHTHALENE	44	U		48	U							
PHENANTHRENE	66			9.8	U							
PYRENE	210			9.8	U							

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4285

SAMPLE NUMBER:	CEF-P39-SD-019			CEF-P39-SD-020			CEF-P39-SD-021			CEF-P39-SD-022		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4285-9			F4285-8			F4285-5			F4285-4		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	71.3 %			22.1 %			78.6 %			72.2 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
4,4'-DDD	4.7	U		15	U		4.2	U		4.6	U	
4,4'-DDE	4.7	U		15	U		4.2	U		4.6	U	
4,4'-DDT	4.7	UJ	C	15	UJ	C	4.2	UJ	C	4.6	UJ	C
ALDRIN	2.3	U		7.6	U		2.1	U		2.3	U	
ALPHA-BHC	2.3	U		7.6	U		2.1	U		2.3	U	
ALPHA-CHLORDANE	4.7	U		15	U		4.2	U		4.6	U	
AROCLOR-1016	47	U		150	U		42	U		46	U	
AROCLOR-1221	47	U		150	U		42	U		46	U	
AROCLOR-1232	47	U		150	U		42	U		46	U	
AROCLOR-1242	47	U		150	U		42	U		46	U	
AROCLOR-1248	47	U		150	U		42	U		46	U	
AROCLOR-1254	47	U		150	U		42	U		46	U	
AROCLOR-1260	47	U		150	U		42	U		46	U	
BETA-BHC	2.3	U		7.6	U		2.1	U		2.3	U	
DELTA-BHC	2.3	U		7.6	U		2.1	U		2.3	U	
DIELDRIN	2.3	U		7.6	U		2.1	U		2.3	U	
ENDOSULFAN I	2.3	U		7.6	U		2.1	U		2.3	U	
ENDOSULFAN II	4.7	U		15	U		4.2	U		4.6	U	
ENDOSULFAN SULFATE	4.7	U		15	U		4.2	U		4.6	U	
ENDRIN	4.7	U		15	U		4.2	U		4.6	U	
ENDRIN ALDEHYDE	4.7	U		15	U		4.2	U		4.6	U	
ENDRIN KETONE	4.7	U		15	U		4.2	U		4.6	U	
GAMMA-BHC (LINDANE)	2.3	U		7.6	U		2.1	U		2.3	U	
GAMMA-CHLORDANE	4.7	U		15	U		4.2	U		4.6	U	
HEPTACHLOR	2.3	U		7.6	U		2.1	U		2.3	U	
HEPTACHLOR EPOXIDE	2.3	U		7.6	U		2.1	U		2.3	U	
METHOXYCHLOR	9.3	UJ	C	30	UJ	C	8.5	UJ	C	9.2	UJ	C
TOXAPHENE	230	U		760	U		210	U		230	U	

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4285

SAMPLE NUMBER:	CEF-P39-SD-025			CEF-P39-SD-DU02								
SAMPLE DATE:	06/09/99			06/09/99			/ /			/ /		
LABORATORY ID:	F4285-2			F4285-11								
QC_TYPE:	NORMAL			NORMAL								
% SOLIDS:	72.8 %			59.4 %			100.0 %			100.0 %		
UNITS:	UG/KG			UG/KG								
FIELD DUPLICATE OF:				CEF-P39-SD-019								
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
4,4'-DDD	46	U		5.6	U							
4,4'-DDE	46	U		5.6	U							
4,4'-DDT	46	U		5.6	UJ	C						
ALDRIN	23	U		2.8	U							
ALPHA-BHC	23	U		2.8	U							
ALPHA-CHLORDANE	46	U		5.6	U							
AROCLOR-1016	46	U		56	U							
AROCLOR-1221	46	U		56	U							
AROCLOR-1232	46	U		56	U							
AROCLOR-1242	46	U		56	U							
AROCLOR-1248	46	U		56	U							
AROCLOR-1254	46	U		56	U							
AROCLOR-1260	46	U		56	U							
BETA-BHC	23	U		2.8	U							
DELTA-BHC	23	U		2.8	U							
DIELDRIN	23	U		2.8	U							
ENDOSULFAN I	23	U		2.8	U							
ENDOSULFAN II	46	U		5.6	U							
ENDOSULFAN SULFATE	46	U		5.6	U							
ENDRIN	46	U		5.6	U							
ENDRIN ALDEHYDE	46	U		5.6	U							
ENDRIN KETONE	46	U		5.6	U							
GAMMA-BHC (LINDANE)	23	U		2.8	U							
GAMMA-CHLORDANE	46	U		5.6	U							
HEPTACHLOR	23	U		2.8	U							
HEPTACHLOR EPOXIDE	23	U		2.8	U							
METHOXYCHLOR	91	U		11	UJ	C						
TOXAPHENE	2300	U		280	U							

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4285

SAMPLE NUMBER:	CEF-P39-SW-019			CEF-P39-SW-020			CEF-P39-SW-022			CEF-P39-SW-025		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4285-7			F4285-6			F4285-3			F4285-1		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/L			UG/L			UG/L			UG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
4,4'-DDD	0.10	U		0.10	U		0.10	U		0.10	U	
4,4'-DDE	0.10	U		0.10	U		0.10	U		0.10	U	
4,4'-DDT	0.10	U		0.10	U		0.10	U		0.10	U	
ALDRIN	0.050	U		0.050	U		0.050	U		0.050	U	
ALPHA-BHC	0.050	UJ	C	0.050	UJ	C	0.050	UJ	C	0.050	UJ	C
ALPHA-CHLORDANE	0.10	U		0.10	U		0.10	U		0.10	U	
AROCLOR-1016	0.50	U		0.50	U		0.50	U		0.50	U	
AROCLOR-1221	0.50	U		0.50	U		0.50	U		0.50	U	
AROCLOR-1232	0.50	U		0.50	U		0.50	U		0.50	U	
AROCLOR-1242	0.50	U		0.50	U		0.50	U		0.50	U	
AROCLOR-1248	0.50	U		0.50	U		0.50	U		0.50	U	
AROCLOR-1254	0.50	U		0.50	U		0.50	U		0.50	U	
AROCLOR-1260	0.50	U		0.50	U		0.50	U		0.50	U	
BETA-BHC	0.050	U		0.050	U		0.050	U		0.050	U	
DELTA-BHC	0.050	UJ	C	0.050	UJ	C	0.050	UJ	C	0.050	UJ	C
DIELDRIN	0.050	U		0.050	U		0.050	U		0.050	U	
ENDOSULFAN I	0.050	U		0.050	U		0.050	U		0.050	U	
ENDOSULFAN II	0.10	U		0.10	U		0.10	U		0.10	U	
ENDOSULFAN SULFATE	0.10	U		0.10	U		0.10	U		0.10	U	
ENDRIN	0.10	U		0.10	U		0.10	U		0.10	U	
ENDRIN ALDEHYDE	0.10	U		0.10	U		0.10	U		0.10	U	
ENDRIN KETONE	0.10	U		0.10	U		0.10	U		0.10	U	
GAMMA-BHC (LINDANE)	0.050	UJ	C	0.050	UJ	C	0.050	UJ	C	0.050	UJ	C
GAMMA-CHLORDANE	0.10	U		0.10	U		0.10	U		0.10	U	
HEPTACHLOR	0.050	U		0.050	U		0.050	U		0.050	U	
HEPTACHLOR EPOXIDE	0.050	U		0.050	U		0.050	U		0.050	U	
METHOXYCHLOR	0.20	U		0.20	U		0.20	U		0.20	U	
TOXAPHENE	2.5	U		2.5	U		2.5	U		2.5	U	

APPENDIX B

Results as Reported by the Laboratory

Report of Analysis

Client Sample ID:	CEF-P39-SW-019		
Lab Sample ID:	F4285-7	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001880.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004601.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND [a]	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND [a]	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND [a]	4.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND [a]	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND [a]	25	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND [a]	25	ug/l	
95-48-7	2-Methylphenol	ND [a]	5.0	ug/l	
	3&4-Methylphenol	ND [a]	5.0	ug/l	
88-75-5	2-Nitrophenol	ND [a]	5.0	ug/l	
100-02-7	4-Nitrophenol	ND [a]	15	ug/l	
87-86-5	Pentachlorophenol	ND	1.0	ug/l	
108-95-2	Phenol	ND [a]	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND [a]	4.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND [a]	5.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND [a]	5.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND [a]	5.0	ug/l	
91-58-7	2-Chloronaphthalene	ND [a]	5.0	ug/l	
106-47-8	4-Chloroaniline	ND [a]	5.0	ug/l	
86-74-8	Carbazole	ND [a]	4.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND [a]	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	1.5	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND [a]	5.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND [a]	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND [a]	5.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND [a]	5.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND [a]	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND [a]	7.5	ug/l	
132-64-9	Dibenzofuran	ND [a]	5.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND [a]	5.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND [a]	5.0	ug/l	
84-66-2	Diethyl phthalate	ND [a]	5.0	ug/l	
131-11-3	Dimethyl phthalate	ND [a]	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	2.8 [a]	5.0	ug/l	J
118-74-1	Hexachlorobenzene	ND	1.0	ug/l	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-019		
Lab Sample ID:	F4285-7	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001880.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004601.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
87-68-3	Hexachlorobutadiene	ND [a]	5.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND [a]	5.0	ug/l	
67-72-1	Hexachloroethane	ND [a]	5.0	ug/l	
78-59-1	Isophorone	ND [a]	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND [a]	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND [a]	5.0	ug/l	
88-74-4	2-Nitroaniline	ND [a]	5.0	ug/l	
99-09-2	3-Nitroaniline	ND [a]	5.0	ug/l	
100-01-6	4-Nitroaniline	ND [a]	5.0	ug/l	
98-95-3	Nitrobenzene	ND [a]	4.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND [a]	4.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND [a]	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND [a]	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol		47%	21-100%
4165-62-2	Phenol-d5		32%	10-94%
118-79-6	2,4,6-Tribromophenol		87%	10-123%
4165-60-0	Nitrobenzene-d5		84%	35-114%
321-60-8	2-Fluorobiphenyl		78%	43-116%
1718-51-0	Terphenyl-d14		90%	33-141%

(a) Result is from Run# 2

00100

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-020		
Lab Sample ID:	F4285-6	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001879.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004600.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND [a]	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND [a]	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND [a]	4.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND [a]	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND [a]	25	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND [a]	25	ug/l	
95-48-7	2-Methylphenol	ND [a]	5.0	ug/l	
	3&4-Methylphenol	ND [a]	5.0	ug/l	
88-75-5	2-Nitrophenol	ND [a]	5.0	ug/l	
100-02-7	4-Nitrophenol	ND [a]	15	ug/l	
87-86-5	Pentachlorophenol	ND	1.0	ug/l	
108-95-2	Phenol	ND [a]	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND [a]	4.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND [a]	5.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND [a]	5.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND [a]	5.0	ug/l	
91-58-7	2-Chloronaphthalene	ND [a]	5.0	ug/l	
106-47-8	4-Chloroaniline	ND [a]	5.0	ug/l	
86-74-8	Carbazole	ND [a]	4.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND [a]	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	1.5	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND [a]	5.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND [a]	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND [a]	5.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND [a]	5.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND [a]	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND [a]	7.5	ug/l	
132-64-9	Dibenzofuran	ND [a]	5.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND [a]	5.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND [a]	5.0	ug/l	
84-66-2	Diethyl phthalate	ND [a]	5.0	ug/l	
131-11-3	Dimethyl phthalate	ND [a]	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	2.8 [a]	5.0	ug/l	J
118-74-1	Hexachlorobenzene	ND	1.0	ug/l	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-020		
Lab Sample ID:	F4285-6	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001879.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004600.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
87-68-3	Hexachlorobutadiene	ND [a]	5.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND [a]	5.0	ug/l	
67-72-1	Hexachloroethane	ND [a]	5.0	ug/l	
78-59-1	Isophorone	ND [a]	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND [a]	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND [a]	5.0	ug/l	
88-74-4	2-Nitroaniline	ND [a]	5.0	ug/l	
99-09-2	3-Nitroaniline	ND [a]	5.0	ug/l	
100-01-6	4-Nitroaniline	ND [a]	5.0	ug/l	
98-95-3	Nitrobenzene	ND [a]	4.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND [a]	4.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND [a]	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND [a]	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol		50%	21-100%
4165-62-2	Phenol-d5		34%	10-94%
118-79-6	2,4,6-Tribromophenol		86%	10-123%
4165-60-0	Nitrobenzene-d5		100%	35-114%
321-60-8	2-Fluorobiphenyl		89%	43-116%
1718-51-0	Terphenyl-d14		108%	33-141%

(a) Result is from Run# 2

00123

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-022		
Lab Sample ID:	F4285-3	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001878.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004599.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND [a]	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND [a]	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND [a]	4.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND [a]	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND [a]	25	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND [a]	25	ug/l	
95-48-7	2-Methylphenol	ND [a]	5.0	ug/l	
	3&4-Methylphenol	ND [a]	5.0	ug/l	
88-75-5	2-Nitrophenol	ND [a]	5.0	ug/l	
100-02-7	4-Nitrophenol	ND [a]	15	ug/l	
87-86-5	Pentachlorophenol	ND	1.0	ug/l	
108-95-2	Phenol	ND [a]	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND [a]	4.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND [a]	5.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND [a]	5.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND [a]	5.0	ug/l	
91-58-7	2-Chloronaphthalene	ND [a]	5.0	ug/l	
106-47-8	4-Chloroaniline	ND [a]	5.0	ug/l	
86-74-8	Carbazole	ND [a]	4.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND [a]	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	1.5	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND [a]	5.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND [a]	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND [a]	5.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND [a]	5.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND [a]	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND [a]	7.5	ug/l	
132-64-9	Dibenzofuran	ND [a]	5.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND [a]	5.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND [a]	5.0	ug/l	
84-66-2	Diethyl phthalate	ND [a]	5.0	ug/l	
131-11-3	Dimethyl phthalate	ND [a]	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND [a]	5.0	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	ug/l	

00200

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-022		
Lab Sample ID:	F4285-3	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001878.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004599.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
87-68-3	Hexachlorobutadiene	ND [a]	5.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND [a]	5.0	ug/l	
67-72-1	Hexachloroethane	ND [a]	5.0	ug/l	
78-59-1	Isophorone	ND [a]	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND [a]	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND [a]	5.0	ug/l	
88-74-4	2-Nitroaniline	ND [a]	5.0	ug/l	
99-09-2	3-Nitroaniline	ND [a]	5.0	ug/l	
100-01-6	4-Nitroaniline	ND [a]	5.0	ug/l	
98-95-3	Nitrobenzene	ND [a]	4.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND [a]	4.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND [a]	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND [a]	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol		48%	21-100%
4165-62-2	Phenol-d5		34%	10-94%
118-79-6	2,4,6-Tribromophenol		83%	10-123%
4165-60-0	Nitrobenzene-d5		67%	35-114%
321-60-8	2-Fluorobiphenyl		61%	43-116%
1718-51-0	Terphenyl-d14		70%	33-141%

(a) Result is from Run# 2

00107

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-025		
Lab Sample ID:	F4285-1	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001877.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004598.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND [a]	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND [a]	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND [a]	4.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND [a]	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND [a]	25	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND [a]	25	ug/l	
95-48-7	2-Methylphenol	ND [a]	5.0	ug/l	
	3&4-Methylphenol	ND [a]	5.0	ug/l	
88-75-5	2-Nitrophenol	ND [a]	5.0	ug/l	
100-02-7	4-Nitrophenol	ND [a]	15	ug/l	
87-86-5	Pentachlorophenol	ND	1.0	ug/l	
108-95-2	Phenol	ND [a]	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND [a]	4.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND [a]	5.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND [a]	5.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND [a]	5.0	ug/l	
91-58-7	2-Chloronaphthalene	ND [a]	5.0	ug/l	
106-47-8	4-Chloroaniline	ND [a]	5.0	ug/l	
86-74-8	Carbazole	ND [a]	4.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND [a]	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	1.5	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND [a]	5.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND [a]	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND [a]	5.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND [a]	5.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND [a]	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND [a]	7.5	ug/l	
132-64-9	Dibenzofuran	ND [a]	5.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND [a]	5.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND [a]	5.0	ug/l	
84-66-2	Diethyl phthalate	ND [a]	5.0	ug/l	
131-11-3	Dimethyl phthalate	ND [a]	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND [a]	5.0	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	ug/l	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-025		
Lab Sample ID:	F4285-1	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001877.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004598.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
87-68-3	Hexachlorobutadiene	ND [a]	5.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND [a]	5.0	ug/l	
67-72-1	Hexachloroethane	ND [a]	5.0	ug/l	
78-59-1	Isophorone	ND [a]	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND [a]	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND [a]	5.0	ug/l	
88-74-4	2-Nitroaniline	ND [a]	5.0	ug/l	
99-09-2	3-Nitroaniline	ND [a]	5.0	ug/l	
100-01-6	4-Nitroaniline	ND [a]	5.0	ug/l	
98-95-3	Nitrobenzene	ND [a]	4.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND [a]	4.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND [a]	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND [a]	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol		49%	21-100%
4165-62-2	Phenol-d5		33%	10-94%
118-79-6	2,4,6-Tribromophenol		86%	10-123%
4165-60-0	Nitrobenzene-d5		93%	35-114%
321-60-8	2-Fluorobiphenyl		85%	43-116%
1718-51-0	Terphenyl-d14		105%	33-141%

(a) Result is from Run# 2

00037

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-DU02		
Lab Sample ID:	F4285-10	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001881.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004602.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND [a]	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND [a]	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND [a]	4.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND [a]	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND [a]	25	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND [a]	25	ug/l	
95-48-7	2-Methylphenol	ND [a]	5.0	ug/l	
	3&4-Methylphenol	ND [a]	5.0	ug/l	
88-75-5	2-Nitrophenol	ND [a]	5.0	ug/l	
100-02-7	4-Nitrophenol	ND [a]	15	ug/l	
87-86-5	Pentachlorophenol	ND	1.0	ug/l	
108-95-2	Phenol	ND [a]	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND [a]	4.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND [a]	5.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND [a]	5.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND [a]	5.0	ug/l	
91-58-7	2-Chloronaphthalene	ND [a]	5.0	ug/l	
106-47-8	4-Chloroaniline	ND [a]	5.0	ug/l	
86-74-8	Carbazole	ND [a]	4.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND [a]	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	1.5	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND [a]	5.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND [a]	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND [a]	5.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND [a]	5.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND [a]	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND [a]	7.5	ug/l	
132-64-9	Dibenzofuran	ND [a]	5.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND [a]	5.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND [a]	5.0	ug/l	
84-66-2	Diethyl phthalate	ND [a]	5.0	ug/l	
131-11-3	Dimethyl phthalate	ND [a]	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	3.3 [a]	5.0	ug/l	J
118-74-1	Hexachlorobenzene	ND	1.0	ug/l	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-DU02		
Lab Sample ID:	F4285-10	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001881.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004602.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
87-68-3	Hexachlorobutadiene	ND [a]	5.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND [a]	5.0	ug/l	
67-72-1	Hexachloroethane	ND [a]	5.0	ug/l	
78-59-1	Isophorone	ND [a]	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND [a]	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND [a]	5.0	ug/l	
88-74-4	2-Nitroaniline	ND [a]	5.0	ug/l	
99-09-2	3-Nitroaniline	ND [a]	5.0	ug/l	
100-01-6	4-Nitroaniline	ND [a]	5.0	ug/l	
98-95-3	Nitrobenzene	ND [a]	4.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND [a]	4.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND [a]	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND [a]	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol		50%	21-100%
4165-62-2	Phenol-d5		33%	10-94%
118-79-6	2,4,6-Tribromophenol		82%	10-123%
4165-60-0	Nitrobenzene-d5		88%	35-114%
321-60-8	2-Fluorobiphenyl		81%	43-116%
1718-51-0	Terphenyl-d14		92%	33-141%

(a) Result is from Run# 2

00147

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-019		
Lab Sample ID:	F4285-9	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8270C	**Percent Solids:**	71.3
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001986.D	1	06/21/99	ME	06/21/99	OP839	SL123
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND	230	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	470	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	210	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	470	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1200	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	470	ug/kg	
95-48-7	2-Methylphenol	ND	230	ug/kg	
	3&4-Methylphenol	ND	230	ug/kg	
88-75-5	2-Nitrophenol	ND	230	ug/kg	
100-02-7	4-Nitrophenol	ND	1200	ug/kg	
87-86-5	Pentachlorophenol	ND	1200	ug/kg	
108-95-2	Phenol	ND	230	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	230	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	230	ug/kg	
83-32-9	Acenaphthene	ND	230	ug/kg	
208-96-8	Acenaphthylene	ND	230	ug/kg	
120-12-7	Anthracene	ND	230	ug/kg	
56-55-3	Benzo(a)anthracene	ND	230	ug/kg	
50-32-8	Benzo(a)pyrene	ND	120	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	230	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	230	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	230	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	230	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	230	ug/kg	
91-58-7	2-Chloronaphthalene	ND	230	ug/kg	
106-47-8	4-Chloroaniline	ND	230	ug/kg	
86-74-8	Carbazole	ND	230	ug/kg	
218-01-9	Chrysene	ND	230	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	230	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	230	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	230	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	230	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	230	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	230	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	230	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	230	ug/kg	

00141

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-019		
Lab Sample ID:	F4285-9	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8270C	**Percent Solids:**	71.3
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001986.D	1	06/21/99	ME	06/21/99	OP839	SL123
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	230	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	470	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	120	ug/kg	
132-64-9	Dibenzofuran	ND	230	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	230	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	230	ug/kg	
84-66-2	Diethyl phthalate	ND	230	ug/kg	
131-11-3	Dimethyl phthalate	ND	230	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	230	ug/kg	
206-44-0	Fluoranthene	ND	230	ug/kg	
86-73-7	Fluorene	ND	230	ug/kg	
118-74-1	Hexachlorobenzene	ND	230	ug/kg	
87-68-3	Hexachlorobutadiene	ND	230	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	230	ug/kg	
67-72-1	Hexachloroethane	ND	230	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	230	ug/kg	
78-59-1	Isophorone	ND	230	ug/kg	
90-12-0	1-Methylnaphthalene	ND	230	ug/kg	
91-57-6	2-Methylnaphthalene	ND	230	ug/kg	
88-74-4	2-Nitroaniline	ND	230	ug/kg	
99-09-2	3-Nitroaniline	ND	230	ug/kg	
100-01-6	4-Nitroaniline	ND	230	ug/kg	
91-20-3	Naphthalene	ND	230	ug/kg	
98-95-3	Nitrobenzene	ND	230	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	84	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	230	ug/kg	
85-01-8	Phenanthrene	ND	230	ug/kg	
129-00-0	Pyrene	ND	230	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	230	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	72%		25-121%
4165-62-2	Phenol-d5	77%		24-113%
118-79-6	2,4,6-Tribromophenol	119%		19-122%
4165-60-0	Nitrobenzene-d5	79%		23-120%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-019		
Lab Sample ID:	F4285-9	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8270C	**Percent Solids:**	71.3
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001986.D	1	06/21/99	ME	06/21/99	OP839	SL123
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	88%		30-115%
1718-51-0	Terphenyl-d14	127%		18-137%

00143

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-020		
Lab Sample ID:	F4285-8	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8270C	**Percent Solids:**	22.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001985.D	1	06/21/99	ME	06/21/99	OP839	SL123
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND	760	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	1500	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	680	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	1500	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	3800	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	1500	ug/kg	
95-48-7	2-Methylphenol	ND	760	ug/kg	
	3&4-Methylphenol	ND	760	ug/kg	
88-75-5	2-Nitrophenol	ND	760	ug/kg	
100-02-7	4-Nitrophenol	ND	3800	ug/kg	
87-86-5	Pentachlorophenol	ND	3800	ug/kg	
108-95-2	Phenol	ND	760	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	760	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	760	ug/kg	
83-32-9	Acenaphthene	ND	760	ug/kg	
208-96-8	Acenaphthylene	ND	760	ug/kg	
120-12-7	Anthracene	ND	760	ug/kg	
56-55-3	Benzo(a)anthracene	ND	760	ug/kg	
50-32-8	Benzo(a)pyrene	ND	380	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	760	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	760	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	760	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	760	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	760	ug/kg	
91-58-7	2-Chloronaphthalene	ND	760	ug/kg	
106-47-8	4-Chloroaniline	ND	760	ug/kg	
86-74-8	Carbazole	ND	760	ug/kg	
218-01-9	Chrysene	ND	760	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	760	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	760	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	760	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	760	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	760	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	760	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	760	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	760	ug/kg	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-020		
Lab Sample ID:	F4285-8	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8270C	**Percent Solids:**	22.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001985.D	1	06/21/99	ME	06/21/99	OP839	SL123
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	760	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	1500	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	380	ug/kg	
132-64-9	Dibenzofuran	ND	760	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	760	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	760	ug/kg	
84-66-2	Diethyl phthalate	ND	760	ug/kg	
131-11-3	Dimethyl phthalate	ND	760	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	760	ug/kg	
206-44-0	Fluoranthene	ND	760	ug/kg	
86-73-7	Fluorene	ND	760	ug/kg	
118-74-1	Hexachlorobenzene	ND	760	ug/kg	
87-68-3	Hexachlorobutadiene	ND	760	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	760	ug/kg	
67-72-1	Hexachloroethane	ND	760	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	760	ug/kg	
78-59-1	Isophorone	ND	760	ug/kg	
90-12-0	1-Methylnaphthalene	ND	760	ug/kg	
91-57-6	2-Methylnaphthalene	ND	760	ug/kg	
88-74-4	2-Nitroaniline	ND	760	ug/kg	
99-09-2	3-Nitroaniline	ND	760	ug/kg	
100-01-6	4-Nitroaniline	ND	760	ug/kg	
91-20-3	Naphthalene	ND	760	ug/kg	
98-95-3	Nitrobenzene	ND	760	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	270	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	760	ug/kg	
85-01-8	Phenanthrene	ND	760	ug/kg	
129-00-0	Pyrene	ND	760	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	760	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	75%		25-121%
4165-62-2	Phenol-d5	82%		24-113%
118-79-6	2,4,6-Tribromophenol	114%		19-122%
4165-60-0	Nitrobenzene-d5	83%		23-120%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-020		
Lab Sample ID:	F4285-8	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8270C	**Percent Solids:**	22.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001985.D	1	06/21/99	ME	06/21/99	OP839	SL123
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	85%		30-115%
1718-51-0	Terphenyl-d14	114%		18-137%

00143

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-021		
Lab Sample ID:	F4285-5	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8270C	**Percent Solids:**	78.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001987.D	1	06/21/99	ME	06/21/99	OP839	SL123
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND	210	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	420	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	190	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	420	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1100	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	420	ug/kg	
95-48-7	2-Methylphenol	ND	210	ug/kg	
	3&4-Methylphenol	ND	210	ug/kg	
88-75-5	2-Nitrophenol	ND	210	ug/kg	
100-02-7	4-Nitrophenol	ND	1100	ug/kg	
87-86-5	Pentachlorophenol	ND	1100	ug/kg	
108-95-2	Phenol	ND	210	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	210	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	210	ug/kg	
83-32-9	Acenaphthene	ND	210	ug/kg	
208-96-8	Acenaphthylene	ND	210	ug/kg	
120-12-7	Anthracene	ND	210	ug/kg	
56-55-3	Benzo(a)anthracene	ND	210	ug/kg	
50-32-8	Benzo(a)pyrene	ND	110	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	210	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	210	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	210	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	210	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	210	ug/kg	
91-58-7	2-Chloronaphthalene	ND	210	ug/kg	
106-47-8	4-Chloroaniline	ND	210	ug/kg	
86-74-8	Carbazole	ND	210	ug/kg	
218-01-9	Chrysene	ND	210	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	210	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	210	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	210	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	210	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	210	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	210	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	210	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	210	ug/kg	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-021		
Lab Sample ID:	F4285-5	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8270C	**Percent Solids:**	78.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001987.D	1	06/21/99	ME	06/21/99	OP839	SL123
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	210	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	420	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	110	ug/kg	
132-64-9	Dibenzofuran	ND	210	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	210	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	210	ug/kg	
84-66-2	Diethyl phthalate	ND	210	ug/kg	
131-11-3	Dimethyl phthalate	ND	210	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	210	ug/kg	
206-44-0	Fluoranthene	ND	210	ug/kg	
86-73-7	Fluorene	ND	210	ug/kg	
118-74-1	Hexachlorobenzene	ND	210	ug/kg	
87-68-3	Hexachlorobutadiene	ND	210	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	210	ug/kg	
67-72-1	Hexachloroethane	ND	210	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	210	ug/kg	
78-59-1	Isophorone	ND	210	ug/kg	
90-12-0	1-Methylnaphthalene	ND	210	ug/kg	
91-57-6	2-Methylnaphthalene	ND	210	ug/kg	
88-74-4	2-Nitroaniline	ND	210	ug/kg	
99-09-2	3-Nitroaniline	ND	210	ug/kg	
100-01-6	4-Nitroaniline	ND	210	ug/kg	
91-20-3	Naphthalene	ND	210	ug/kg	
98-95-3	Nitrobenzene	ND	210	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	76	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	210	ug/kg	
85-01-8	Phenanthrene	ND	210	ug/kg	
129-00-0	Pyrene	ND	210	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	210	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	82%		25-121%
4165-62-2	Phenol-d5	85%		24-113%
118-79-6	2,4,6-Tribromophenol	121%		19-122%
4165-60-0	Nitrobenzene-d5	89%		23-120%

00113

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-021		
Lab Sample ID:	F4285-5	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8270C	**Percent Solids:**	78.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001987.D	1	06/21/99	ME	06/21/99	OP839	SL123
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	100%		30-115%
1718-51-0	Terphenyl-d14	123%		18-137%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-022		
Lab Sample ID:	F4285-4	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8270C	**Percent Solids:**	72.2
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001997.D	2	06/22/99	ME	06/21/99	OP839	SL124
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND	460	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	920	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	410	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	920	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	2300	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	920	ug/kg	
95-48-7	2-Methylphenol	ND	460	ug/kg	
	3&4-Methylphenol	ND	460	ug/kg	
88-75-5	2-Nitrophenol	ND	460	ug/kg	
100-02-7	4-Nitrophenol	ND	2300	ug/kg	
87-86-5	Pentachlorophenol	ND	2300	ug/kg	
108-95-2	Phenol	ND	460	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	460	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	460	ug/kg	
83-32-9	Acenaphthene	ND	460	ug/kg	
208-96-8	Acenaphthylene	ND	460	ug/kg	
120-12-7	Anthracene	ND	460	ug/kg	
56-55-3	Benzo(a)anthracene	ND	460	ug/kg	
50-32-8	Benzo(a)pyrene	ND	230	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	460	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	460	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	460	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	460	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	460	ug/kg	
91-58-7	2-Chloronaphthalene	ND	460	ug/kg	
106-47-8	4-Chloroaniline	ND	460	ug/kg	
86-74-8	Carbazole	ND	460	ug/kg	
218-01-9	Chrysene	ND	460	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	460	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	460	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	460	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	460	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	460	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	460	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	460	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	460	ug/kg	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-022		
Lab Sample ID:	F4285-4	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8270C	**Percent Solids:**	72.2
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001997.D	2	06/22/99	ME	06/21/99	OP839	SL124
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	460	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	920	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	230	ug/kg	
132-64-9	Dibenzofuran	ND	460	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	460	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	460	ug/kg	
84-66-2	Diethyl phthalate	ND	460	ug/kg	
131-11-3	Dimethyl phthalate	ND	460	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	460	ug/kg	
206-44-0	Fluoranthene	ND	460	ug/kg	
86-73-7	Fluorene	ND	460	ug/kg	
118-74-1	Hexachlorobenzene	ND	460	ug/kg	
87-68-3	Hexachlorobutadiene	ND	460	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	460	ug/kg	
67-72-1	Hexachloroethane	ND	460	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	460	ug/kg	
78-59-1	Isophorone	ND	460	ug/kg	
90-12-0	1-Methylnaphthalene	ND	460	ug/kg	
91-57-6	2-Methylnaphthalene	ND	460	ug/kg	
88-74-4	2-Nitroaniline	ND	460	ug/kg	
99-09-2	3-Nitroaniline	ND	460	ug/kg	
100-01-6	4-Nitroaniline	ND	460	ug/kg	
91-20-3	Naphthalene	ND	460	ug/kg	
98-95-3	Nitrobenzene	ND	460	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	160	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	460	ug/kg	
85-01-8	Phenanthrene	ND	460	ug/kg	
129-00-0	Pyrene	ND	460	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	460	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	99%		25-121%
4165-62-2	Phenol-d5	104%		24-113%
118-79-6	2,4,6-Tribromophenol	119%		19-122%
4165-60-0	Nitrobenzene-d5	104%		23-120%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-022		
Lab Sample ID:	F4285-4	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8270C	**Percent Solids:**	72.2
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001997.D	2	06/22/99	ME	06/21/99	OP839	SL124
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	107%		30-115%
1718-51-0	Terphenyl-d14	121%		18-137%

(a) Dilution required due to matrix interference.

0041

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-025		
Lab Sample ID:	F4285-2	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8270C	**Percent Solids:**	72.8
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001991.D	2	06/21/99	ME	06/21/99	OP839	SL123
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND	460	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	920	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	410	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	920	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	2300	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	920	ug/kg	
95-48-7	2-Methylphenol	ND	460	ug/kg	
	3&4-Methylphenol	ND	460	ug/kg	
88-75-5	2-Nitrophenol	ND	460	ug/kg	
100-02-7	4-Nitrophenol	ND	2300	ug/kg	
87-86-5	Pentachlorophenol	ND	2300	ug/kg	
108-95-2	Phenol	ND	460	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	460	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	460	ug/kg	
83-32-9	Acenaphthene	ND	460	ug/kg	
208-96-8	Acenaphthylene	ND	460	ug/kg	
120-12-7	Anthracene	ND	460	ug/kg	
56-55-3	Benzo(a)anthracene	ND	460	ug/kg	
50-32-8	Benzo(a)pyrene	ND	230	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	460	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	460	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	460	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	460	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	460	ug/kg	
91-58-7	2-Chloronaphthalene	ND	460	ug/kg	
106-47-8	4-Chloroaniline	ND	460	ug/kg	
86-74-8	Carbazole	ND	460	ug/kg	
218-01-9	Chrysene	ND	460	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	460	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	460	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	460	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	460	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	460	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	460	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	460	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	460	ug/kg	

00053

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-025		
Lab Sample ID:	F4285-2	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8270C	**Percent Solids:**	72.8
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001991.D	2	06/21/99	ME	06/21/99	OP839	SL123
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	460	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	920	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	230	ug/kg	
132-64-9	Dibenzofuran	ND	460	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	460	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	460	ug/kg	
84-66-2	Diethyl phthalate	ND	460	ug/kg	
131-11-3	Dimethyl phthalate	ND	460	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	460	ug/kg	
206-44-0	Fluoranthene	ND	460	ug/kg	
86-73-7	Fluorene	ND	460	ug/kg	
118-74-1	Hexachlorobenzene	ND	460	ug/kg	
87-68-3	Hexachlorobutadiene	ND	460	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	460	ug/kg	
67-72-1	Hexachloroethane	ND	460	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	460	ug/kg	
78-59-1	Isophorone	ND	460	ug/kg	
90-12-0	1-Methylnaphthalene	ND	460	ug/kg	
91-57-6	2-Methylnaphthalene	ND	460	ug/kg	
88-74-4	2-Nitroaniline	ND	460	ug/kg	
99-09-2	3-Nitroaniline	ND	460	ug/kg	
100-01-6	4-Nitroaniline	ND	460	ug/kg	
91-20-3	Naphthalene	ND	460	ug/kg	
98-95-3	Nitrobenzene	ND	460	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	160	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	460	ug/kg	
85-01-8	Phenanthrene	ND	460	ug/kg	
129-00-0	Pyrene	ND	460	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	460	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	82%		25-121%
4165-62-2	Phenol-d5	84%		24-113%
118-79-6	2,4,6-Tribromophenol	112%		19-122%
4165-60-0	Nitrobenzene-d5	89%		23-120%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-025		
Lab Sample ID:	F4285-2	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8270C	**Percent Solids:**	72.8
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001991.D	2	06/21/99	ME	06/21/99	OP839	SL123
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	102%		30-115%
1718-51-0	Terphenyl-d14	122%		18-137%

(a) Dilution required due to matrix interference; extract was viscous.

06101

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-DU02		
Lab Sample ID:	F4285-11	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8270C	**Percent Solids:**	59.4
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001988.D	1	06/21/99	ME	06/21/99	OP839	SL123
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND	280	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	560	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	250	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	560	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1400	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	560	ug/kg	
95-48-7	2-Methylphenol	ND	280	ug/kg	
	3&4-Methylphenol	ND	280	ug/kg	
88-75-5	2-Nitrophenol	ND	280	ug/kg	
100-02-7	4-Nitrophenol	ND	1400	ug/kg	
87-86-5	Pentachlorophenol	ND	1400	ug/kg	
108-95-2	Phenol	ND	280	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	280	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	280	ug/kg	
83-32-9	Acenaphthene	ND	280	ug/kg	
208-96-8	Acenaphthylene	ND	280	ug/kg	
120-12-7	Anthracene	ND	280	ug/kg	
56-55-3	Benzo(a)anthracene	ND	280	ug/kg	
50-32-8	Benzo(a)pyrene	ND	140	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	280	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	280	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	280	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	280	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	280	ug/kg	
91-58-7	2-Chloronaphthalene	ND	280	ug/kg	
106-47-8	4-Chloroaniline	ND	280	ug/kg	
86-74-8	Carbazole	ND	280	ug/kg	
218-01-9	Chrysene	ND	280	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	280	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	280	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	280	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	280	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	280	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	280	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	280	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	280	ug/kg	

ND = Not detected
RDL = Reported Detection 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

00150

Report of Analysis

Client Sample ID:	CEF-P39-SD-DU02		
Lab Sample ID:	F4285-11	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8270C	**Percent Solids:**	59.4
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001988.D	1	06/21/99	ME	06/21/99	OP839	SL123
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	280	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	560	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	140	ug/kg	
132-64-9	Dibenzofuran	ND	280	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	280	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	280	ug/kg	
84-66-2	Diethyl phthalate	ND	280	ug/kg	
131-11-3	Dimethyl phthalate	ND	280	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	280	ug/kg	
206-44-0	Fluoranthene	ND	280	ug/kg	
86-73-7	Fluorene	ND	280	ug/kg	
118-74-1	Hexachlorobenzene	ND	280	ug/kg	
87-68-3	Hexachlorobutadiene	ND	280	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	280	ug/kg	
67-72-1	Hexachloroethane	ND	280	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	280	ug/kg	
78-59-1	Isophorone	ND	280	ug/kg	
90-12-0	1-Methylnaphthalene	ND	280	ug/kg	
91-57-6	2-Methylnaphthalene	ND	280	ug/kg	
88-74-4	2-Nitroaniline	ND	280	ug/kg	
99-09-2	3-Nitroaniline	ND	280	ug/kg	
100-01-6	4-Nitroaniline	ND	280	ug/kg	
91-20-3	Naphthalene	ND	280	ug/kg	
98-95-3	Nitrobenzene	ND	280	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	100	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	280	ug/kg	
85-01-8	Phenanthrene	ND	280	ug/kg	
129-00-0	Pyrene	ND	280	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	280	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	76%		25-121%
4165-62-2	Phenol-d5	82%		24-113%
118-79-6	2,4,6-Tribromophenol	111%		19-122%
4165-60-0	Nitrobenzene-d5	82%		23-120%

00154

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-DU02		
Lab Sample ID:	F4285-11	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8270C	**Percent Solids:**	59.4
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001988.D	1	06/21/99	ME	06/21/99	OP839	SL123
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	90%		30-115%
1718-51-0	Terphenyl-d14	119%		18-137%

00155

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-019		
Lab Sample ID:	F4285-7	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	EPA 8310	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/17/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	0.15	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.15	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.15	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.15	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.15	ug/l	
218-01-9	Chrysene	ND	0.15	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.25	ug/l	
206-44-0	Fluoranthene	ND	0.20	ug/l	
86-73-7	Fluorene	ND	0.20	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.15	ug/l	
91-20-3	Naphthalene	ND	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	ug/l	
85-01-8	Phenanthrene	ND	0.15	ug/l	
129-00-0	Pyrene	ND	0.20	ug/l	

(a) Analyzed By Accutest Southeast Subcontract Lab.

050281

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4285-7

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990697 SAS No.: _____ SDG No.: 9905487

Matrix: (soil/water) WATER Lab Sample ID: 9905493

Sample wt/vol: 1000 (g/ml) ML Lab File ID: LA1R661U.D

% Moisture: _____ decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) _____ Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/17/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
91-20-3	NAPHTHALENE	1.0	U
208-96-8	ACENAPHTHYLENE	2.0	U
90-12-0	1-METHYL-NAPHTHALENE	1.0	U
91-57-6	2-METHYL-NAPHTHALENE	1.0	U
83-32-9	ACENAPHTHENE	1.0	U
86-73-7	FLUORENE	0.20	U
85-01-8	PHENANTHRENE	0.15	U
120-12-7	ANTHRACENE	0.15	U
206-44-0	FLUORANTHENE	0.20	U
129-00-0	PYRENE	0.20	U
56-55-3	BENZO[a]ANTHRACENE	0.15	U
218-01-9	CHRYSENE	0.15	U
205-99-2	BENZO[b]FLUORANTHENE	0.20	U
207-08-9	BENZO[k]FLUORANTHENE	0.15	U
50-32-8	BENZO[a]PYRENE	0.15	U
56-55-3	DIBENZO[a,h]ANTHRACENE	0.25	U
191-24-2	BENZO[g,h,i]PERYLENE	0.20	U
193-39-5	INDENO[1,2,3-cd]PYRENE	0.15	U

Report of Analysis

Client Sample ID:	CEF-P39-SW-020		
Lab Sample ID:	F4285-6	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	EPA 8310	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/17/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	0.15	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.15	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.15	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.15	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.15	ug/l	
218-01-9	Chrysene	ND	0.15	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.25	ug/l	
206-44-0	Fluoranthene	ND	0.20	ug/l	
86-73-7	Fluorene	ND	0.20	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.15	ug/l	
91-20-3	Naphthalene	ND	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	ug/l	
85-01-8	Phenanthrene	ND	0.15	ug/l	
129-00-0	Pyrene	ND	0.20	ug/l	

(a) Analyzed By Accutest Southeast Subcontract Lab.

00277

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4285-6

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990697 SAS No.: SDG No.: 9905487

Matrix: (soil/water) WATER Lab Sample ID: 9905492

Sample wt/vol: 1000 (g/ml) ML Lab File ID: LA1R660U.D

% Moisture: decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/17/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
91-20-3	NAPHTHALENE	1.0	U
208-96-8	ACENAPHTHYLENE	2.0	U
90-12-0	1-METHYL-NAPHTHALENE	1.0	U
91-57-6	2-METHYL-NAPHTHALENE	1.0	U
83-32-9	ACENAPHTHENE	1.0	U
86-73-7	FLUORENE	0.20	U
85-01-8	PHENANTHRENE	0.15	U
120-12-7	ANTHRACENE	0.15	U
206-44-0	FLUORANTHENE	0.20	U
129-00-0	PYRENE	0.20	U
56-55-3	BENZO[a]ANTHRACENE	0.15	U
218-01-9	CHRYSENE	0.15	U
205-99-2	BENZO[b]FLUORANTHENE	0.20	U
207-08-9	BENZO[k]FLUORANTHENE	0.15	U
50-32-8	BENZO[a]PYRENE	0.15	U
56-55-3	DIBENZO[a,h]ANTHRACENE	0.25	U
191-24-2	BENZO[g,h,i]PERYLENE	0.20	U
193-39-5	INDENO[1,2,3-cd]PYRENE	0.15	U

Report of Analysis

Client Sample ID:	CEF-P39-SW-022		
Lab Sample ID:	F4285-3	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	EPA 8310	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/17/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	0.15	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.15	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.15	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.15	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.15	ug/l	
218-01-9	Chrysene	ND	0.15	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.25	ug/l	
206-44-0	Fluoranthene	ND	0.20	ug/l	
86-73-7	Fluorene	ND	0.20	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.15	ug/l	
91-20-3	Naphthalene	ND	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	ug/l	
85-01-8	Phenanthrene	ND	0.15	ug/l	
129-00-0	Pyrene	ND	0.20	ug/l	

(a) Analyzed By Accutest Southeast Subcontract Lab.

00265

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4285-3

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990697 SAS No.: SDG No.: 9905487

Matrix: (soil/water) WATER Lab Sample ID: 9905489

Sample wt/vol: 995 (g/ml) ML Lab File ID: LA1R659U.D

% Moisture: decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/17/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
91-20-3	NAPHTHALENE	1.0	U
208-96-8	ACENAPHTHYLENE	2.0	U
90-12-0	1-METHYL-NAPHTHALENE	1.0	U
91-57-6	2-METHYL-NAPHTHALENE	1.0	U
83-32-9	ACENAPHTHENE	1.0	U
86-73-7	FLUORENE	0.20	U
85-01-8	PHENANTHRENE	0.15	U
120-12-7	ANTHRACENE	0.15	U
206-44-0	FLUORANTHENE	0.20	U
129-00-0	PYRENE	0.20	U
56-55-3	BENZO[a]ANTHRACENE	0.15	U
218-01-9	CHRYSENE	0.15	U
205-99-2	BENZO[b]FLUORANTHENE	0.20	U
207-08-9	BENZO[k]FLUORANTHENE	0.15	U
50-32-8	BENZO[a]PYRENE	0.15	U
56-55-3	DIBENZO[a,h]ANTHRACENE	0.25	U
191-24-2	BENZO[g,h,i]PERYLENE	0.20	U
193-39-5	INDENO[1,2,3-cd]PYRENE	0.15	U

Report of Analysis

Client Sample ID:	CEF-P39-SW-025		
Lab Sample ID:	F4285-1	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	EPA 8310	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/17/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	0.15	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.15	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.15	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.15	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.15	ug/l	
218-01-9	Chrysene	ND	0.15	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.25	ug/l	
206-44-0	Fluoranthene	ND	0.15	ug/l	
86-73-7	Fluorene	ND	0.20	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.15	ug/l	
91-20-3	Naphthalene	ND	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	ug/l	
85-01-8	Phenanthrene	ND	0.15	ug/l	
129-00-0	Pyrene	ND	0.20	ug/l	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4285-1

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990697 SAS No.: SDG No.: 9905487

Matrix: (soil/water) WATER Lab Sample ID: 9905487

Sample wt/vol: 1000 (g/ml) ML Lab File ID: LA1R658U.D

% Moisture: decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/17/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
91-20-3	NAPHTHALENE	1.0	U
208-96-8	ACENAPHTHYLENE	2.0	U
90-12-0	1-METHYL-NAPHTHALENE	1.0	U
91-57-6	2-METHYL-NAPHTHALENE	1.0	U
83-32-9	ACENAPHTHENE	1.0	U
86-73-7	FLUORENE	0.20	U
85-01-8	PHENANTHRENE	0.15	U
120-12-7	ANTHRACENE	0.15	U
206-44-0	FLUORANTHENE	0.20	U
129-00-0	PYRENE	0.20	U
56-55-3	BENZO[a]ANTHRACENE	0.15	U
218-01-9	CHRYSENE	0.15	U
205-99-2	BENZO[b]FLUORANTHENE	0.20	U
207-08-9	BENZO[k]FLUORANTHENE	0.15	U
50-32-8	BENZO[a]PYRENE	0.15	U
56-55-3	DIBENZO[a,h]ANTHRACENE	0.25	U
191-24-2	BENZO[g,h,i]PERYLENE	0.20	U
193-39-5	INDENO[1,2,3-cd]PYRENE	0.15	U

Report of Analysis

Client Sample ID:	CEF-P39-SW-DU02		
Lab Sample ID:	F4285-10	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	EPA 8310	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/17/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	0.15	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.15	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.15	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.15	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.15	ug/l	
218-01-9	Chrysene	ND	0.15	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.25	ug/l	
206-44-0	Fluoranthene	ND	0.20	ug/l	
86-73-7	Fluorene	ND	0.20	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.15	ug/l	
91-20-3	Naphthalene	ND	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	ug/l	
85-01-8	Phenanthrene	ND	0.15	ug/l	
129-00-0	Pyrene	ND	0.20	ug/l	

(a) Analyzed By Accutest Southeast Subcontract Lab.

06293

ND = Not detected
RDL = Reported Detection 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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4285-10

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990697 SAS No.: _____ SDG No.: 9905487

Matrix: (soil/water) WATER Lab Sample ID: 9905496

Sample wt/vol: 995 (g/ml) ML Lab File ID: LA1R662U.D

% Moisture: _____ decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) _____ Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/17/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
91-20-3	NAPHTHALENE	1.0	U
208-96-8	ACENAPHTHYLENE	2.0	U
90-12-0	1-METHYL-NAPHTHALENE	1.0	U
91-57-6	2-METHYL-NAPHTHALENE	1.0	U
83-32-9	ACENAPHTHENE	1.0	U
86-73-7	FLUORENE	0.20	U
85-01-8	PHENANTHRENE	0.15	U
120-12-7	ANTHRACENE	0.15	U
206-44-0	FLUORANTHENE	0.20	U
129-00-0	PYRENE	0.20	U
56-55-3	BENZO[a]ANTHRACENE	0.15	U
218-01-9	CHRYSENE	0.15	U
205-99-2	BENZO[b]FLUORANTHENE	0.20	U
207-08-9	BENZO[k]FLUORANTHENE	0.15	U
50-32-8	BENZO[a]PYRENE	0.15	U
56-55-3	DIBENZO[a,h]ANTHRACENE	0.25	U
191-24-2	BENZO[g,h,i]PERYLENE	0.20	U
193-39-5	INDENO[1,2,3-cd]PYRENE	0.15	U

Report of Analysis

Client Sample ID:	CEF-P39-SD-019		
Lab Sample ID:	F4285-9	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	EPA 8310	**Percent Solids:**	71.3
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/17/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	52	ug/kg	
208-96-8	Acenaphthylene	ND	110	ug/kg	
120-12-7	Anthracene	ND	7.6	ug/kg	
56-55-3	Benzo(a)anthracene	15	7.6	ug/kg	
50-32-8	Benzo(a)pyrene	40	7.6	ug/kg	
205-99-2	Benzo(b)fluoranthene	34	7.6	ug/kg	
191-24-2	Benzo(g,h,i)perylene	46	11	ug/kg	
207-08-9	Benzo(k)fluoranthene	18	7.6	ug/kg	
218-01-9	Chrysene	67	7.6	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	13	ug/kg	
206-44-0	Fluoranthene	ND	11	ug/kg	
86-73-7	Fluorene	ND	11	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	42	7.6	ug/kg	
91-20-3	Naphthalene	ND	52	ug/kg	
90-12-0	1-Methylnaphthalene	ND	52	ug/kg	
91-57-6	2-Methylnaphthalene	ND	52	ug/kg	
85-01-8	Phenanthrene	ND	11	ug/kg	
129-00-0	Pyrene	11	11	ug/kg	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4285-9

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990697 SAS No.: _____ SDG No.: 9905487

Matrix: (soil/water) SOIL Lab Sample ID: 9905495

Sample wt/vol: 30.5 (g/ml) G Lab File ID: LA1R690U.D

% Moisture: 38 decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) _____ Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/18/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
91-20-3	NAPHTHALENE	52	U
208-96-8	ACENAPHTHYLENE	110	U
90-12-0	1-METHYL-NAPHTHALENE	52	U
91-57-6	2-METHYL-NAPHTHALENE	52	U
83-32-9	ACENAPHTHENE	52	U
86-73-7	FLUORENE	11	U
85-01-8	PHENANTHRENE	7.9	U
120-12-7	ANTHRACENE	7.9	U
206-44-0	FLUORANTHENE	11	U
129-00-0	PYRENE	11	P
56-55-3	BENZO[a]ANTHRACENE	15	
218-01-9	CHRYSENE	67	
205-99-2	BENZO[b]FLUORANTHENE	34	P
207-08-9	BENZO[k]FLUORANTHENE	18	P
50-32-8	BENZO[a]PYRENE	40	
56-55-3	DIBENZO[a,h]ANTHRACENE	13	U
191-24-2	BENZO[g,h,i]PERYLENE	46	P
193-39-5	INDENO[1,2,3-cd]PYRENE	42	P

Report of Analysis

Client Sample ID:	CEF-P39-SD-020		
Lab Sample ID:	F4285-8	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	EPA 8310	**Percent Solids:**	22.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/17/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	93	ug/kg	
208-96-8	Acenaphthylene	ND	190	ug/kg	
120-12-7	Anthracene	ND	14	ug/kg	
56-55-3	Benzo(a)anthracene	14	14	ug/kg	
50-32-8	Benzo(a)pyrene	16	14	ug/kg	
205-99-2	Benzo(b)fluoranthene	26	14	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	19	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	14	ug/kg	
218-01-9	Chrysene	56	14	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	23	ug/kg	
206-44-0	Fluoranthene	34	19	ug/kg	
86-73-7	Fluorene	ND	19	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	14	ug/kg	
91-20-3	Naphthalene	ND	93	ug/kg	
90-12-0	1-Methylnaphthalene	ND	93	ug/kg	
91-57-6	2-Methylnaphthalene	ND	93	ug/kg	
85-01-8	Phenanthrene	ND	19	ug/kg	
129-00-0	Pyrene	27	19	ug/kg	

(a) Analyzed By Accutest Southeast Subcontract Lab.

00285

ND = Not detected
RDL = Reported Detection 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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4285-8

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990697 SAS No.: SDG No.: 9905487

Matrix: (soil/water) SOIL Lab Sample ID: 9905494

Sample wt/vol: 30.4 (g/ml) G Lab File ID: LA1R689U.D

% Moisture: 65 decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/18/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
91-20-3	NAPHTHALENE	93	U
208-96-8	ACENAPHTHYLENE	190	~~U~~
90-12-0	1-METHYL-NAPHTHALENE	93	U
91-57-6	2-METHYL-NAPHTHALENE	93	U
83-32-9	ACENAPHTHENE	93	U
86-73-7	FLUORENE	19	U
85-01-8	PHENANTHRENE	14	U
120-12-7	ANTHRACENE	14	U
206-44-0	FLUORANTHENE	34	
129-00-0	PYRENE	27	P
56-55-3	BENZO[a]ANTHRACENE	14	
218-01-9	CHRYSENE	56	
205-99-2	BENZO[b]FLUORANTHENE	26	
207-08-9	BENZO[k]FLUORANTHENE	14	U
50-32-8	BENZO[a]PYRENE	16	
56-55-3	DIBENZO[a,h]ANTHRACENE	23	U
191-24-2	BENZO[g,h,i]PERYLENE	19	U
193-39-5	INDENO[1,2,3-cd]PYRENE	14	U

MH 6/21/99

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Report of Analysis

Client Sample ID:	CEF-P39-SD-021		
Lab Sample ID:	F4285-5	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	EPA 8310	**Percent Solids:**	78.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/17/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	44	ug/kg	
208-96-8	Acenaphthylene	ND	90	ug/kg	
120-12-7	Anthracene	ND	6.7	ug/kg	
56-55-3	Benzo(a)anthracene	9.0	6.7	ug/kg	
50-32-8	Benzo(a)pyrene	34	6.7	ug/kg	
205-99-2	Benzo(b)fluoranthene	37	6.7	ug/kg	
191-24-2	Benzo(g,h,i)perylene	68	9.0	ug/kg	
207-08-9	Benzo(k)fluoranthene	14	6.7	ug/kg	
218-01-9	Chrysene	27	6.7	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	11	ug/kg	
206-44-0	Fluoranthene	22	9.0	ug/kg	
86-73-7	Fluorene	ND	9.0	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	44	6.7	ug/kg	
91-20-3	Naphthalene	ND	44	ug/kg	
90-12-0	1-Methylnaphthalene	ND	44	ug/kg	
91-57-6	2-Methylnaphthalene	ND	44	ug/kg	
85-01-8	Phenanthrene	8.4	6.7	ug/kg	
129-00-0	Pyrene	22	9.0	ug/kg	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4285-5

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990697 SAS No.: SDG No.: 9905487

Matrix: (soil/water) SOIL Lab Sample ID: 9905491

Sample wt/vol: 30.2 (g/ml) G Lab File ID: LA1R688U.D

% Moisture: 26 decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/18/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
91-20-3	NAPHTHALENE	44	U
208-96-8	ACENAPHTHYLENE	90	U
90-12-0	1-METHYL-NAPHTHALENE	44	U
91-57-6	2-METHYL-NAPHTHALENE	44	U
83-32-9	ACENAPHTHENE	44	U
86-73-7	FLUORENE	9.0	U
85-01-8	PHENANTHRENE	8.4	
120-12-7	ANTHRACENE	6.7	U
206-44-0	FLUORANTHENE	22	
129-00-0	PYRENE	22	
56-55-3	BENZO[a]ANTHRACENE	9.0	
218-01-9	CHRYSENE	27	
205-99-2	BENZO[b]FLUORANTHENE	37	P
207-08-9	BENZO[k]FLUORANTHENE	14	P
50-32-8	BENZO[a]PYRENE	34	
56-55-3	DIBENZO[a,h]ANTHRACENE	11	U
191-24-2	BENZO[g,h,i]PERYLENE	68	
193-39-5	INDENO[1,2,3-cd]PYRENE	44	P

Report of Analysis

Client Sample ID:	CEF-P39-SD-022		
Lab Sample ID:	F4285-4	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	EPA 8310	**Percent Solids:**	72.2
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/17/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	49	ug/kg	
208-96-8	Acenaphthylene	ND	100	ug/kg	
120-12-7	Anthracene	ND	7.4	ug/kg	
56-55-3	Benzo(a)anthracene	ND	7.4	ug/kg	
50-32-8	Benzo(a)pyrene	ND	7.4	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	7.4	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	10	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	7.4	ug/kg	
218-01-9	Chrysene	ND	7.4	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	12	ug/kg	
206-44-0	Fluoranthene	ND	10	ug/kg	
86-73-7	Fluorene	ND	10	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	7.4	ug/kg	
91-20-3	Naphthalene	ND	49	ug/kg	
90-12-0	1-Methylnaphthalene	ND	49	ug/kg	
91-57-6	2-Methylnaphthalene	ND	49	ug/kg	
85-01-8	Phenanthrene	ND	7.4	ug/kg	
129-00-0	Pyrene	ND	10	ug/kg	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4285-4

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990697 SAS No.: SDG No.: 9905487

Matrix: (soil/water) SOIL Lab Sample ID: 9905490

Sample wt/vol: 30.1 (g/ml) G Lab File ID: LA1R772U.D

% Moisture: 33 decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/22/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
91-20-3	NAPHTHALENE	49	U
208-96-8	ACENAPHTHYLENE	100	U
90-12-0	1-METHYL-NAPHTHALENE	49	U
91-57-6	2-METHYL-NAPHTHALENE	49	U
83-32-9	ACENAPHTHENE	49	U
86-73-7	FLUORENE	10.0	U
85-01-8	PHENANTHRENE	7.4	U
120-12-7	ANTHRACENE	7.4	U
206-44-0	FLUORANTHENE	10.0	U
129-00-0	PYRENE	10.0	U
56-55-3	BENZO[a]ANTHRACENE	7.4	U
218-01-9	CHRYSENE	7.4	U
205-99-2	BENZO[b]FLUORANTHENE	10.0	U
207-08-9	BENZO[k]FLUORANTHENE	7.4	U
50-32-8	BENZO[a]PYRENE	7.4	U
56-55-3	DIBENZO[a,h]ANTHRACENE	12	U
191-24-2	BENZO[g,h,i]PERYLENE	10.0	U
193-39-5	INDENO[1,2,3-cd]PYRENE	7.4	U

Report of Analysis

Client Sample ID:	CEF-P39-SD-025		
Lab Sample ID:	F4285-2	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	EPA 8310	**Percent Solids:**	72.8
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/17/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	290	44	ug/kg	
208-96-8	Acenaphthylene	ND	89	ug/kg	
120-12-7	Anthracene	11	6.6	ug/kg	
56-55-3	Benzo(a)anthracene	110	6.6	ug/kg	
50-32-8	Benzo(a)pyrene	150	6.6	ug/kg	
205-99-2	Benzo(b)fluoranthene	190	8.9	ug/kg	
191-24-2	Benzo(g,h,i)perylene	150	8.9	ug/kg	
207-08-9	Benzo(k)fluoranthene	96	6.6	ug/kg	
218-01-9	Chrysene	220	6.6	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	13	11	ug/kg	
206-44-0	Fluoranthene	220	8.9	ug/kg	
86-73-7	Fluorene	ND	8.9	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	140	6.6	ug/kg	
91-20-3	Naphthalene	ND	44	ug/kg	
90-12-0	1-Methylnaphthalene	ND	44	ug/kg	
91-57-6	2-Methylnaphthalene	220	44	ug/kg	
85-01-8	Phenanthrene	66	6.6	ug/kg	
129-00-0	Pyrene	210	8.9	ug/kg	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4285-2

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990697 SAS No.: SDG No.: 9905487

Matrix: (soil/water) SOIL Lab Sample ID: 9905488

Sample wt/vol: 30.8 (g/ml) G Lab File ID: LA1R686U.D

% Moisture: 27 decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/18/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
91-20-3	NAPHTHALENE	44	U
208-96-8	ACENAPHTHYLENE	89	U
90-12-0	1-METHYL-NAPHTHALENE	44	U
91-57-6	2-METHYL-NAPHTHALENE	220	
83-32-9	ACENAPHTHENE	290	P
86-73-7	FLUORENE	8.9	U
85-01-8	PHENANTHRENE	66	
120-12-7	ANTHRACENE	11	
206-44-0	FLUORANTHENE	220	
129-00-0	PYRENE	210	P
56-55-3	BENZO[a]ANTHRACENE	110	
218-01-9	CHRYSENE	220	
205-99-2	BENZO[b]FLUORANTHENE	190	
207-08-9	BENZO[k]FLUORANTHENE	96	P
50-32-8	BENZO[a]PYRENE	150	
56-55-3	DIBENZO[a,h]ANTHRACENE	13	
191-24-2	BENZO[g,h,i]PERYLENE	150	
193-39-5	INDENO[1,2,3-cd]PYRENE	140	

Report of Analysis

Client Sample ID:	CEF-P39-SD-DU02		
Lab Sample ID:	F4285-11	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	EPA 8310	**Percent Solids:**	59.4
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/17/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	48	ug/kg	
208-96-8	Acenaphthylene	ND	98	ug/kg	
120-12-7	Anthracene	ND	7.3	ug/kg	
56-55-3	Benzo(a)anthracene	ND	7.3	ug/kg	
50-32-8	Benzo(a)pyrene	9.6	7.3	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	7.3	ug/kg	
191-24-2	Benzo(g,h,i)perylene	10	9.8	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	7.3	ug/kg	
218-01-9	Chrysene	10	7.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	12	ug/kg	
206-44-0	Fluoranthene	ND	9.8	ug/kg	
86-73-7	Fluorene	ND	7.3	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	9.9	7.3	ug/kg	
91-20-3	Naphthalene	ND	48	ug/kg	
90-12-0	1-Methylnaphthalene	ND	48	ug/kg	
91-57-6	2-Methylnaphthalene	ND	48	ug/kg	
85-01-8	Phenanthrene	ND	9.8	ug/kg	
129-00-0	Pyrene	ND	9.8	ug/kg	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4285-11

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990697 SAS No.: SDG No.: 9905487

Matrix: (soil/water) SOIL Lab Sample ID: 9905497

Sample wt/vol: 30.7 (g/ml) G Lab File ID: LA1R691U.D

% Moisture: 33 decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/18/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
91-20-3	NAPHTHALENE	48	U
208-96-8	ACENAPHTHYLENE	98	U
90-12-0	1-METHYL-NAPHTHALENE	48	U
91-57-6	2-METHYL-NAPHTHALENE	48	U
83-32-9	ACENAPHTHENE	48	U
86-73-7	FLUORENE	9.8	U
85-01-8	PHENANTHRENE	7.3	U
120-12-7	ANTHRACENE	7.3	U
206-44-0	FLUORANTHENE	9.8	U
129-00-0	PYRENE	9.8	U
56-55-3	BENZO[a]ANTHRACENE	7.3	U
218-01-9	CHRYSENE	10	P
205-99-2	BENZO[b]FLUORANTHENE	9.8	U
207-08-9	BENZO[k]FLUORANTHENE	7.3	U
50-32-8	BENZO[a]PYRENE	9.6	
56-55-3	DIBENZO[a,h]ANTHRACENE	12	U
191-24-2	BENZO[g,h,i]PERYLENE	10	
193-39-5	INDENO[1,2,3-cd]PYRENE	9.9	

Report of Analysis

Client Sample ID:	CEF-P39-SW-019		
Lab Sample ID:	F4285-7	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	SW846 3510C/8081A	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN03951.D	1	06/17/99	SKW	06/11/99	OP844	GMN164
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	0.050	ug/l	
319-84-6	alpha-BHC	ND	0.050	ug/l	
319-85-7	beta-BHC	ND	0.050	ug/l	
319-86-8	delta-BHC	ND	0.050	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	ug/l	
5103-71-9	alpha-Chlordane	ND	0.10	ug/l	
5103-74-2	gamma-Chlordane	ND	0.10	ug/l	
60-57-1	Dieldrin	ND	0.050	ug/l	
72-54-8	4,4'-DDD	ND	0.10	ug/l	
72-55-9	4,4'-DDE	ND	0.10	ug/l	
50-29-3	4,4'-DDT	ND	0.10	ug/l	
72-20-8	Endrin	ND	0.10	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.10	ug/l	
7421-93-4	Endrin aldehyde	ND	0.10	ug/l	
53494-70-5	Endrin ketone	ND	0.10	ug/l	
959-98-8	Endosulfan-I	ND	0.050	ug/l	
33213-65-9	Endosulfan-II	ND	0.10	ug/l	
76-44-8	Heptachlor	ND	0.050	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.050	ug/l	
72-43-5	Methoxychlor	ND	0.20	ug/l	
8001-35-2	Toxaphene	ND	2.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	84%		30-160%
2051-24-3	Decachlorobiphenyl	62%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-020		
Lab Sample ID:	F4285-6	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	SW846 3510C/8081A	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN03950.D	1	06/17/99	SKW	06/11/99	OP844	GMN164
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	0.050	ug/l	
319-84-6	alpha-BHC	ND	0.050	ug/l	
319-85-7	beta-BHC	ND	0.050	ug/l	
319-86-8	delta-BHC	ND	0.050	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	ug/l	
5103-71-9	alpha-Chlordane	ND	0.10	ug/l	
5103-74-2	gamma-Chlordane	ND	0.10	ug/l	
60-57-1	Dieldrin	ND	0.050	ug/l	
72-54-8	4,4'-DDD	ND	0.10	ug/l	
72-55-9	4,4'-DDE	ND	0.10	ug/l	
50-29-3	4,4'-DDT	ND	0.10	ug/l	
72-20-8	Endrin	ND	0.10	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.10	ug/l	
7421-93-4	Endrin aldehyde	ND	0.10	ug/l	
53494-70-5	Endrin ketone	ND	0.10	ug/l	
959-98-8	Endosulfan-I	ND	0.050	ug/l	
33213-65-9	Endosulfan-II	ND	0.10	ug/l	
76-44-8	Heptachlor	ND	0.050	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.050	ug/l	
72-43-5	Methoxychlor	ND	0.20	ug/l	
8001-35-2	Toxaphene	ND	2.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	87%		30-160%
2051-24-3	Decachlorobiphenyl	65%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-022		
Lab Sample ID:	F4285-3	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	SW846 3510C/8081A	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN03949.D	1	06/17/99	SKW	06/11/99	OP844	GMN164
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	0.050	ug/l	
319-84-6	alpha-BHC	ND	0.050	ug/l	
319-85-7	beta-BHC	ND	0.050	ug/l	
319-86-8	delta-BHC	ND	0.050	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	ug/l	
5103-71-9	alpha-Chlordane	ND	0.10	ug/l	
5103-74-2	gamma-Chlordane	ND	0.10	ug/l	
60-57-1	Dieldrin	ND	0.050	ug/l	
72-54-8	4,4'-DDD	ND	0.10	ug/l	
72-55-9	4,4'-DDE	ND	0.10	ug/l	
50-29-3	4,4'-DDT	ND	0.10	ug/l	
72-20-8	Endrin	ND	0.10	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.10	ug/l	
7421-93-4	Endrin aldehyde	ND	0.10	ug/l	
53494-70-5	Endrin ketone	ND	0.10	ug/l	
959-98-8	Endosulfan-I	ND	0.050	ug/l	
33213-65-9	Endosulfan-II	ND	0.10	ug/l	
76-44-8	Heptachlor	ND	0.050	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.050	ug/l	
72-43-5	Methoxychlor	ND	0.20	ug/l	
8001-35-2	Toxaphene	ND	2.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	89%		30-160%
2051-24-3	Decachlorobiphenyl	69%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-025		
Lab Sample ID:	F4285-1	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	SW846 3510C/8081A	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN03948.D	1	06/17/99	SKW	06/11/99	OP844	GMN164
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	0.050	ug/l	
319-84-6	alpha-BHC	ND	0.050	ug/l	
319-85-7	beta-BHC	ND	0.050	ug/l	
319-86-8	delta-BHC	ND	0.050	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	ug/l	
5103-71-9	alpha-Chlordane	ND	0.10	ug/l	
5103-74-2	gamma-Chlordane	ND	0.10	ug/l	
60-57-1	Dieldrin	ND	0.050	ug/l	
72-54-8	4,4'-DDD	ND	0.10	ug/l	
72-55-9	4,4'-DDE	ND	0.10	ug/l	
50-29-3	4,4'-DDT	ND	0.10	ug/l	
72-20-8	Endrin	ND	0.10	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.10	ug/l	
7421-93-4	Endrin aldehyde	ND	0.10	ug/l	
53494-70-5	Endrin ketone	ND	0.10	ug/l	
959-98-8	Endosulfan-I	ND	0.050	ug/l	
33213-65-9	Endosulfan-II	ND	0.10	ug/l	
76-44-8	Heptachlor	ND	0.050	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.050	ug/l	
72-43-5	Methoxychlor	ND	0.20	ug/l	
8001-35-2	Toxaphene	ND	2.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	90%		30-160%
2051-24-3	Decachlorobiphenyl	61%		30-160%

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ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-DU02		
Lab Sample ID:	F4285-10	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	SW846 3510C/8081A	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN03952.D	1	06/17/99	SKW	06/11/99	OP844	GMN164
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	0.050	ug/l	
319-84-6	alpha-BHC	ND	0.050	ug/l	
319-85-7	beta-BHC	ND	0.050	ug/l	
319-86-8	delta-BHC	ND	0.050	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	ug/l	
5103-71-9	alpha-Chlordane	ND	0.10	ug/l	
5103-74-2	gamma-Chlordane	ND	0.10	ug/l	
60-57-1	Dieldrin	ND	0.050	ug/l	
72-54-8	4,4'-DDD	ND	0.10	ug/l	
72-55-9	4,4'-DDE	ND	0.10	ug/l	
50-29-3	4,4'-DDT	ND	0.10	ug/l	
72-20-8	Endrin	ND	0.10	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.10	ug/l	
7421-93-4	Endrin aldehyde	ND	0.10	ug/l	
53494-70-5	Endrin ketone	ND	0.10	ug/l	
959-98-8	Endosulfan-I	ND	0.050	ug/l	
33213-65-9	Endosulfan-II	ND	0.10	ug/l	
76-44-8	Heptachlor	ND	0.050	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.050	ug/l	
72-43-5	Methoxychlor	ND	0.20	ug/l	
8001-35-2	Toxaphene	ND	2.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	86%		30-160%
2051-24-3	Decachlorobiphenyl	52%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-019		
Lab Sample ID:	F4285-9	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8081A	**Percent Solids:**	71.3
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN04104.D	1	06/24/99	SKW	06/18/99	OP856	GMN168
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	2.3	ug/kg	
319-84-6	alpha-BHC	ND	2.3	ug/kg	
319-85-7	beta-BHC	ND	2.3	ug/kg	
319-86-8	delta-BHC	ND	2.3	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	2.3	ug/kg	
5103-71-9	alpha-Chlordane	ND	4.7	ug/kg	
5103-74-2	gamma-Chlordane	ND	4.7	ug/kg	
60-57-1	Dieldrin	ND	2.3	ug/kg	
72-54-8	4,4'-DDD	ND	4.7	ug/kg	
72-55-9	4,4'-DDE	ND	4.7	ug/kg	
50-29-3	4,4'-DDT	ND	4.7	ug/kg	
72-20-8	Endrin	ND	4.7	ug/kg	
1031-07-8	Endosulfan sulfate	ND	4.7	ug/kg	
7421-93-4	Endrin aldehyde	ND	4.7	ug/kg	
53494-70-5	Endrin ketone	ND	4.7	ug/kg	
959-98-8	Endosulfan-I	ND	2.3	ug/kg	
33213-65-9	Endosulfan-II	ND	4.7	ug/kg	
76-44-8	Heptachlor	ND	2.3	ug/kg	
1024-57-3	Heptachlor epoxide	ND	2.3	ug/kg	
72-43-5	Methoxychlor	ND	9.3	ug/kg	
8001-35-2	Toxaphene	ND	230	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	95%		40-150%
2051-24-3	Decachlorobiphenyl	96%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-020		
Lab Sample ID:	F4285-8	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8081A	**Percent Solids:**	22.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN04103.D	1	06/24/99	SKW	06/18/99	OP856	GMN168
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	7.6	ug/kg	
319-84-6	alpha-BHC	ND	7.6	ug/kg	
319-85-7	beta-BHC	ND	7.6	ug/kg	
319-86-8	delta-BHC	ND	7.6	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	7.6	ug/kg	
5103-71-9	alpha-Chlordane	ND	15	ug/kg	
5103-74-2	gamma-Chlordane	ND	15	ug/kg	
60-57-1	Dieldrin	ND	7.6	ug/kg	
72-54-8	4,4'-DDD	ND	15	ug/kg	
72-55-9	4,4'-DDE	ND	15	ug/kg	
50-29-3	4,4'-DDT	ND	15	ug/kg	
72-20-8	Endrin	ND	15	ug/kg	
1031-07-8	Endosulfan sulfate	ND	15	ug/kg	
7421-93-4	Endrin aldehyde	ND	15	ug/kg	
53494-70-5	Endrin ketone	ND	15	ug/kg	
959-98-8	Endosulfan-I	ND	7.6	ug/kg	
33213-65-9	Endosulfan-II	ND	15	ug/kg	
76-44-8	Heptachlor	ND	7.6	ug/kg	
1024-57-3	Heptachlor epoxide	ND	7.6	ug/kg	
72-43-5	Methoxychlor	ND	30	ug/kg	
8001-35-2	Toxaphene	ND	760	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	85%		40-150%
2051-24-3	Decachlorobiphenyl	106%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-021		
Lab Sample ID:	F4285-5	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8081A	**Percent Solids:**	78.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN04102.D	1	06/24/99	SKW	06/18/99	OP856	GMN168
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	2.1	ug/kg	
319-84-6	alpha-BHC	ND	2.1	ug/kg	
319-85-7	beta-BHC	ND	2.1	ug/kg	
319-86-8	delta-BHC	ND	2.1	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	2.1	ug/kg	
5103-71-9	alpha-Chlordane	ND	4.2	ug/kg	
5103-74-2	gamma-Chlordane	ND	4.2	ug/kg	
60-57-1	Dieldrin	ND	2.1	ug/kg	
72-54-8	4,4'-DDD	ND	4.2	ug/kg	
72-55-9	4,4'-DDE	ND	4.2	ug/kg	
50-29-3	4,4'-DDT	ND	4.2	ug/kg	
72-20-8	Endrin	ND	4.2	ug/kg	
1031-07-8	Endosulfan sulfate	ND	4.2	ug/kg	
7421-93-4	Endrin aldehyde	ND	4.2	ug/kg	
53494-70-5	Endrin ketone	ND	4.2	ug/kg	
959-98-8	Endosulfan-I	ND	2.1	ug/kg	
33213-65-9	Endosulfan-II	ND	4.2	ug/kg	
76-44-8	Heptachlor	ND	2.1	ug/kg	
1024-57-3	Heptachlor epoxide	ND	2.1	ug/kg	
72-43-5	Methoxychlor	ND	8.5	ug/kg	
8001-35-2	Toxaphene	ND	210	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	92%		40-150%
2051-24-3	Decachlorobiphenyl	115%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-022		
Lab Sample ID:	F4285-4	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8081A	**Percent Solids:**	72.2
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN04101.D	1	06/24/99	SKW	06/18/99	OP856	GMN168
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	2.3	ug/kg	
319-84-6	alpha-BHC	ND	2.3	ug/kg	
319-85-7	beta-BHC	ND	2.3	ug/kg	
319-86-8	delta-BHC	ND	2.3	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	2.3	ug/kg	
5103-71-9	alpha-Chlordane	ND	4.6	ug/kg	
5103-74-2	gamma-Chlordane	ND	4.6	ug/kg	
60-57-1	Dieldrin	ND	2.3	ug/kg	
72-54-8	4,4'-DDD	ND	4.6	ug/kg	
72-55-9	4,4'-DDE	ND	4.6	ug/kg	
50-29-3	4,4'-DDT	ND	4.6	ug/kg	
72-20-8	Endrin	ND	4.6	ug/kg	
1031-07-8	Endosulfan sulfate	ND	4.6	ug/kg	
7421-93-4	Endrin aldehyde	ND	4.6	ug/kg	
53494-70-5	Endrin ketone	ND	4.6	ug/kg	
959-98-8	Endosulfan-I	ND	2.3	ug/kg	
33213-65-9	Endosulfan-II	ND	4.6	ug/kg	
76-44-8	Heptachlor	ND	2.3	ug/kg	
1024-57-3	Heptachlor epoxide	ND	2.3	ug/kg	
72-43-5	Methoxychlor	ND	9.2	ug/kg	
8001-35-2	Toxaphene	ND	230	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	76%		40-150%
2051-24-3	Decachlorobiphenyl	104%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-025		
Lab Sample ID:	F4285-2	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8081A	**Percent Solids:**	72.8
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	MN04094.D	10	06/23/99	SKW	06/18/99	OP856	GMN168
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	23	ug/kg	
319-84-6	alpha-BHC	ND	23	ug/kg	
319-85-7	beta-BHC	ND	23	ug/kg	
319-86-8	delta-BHC	ND	23	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	23	ug/kg	
5103-71-9	alpha-Chlordane	ND	46	ug/kg	
5103-74-2	gamma-Chlordane	ND	46	ug/kg	
60-57-1	Dieldrin	ND	23	ug/kg	
72-54-8	4,4'-DDD	ND	46	ug/kg	
72-55-9	4,4'-DDE	ND	46	ug/kg	
50-29-3	4,4'-DDT	ND	46	ug/kg	
72-20-8	Endrin	ND	46	ug/kg	
1031-07-8	Endosulfan sulfate	ND	46	ug/kg	
7421-93-4	Endrin aldehyde	ND	46	ug/kg	
53494-70-5	Endrin ketone	ND	46	ug/kg	
959-98-8	Endosulfan-I	ND	23	ug/kg	
33213-65-9	Endosulfan-II	ND	46	ug/kg	
76-44-8	Heptachlor	ND	23	ug/kg	
1024-57-3	Heptachlor epoxide	ND	23	ug/kg	
72-43-5	Methoxychlor	ND	91	ug/kg	
8001-35-2	Toxaphene	ND	2300	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	110%		40-150%
2051-24-3	Decachlorobiphenyl	128%		30-160%

(a) Dilution required due to matrix interference.

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-DU02		
Lab Sample ID:	F4285-11	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 3550B/8081A	**Percent Solids:**	59.4
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN04105.D	1	06/24/99	SKW	06/18/99	OP856	GMN168
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	2.8	ug/kg	
319-84-6	alpha-BHC	ND	2.8	ug/kg	
319-85-7	beta-BHC	ND	2.8	ug/kg	
319-86-8	delta-BHC	ND	2.8	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	2.8	ug/kg	
5103-71-9	alpha-Chlordane	ND	5.6	ug/kg	
5103-74-2	gamma-Chlordane	ND	5.6	ug/kg	
60-57-1	Dieldrin	ND	2.8	ug/kg	
72-54-8	4,4'-DDD	ND	5.6	ug/kg	
72-55-9	4,4'-DDE	ND	5.6	ug/kg	
50-29-3	4,4'-DDT	ND	5.6	ug/kg	
72-20-8	Endrin	ND	5.6	ug/kg	
1031-07-8	Endosulfan sulfate	ND	5.6	ug/kg	
7421-93-4	Endrin aldehyde	ND	5.6	ug/kg	
53494-70-5	Endrin ketone	ND	5.6	ug/kg	
959-98-8	Endosulfan-I	ND	2.8	ug/kg	
33213-65-9	Endosulfan-II	ND	5.6	ug/kg	
76-44-8	Heptachlor	ND	2.8	ug/kg	
1024-57-3	Heptachlor epoxide	ND	2.8	ug/kg	
72-43-5	Methoxychlor	ND	11	ug/kg	
8001-35-2	Toxaphene	ND	280	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	88%		40-150%
2051-24-3	Decachlorobiphenyl	79%		30-160%

DOEF

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-019		
Lab Sample ID:	F4285-7	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	SW846 8082	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09163.D	1	06/14/99	SKW	06/11/99	OP843	GAB345
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	104%		30-160%
2051-24-3	Decachlorobiphenyl	98%		30-160%

00103

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-020		
Lab Sample ID:	F4285-6	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	SW846 8082	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09162.D	1	06/14/99	SKW	06/11/99	OP843	GAB345
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	103%		30-160%
2051-24-3	Decachlorobiphenyl	106%		30-160%

00750

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-022		
Lab Sample ID:	F4285-3	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	SW846 8082	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09161.D	1	06/14/99	SKW	06/11/99	OP843	GAB345
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	108%		30-160%
2051-24-3	Decachlorobiphenyl	102%		30-160%

00001

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-025		
Lab Sample ID:	F4285-1	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	SW846 8082	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09160.D	1	06/14/99	SKW	06/11/99	OP843	GAB345
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	110%		30-160%
2051-24-3	Decachlorobiphenyl	109%		30-160%

00695

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-DU02		
Lab Sample ID:	F4285-10	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
Method:	SW846 8082	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09164.D	1	06/14/99	SKW	06/11/99	OP843	GAB345
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	110%		30-160%
2051-24-3	Decachlorobiphenyl	86%		30-160%

30712

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-019		
Lab Sample ID:	F4285-9	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 8082	**Percent Solids:**	71.3
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09286.D	1	06/21/99	SKW	06/18/99	OP855	GAB350
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	47	ug/kg	
11104-28-2	Aroclor 1221	ND	47	ug/kg	
11141-16-5	Aroclor 1232	ND	47	ug/kg	
53469-21-9	Aroclor 1242	ND	47	ug/kg	
12672-29-6	Aroclor 1248	ND	47	ug/kg	
11097-69-1	Aroclor 1254	ND	47	ug/kg	
11096-82-5	Aroclor 1260	ND	47	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	119%		40-150%
2051-24-3	Decachlorobiphenyl	90%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-020		
Lab Sample ID:	F4285-8	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 8082	**Percent Solids:**	22.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09285.D	1	06/21/99	SKW	06/18/99	OP855	GAB350
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	150	ug/kg	
11104-28-2	Aroclor 1221	ND	150	ug/kg	
11141-16-5	Aroclor 1232	ND	150	ug/kg	
53469-21-9	Aroclor 1242	ND	150	ug/kg	
12672-29-6	Aroclor 1248	ND	150	ug/kg	
11097-69-1	Aroclor 1254	ND	150	ug/kg	
11096-82-5	Aroclor 1260	ND	150	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	108%		40-150%
2051-24-3	Decachlorobiphenyl	105%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-021		
Lab Sample ID:	F4285-5	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 8082	**Percent Solids:**	78.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09284.D	1	06/21/99	SKW	06/18/99	OP855	GAB350
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	42	ug/kg	
11104-28-2	Aroclor 1221	ND	42	ug/kg	
11141-16-5	Aroclor 1232	ND	42	ug/kg	
53469-21-9	Aroclor 1242	ND	42	ug/kg	
12672-29-6	Aroclor 1248	ND	42	ug/kg	
11097-69-1	Aroclor 1254	ND	42	ug/kg	
11096-82-5	Aroclor 1260	ND	42	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	118%		40-150%
2051-24-3	Decachlorobiphenyl	125%		30-160%

00057

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-022		
Lab Sample ID:	F4285-4	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 8082	**Percent Solids:**	72.2
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09283.D	1	06/21/99	SKW	06/18/99	OP855	GAB350
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	46	ug/kg	
11104-28-2	Aroclor 1221	ND	46	ug/kg	
11141-16-5	Aroclor 1232	ND	46	ug/kg	
53469-21-9	Aroclor 1242	ND	46	ug/kg	
12672-29-6	Aroclor 1248	ND	46	ug/kg	
11097-69-1	Aroclor 1254	ND	46	ug/kg	
11096-82-5	Aroclor 1260	ND	46	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	110%		40-150%
2051-24-3	Decachlorobiphenyl	75%		30-160%

00054

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-025		
Lab Sample ID:	F4285-2	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 8082	**Percent Solids:**	72.8
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09282.D	1	06/21/99	SKW	06/18/99	OP855	GAB350
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	46	ug/kg	
11104-28-2	Aroclor 1221	ND	46	ug/kg	
11141-16-5	Aroclor 1232	ND	46	ug/kg	
53469-21-9	Aroclor 1242	ND	46	ug/kg	
12672-29-6	Aroclor 1248	ND	46	ug/kg	
11097-69-1	Aroclor 1254	ND	46	ug/kg	
11096-82-5	Aroclor 1260	ND	46	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	101%		40-150%
2051-24-3	Decachlorobiphenyl	100%		30-160%

00039

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-DU02		
Lab Sample ID:	F4285-11	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
Method:	SW846 8082	**Percent Solids:**	59.4
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09287.D	1	06/21/99	SKW	06/18/99	OP855	GAB350
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	56	ug/kg	
11104-28-2	Aroclor 1221	ND	56	ug/kg	
11141-16-5	Aroclor 1232	ND	56	ug/kg	
53469-21-9	Aroclor 1242	ND	56	ug/kg	
12672-29-6	Aroclor 1248	ND	56	ug/kg	
11097-69-1	Aroclor 1254	ND	56	ug/kg	
11096-82-5	Aroclor 1260	ND	56	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	107%		40-150%
2051-24-3	Decachlorobiphenyl	72%		30-160%

ND = Not detected
RDL = Reported Detection 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

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

PITT-07-9-029

TO:	**M. SPERANZA**	**DATE:**	**JULY 16, 1999**
FROM:	**TERRI L. SOLOMON**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – TAL METALS**
CTO 078 – NAS CECIL FIELD, FLORIDA
SDG – F4285

SAMPLES: 5/Aqueous/

CEF-P39-SW-019 CEF-P39-SW-020 CEF-P39-SW-022 CEF-P39-SW-025
CEF-P39-SW-DU02

6/Soils/

CEF-P39-SD-019 CEF-P39-SD-020 CEF-P39-SD-021 CEF-P39-SD-022
CEF-P39-SD-025 CEF-P39-SD-DU02

Overview

The sample set for CTO 078, NAS Cecil Field, SDG F4285, consists of five (5) aqueous and six (6) soil environmental samples. Two (2) field duplicate results (CEF-P39-SW-019 / CEF-P39-SW-DU02 and CEF-P39-SD-019 / CEF-P39-SD-DU02) were included within this SDG.

All samples were analyzed for Target Analyte List (TAL) metals. The samples were collected by Tetra Tech NUS on June 9, 1999 and analyzed by Accutest Laboratories under Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria. All metals analyses were conducted using SW-846 methods 6010B and 7471A. These data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibration Recoveries
• Laboratory Blank Analyses
• Field Duplicate Results
* • Detection Limits

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

The attached Table 1 summarizes the validation recommendations which were based on the following information:

Executive Summary

Laboratory Performance: Several analytes were present in the laboratory method / preparation blanks.

Other Factors Affecting Data Quality: Field duplicate imprecision (> 50%) was noted for aluminum, chromium, iron, manganese and zinc affecting the soil matrix.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", February 1994 and the NFESC document entitled "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)."

Tetra Tech NUS
Terri L. Solomon
Chemist

Tetra Tech NUS
Joseph A. Samchuck
Quality Assurance Officer

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

APPENDIX A
Qualified Analytical Results

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4285

SAMPLE NUMBER:	CEF-P39-SW-019			CEF-P39-SW-020			CEF-P39-SW-022			CEF-P39-SW-025		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4285-7			F4285-6			F4285-3			F4285-1		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/L			UG/L			UG/L			UG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ALUMINUM	3800			34.6	U	A	2150			384		
ANTIMONY	2.4	U		2.4	U		2.4	U		2.4	U	
ARSENIC	3.4	U		3.4	U		3.4	U		3.4	U	
BARIUM	15.1			19.7			108			11.7		
BERYLLIUM	1.3	U	A	1.2	U	A	1.1	U	A	1.1	U	A
CADMIUM	0.33	U		0.33	U		0.33	U		0.33	U	
CALCIUM	6230			14300			2970			5190		
CHROMIUM	3.2	U	A	10.4			1.2	U	A	0.64	U	
COBALT	0.80	U		0.80	U		0.80	U		0.80	U	
COPPER	0.75	U		0.75	U		0.75	U		0.75	U	
IRON	25000			351			6900			1550		
LEAD	6.4	U	A	1.6	U		1.6	U		1.6	U	
MAGNESIUM	709			3810			567			587		
MANGANESE	5.7			8.1			6.4			3.7	U	A
MERCURY	0.25	U		0.25	U		0.25	U		0.06	U	
NICKEL	1.3	U	A	7.1			1.0	U		1.0	U	
POTASSIUM	903			512	U	A	1100			293	U	A
SELENIUM	2.0	U		2.0	U		2.0	U		2.0	U	
SILVER	0.96	U		0.96	U		0.96	U		0.96	U	
SODIUM	1850			3910			2010			1750		
THALLIUM	2.7	U		3.0	U	A	2.7	U		5.0	U	A
VANADIUM	19.0			0.72	U		18.6			1.9		
ZINC	37.7			7.5	U	A	44.6			9.6		

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4285

SAMPLE NUMBER:	CEF-P39-SW-DU02											
SAMPLE DATE:	06/09/99			/ /			/ /			/ /		
LABORATORY ID:	F4285-10											
QC_TYPE:	NORMAL											
% SOLIDS:	0.0 %			100.0 %			100.0 %			100.0 %		
UNITS:	UG/L											
FIELD DUPLICATE OF:	CEF-P39-SW-019											
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ALUMINUM	3760											
ANTIMONY	2.4	U										
ARSENIC	3.4	U										
BARIUM	16.2											
BERYLLIUM	1.2	U	A									
CADMIUM	0.33	U										
CALCIUM	6220											
CHROMIUM	2.6	U	A									
COBALT	0.80	U										
COPPER	0.75	U										
IRON	23100											
LEAD	7.5	U	A									
MAGNESIUM	692											
MANGANESE	9.6											
MERCURY	0.25	U										
NICKEL	1.0	U										
POTASSIUM	890											
SELENIUM	2.0	U										
SILVER	0.96	U										
SODIUM	1720											
THALLIUM	2.7	U										
VANADIUM	17.9											
ZINC	42.2											

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4285

SAMPLE NUMBER:	CEF-P39-SD-019			CEF-P39-SD-020			CEF-P39-SD-021			CEF-P39-SD-022		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4285-9			F4285-8			F4285-5			F4285-4		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	71.3 %			22.1 %			78.6 %			72.2 %		
UNITS:	MG/KG			MG/KG			MG/KG			MG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ALUMINUM	1010	J	G	5670	J	G	3260	J	G	3360	J	G
ANTIMONY	0.34	U		1.1	U		0.30	U		0.33	U	
ARSENIC	0.48	U		1.6	U		0.44	U		0.48	U	
BARIUM	7.4			39.0			10.3			10.2		
BERYLLIUM	0.25	U	A	1.3	U	A	0.28	U	A	0.28	U	A
CADMIUM	0.05	U		1.4	U	A	0.06	U	A	0.06	U	A
CALCIUM	309			3500			1220			143		
CHROMIUM	1.4	U	A	7.9	U	A	3.1	J	G	3.6	J	G
COBALT	0.11	U		0.60			0.41			0.11		
COPPER	1.9			9.3			1.6			2.5		
IRON	795	J	G	1600	J	G	1160	J	G	596	J	G
LEAD	6.5			24.2			6.6			4.3	U	A
MAGNESIUM	77.5			341			94.6			66.8		
MANGANESE	1.2	J	G	8.4	J	G	10.2	J	G	1.7	J	G
MERCURY	0.06	U		0.19	U		0.05	U		0.06	U	
NICKEL	0.44	U	A	3.2	U	A	0.66	U	A	0.51	U	A
POTASSIUM	58.0	U	A	106	U	A	60.3	U	A	65.2	U	A
SELENIUM	0.29	U		0.92	U		0.26	U		1.3		
SILVER	0.14	U		0.44	U		0.12	U		0.13	U	
SODIUM	390			1200			295			387		
THALLIUM	0.38	U		1.2	U		0.34	U		0.37	U	
VANADIUM	1.8			15.7			2.8			4.3		
ZINC	18.3	J	G	63.7	J	G	11.7	J	G	16.2	J	G

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4285

SAMPLE NUMBER:	CEF-P39-SD-025			CEF-P39-SD-DU02								
SAMPLE DATE:	06/09/99			06/09/99			/ /			/ /		
LABORATORY ID:	F4285-2			F4285-11								
QC_TYPE:	NORMAL			NORMAL								
% SOLIDS:	72.8 %			59.4 %			100.0 %			100.0 %		
UNITS:	MG/KG			MG/KG								
FIELD DUPLICATE OF:				CEF-P39-SD-019								
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ALUMINUM	1670	J	G	2520	J	G						
ANTIMONY	0.33	U		0.40	U							
ARSENIC	0.47	U		0.67								
BARIUM	9.3			18.9								
BERYLLIUM	0.31	U	A	0.43	U	A						
CADMIUM	0.12	U	A	0.07	U	A						
CALCIUM	6260			463								
CHROMIUM	4.6	J	G	3.5	J	G						
COBALT	0.29			0.40								
COPPER	2.5			3.7								
IRON	1480	J	G	1340	J	G						
LEAD	8.1			12.3								
MAGNESIUM	97.4			354								
MANGANESE	3.0	J	G	5.0	J	G						
MERCURY	0.06	U		0.07	U							
NICKEL	1.5	U	A	1.2	U	A						
POTASSIUM	36.2	U	A	45.0	U	A						
SELENIUM	0.28	U		0.34	U							
SILVER	0.13	U		0.16	U							
SODIUM	361			480								
THALLIUM	0.37	U		0.45	U							
VANADIUM	3.6			4.3								
ZINC	27.4	J	G	33.4	J	G						

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
N = Internal Standard Noncompliance
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCB D% between columns for positive results
V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = % Solid content is less than 30%

APPENDIX B
Results as reported by the Laboratory

Report of Analysis

Client Sample ID:	CEF-P39-SW-019		
Lab Sample ID:	F4285-7	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	3800	200	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Antimony	2.4 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Arsenic	3.4 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Barium	15.1 B	200	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Beryllium	1.3 B	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Cadmium	0.33 U	4.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Calcium	6230	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Chromium	3.2 B	10.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Cobalt	0.80 U	50.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Copper	0.75 U	25.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Iron	25000	100	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Lead	6.4	3.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Magnesium	709 B	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Manganese	5.7 B	15.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Mercury	0.25 U	1.0	ug/l	1	06/16/99	06/17/99	JK	SW846 7470A
Nickel	1.3 B	40.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Potassium	903 B	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Selenium	2.0 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Silver	0.96 U	10.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Sodium	1850 B	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Thallium	2.7 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Vanadium	19.0 B	50.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Zinc	37.7	20.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A

00084

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SW-020		
Lab Sample ID:	F4285-6	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	34.6 B	200	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Antimony	2.4 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Arsenic	3.4 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Barium	19.7 B	200	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Beryllium	1.2 B	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Cadmium	0.33 U	4.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Calcium	14300	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Chromium	10.4	10.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Cobalt	0.80 U	50.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Copper	0.75 U	25.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Iron	351	100	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Lead	1.6 U	3.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Magnesium	3810 B	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Manganese	8.1 B	15.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Mercury	0.25 U	1.0	ug/l	1	06/16/99	06/17/99	JK	SW846 7470A
Nickel	7.1 B	40.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Potassium	512 B	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Selenium	2.0 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Silver	0.96 U	10.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Sodium	3910 B	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Thallium	3.0 B	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Vanadium	0.72 U	50.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Zinc	7.5 B	20.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SW-022		
Lab Sample ID:	F4285-3	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	2150	200	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Antimony	2.4 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Arsenic	3.4 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Barium	108 B	200	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Beryllium	1.1 B	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Cadmium	0.33 U	4.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Calcium	2970 B	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Chromium	1.2 B	10.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Cobalt	0.80 U	50.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Copper	0.75 U	25.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Iron	6900	100	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Lead	1.6 U	3.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Magnesium	567 B	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Manganese	6.4 B	15.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Mercury	0.25 U	1.0	ug/l	1	06/16/99	06/17/99	JK	SW846 7470A
Nickel	1.0 U	40.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Potassium	1100 B	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Selenium	2.0 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Silver	0.96 U	10.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Sodium	2010 B	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Thallium	2.7 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Vanadium	18.6 B	50.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Zinc	44.6	20.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A

00000

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SW-025		
Lab Sample ID:	F4285-1	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	384	200	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Antimony	2.4 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Arsenic	3.4 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Barium	11.7 B	200	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Beryllium	1.1 B	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Cadmium	0.33 U	4.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Calcium	5190	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Chromium	0.64 U	10.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Cobalt	0.80 U	50.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Copper	0.75 U	25.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Iron	1550	100	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Lead	1.6 U	3.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Magnesium	587 B	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Manganese	3.7 B	15.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Mercury	0.06 U	1.0	ug/l	1	06/24/99	06/25/99	JK	SW846 7470A
Nickel	1.0 U	40.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Potassium	293 B	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Selenium	2.0 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Silver	0.96 U	10.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Sodium	1750 B	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Thallium	5.0	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Vanadium	1.9 B	50.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Zinc	9.6 B	20.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A

006858

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SW-DU02		
Lab Sample ID:	F4285-10	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/10/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	3760	200	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Antimony	2.4 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Arsenic	3.4 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Barium	16.2 B	200	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Beryllium	1.2 B	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Cadmium	0.33 U	4.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Calcium	6220	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Chromium	2.6 B	10.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Cobalt	0.80 U	50.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Copper	0.75 U	25.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Iron	23100	100	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Lead	7.5	3.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Magnesium	692 B	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Manganese	9.6 B	15.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Mercury	0.25 U	1.0	ug/l	1	06/16/99	06/17/99	JK	SW846 7470A
Nickel	1.0 U	40.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Potassium	890 B	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Selenium	2.0 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Silver	0.96 U	10.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Sodium	1720 B	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Thallium	2.7 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Vanadium	17.9 B	50.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Zinc	42.2	20.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A

00587

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID: CEF-P39-SD-019
Lab Sample ID: F4285-9
Matrix: SO - Soil
Project: NAS Cecil Field

Date Sampled: 06/09/99
Date Received: 06/10/99
Percent Solids: 71.3

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	1010	28.1	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Antimony	0.34 U	8.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Arsenic	0.48 U	1.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Barium	7.4 B	28.1	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Beryllium	0.25 B	0.70	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Cadmium	0.05 U	0.56	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Calcium	309 B	701	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Chromium	1.4	1.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Cobalt	0.11 U	7.0	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Copper	1.9 B	3.5	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Iron	795	14.0	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Lead	6.5 B	14.0	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Magnesium	77.5 B	701	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Manganese	1.2 B	2.1	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Mercury	0.06 U	0.23	mg/kg	1	06/17/99	06/18/99	JK	SW846 7471A
Nickel	0.44 B	5.6	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Potassium	58.0 B	701	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Selenium	0.29 U	14.0	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Silver	0.14 U	1.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Sodium	390 B	701	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Thallium	0.38 U	1.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Vanadium	1.8 B	7.0	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Zinc	18.3	2.8	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A

J6000

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SD-020		
Lab Sample ID:	F4285-8	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
		Percent Solids:	22.1
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	5670	90.5	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Antimony	1.1 U	27.1	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Arsenic	1.6 U	4.5	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Barium	39.0 B	90.5	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Beryllium	1.3 B	2.3	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Cadmium	1.4 B	1.8	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Calcium	3500	2260	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Chromium	7.9	4.5	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Cobalt	0.60 B	22.6	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Copper	9.3 B	11.3	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Iron	1600	45.2	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Lead	24.2 B	45.2	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Magnesium	341 B	2260	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Manganese	8.4	6.8	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Mercury	0.19 U	0.75	mg/kg	1	06/17/99	06/18/99	JK	SW846 7471A
Nickel	3.2 B	18.1	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Potassium	106 B	2260	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Selenium	0.92 U	45.2	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Silver	0.44 U	4.5	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Sodium	1200 B	2260	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Thallium	1.2 U	4.5	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Vanadium	15.7 B	22.6	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Zinc	63.7	9.0	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A

00665

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID: CEF-P39-SD-021
Lab Sample ID: F4285-5
Matrix: SO - Soil
Project: NAS Cecil Field

Date Sampled: 06/09/99
Date Received: 06/10/99
Percent Solids: 78.6

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	3260	25.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Antimony	0.30 U	7.6	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Arsenic	0.44 U	1.3	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Barium	10.3 B	25.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Beryllium	0.28 B	0.64	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Cadmium	0.06 B	0.51	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Calcium	1220	636	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Chromium	3.1	1.3	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Cobalt	0.41 B	6.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Copper	1.6 B	3.2	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Iron	1160	12.7	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Lead	6.6 B	12.7	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Magnesium	94.6 B	636	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Manganese	10.2	1.9	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Mercury	0.05 U	0.21	mg/kg	1	06/17/99	06/18/99	JK	SW846 7471A
Nickel	0.66 B	5.1	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Potassium	60.3 B	636	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Selenium	0.26 U	12.7	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Silver	0.12 U	1.3	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Sodium	295 B	636	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Thallium	0.34 U	1.3	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Vanadium	2.8 B	6.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Zinc	11.7	2.5	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A

00862

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID: CEF-P39-SD-022
Lab Sample ID: F4285-4
Matrix: SO - Soil
Project: NAS Cecil Field

Date Sampled: 06/09/99
Date Received: 06/10/99
Percent Solids: 72.2

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	3360	27.7	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Antimony	0.33 U	8.3	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Arsenic	0.48 U	1.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Barium	10.2 B	27.7	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Beryllium	0.28 B	0.69	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Cadmium	0.06 B	0.55	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Calcium	143 B	693	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Chromium	3.6	1.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Cobalt	0.11 B	6.9	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Copper	2.5 B	3.5	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Iron	596	13.9	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Lead	4.3 B	13.9	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Magnesium	66.8 B	693	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Manganese	1.7 B	2.1	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Mercury	0.06 U	0.23	mg/kg	1	06/17/99	06/18/99	JK	SW846 7471A
Nickel	0.51 B	5.5	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Potassium	65.2 B	693	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Selenium	1.3 B	13.9	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Silver	0.13 U	1.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Sodium	387 B	693	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Thallium	0.37 U	1.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Vanadium	4.3 B	6.9	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Zinc	16.2	2.8	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A

-00601

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SD-025		
Lab Sample ID:	F4285-2	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
		Percent Solids:	72.8
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	1670	27.5	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Antimony	0.33 U	8.2	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Arsenic	0.47 U	1.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Barium	9.3 B	27.5	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Beryllium	0.31 B	0.69	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Cadmium	0.12 B	0.55	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Calcium	6260	687	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Chromium	4.6	1.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Cobalt	0.29 B	6.9	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Copper	2.5 B	3.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Iron	1480	13.7	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Lead	8.1 B	13.7	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Magnesium	97.4 B	687	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Manganese	3.0	2.1	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Mercury	0.06 U	0.23	mg/kg	1	06/16/99	06/17/99	JK	SW846 7471A
Nickel	1.5 B	5.5	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Potassium	36.2 B	687	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Selenium	0.28 U	13.7	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Silver	0.13 U	1.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Sodium	361 B	687	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Thallium	0.37 U	1.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Vanadium	3.6 B	6.9	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Zinc	27.4	2.7	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A

00859

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SD-DU02		
Lab Sample ID:	F4285-11	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/10/99
		Percent Solids:	59.4
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	2520	33.7	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Antimony	0.40 U	10.1	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Arsenic	0.67 B	1.7	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Barium	18.9 B	33.7	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Beryllium	0.43 B	0.84	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Cadmium	0.07 B	0.67	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Calcium	463 B	842	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Chromium	3.5	1.7	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Cobalt	0.40 B	8.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Copper	3.7 B	4.2	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Iron	1340	16.8	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Lead	12.3 B	16.8	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Magnesium	354 B	842	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Manganese	5.0	2.5	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Mercury	0.07 U	0.28	mg/kg	1	06/17/99	06/18/99	JK	SW846 7471A
Nickel	1.2 B	6.7	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Potassium	45.0 B	842	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Selenium	0.34 U	16.8	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Silver	0.16 U	1.7	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Sodium	480 B	842	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Thallium	0.45 U	1.7	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Vanadium	4.3 B	8.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Zinc	33.4	3.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A

00668

RDL = Reported Detection Limit

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

PITT-07-9-031

TO: **MR. M. SPERANZA** **DATE: JULY 19, 1999**

FROM: **JUSTIN ORBICH** **CC: DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION –SVOA/PAH/PEST/PCB**
CTO 078 – NAS CECIL FIELD
SDG F4281

SAMPLES: 10/Aqueous

CEF-P39-SW-001	CEF-P39-SW-004
CEF-P39-SW-007	CEF-P39-SW-010
CEF-P39-SW-012	CEF-P39-SW-013
CEF-P39-SW-016	CEF-P39-SW-023
CEF-P39-SW-DU01	CEF-P39-SW-018*

14/Solid

CEF-P39-SD-002	CEF-P39-SD-005
CEF-P39-SD-008	CEF-P39-SD-011
CEF-P39-SD-012	CEF-P39-SD-014
CEF-P39-SD-017	CEF-P39-SD-023
CEF-P39-SD-024	CEF-P39-SD-026
CEF-P39-SD-028	CEF-P39-SD-DU01
CEF-P39-SD-018*	CEF-P39-SD-027*

OVERVIEW

The sample set for CTO 078, SDG F4281, Naval Air Station (NAS) Cecil Field; Florida consists of ten (10) aqueous environmental samples and fourteen (14) solid environmental samples. The environmental samples were analyzed for Target Compound List (TCL) semivolatile, pesticide/PCBs, and Polynuclear Aromatic Hydrocarbon (PAH) organic compounds. The three (3) samples designated (*) were analyzed for pesticide organic compounds only. Two (2) field duplicate pairs (/CEF-P39-SW-DU01 and /CEF-P39-SD-DU01) was included within this SDG.

The samples were collected by Tetra Tech, NUS on June 8th and 9th, 1999 and analyzed by Accutest Laboratories. The PAH samples were analyzed by Accutest Southeast subcontracted Lab. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW 846 Method 8260B, 8270C, 8081A, 8082, and 8310 analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

- * Data Completeness
- * Holding Times
- Initial/continuing calibrations
- * Laboratory method/field quality control blank results
- * Detection Limits
- * Field Duplicate Precision

The symbol (*) indicates that all quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified analytical results are presented in Appendix A.

SEMIVOLATILE FRACTION

The continuing calibration Percent Differences (%Ds) exceeded the 25% quality control limits for benzo(g,h,i)perylene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene. The positive and nondetected results were qualified as estimated (J) and (UJ), respectively, in the affected samples.

In samples CEF-P39-SD-002, CEF-P39-SD-005, CEF-P39-SD-011, CEF-P39-SD-012, CEF-P39-SD-014, CEF-P39-SD-017, CEF-P39-SD-023, and CEF-P39-SD-024, elevated detection limits were reported due to a 4X dilution.

In sample CEF-P39-SD-008, elevated detection limits were reported due to a 100X dilution.

PAH FRACTION

In samples CEF-P39-SD-014 and CEF-P39-SD-023, elevated detection limits were reported due to a 2X dilution.

In samples CEF-P39-SD-017 and CEF-P39-SD-024, elevated detection limits were reported due to a 5X dilution.

In sample CEF-P39-SD-002, elevated detection limits were reported to a 10X dilution.

In sample CEF-P39-SD-008, elevated detection limits were reported to a 20X dilution.

PESTICIDE FRACTION

The initial calibration Percent Relative Standard Deviation (%RSD) exceeded the 20% quality control limit for 4,4'-DDT on 6/17/99 at 1307 on column II. No action was warranted since only nondetected results were reported and the %RSD was within the quality control limits on column I.

The continuing calibration %Ds exceeded the 15% quality control limits for alpha-BHC, gamma-BHC, and delta-BHC on 6/17/99 at 1651 on both columns. The nondetected results were qualified as estimated (UJ), in the affected results.

The continuing calibration %Ds exceeded the 15% quality control limits for 4,4'-DDT and Methoxychlor on 6/17/99 at 1756 on both columns. The nondetected results were qualified as estimated (UJ), in the affected results.

The continuing calibration %Ds exceeded the 15% quality control limits for beta-BHC, gamma-Chlordane, alpha-Chlordane, Endosulfan I, 4,4'-DDE, Endrin, 4,4'-DDD, Endosulfan II, 4,4'-DDT, Endrin aldehyde, Endosulfan sulfate, Methoxychlor, and Endrin ketone on 6/21/99 at 2056 on both columns. The nondetected results were qualified as estimated (UJ), in the affected results.

The continuing calibration %Ds exceeded the 15% quality control limits for Endosulfan II, 4,4-DDT, Endrin aldehyde, Endosulfan sulfate, Methoxychlor, and Endrin ketone on 6/21/99 at 1908 on both columns. The nondetected results were qualified as estimated (UJ), in the affected results.

MEMO TO: MR. M. SPERANZA
DATE: JULY 19, 1999 – PAGE 3

PCB FRACTION

In sample CEF-P39-SD-008, elevated detection limits were reported due to a 10X dilution.

EXECUTIVE SUMMARY

Laboratory performance: Several semivolatile and pesticide continuing calibration %Ds exceeded the quality control limits.

Other Factors Affecting Data Quality: Several sediment samples were analyzed at a dilution in all the fractions.

MEMO TO: MR. M. SPERANZA
DATE: JULY 19, 1999 – PAGE 4

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1994), and the NFESC guidelines "Navy Installation Restoration Program Laboratory Quality Assurance Guide" (February, 1996). The text of this report has been formulated to address only those problems affecting data quality.

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

Justin Orbich

Chemist/Data Validator
Tetra Tech, NUS

Joseph A. Samchuck

Data Validation Quality Assurance Officer
Tetra Tech, NUS

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

DATA QUALIFIER DEFINITIONS:

U	-	Value is a nondetected result as reported by the laboratory and should not be considered present.
J	-	Positive result is estimated as a result of a value below the CRQL or a technical noncompliance.
UJ	-	Nondetected result is considered to be estimated as a result of technical noncompliances.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
N = Internal Standard Noncompliance
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCB D% between columns for positive results
V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = % Solid content is less than 30%

APPENDIX A

Qualified Analytical Results

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SD-002			CEF-P39-SD-005			CEF-P39-SD-008			CEF-P39-SD-011		
SAMPLE DATE:	06/08/99			06/08/99			06/08/99			06/09/99		
LABORATORY ID:	F4281-2			F4281-6			F4281-9			F4281-13		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	45.3 %			68.1 %			62.5 %			65.1 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
1,2,4-TRICHLOROBENZENE	1500	U		980	U		27000	U		1000	U	
1,2-DICHLOROBENZENE	1500	U		980	U		27000	U		1000	U	
1,3-DICHLOROBENZENE	1500	U		980	U		27000	U		1000	U	
1,4-DICHLOROBENZENE	1500	U		980	U		27000	U		1000	U	
2,4,5-TRICHLOROPHENOL	1500	U		980	U		27000	U		1000	U	
2,4,6-TRICHLOROPHENOL	1500	U		980	U		27000	U		1000	U	
2,4-DICHLOROPHENOL	1300	U		880	U		24000	U		920	U	
2,4-DIMETHYLPHENOL	2900	U		2000	U		53000	U		2000	U	
2,4-DINITROPHENOL	7400	U		4900	U		130000	U		5100	U	
2,4-DINITROTOLUENE	1500	U		980	U		27000	U		1000	U	
2,6-DINITROTOLUENE	1500	U		980	U		27000	U		1000	U	
2-CHLORONAPHTHALENE	1500	U		980	U		27000	U		1000	U	
2-CHLOROPHENOL	1500	U		980	U		27000	U		1000	U	
2-METHYLPHENOL	1500	U		980	U		27000	U		1000	U	
2-NITROANILINE	1500	U		980	U		27000	U		1000	U	
2-NITROPHENOL	1500	U		980	U		27000	U		1000	U	
3,3'-DICHLOROBENZIDINE	2900	U		2000	U		53000	U		2000	U	
3-NITROANILINE	1500	U		980	U		27000	U		1000	U	
4,6-DINITRO-2-METHYLPHENOL	2900	U		2000	U		53000	U		2000	U	
4-BROMOPHENYL PHENYL ETHER	1500	U		980	U		27000	U		1000	U	
4-CHLORO-3-METHYLPHENOL	2900	U		2000	U		53000	U		2000	U	
4-CHLOROANILINE	1500	U		980	U		27000	U		1000	U	
4-CHLOROPHENYL PHENYL ETHER	1500	U		980	U		27000	U		1000	U	
4-METHYLPHENOL	1500	U		980	U		27000	U		1000	U	
4-NITROANILINE	1500	U		980	U		27000	U		1000	U	
4-NITROPHENOL	7400	U		4900	U		130000	U		5100	U	
BIS(2-CHLOROETHOXY)METHANE	1500	U		980	U		27000	U		1000	U	
BIS(2-CHLOROETHYL)ETHER	1500	U		980	U		27000	U		1000	U	
BIS(2-CHLOROISOPROPYL) ETHER	1500	U		980	U		27000	U		1000	U	
BIS(2-ETHYLHEXYL)PHTHALATE	1500	U		1020			27000	U		5750		
BUTYLBENZYL PHTHALATE	1500	U		980	U		27000	U		946	J	P
CARBAZOLE	1500	U		980	U		27000	U		1000	U	
DI-N-BUTYL PHTHALATE	1500	U		980	U		27000	U		1000	U	
DI-N-OCTYL PHTHALATE	1500	U		980	U		27000	U		1000	U	

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SD-002			CEF-P39-SD-005			CEF-P39-SD-008			CEF-P39-SD-011		
SAMPLE DATE:	06/08/99			06/08/99			06/08/99			06/09/99		
LABORATORY ID:	F4281-2			F4281-6			F4281-9			F4281-13		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	45.3 %			68.1 %			62.5 %			65.1 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
DIBENZOFURAN	1500	U		980	U		27000	U		1000	U	
DIETHYL PHTHALATE	1500	U		980	U		27000	U		1000	U	
DIMETHYL PHTHALATE	1500	U		980	U		27000	U		1000	U	
HEXACHLOROBENZENE	1500	U		980	U		27000	U		1000	U	
HEXACHLOROBUTADIENE	1500	U		980	U		27000	U		1000	U	
HEXACHLOROCYCLOPENTADIENE	1500	U		980	U		27000	U		1000	U	
HEXACHLOROETHANE	1500	U		980	U		27000	U		1000	U	
ISOPHORONE	1500	U		980	U		27000	U		1000	U	
N-NITROSO-DI-N-PROPYLAMINE	530	U		350	U		9600	U		370	U	
N-NITROSODIPHENYLAMINE	1500	U		980	U		27000	U		1000	U	
NITROBENZENE	1500	U		980	U		27000	U		1000	U	
PENTACHLOROPHENOL	7400	U		4900	U		130000	U		5100	U	
PHENOL	1500	U		980	U		27000	U		1000	U	

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SD-012			CEF-P39-SD-014			CEF-P39-SD-017			CEF-P39-SD-023		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4281-22			F4281-24			F4281-28			F4281-14		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	71.7 %			69.6 %			51.6 %			68.4 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
1,2,4-TRICHLOROBENZENE	930	U		960	U		1300	U		980	U	
1,2-DICHLOROBENZENE	930	U		960	U		1300	U		980	U	
1,3-DICHLOROBENZENE	930	U		960	U		1300	U		980	U	
1,4-DICHLOROBENZENE	930	U		960	U		1300	U		980	U	
2,4,5-TRICHLOROPHENOL	930	U		960	U		1300	U		980	U	
2,4,6-TRICHLOROPHENOL	930	U		960	U		1300	U		980	U	
2,4-DICHLOROPHENOL	840	U		860	U		1200	U		880	U	
2,4-DIMETHYLPHENOL	1900	U		1900	U		2600	U		2000	U	
2,4-DINITROPHENOL	4600	U		4800	U		6400	U		4900	U	
2,4-DINITROTOLUENE	930	U		960	U		1300	U		980	U	
2,6-DINITROTOLUENE	930	U		960	U		1300	U		980	U	
2-CHLORONAPHTHALENE	930	U		960	U		1300	U		980	U	
2-CHLOROPHENOL	930	U		960	U		1300	U		980	U	
2-METHYLPHENOL	930	U		960	U		1300	U		980	U	
2-NITROANILINE	930	U		960	U		1300	U		980	U	
2-NITROPHENOL	930	U		960	U		1300	U		980	U	
3,3'-DICHLOROBENZIDINE	1900	U		1900	U		2600	U		2000	U	
3-NITROANILINE	930	U		960	U		1300	U		980	U	
4,6-DINITRO-2-METHYLPHENOL	1900	U		1900	U		2600	U		2000	U	
4-BROMOPHENYL PHENYL ETHER	930	U		960	U		1300	U		980	U	
4-CHLORO-3-METHYLPHENOL	1900	U		1900	U		2600	U		2000	U	
4-CHLOROANILINE	930	U		960	U		1300	U		980	U	
4-CHLOROPHENYL PHENYL ETHER	930	U		960	U		1300	U		980	U	
4-METHYLPHENOL	930	U		960	U		1300	U		980	U	
4-NITROANILINE	930	U		960	U		1300	U		980	U	
4-NITROPHENOL	4600	U		4800	U		6400	U		4900	U	
BIS(2-CHLOROETHOXY)METHANE	930	U		960	U		1300	U		980	U	
BIS(2-CHLOROETHYL)ETHER	930	U		960	U		1300	U		980	U	
BIS(2-CHLOROISOPROPYL) ETHER	930	U		960	U		1300	U		980	U	
BIS(2-ETHYLHEXYL)PHTHALATE	649	J	P	3490			889	J	P	980	U	
BUTYLBENZYL PHTHALATE	930	U		960	U		1300	U		980	U	
CARBAZOLE	930	U		960	U		1300	U		980	U	
DI-N-BUTYL PHTHALATE	930	U		960	U		1300	U		980	U	
DI-N-OCTYL PHTHALATE	930	U		960	U		1300	U		980	U	

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SD-012			CEF-P39-SD-014			CEF-P39-SD-017			CEF-P39-SD-023		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4281-22			F4281-24			F4281-28			F4281-14		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	71.7 %			69.6 %			51.6 %			68.4 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
DIBENZOFURAN	930	U		960	U		1300	U		980	U	
DIETHYL PHTHALATE	930	U		960	U		1300	U		980	U	
DIMETHYL PHTHALATE	930	U		960	U		1300	U		980	U	
HEXACHLOROBENZENE	930	U		960	U		1300	U		980	U	
HEXACHLOROBUTADIENE	930	U		960	U		1300	U		980	U	
HEXACHLOROCYCLOPENTADIENE	930	U		960	U		1300	U		980	U	
HEXACHLOROETHANE	930	U		960	U		1300	U		980	U	
ISOPHORONE	930	U		960	U		1300	U		980	U	
N-NITROSO-DI-N-PROPYLAMINE	330	U		340	U		460	U		350	U	
N-NITROSODIPHENYLAMINE	930	U		960	U		1300	U		980	U	
NITROBENZENE	930	U		960	U		1300	U		980	U	
PENTACHLOROPHENOL	4600	U		4800	U		6400	U		4900	U	
PHENOL	930	U		960	U		1300	U		980	U	

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SD-024			CEF-P39-SD-026			CEF-P39-SD-028			CEF-P39-SD-DU01		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/08/99		
LABORATORY ID:	F4281-16			F4281-17			F4281-19			F4281-32		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	64.8 %			92.1 %			94.7 %			71.1 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:										CEF-P39-SD-003		
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
1,2,4-TRICHLOROBENZENE	1000	U		180	U		180	U		230	U	
1,2-DICHLOROBENZENE	1000	U		180	U		180	U		230	U	
1,3-DICHLOROBENZENE	1000	U		180	U		180	U		230	U	
1,4-DICHLOROBENZENE	1000	U		180	U		180	U		230	U	
2,4,5-TRICHLOROPHENOL	1000	U		180	U		180	U		230	U	
2,4,6-TRICHLOROPHENOL	1000	U		180	U		180	U		230	U	
2,4-DICHLOROPHENOL	930	U		160	U		160	U		210	U	
2,4-DIMETHYLPHENOL	2100	U		360	U		350	U		470	U	
2,4-DINITROPHENOL	5200	U		900	U		880	U		1200	U	
2,4-DINITROTOLUENE	1000	U		180	U		180	U		230	U	
2,6-DINITROTOLUENE	1000	U		180	U		180	U		230	U	
2-CHLORONAPHTHALENE	1000	U		180	U		180	U		230	U	
2-CHLOROPHENOL	1000	U		180	U		180	U		230	U	
2-METHYLPHENOL	1000	U		180	U		180	U		230	U	
2-NITROANILINE	1000	U		180	U		180	U		230	U	
2-NITROPHENOL	1000	U		180	U		180	U		230	U	
3,3'-DICHLOROBENZIDINE	2100	U		360	U		350	U		470	U	
3-NITROANILINE	1000	U		180	U		180	U		230	U	
4,6-DINITRO-2-METHYLPHENOL	2100	U		360	U		350	U		470	U	
4-BROMOPHENYL PHENYL ETHER	1000	U		180	U		180	U		230	U	
4-CHLORO-3-METHYLPHENOL	2100	U		360	U		350	U		470	U	
4-CHLOROANILINE	1000	U		180	U		180	U		230	U	
4-CHLOROPHENYL PHENYL ETHER	1000	U		180	U		180	U		230	U	
4-METHYLPHENOL	1000	U		180	U		180	U		230	U	
4-NITROANILINE	1000	U		180	U		180	U		230	U	
4-NITROPHENOL	5200	U		900	U		880	U		1200	U	
BIS(2-CHLOROETHOXY)METHANE	1000	U		180	U		180	U		230	U	
BIS(2-CHLOROETHYL)ETHER	1000	U		180	U		180	U		230	U	
BIS(2-CHLOROISOPROPYL) ETHER	1000	U		180	U		180	U		230	U	
BIS(2-ETHYLHEXYL)PHTHALATE	1000	U		180	U		180	U		1750		
BUTYLBENZYL PHTHALATE	1000	U		180	U		180	U		203	J	P
CARBAZOLE	1000	U		180	U		180	U		230	U	
DI-N-BUTYL PHTHALATE	1000	U		180	U		180	U		230	U	
DI-N-OCTYL PHTHALATE	1000	U		180	U		180	U		230	U	

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SD-024			CEF-P39-SD-026			CEF-P39-SD-028			CEF-P39-SD-DU01		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/08/99		
LABORATORY ID:	F4281-16			F4281-17			F4281-19			F4281-32		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	64.8 %			92.1 %			94.7 %			71.1 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:										CEF-P39-SD-003		
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
DIBENZOFURAN	1000	U		180	U		180	U		230	U	
DIETHYL PHTHALATE	1000	U		180	U		180	U		230	U	
DIMETHYL PHTHALATE	1000	U		180	U		180	U		230	U	
HEXACHLOROBENZENE	1000	U		180	U		180	U		230	U	
HEXACHLOROBUTADIENE	1000	U		180	U		180	U		230	U	
HEXACHLOROCYCLOPENTADIENE	1000	U		180	U		180	U		230	U	
HEXACHLOROETHANE	1000	U		180	U		180	U		230	U	
ISOPHORONE	1000	U		180	U		180	U		230	U	
N-NITROSO-DI-N-PROPYLAMINE	370	U		65	U		63	U		84	U	
N-NITROSODIPHENYLAMINE	1000	U		180	U		180	U		230	U	
NITROBENZENE	1000	U		180	U		180	U		230	U	
PENTACHLOROPHENOL	5200	U		900	U		880	U		1200	U	
PHENOL	1000	U		180	U		180	U		230	U	

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SW-001			CEF-P39-SW-004			CEF-P39-SW-007			CEF-P39-SW-010		
SAMPLE DATE:	06/08/99			06/08/99			06/08/99			06/09/99		
LABORATORY ID:	F4281-1			F4281-5			F4281-8			F4281-12		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/L			UG/L			UG/L			UG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
1,2,4-TRICHLOROBENZENE	5	U		5	U		5	U		5	U	
1,2-DICHLOROBENZENE	5	U		5	U		5	U		5	U	
1,3-DICHLOROBENZENE	5	U		5	U		5	U		5	U	
1,4-DICHLOROBENZENE	5	U		5	U		5	U		5	U	
2,4,5-TRICHLOROPHENOL	4	U		4	U		4	U		4	U	
2,4,6-TRICHLOROPHENOL	5	U		5	U		5	U		5	U	
2,4-DICHLOROPHENOL	4	U		4	U		4	U		4	U	
2,4-DIMETHYLPHENOL	10	U		10	U		10	U		10	U	
2,4-DINITROPHENOL	25	U		25	U		25	U		25	U	
2,4-DINITROTOLUENE	0.2	U		0.2	U		0.2	U		0.2	U	
2,6-DINITROTOLUENE	0.2	U		0.2	U		0.2	U		0.2	U	
2-CHLORONAPHTHALENE	5	U		5	U		5	U		5	U	
2-CHLOROPHENOL	5	U		5	U		5	U		5	U	
2-METHYLNAPHTHALENE	5	U		5	U		5	U		5	U	
2-METHYLPHENOL	5	U		5	U		5	U		5	U	
2-NITROANILINE	5	U		5	U		5	U		5	U	
2-NITROPHENOL	5	U		5	U		5	U		5	U	
3,3'-DICHLOROBENZIDINE	7.5	U		7.5	U		7.5	U		7.5	U	
3-NITROANILINE	5	U		5	U		5	U		5	U	
4,6-DINITRO-2-METHYLPHENOL	25	U		25	U		25	U		25	U	
4-BROMOPHENYL PHENYL ETHER	5	U		5	U		5	U		5	U	
4-CHLORO-3-METHYLPHENOL	10	U		10	U		10	U		10	U	
4-CHLOROANILINE	5	U		5	U		5	U		5	U	
4-CHLOROPHENYL PHENYL ETHER	5	U		5	U		5	U		5	U	
4-METHYLPHENOL	5	U		5	U		5	U		5	U	
4-NITROANILINE	5	U		5	U		5	U		5	U	
4-NITROPHENOL	15	U		15	U		15	U		15	U	
BIS(2-CHLOROETHOXY)METHANE	5	U		5	U		5	U		5	U	
BIS(2-CHLOROETHYL)ETHER	1.5	U		1.5	U		1.5	U		1.5	U	
BIS(2-CHLOROISOPROPYL) ETHER	5	U		5	U		5	U		5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U		3.5	J	P	5	U		5	U	
BUTYLBENZYL PHTHALATE	5	U		5	U		5	U		5	U	
CARBAZOLE	4	U		4	U		4	U		4	U	
DI-N-BUTYL PHTHALATE	5	U		5	U		5	U		5	U	

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SW-001			CEF-P39-SW-004			CEF-P39-SW-007			CEF-P39-SW-010		
SAMPLE DATE:	06/08/99			06/08/99			06/08/99			06/09/99		
LABORATORY ID:	F4281-1			F4281-5			F4281-8			F4281-12		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/L			UG/L			UG/L			UG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
DI-N-OCTYL PHTHALATE	5	U		5	U		5	U		5	U	
DIBENZOFURAN	5	U		5	U		5	U		5	U	
DIETHYL PHTHALATE	5	U		5	U		5	U		5	U	
DIMETHYL PHTHALATE	5	U		5	U		5	U		5	U	
HEXACHLOROBENZENE	1	U		1	U		1	U		1	U	
HEXACHLOROBUTADIENE	5	U		5	U		5	U		5	U	
HEXACHLOROCYCLOPENTADIENE	5	U		5	U		5	U		5	U	
HEXACHLOROETHANE	5	U		5	U		5	U		5	U	
ISOPHORONE	5	U		5	U		5	U		5	U	
N-NITROSO-DI-N-PROPYLAMINE	4	U		4	U		4	U		4	U	
N-NITROSODIPHENYLAMINE	5	U		5	U		5	U		5	U	
NITROBENZENE	4	U		4	U		4	U		4	U	
PENTACHLOROPHENOL	1	U		1	U		1	U		1.	U	
PHENOL	5	U		5	U		5	U		5	U	

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SW-012			CEF-P39-SW-013			CEF-P39-SW-016			CEF-P39-SW-023		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4281-21			F4281-23			F4281-27			F4281-15		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/L			UG/L			UG/L			UG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
1,2,4-TRICHLOROBENZENE	5	U		5	U		5	U		5	U	
1,2-DICHLOROBENZENE	5	U		5	U		5	U		5	U	
1,3-DICHLOROBENZENE	5	U		5	U		5	U		5	U	
1,4-DICHLOROBENZENE	5	U		5	U		5	U		5	U	
2,4,5-TRICHLOROPHENOL	4	U		4	U		4	U		4	U	
2,4,6-TRICHLOROPHENOL	5	U		5	U		5	U		5	U	
2,4-DICHLOROPHENOL	4	U		4	U		4	U		4	U	
2,4-DIMETHYLPHENOL	10	U		10	U		10	U		10	U	
2,4-DINITROPHENOL	25	U		25	U		25	U		25	U	
2,4-DINITROTOLUENE	0.2	U		0.2	U		0.2	U		0.2	U	
2,6-DINITROTOLUENE	0.2	U		0.2	U		0.2	U		0.2	U	
2-CHLORONAPHTHALENE	5	U		5	U		5	U		5	U	
2-CHLOROPHENOL	5	U		5	U		5	U		5	U	
2-METHYLNAPHTHALENE	5	U		5	U		5	U		5	U	
2-METHYLPHENOL	5	U		5	U		5	U		5	U	
2-NITROANILINE	5	U		5	U		5	U		5	U	
2-NITROPHENOL	5	U		5	U		5	U		5	U	
3,3'-DICHLOROBENZIDINE	7.5	U		7.5	U		7.5	U		7.5	U	
3-NITROANILINE	5	U		5	U		5	U		5	U	
4,6-DINITRO-2-METHYLPHENOL	25	U		25	U		25	U		25	U	
4-BROMOPHENYL PHENYL ETHER	5	U		5	U		5	U		5	U	
4-CHLORO-3-METHYLPHENOL	10	U		10	U		10	U		10	U	
4-CHLOROANILINE	5	U		5	U		5	U		5	U	
4-CHLOROPHENYL PHENYL ETHER	5	U		5	U		5	U		5	U	
4-METHYLPHENOL	5	U		5	U		5	U		5	U	
4-NITROANILINE	5	U		5	U		5	U		5	U	
4-NITROPHENOL	15	U		15	U		15	U		15	U	
BIS(2-CHLOROETHOXY)METHANE	5	U		5	U		5	U		5	U	
BIS(2-CHLOROETHYL)ETHER	1.5	U		1.5	U		1.5	U		1.5	U	
BIS(2-CHLOROISOPROPYL) ETHER	5	U		5	U		5	U		5	U	
BIS(2-ETHYLHEXYL)PHTHALATE	5	U		5	U		5	U		5	U	
BUTYLBENZYL PHTHALATE	5	U		5	U		5	U		5	U	
CARBAZOLE	4	U		4	U		4	U		4	U	
DI-N-BUTYL PHTHALATE	5	U		5	U		5	U		5	U	

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SDG: F4281

SAMPLE NUMBER:	CEF-P39-SW-012			CEF-P39-SW-013			CEF-P39-SW-016			CEF-P39-SW-023		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4281-21			F4281-23			F4281-27			F4281-15		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/L			UG/L			UG/L			UG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
DI-N-OCTYL PHTHALATE	5	U		5	U		5	U		5	U	
DIBENZOFURAN	5	U		5	U		5	U		5	U	
DIETHYL PHTHALATE	5	U		5	U		5	U		5	U	
DIMETHYL PHTHALATE	5	U		5	U		5	U		5	U	
HEXACHLOROBENZENE	1	U		1	U		1	U		1	U	
HEXACHLOROBUTADIENE	5	U		5	U		5	U		5	U	
HEXACHLOROCYCLOPENTADIENE	5	U		5	U		5	U		5	U	
HEXACHLOROETHANE	5	U		5	U		5	U		5	U	
ISOPHORONE	5	U		5	U		5	U		5	U	
N-NITROSO-DI-N-PROPYLAMINE	4	U		4	U		4	U		4	U	
N-NITROSODIPHENYLAMINE	5	U		5	U		5	U		5	U	
NITROBENZENE	4	U		4	U		4	U		4	U	
PENTACHLOROPHENOL	1	U		1	U		1	U		1	U	
PHENOL	5	U		5	U		5	U		5	U	

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SW-DU01			
SAMPLE DATE:	06/08/99	/ /	/ /	/ /
LABORATORY ID:	F4281-31			
QC_TYPE:	NORMAL			
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/L			
FIELD DUPLICATE OF:	CEF-P39-SW-003			

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
1,2,4-TRICHLOROBENZENE	5	U										
1,2-DICHLOROBENZENE	5	U										
1,3-DICHLOROBENZENE	5	U										
1,4-DICHLOROBENZENE	5	U										
2,4,5-TRICHLOROPHENOL	4	U										
2,4,6-TRICHLOROPHENOL	5	U										
2,4-DICHLOROPHENOL	4	U										
2,4-DIMETHYLPHENOL	10	U										
2,4-DINITROPHENOL	25	U										
2,4-DINITROTOLUENE	0.2	U										
2,6-DINITROTOLUENE	0.2	U										
2-CHLORONAPHTHALENE	5	U										
2-CHLOROPHENOL	5	U										
2-METHYLNAPHTHALENE	5	U										
2-METHYLPHENOL	5	U										
2-NITROANILINE	5	U										
2-NITROPHENOL	5	U										
3,3'-DICHLOROBENZIDINE	7.5	U										
3-NITROANILINE	5	U										
4,6-DINITRO-2-METHYLPHENOL	25	U										
4-BROMOPHENYL PHENYL ETHER	5	U										
4-CHLORO-3-METHYLPHENOL	10	U										
4-CHLOROANILINE	5	U										
4-CHLOROPHENYL PHENYL ETHER	5	U										
4-METHYLPHENOL	5	U										
4-NITROANILINE	5	U										
4-NITROPHENOL	15	U										
BIS(2-CHLOROETHOXY)METHANE	5	U										
BIS(2-CHLOROETHYL)ETHER	1.5	U										
BIS(2-CHLOROISOPROPYL) ETHER	5	U										
BIS(2-ETHYLHEXYL)PHTHALATE	5	U										
BUTYLBENZYL PHTHALATE	5	U										
CARBAZOLE	4	U										
DI-N-BUTYL PHTHALATE	5	U										

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SW-DU01			
SAMPLE DATE:	06/08/99	/ /	/ /	/ /
LABORATORY ID:	F4281-31			
QC_TYPE:	NORMAL			
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/L			
FIELD DUPLICATE OF:	CEF-P39-SW-003			

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
DI-N-OCTYL PHTHALATE	5	U										
DIBENZOFURAN	5	U										
DIETHYL PHTHALATE	5	U										
DIMETHYL PHTHALATE	5	U										
HEXACHLOROBENZENE	1	U										
HEXACHLOROBUTADIENE	5	U										
HEXACHLOROCYCLOPENTADIENE	5	U										
HEXACHLOROETHANE	5	U										
ISOPHORONE	5	U										
N-NITROSO-DI-N-PROPYLAMINE	4	U										
N-NITROSODIPHENYLAMINE	5	U										
NITROBENZENE	4	U										
PENTACHLOROPHENOL	1	U										
PHENOL	5	U										

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SAMPLE NUMBER:	CEF-P39-SD-002			CEF-P39-SD-005			CEF-P39-SD-008			CEF-P39-SD-011		
SAMPLE DATE:	06/08/99			06/08/99			06/08/99			06/09/99		
LABORATORY ID:	F4281-2			F4281-6			F4281-9			F4281-13		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	45.3 %			68.1 %			62.5 %			65.1 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
4,4'-DDD	7.4	U		24	U		53	UJ	C	51	U	
4,4'-DDE	7.4	U		24	U		53	UJ	C	51	U	
4,4'-DDT	37	UJ	C	24	UJ	C	53	UJ	C	51	UJ	C
ALDRIN	3.7	U		12	U		27	U		26	U	
ALPHA-BHC	3.7	U		12	U		27	U		26	U	
ALPHA-CHLORDANE	7.4	U		24	U		53	UJ	C	51	U	
AROCLOR-1016	74	U		49	U		53	U		51	U	
AROCLOR-1221	74	U		49	U		53	U		51	U	
AROCLOR-1232	74	U		49	U		53	U		51	U	
AROCLOR-1242	74	U		49	U		53	U		51	U	
AROCLOR-1248	74	U		49	U		53	U		51	U	
AROCLOR-1254	74	U		49	U		54.4	J	P	51	U	
AROCLOR-1260	74	U		49	U		178	J	P	51	U	
BETA-BHC	3.7	U		12	U		27	UJ	C	26	U	
DELTA-BHC	3.7	U		12	U		27	U		26	U	
DIELDRIN	3.7	U		12	U		27	U		26	U	
ENDOSULFAN I	3.7	U		12	U		27	UJ	C	26	U	
ENDOSULFAN II	7.4	UJ	C	24	UJ	C	53	UJ	C	51	UJ	C
ENDOSULFAN SULFATE	7.4	UJ	C	24	UJ	C	53	UJ	C	51	UJ	C
ENDRIN	7.4	U		24	U		53	UJ	C	51	U	
ENDRIN ALDEHYDE	7.4	UJ	C	24	UJ	C	53	UJ	C	51	UJ	C
ENDRIN KETONE	7.4	UJ	C	24	UJ	C	53	UJ	C	51	UJ	C
GAMMA-BHC (LINDANE)	3.7	U		12	U		27	U		26	U	
GAMMA-CHLORDANE	7.4	U		24	U		53	UJ	C	51	U	
HEPTACHLOR	3.7	U		12	U		27	U		26	U	
HEPTACHLOR EPOXIDE	3.7	U		12	U		27	U		26	U	
METHOXYCHLOR	74	UJ	C	49	UJ	C	110	UJ	C	100	UJ	C
TOXAPHENE	370	U		1200	U		2700	U		2600	U	

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SD-014			CEF-P39-SD-017			CEF-P39-SD-018			CEF-P39-SD-023		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4281-24			F4281-28			F4281-30			F4281-14		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	69.6 %			51.6 %			53.1 %			68.4 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
4,4'-DDD	48	UJ	C	64	UJ	C	120	UJ	C	24	U	
4,4'-DDE	48	UJ	C	64	UJ	C	120	UJ	C	24	U	
4,4'-DDT	48	UJ	C	64	UJ	C	120	UJ	C	24	UJ	C
ALDRIN	24	U		32	U		62	U		12	U	
ALPHA-BHC	24	U		32	U		62	U		12	U	
ALPHA-CHLORDANE	48	UJ	C	64	UJ	C	120	UJ	C	24	U	
AROCLOR-1016	48	U		64	U					97	U	
AROCLOR-1221	48	U		64	U					97	U	
AROCLOR-1232	48	U		64	U					97	U	
AROCLOR-1242	48	U		64	U					97	U	
AROCLOR-1248	48	U		64	U					97	U	
AROCLOR-1254	48	U		64	U					97	U	
AROCLOR-1260	48	U		64	U					470		
BETA-BHC	24	UJ	C	32	UJ	C	62	UJ	C	12	U	
DELTA-BHC	24	U		32	U		62	U		12	U	
DIELDRIN	24	U		32	U		62	U		12	U	
ENDOSULFAN I	24	UJ	C	32	UJ	C	62	UJ	C	12	U	
ENDOSULFAN II	48	UJ	C	64	UJ	C	120	UJ	C	24	UJ	C
ENDOSULFAN SULFATE	48	UJ	C	64	UJ	C	120	UJ	C	24	UJ	C
ENDRIN	48	UJ	C	64	UJ	C	120	UJ	C	24	U	
ENDRIN ALDEHYDE	48	UJ	C	64	UJ	C	120	UJ	C	24	UJ	C
ENDRIN KETONE	48	UJ	C	64	UJ	C	120	UJ	C	24	UJ	C
GAMMA-BHC (LINDANE)	24	U		32	U		62	U		12	U	
GAMMA-CHLORDANE	48	UJ	C	64	UJ	C	120	UJ	C	24	U	
HEPTACHLOR	24	U		32	U		62	U		12	U	
HEPTACHLOR EPOXIDE	24	U		32	U		62	U		12	U	
METHOXYCHLOR	96	UJ	C	130	UJ	C	250	UJ	C	49	UJ	C
TOXAPHENE	2400	U		3200	U		6200	U		1200	U	

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SAMPLE NUMBER:	CEF-P39-SD-024			CEF-P39-SD-026			CEF-P39-SD-027			CEF-P39-SD-028		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4281-16			F4281-17			F4281-18			F4281-19		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	64.8 %			92.1 %			85.1 %			94.7 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
4,4'-DDD				18	U		3.9	U		18	U	
4,4'-DDE				18	U		3.9	U		18	U	
4,4'-DDT				18	UJ	C	3.9	U		18	UJ	C
ALDRIN				9.0	U		2.0	U		8.8	U	
ALPHA-BHC				9.0	U		2.0	U		8.8	U	
ALPHA-CHLORDANE				18	U		3.9	U		18	U	
AROCLOR-1016	100	U		36	U					35	U	
AROCLOR-1221	100	U		36	U					35	U	
AROCLOR-1232	100	U		36	U					35	U	
AROCLOR-1242	100	U		36	U					35	U	
AROCLOR-1248	100	U		36	U					35	U	
AROCLOR-1254	100	U		36	U					35	U	
AROCLOR-1260	907			36	U					35	U	
BETA-BHC				9.0	U		2.0	U		8.8	U	
DELTA-BHC				9.0	U		2.0	U		8.8	U	
DIELDRIN				9.0	U		2.0	U		8.8	U	
ENDOSULFAN I				9.0	U		2.0	U		8.8	U	
ENDOSULFAN II				18	UJ	C	3.9	U		18	UJ	C
ENDOSULFAN SULFATE				18	UJ	C	3.9	U		18	UJ	C
ENDRIN				18	U		3.9	U		18	U	
ENDRIN ALDEHYDE				18	UJ	C	3.9	U		18	UJ	C
ENDRIN KETONE				18	UJ	C	3.9	U		18	UJ	C
GAMMA-BHC (LINDANE)				9.0	U		2.0	U		8.8	U	
GAMMA-CHLORDANE				18	U		3.9	U		18	U	
HEPTACHLOR				9.0	U		2.0	U		8.8	U	
HEPTACHLOR EPOXIDE				9.0	U		2.0	U		8.8	U	
METHOXYCHLOR				36	UJ	C	7.8	U		35	UJ	C
TOXAPHENE				900	U		200	U		880	U	

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SAMPLE NUMBER:	CEF-P39-SD-DU01											
SAMPLE DATE:	06/08/99			/ /			/ /			/ /		
LABORATORY ID:	F4281-32											
QC_TYPE:	NORMAL											
% SOLIDS:	71.1 %			100.0 %			100.0 %			100.0 %		
UNITS:	UG/KG											
FIELD DUPLICATE OF:	CEF-P39-SD-003											
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
4,4'-DDD	23	U										
4,4'-DDE	23	U										
4,4'-DDT	23	UJ	C									
ALDRIN	12	U										
ALPHA-BHC	12	U										
ALPHA-CHLORDANE	23	U										
AROCLOR-1016	47	U										
AROCLOR-1221	47	U										
AROCLOR-1232	47	U										
AROCLOR-1242	47	U										
AROCLOR-1248	47	U										
AROCLOR-1254	47	U										
AROCLOR-1260	47	U										
BETA-BHC	12	U										
DELTA-BHC	12	U										
DIELDRIN	12	U										
ENDOSULFAN I	12	U										
ENDOSULFAN II	23	UJ	C									
ENDOSULFAN SULFATE	23	UJ	C									
ENDRIN	23	U										
ENDRIN ALDEHYDE	23	UJ	C									
ENDRIN KETONE	23	UJ	C									
GAMMA-BHC (LINDANE)	12	U										
GAMMA-CHLORDANE	23	U										
HEPTACHLOR	12	U										
HEPTACHLOR EPOXIDE	12	U										
METHOXYCHLOR	47	UJ	C									
TOXAPHENE	1200	U										

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SAMPLE NUMBER:	CEF-P39-SW-001			CEF-P39-SW-004			CEF-P39-SW-007			CEF-P39-SW-010		
SAMPLE DATE:	06/08/99			06/08/99			06/08/99			06/09/99		
LABORATORY ID:	F4281-1			F4281-5			F4281-8			F4281-12		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/L			UG/L			UG/L			UG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
4,4'-DDD	0.10	UJ	C	0.10	UJ	C	0.10	UJ	C	0.10	UJ	C
4,4'-DDE	0.10	U		0.10	U		0.10	U		0.10	U	
4,4'-DDT	0.10	UJ	C	0.10	UJ	C	0.10	UJ	C	0.10	UJ	C
ALDRIN	0.050	U		0.050	U		0.050	U		0.050	U	
ALPHA-BHC	0.050	U		0.050	U		0.050	U		0.050	U	
ALPHA-CHLORDANE	0.10	U		0.10	U		0.10	U		0.10	U	
AROCLOR-1016	0.50	U		0.50	U		0.50	U		0.50	U	
AROCLOR-1221	0.50	U		0.50	U		0.50	U		0.50	U	
AROCLOR-1232	0.50	U		0.50	U		0.50	U		0.50	U	
AROCLOR-1242	0.50	U		0.50	U		0.50	U		0.50	U	
AROCLOR-1248	0.50	U		0.50	U		0.50	U		0.50	U	
AROCLOR-1254	0.50	U		0.50	U		0.50	U		0.50	U	
AROCLOR-1260	0.50	U		0.50	U		0.50	U		0.50	U	
BETA-BHC	0.050	U		0.050	U		0.050	U		0.050	U	
DELTA-BHC	0.050	U		0.050	U		0.050	U		0.050	U	
DIELDRIN	0.050	U		0.050	U		0.050	U		0.050	U	
ENDOSULFAN I	0.050	U		0.050	U		0.050	U		0.050	U	
ENDOSULFAN II	0.10	U		0.10	U		0.10	U		0.10	U	
ENDOSULFAN SULFATE	0.10	U		0.10	U		0.10	U		0.10	U	
ENDRIN	0.10	U		0.10	U		0.10	U		0.10	U	
ENDRIN ALDEHYDE	0.10	U		0.10	U		0.10	U		0.10	U	
ENDRIN KETONE	0.10	U		0.10	U		0.10	U		0.10	U	
GAMMA-BHC (LINDANE)	0.050	U		0.050	U		0.050	U		0.050	U	
GAMMA-CHLORDANE	0.10	U		0.10	U		0.10	U		0.10	U	
HEPTACHLOR	0.050	U		0.050	U		0.050	U		0.050	U	
HEPTACHLOR EPOXIDE	0.050	U		0.050	U		0.050	U		0.050	U	
METHOXYCHLOR	0.20	UJ	C	0.20	UJ	C	0.20	UJ	C	0.20	UJ	C
TOXAPHENE	2.5	U		2.5	U		2.5	U		2.5	U	

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SW-013			CEF-P39-SW-016			CEF-P39-SW-018			CEF-P39-SW-023		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4281-23			F4281-27			F4281-29			F4281-15		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/L			UG/L			UG/L			UG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
4,4'-DDD	0.10	U		0.10	U		0.40	U		0.10	U	
4,4'-DDE	0.10	U		0.10	U		0.40	U		0.10	U	
4,4'-DDT	0.10	U		0.10	U		0.40	UJ	C	0.10	U	
ALDRIN	0.050	U		0.050	U		0.20	U		0.050	U	
ALPHA-BHC	0.050	UJ	C	0.050	UJ	C	0.20	U		0.050	UJ	C
ALPHA-CHLORDANE	0.10	U		0.10	U		0.40	U		0.10	U	
AROCLOR-1016	0.50	U		0.50	U					0.50	U	
AROCLOR-1221	0.50	U		0.50	U					0.50	U	
AROCLOR-1232	0.50	U		0.50	U					0.50	U	
AROCLOR-1242	0.50	U		0.50	U					0.50	U	
AROCLOR-1248	0.50	U		0.50	U					0.50	U	
AROCLOR-1254	0.50	U		0.50	U					0.50	U	
AROCLOR-1260	0.50	U		0.50	U					0.50	U	
BETA-BHC	0.050	UJ	C	0.050	UJ	C	0.20	U		0.050	UJ	C
DELTA-BHC	0.050	UJ	C	0.050	UJ	C	0.20	U		0.050	UJ	C
DIELDRIN	0.050	U		0.050	U		0.20	U		0.050	U	
ENDOSULFAN I	0.050	U		0.050	U		0.20	U		0.050	U	
ENDOSULFAN II	0.10	U		0.10	U		0.40	U		0.10	U	
ENDOSULFAN SULFATE	0.10	U		0.10	U		0.40	U		0.10	U	
ENDRIN	0.10	U		0.10	U		0.40	U		0.10	U	
ENDRIN ALDEHYDE	0.10	U		0.10	U		0.40	U		0.10	U	
ENDRIN KETONE	0.10	U		0.10	U		0.40	U		0.10	U	
GAMMA-BHC (LINDANE)	0.050	U		0.050	U		0.20	U		0.050	U	
GAMMA-CHLORDANE	0.10	U		0.10	U		0.40	U		0.10	U	
HEPTACHLOR	0.050	U		0.050	U		0.20	U		0.050	U	
HEPTACHLOR EPOXIDE	0.050	U		0.050	U		0.20	U		0.050	U	
METHOXYCHLOR	0.20	U		0.20	U		0.80	UJ	C	0.20	U	
TOXAPHENE	2.5	U		2.5	U		10	U		2.5	U	

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SW-DU01											
SAMPLE DATE:	06/08/99			/ /			/ /			/ /		
LABORATORY ID:	F4281-31											
QC_TYPE:	NORMAL											
% SOLIDS:	0.0 %			100.0 %			100.0 %			100.0 %		
UNITS:	UG/L											
FIELD DUPLICATE OF:	CEF-P39-SW-003											
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
4,4'-DDD	0.10	U										
4,4'-DDE	0.10	U										
4,4'-DDT	0.10	U										
ALDRIN	0.050	U										
ALPHA-BHC	0.050	UJ	C									
ALPHA-CHLORDANE	0.10	U										
AROCLOR-1016	0.50	U										
AROCLOR-1221	0.50	U										
AROCLOR-1232	0.50	U										
AROCLOR-1242	0.50	U										
AROCLOR-1248	0.50	U										
AROCLOR-1254	0.50	U										
AROCLOR-1260	0.50	U										
BETA-BHC	0.050	UJ	C									
DELTA-BHC	0.050	UJ	C									
DIELDRIN	0.050	U										
ENDOSULFAN I	0.050	U										
ENDOSULFAN II	0.10	U										
ENDOSULFAN SULFATE	0.10	U										
ENDRIN	0.10	U										
ENDRIN ALDEHYDE	0.10	U										
ENDRIN KETONE	0.10	U										
GAMMA-BHC (LINDANE)	0.050	U										
GAMMA-CHLORDANE	0.10	U										
HEPTACHLOR	0.050	U										
HEPTACHLOR EPOXIDE	0.050	U										
METHOXYCHLOR	0.20	U										
TOXAPHENE	2.5	U										

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SW-001			CEF-P39-SW-004			CEF-P39-SW-007			CEF-P39-SW-010		
SAMPLE DATE:	06/08/99			06/08/99			06/08/99			06/09/99		
LABORATORY ID:	F4281-1			F4281-5			F4281-8			F4281-12		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/L			UG/L			UG/L			UG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	1	U		1	U		1	U		1	U	
2-METHYLNAPHTHALENE	1	U		1	U		1	U		1	U	
ACENAPHTHENE	1	U		1	U		1	U		1	U	
ACENAPHTHYLENE	2	U		2	U		2	U		2	U	
ANTHRACENE	0.15	U		0.15	U		0.15	U		0.15	U	
BENZO(A)ANTHRACENE	0.15	U		0.15	U		0.15	U		0.15	U	
BENZO(A)PYRENE	0.15	U		0.15	U		0.15	U		0.15	U	
BENZO(B)FLUORANTHENE	0.15	U		0.15	U		0.2	U		0.15	U	
BENZO(G,H,I)PERYLENE	0.2	U		0.2	U		0.2	U		0.2	U	
BENZO(K)FLUORANTHENE	0.15	U		0.15	U		0.15	U		0.15	U	
CHRYSENE	0.15	U		0.2	U		0.15	U		0.15	U	
DIBENZO(A,H)ANTHRACENE	0.25	U		0.25	U		0.25	U		0.25	U	
FLUORANTHENE	0.2	U		0.2	U		0.2	U		0.15	U	
FLUORENE	0.2	U		0.2	U		0.2	U		0.2	U	
INDENO(1,2,3-CD)PYRENE	0.15	U		0.15	U		0.15	U		0.15	U	
NAPHTHALENE	1	U		1	U		1	U		1	U	
PHENANTHRENE	0.15	U		0.15	U		0.15	U		0.15	U	
PYRENE	0.2	U		0.2	U		0.2	U		0.2	U	

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SW-013			CEF-P39-SW-016			CEF-P39-SW-023			CEF-P39-SW-DU01		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/08/99		
LABORATORY ID:	F4281-23			F4281-27			F4281-15			F4281-31		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/L			UG/L			UG/L			UG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	1	U		1	U		1	U		1	U	
2-METHYLNAPHTHALENE	1	U		1	U		1	U		1	U	
ACENAPHTHENE	1	U		1	U		1	U		1	U	
ACENAPHTHYLENE	2	U		2	U		2	U		2	U	
ANTHRACENE	0.15	U		0.15	U		0.15	U		0.15	U	
BENZO(A)ANTHRACENE	0.15	U		0.15	U		0.15	U		0.15	U	
BENZO(A)PYRENE	0.15	U		0.15	U		0.15	U		0.15	U	
BENZO(B)FLUORANTHENE	0.15	U		0.15	U		0.15	U		0.2	U	
BENZO(G,H,I)PERYLENE	0.2	U		0.2	U		0.2	U		0.2	U	
BENZO(K)FLUORANTHENE	0.15	U		0.15	U		0.15	U		0.15	U	
CHRYSENE	0.15	U		0.15	U		0.15	U		0.15	U	
DIBENZO(A,H)ANTHRACENE	0.25	U		0.25	U		0.25	U		0.25	U	
FLUORANTHENE	0.2	U		0.15	U		0.15	U		0.23		
FLUORENE	0.2	U		0.2	U		0.2	U		0.2	U	
INDENO(1,2,3-CD)PYRENE	0.15	U		0.15	U		0.15	U		0.15	U	
NAPHTHALENE	1	U		1	U		1	U		1	U	
PHENANTHRENE	0.15	U		0.15	U		0.15	U		0.15	U	
PYRENE	0.2	U		0.2	U		0.2	U		0.2	U	

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SD-002			CEF-P39-SD-005			CEF-P39-SD-008			CEF-P39-SD-011		
SAMPLE DATE:	06/08/99			06/08/99			06/08/99			06/09/99		
LABORATORY ID:	F4281-2			F4281-6			F4281-9			F4281-13		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	45.3 %			68.1 %			62.5 %			65.1 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	73			44	U		43	U		43	U	
2-METHYLNAPHTHALENE	1300			44	U		2500			350		
ACENAPHTHENE	2700			44	U		3200			280		
ACENAPHTHYLENE	1100	U		89	U		450			87	U	
ANTHRACENE	490			6.6	U		520			6.5	U	
BENZO(A)ANTHRACENE	1200			6.6	U		1400			63		
BENZO(A)PYRENE	990			13			1200			80		
BENZO(B)FLUORANTHENE	1300			14			1300			130		
BENZO(G,H,I)PERYLENE	650			25			910			81		
BENZO(K)FLUORANTHENE	570			7.5			680			67		
CHRYSENE	950			7.5			1400			98		
DIBENZO(A,H)ANTHRACENE	130			11	U		39			11	U	
FLUORANTHENE	2800			24			4700			220		
FLUORENE	110			8.9	U		450			8.7	U	
INDENO(1,2,3-CD)PYRENE	570			21			900			11		
NAPHTHALENE	86			44	U		310			51		
PHENANTHRENE	1400			6.6	U		3200			66		
PYRENE	2100			18			3200			120		

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SD-014			CEF-P39-SD-017			CEF-P39-SD-023			CEF-P39-SD-024		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4281-24			F4281-28			F4281-14			F4281-16		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	69.6 %			51.6 %			68.4 %			64.8 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	47	U		640			50	U		47	U	
2-METHYLNAPHTHALENE	170			810			660			580		
ACENAPHTHENE	200			1100			700			690		
ACENAPHTHYLENE	96	U		460	U		100	U		95	U	
ANTHRACENE	20			65			19			23		
BENZO(A)ANTHRACENE	110			460			200			250		
BENZO(A)PYRENE	110			460			280			350		
BENZO(B)FLUORANTHENE	160			610			340			420		
BENZO(G,H,I)PERYLENE	110			470			250			330		
BENZO(K)FLUORANTHENE	77			310			170			210		
CHRYSENE	250			930			300			410		
DIBENZO(A,H)ANTHRACENE	12	U		69			21			59		
FLUORANTHENE	300			1600			680			880		
FLUORENE	19			25			11			9.4	U	
INDENO(1,2,3-CD)PYRENE	95			370			250			320		
NAPHTHALENE	47	U		130			50	U		47	U	
PHENANTHRENE	81			910			300			290		
PYRENE	240			1100			490			590		

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SD-026			CEF-P39-SD-028			CEF-P39-SD-DU01					
SAMPLE DATE:	06/09/99			06/09/99			06/08/99			/ /		
LABORATORY ID:	F4281-17			F4281-19			F4281-32					
QC_TYPE:	NORMAL			NORMAL			NORMAL					
% SOLIDS:	92.1 %			94.7 %			71.1 %			100.0 %		
UNITS:	UG/KG			UG/KG			UG/KG					
FIELD DUPLICATE OF:							CEF-P39-SD-003					
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	35	U		35	U		42	U				
2-METHYLNAPHTHALENE	35	U		35	U		42	U				
ACENAPHTHENE	35	U		35	U		42	U				
ACENAPHTHYLENE	71	U		71	U		85	U				
ANTHRACENE	5.3	U		5.3	U		52					
BENZO(A)ANTHRACENE	5.3	U		6.1			26					
BENZO(A)PYRENE	5.4			19			57					
BENZO(B)FLUORANTHENE	7.3			23			63					
BENZO(G,H,I)PERYLENE	8.6			17			40					
BENZO(K)FLUORANTHENE	5.3	U		11			29					
CHRYSENE	7.3			10			36					
DIBENZO(A,H)ANTHRACENE	8.8	U		8.7	U		11	U				
FLUORANTHENE	8.2			18			46					
FLUORENE	7.1	U		7.1	U		8.4	U				
INDENO(1,2,3-CD)PYRENE	5.7			20			37					
NAPHTHALENE	35	U		35	U		42	U				
PHENANTHRENE	5.3	U		6.4			8.4	U				
PYRENE	7.1	U		17			48					

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4285

SAMPLE NUMBER:	CEF-P39-SW-DU02											
SAMPLE DATE:	06/09/99			/ /			/ /			/ /		
LABORATORY ID:	F4285-10											
QC_TYPE:	NORMAL											
% SOLIDS:	0.0 %			100.0 %			100.0 %			100.0 %		
UNITS:	UG/L											
FIELD DUPLICATE OF:	CEF-P39-SW-019											
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
4,4'-DDD	0.10	U										
4,4'-DDE	0.10	U										
4,4'-DDT	0.10	U										
ALDRIN	0.050	U										
ALPHA-BHC	0.050	UJ	C									
ALPHA-CHLORDANE	0.10	U										
AROCLOR-1016	0.50	U										
AROCLOR-1221	0.50	U										
AROCLOR-1232	0.50	U										
AROCLOR-1242	0.50	U										
AROCLOR-1248	0.50	U										
AROCLOR-1254	0.50	U										
AROCLOR-1260	0.50	U										
BETA-BHC	0.050	U										
DELTA-BHC	0.050	UJ	C									
DIELDRIN	0.050	U										
ENDOSULFAN I	0.050	U										
ENDOSULFAN II	0.10	U										
ENDOSULFAN SULFATE	0.10	U										
ENDRIN	0.10	U										
ENDRIN ALDEHYDE	0.10	U										
ENDRIN KETONE	0.10	U										
GAMMA-BHC (LINDANE)	0.050	UJ	C									
GAMMA-CHLORDANE	0.10	U										
HEPTACHLOR	0.050	U										
HEPTACHLOR EPOXIDE	0.050	U										
METHOXYCHLOR	0.20	U										
TOXAPHENE	2.5	U										

APPENDIX B

Results as Reported by the Laboratory

Report of Analysis

Client Sample ID:	CEF-P39-SW-001		
Lab Sample ID:	F4281-1	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001868.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004589.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND [a]	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND [a]	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND [a]	4.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND [a]	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND [a]	25	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND [a]	25	ug/l	
95-48-7	2-Methylphenol	ND [a]	5.0	ug/l	
	3&4-Methylphenol	ND [a]	5.0	ug/l	
88-75-5	2-Nitrophenol	ND [a]	5.0	ug/l	
100-02-7	4-Nitrophenol	ND [a]	15	ug/l	
87-86-5	Pentachlorophenol	ND	1.0	ug/l	
108-95-2	Phenol	ND [a]	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND [a]	4.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND [a]	5.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND [a]	5.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND [a]	5.0	ug/l	
91-58-7	2-Chloronaphthalene	ND [a]	5.0	ug/l	
106-47-8	4-Chloroaniline	ND [a]	5.0	ug/l	
86-74-8	Carbazole	ND [a]	4.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND [a]	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	1.5	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND [a]	5.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND [a]	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND [a]	5.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND [a]	5.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND [a]	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND [a]	7.5	ug/l	
132-64-9	Dibenzofuran	ND [a]	5.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND [a]	5.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND [a]	5.0	ug/l	
84-66-2	Diethyl phthalate	ND [a]	5.0	ug/l	
131-11-3	Dimethyl phthalate	ND [a]	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND [a]	5.0	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	ug/l	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-001		
Lab Sample ID:	F4281-1	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001868.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004589.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
87-68-3	Hexachlorobutadiene	ND [a]	5.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND [a]	5.0	ug/l	
67-72-1	Hexachloroethane	ND [a]	5.0	ug/l	
78-59-1	Isophorone	ND [a]	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND [a]	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND [a]	5.0	ug/l	
88-74-4	2-Nitroaniline	ND [a]	5.0	ug/l	
99-09-2	3-Nitroaniline	ND [a]	5.0	ug/l	
100-01-6	4-Nitroaniline	ND [a]	5.0	ug/l	
98-95-3	Nitrobenzene	ND [a]	4.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND [a]	4.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND [a]	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND [a]	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol		45%	21-100%
4165-62-2	Phenol-d5		32%	10-94%
118-79-6	2,4,6-Tribromophenol		81%	10-123%
4165-60-0	Nitrobenzene-d5		93%	35-114%
321-60-8	2-Fluorobiphenyl		83%	43-116%
1718-51-0	Terphenyl-d14		98%	33-141%

(a) Result is from Run# 2

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-004		
Lab Sample ID:	F4281-5	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001869.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004590.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND [a]	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND [a]	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND [a]	4.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND [a]	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND [a]	25	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND [a]	25	ug/l	
95-48-7	2-Methylphenol	ND [a]	5.0	ug/l	
	3&4-Methylphenol	ND [a]	5.0	ug/l	
88-75-5	2-Nitrophenol	ND [a]	5.0	ug/l	
100-02-7	4-Nitrophenol	ND [a]	15	ug/l	
87-86-5	Pentachlorophenol	ND	1.0	ug/l	
108-95-2	Phenol	ND [a]	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND [a]	4.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND [a]	5.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND [a]	5.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND [a]	5.0	ug/l	
91-58-7	2-Chloronaphthalene	ND [a]	5.0	ug/l	
106-47-8	4-Chloroaniline	ND [a]	5.0	ug/l	
86-74-8	Carbazole	ND [a]	4.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND [a]	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	1.5	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND [a]	5.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND [a]	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND [a]	5.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND [a]	5.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND [a]	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND [a]	7.5	ug/l	
132-64-9	Dibenzofuran	ND [a]	5.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND [a]	5.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND [a]	5.0	ug/l	
84-66-2	Diethyl phthalate	ND [a]	5.0	ug/l	
131-11-3	Dimethyl phthalate	ND [a]	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	3.5 [a]	5.0	ug/l	J
118-74-1	Hexachlorobenzene	ND	1.0	ug/l	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-004		
Lab Sample ID:	F4281-5	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001869.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004590.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
87-68-3	Hexachlorobutadiene	ND [a]	5.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND [a]	5.0	ug/l	
67-72-1	Hexachloroethane	ND [a]	5.0	ug/l	
78-59-1	Isophorone	ND [a]	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND [a]	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND [a]	5.0	ug/l	
88-74-4	2-Nitroaniline	ND [a]	5.0	ug/l	
99-09-2	3-Nitroaniline	ND [a]	5.0	ug/l	
100-01-6	4-Nitroaniline	ND [a]	5.0	ug/l	
98-95-3	Nitrobenzene	ND [a]	4.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND [a]	4.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND [a]	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND [a]	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol		49%	21-100%
4165-62-2	Phenol-d5		35%	10-94%
118-79-6	2,4,6-Tribromophenol		90%	10-123%
4165-60-0	Nitrobenzene-d5		98%	35-114%
321-60-8	2-Fluorobiphenyl		88%	43-116%
1718-51-0	Terphenyl-d14		101%	33-141%

(a) Result is from Run# 2

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-007		
Lab Sample ID:	F4281-8	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001870.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004591.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND [a]	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND [a]	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND [a]	4.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND [a]	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND [a]	25	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND [a]	25	ug/l	
95-48-7	2-Methylphenol	ND [a]	5.0	ug/l	
	3&4-Methylphenol	ND [a]	5.0	ug/l	
88-75-5	2-Nitrophenol	ND [a]	5.0	ug/l	
100-02-7	4-Nitrophenol	ND [a]	15	ug/l	
87-86-5	Pentachlorophenol	ND	1.0	ug/l	
108-95-2	Phenol	ND [a]	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND [a]	4.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND [a]	5.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND [a]	5.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND [a]	5.0	ug/l	
91-58-7	2-Chloronaphthalene	ND [a]	5.0	ug/l	
106-47-8	4-Chloroaniline	ND [a]	5.0	ug/l	
86-74-8	Carbazole	ND [a]	4.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND [a]	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	1.5	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND [a]	5.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND [a]	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND [a]	5.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND [a]	5.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND [a]	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND [a]	7.5	ug/l	
132-64-9	Dibenzofuran	ND [a]	5.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND [a]	5.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND [a]	5.0	ug/l	
84-66-2	Diethyl phthalate	ND [a]	5.0	ug/l	
131-11-3	Dimethyl phthalate	ND [a]	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND [a]	5.0	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	ug/l	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-007		
Lab Sample ID:	F4281-8	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001870.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004591.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
87-68-3	Hexachlorobutadiene	ND [a]	5.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND [a]	5.0	ug/l	
67-72-1	Hexachloroethane	ND [a]	5.0	ug/l	
78-59-1	Isophorone	ND [a]	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND [a]	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND [a]	5.0	ug/l	
88-74-4	2-Nitroaniline	ND [a]	5.0	ug/l	
99-09-2	3-Nitroaniline	ND [a]	5.0	ug/l	
100-01-6	4-Nitroaniline	ND [a]	5.0	ug/l	
98-95-3	Nitrobenzene	ND [a]	4.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND [a]	4.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND [a]	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND [a]	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol		53%	21-100%
4165-62-2	Phenol-d5		38%	10-94%
118-79-6	2,4,6-Tribromophenol		81%	10-123%
4165-60-0	Nitrobenzene-d5		89%	35-114%
321-60-8	2-Fluorobiphenyl		82%	43-116%
1718-51-0	Terphenyl-d14		99%	33-141%

(a) Result is from Run# 2

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-010		
Lab Sample ID:	F4281-12	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001871.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004592.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND [a]	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND [a]	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND [a]	4.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND [a]	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND [a]	25	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND [a]	25	ug/l	
95-48-7	2-Methylphenol	ND [a]	5.0	ug/l	
	3&4-Methylphenol	ND [a]	5.0	ug/l	
88-75-5	2-Nitrophenol	ND [a]	5.0	ug/l	
100-02-7	4-Nitrophenol	ND [a]	15	ug/l	
87-86-5	Pentachlorophenol	ND	1.0	ug/l	
108-95-2	Phenol	ND [a]	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND [a]	4.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND [a]	5.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND [a]	5.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND [a]	5.0	ug/l	
91-58-7	2-Chloronaphthalene	ND [a]	5.0	ug/l	
106-47-8	4-Chloroaniline	ND [a]	5.0	ug/l	
86-74-8	Carbazole	ND [a]	4.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND [a]	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	1.5	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND [a]	5.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND [a]	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND [a]	5.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND [a]	5.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND [a]	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND [a]	7.5	ug/l	
132-64-9	Dibenzofuran	ND [a]	5.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND [a]	5.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND [a]	5.0	ug/l	
84-66-2	Diethyl phthalate	ND [a]	5.0	ug/l	
131-11-3	Dimethyl phthalate	ND [a]	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND [a]	5.0	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	ug/l	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-010		
Lab Sample ID:	F4281-12	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001871.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004592.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
87-68-3	Hexachlorobutadiene	ND [a]	5.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND [a]	5.0	ug/l	
67-72-1	Hexachloroethane	ND [a]	5.0	ug/l	
78-59-1	Isophorone	ND [a]	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND [a]	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND [a]	5.0	ug/l	
88-74-4	2-Nitroaniline	ND [a]	5.0	ug/l	
99-09-2	3-Nitroaniline	ND [a]	5.0	ug/l	
100-01-6	4-Nitroaniline	ND [a]	5.0	ug/l	
98-95-3	Nitrobenzene	ND [a]	4.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND [a]	4.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND [a]	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND [a]	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol		45%	21-100%
4165-62-2	Phenol-d5		30%	10-94%
118-79-6	2,4,6-Tribromophenol		84%	10-123%
4165-60-0	Nitrobenzene-d5		86%	35-114%
321-60-8	2-Fluorobiphenyl		80%	43-116%
1718-51-0	Terphenyl-d14		110%	33-141%

(a) Result is from Run# 2

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-012		
Lab Sample ID:	F4281-21	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001873.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004594.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND [a]	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND [a]	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND [a]	4.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND [a]	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND [a]	25	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND [a]	25	ug/l	
95-48-7	2-Methylphenol	ND [a]	5.0	ug/l	
	3&4-Methylphenol	ND [a]	5.0	ug/l	
88-75-5	2-Nitrophenol	ND [a]	5.0	ug/l	
100-02-7	4-Nitrophenol	ND [a]	15	ug/l	
87-86-5	Pentachlorophenol	ND	1.0	ug/l	
108-95-2	Phenol	ND [a]	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND [a]	4.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND [a]	5.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND [a]	5.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND [a]	5.0	ug/l	
91-58-7	2-Chloronaphthalene	ND [a]	5.0	ug/l	
106-47-8	4-Chloroaniline	ND [a]	5.0	ug/l	
86-74-8	Carbazole	ND [a]	4.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND [a]	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	1.5	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND [a]	5.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND [a]	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND [a]	5.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND [a]	5.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND [a]	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND [a]	7.5	ug/l	
132-64-9	Dibenzofuran	ND [a]	5.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND [a]	5.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND [a]	5.0	ug/l	
84-66-2	Diethyl phthalate	ND [a]	5.0	ug/l	
131-11-3	Dimethyl phthalate	ND [a]	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND [a]	5.0	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	ug/l	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-012		
Lab Sample ID:	F4281-21	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001873.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004594.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
87-68-3	Hexachlorobutadiene	ND [a]	5.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND [a]	5.0	ug/l	
67-72-1	Hexachloroethane	ND [a]	5.0	ug/l	
78-59-1	Isophorone	ND [a]	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND [a]	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND [a]	5.0	ug/l	
88-74-4	2-Nitroaniline	ND [a]	5.0	ug/l	
99-09-2	3-Nitroaniline	ND [a]	5.0	ug/l	
100-01-6	4-Nitroaniline	ND [a]	5.0	ug/l	
98-95-3	Nitrobenzene	ND [a]	4.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND [a]	4.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND [a]	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND [a]	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol		48%	21-100%
4165-62-2	Phenol-d5		34%	10-94%
118-79-6	2,4,6-Tribromophenol		82%	10-123%
4165-60-0	Nitrobenzene-d5		91%	35-114%
321-60-8	2-Fluorobiphenyl		84%	43-116%
1718-51-0	Terphenyl-d14		102%	33-141%

(a) Result is from Run# 2

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-013		
Lab Sample ID:	F4281-23	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001874.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004595.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND [a]	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND [a]	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND [a]	4.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND [a]	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND [a]	25	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND [a]	25	ug/l	
95-48-7	2-Methylphenol	ND [a]	5.0	ug/l	
	3&4-Methylphenol	ND [a]	5.0	ug/l	
88-75-5	2-Nitrophenol	ND [a]	5.0	ug/l	
100-02-7	4-Nitrophenol	ND [a]	15	ug/l	
87-86-5	Pentachlorophenol	ND	1.0	ug/l	
108-95-2	Phenol	ND [a]	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND [a]	4.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND [a]	5.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND [a]	5.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND [a]	5.0	ug/l	
91-58-7	2-Chloronaphthalene	ND [a]	5.0	ug/l	
106-47-8	4-Chloroaniline	ND [a]	5.0	ug/l	
86-74-8	Carbazole	ND [a]	4.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND [a]	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	1.5	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND [a]	5.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND [a]	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND [a]	5.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND [a]	5.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND [a]	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND [a]	7.5	ug/l	
132-64-9	Dibenzofuran	ND [a]	5.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND [a]	5.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND [a]	5.0	ug/l	
84-66-2	Diethyl phthalate	ND [a]	5.0	ug/l	
131-11-3	Dimethyl phthalate	ND [a]	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND [a]	5.0	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	ug/l	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-013		
Lab Sample ID:	F4281-23	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001874.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004595.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
87-68-3	Hexachlorobutadiene	ND [a]	5.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND [a]	5.0	ug/l	
67-72-1	Hexachloroethane	ND [a]	5.0	ug/l	
78-59-1	Isophorone	ND [a]	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND [a]	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND [a]	5.0	ug/l	
88-74-4	2-Nitroaniline	ND [a]	5.0	ug/l	
99-09-2	3-Nitroaniline	ND [a]	5.0	ug/l	
100-01-6	4-Nitroaniline	ND [a]	5.0	ug/l	
98-95-3	Nitrobenzene	ND [a]	4.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND [a]	4.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND [a]	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND [a]	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol		44%	21-100%
4165-62-2	Phenol-d5		31%	10-94%
118-79-6	2,4,6-Tribromophenol		81%	10-123%
4165-60-0	Nitrobenzene-d5		84%	35-114%
321-60-8	2-Fluorobiphenyl		76%	43-116%
1718-51-0	Terphenyl-d14		92%	33-141%

(a) Result is from Run# 2

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-016		
Lab Sample ID:	F4281-27	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001875.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004596.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND [a]	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND [a]	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND [a]	4.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND [a]	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND [a]	25	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND [a]	25	ug/l	
95-48-7	2-Methylphenol	ND [a]	5.0	ug/l	
	3&4-Methylphenol	ND [a]	5.0	ug/l	
88-75-5	2-Nitrophenol	ND [a]	5.0	ug/l	
100-02-7	4-Nitrophenol	ND [a]	15	ug/l	
87-86-5	Pentachlorophenol	ND	1.0	ug/l	
108-95-2	Phenol	ND [a]	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND [a]	4.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND [a]	5.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND [a]	5.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND [a]	5.0	ug/l	
91-58-7	2-Chloronaphthalene	ND [a]	5.0	ug/l	
106-47-8	4-Chloroaniline	ND [a]	5.0	ug/l	
86-74-8	Carbazole	ND [a]	4.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND [a]	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	1.5	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND [a]	5.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND [a]	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND [a]	5.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND [a]	5.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND [a]	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND [a]	7.5	ug/l	
132-64-9	Dibenzofuran	ND [a]	5.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND [a]	5.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND [a]	5.0	ug/l	
84-66-2	Diethyl phthalate	ND [a]	5.0	ug/l	
131-11-3	Dimethyl phthalate	ND [a]	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND [a]	5.0	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	ug/l	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-016		
Lab Sample ID:	F4281-27	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001875.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004596.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
87-68-3	Hexachlorobutadiene	ND [a]	5.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND [a]	5.0	ug/l	
67-72-1	Hexachloroethane	ND [a]	5.0	ug/l	
78-59-1	Isophorone	ND [a]	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND [a]	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND [a]	5.0	ug/l	
88-74-4	2-Nitroaniline	ND [a]	5.0	ug/l	
99-09-2	3-Nitroaniline	ND [a]	5.0	ug/l	
100-01-6	4-Nitroaniline	ND [a]	5.0	ug/l	
98-95-3	Nitrobenzene	ND [a]	4.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND [a]	4.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND [a]	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND [a]	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol		46%	21-100%
4165-62-2	Phenol-d5		32%	10-94%
118-79-6	2,4,6-Tribromophenol		83%	10-123%
4165-60-0	Nitrobenzene-d5		90%	35-114%
321-60-8	2-Fluorobiphenyl		78%	43-116%
1718-51-0	Terphenyl-d14		98%	33-141%

(a) Result is from Run# 2

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-023		
Lab Sample ID:	F4281-15	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001872.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004593.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND [a]	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND [a]	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND [a]	4.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND [a]	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND [a]	25	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND [a]	25	ug/l	
95-48-7	2-Methylphenol	ND [a]	5.0	ug/l	
	3&4-Methylphenol	ND [a]	5.0	ug/l	
88-75-5	2-Nitrophenol	ND [a]	5.0	ug/l	
100-02-7	4-Nitrophenol	ND [a]	15	ug/l	
87-86-5	Pentachlorophenol	ND	1.0	ug/l	
108-95-2	Phenol	ND [a]	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND [a]	4.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND [a]	5.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND [a]	5.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND [a]	5.0	ug/l	
91-58-7	2-Chloronaphthalene	ND [a]	5.0	ug/l	
106-47-8	4-Chloroaniline	ND [a]	5.0	ug/l	
86-74-8	Carbazole	ND [a]	4.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND [a]	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	1.5	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND [a]	5.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND [a]	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND [a]	5.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND [a]	5.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND [a]	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND [a]	7.5	ug/l	
132-64-9	Dibenzofuran	ND [a]	5.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND [a]	5.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND [a]	5.0	ug/l	
84-66-2	Diethyl phthalate	ND [a]	5.0	ug/l	
131-11-3	Dimethyl phthalate	ND [a]	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND [a]	5.0	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	ug/l	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-023		
Lab Sample ID:	F4281-15	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001872.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004593.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
87-68-3	Hexachlorobutadiene	ND [a]	5.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND [a]	5.0	ug/l	
67-72-1	Hexachloroethane	ND [a]	5.0	ug/l	
78-59-1	Isophorone	ND [a]	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND [a]	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND [a]	5.0	ug/l	
88-74-4	2-Nitroaniline	ND [a]	5.0	ug/l	
99-09-2	3-Nitroaniline	ND [a]	5.0	ug/l	
100-01-6	4-Nitroaniline	ND [a]	5.0	ug/l	
98-95-3	Nitrobenzene	ND [a]	4.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND [a]	4.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND [a]	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND [a]	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol		47%	21-100%
4165-62-2	Phenol-d5		33%	10-94%
118-79-6	2,4,6-Tribromophenol		84%	10-123%
4165-60-0	Nitrobenzene-d5		88%	35-114%
321-60-8	2-Fluorobiphenyl		82%	43-116%
1718-51-0	Terphenyl-d14		102%	33-141%

(a) Result is from Run# 2

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-DU01		
Lab Sample ID:	F4281-31	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001876.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004597.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND [a]	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND [a]	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND [a]	4.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND [a]	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND [a]	25	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND [a]	25	ug/l	
95-48-7	2-Methylphenol	ND [a]	5.0	ug/l	
	3&4-Methylphenol	ND [a]	5.0	ug/l	
88-75-5	2-Nitrophenol	ND [a]	5.0	ug/l	
100-02-7	4-Nitrophenol	ND [a]	15	ug/l	
87-86-5	Pentachlorophenol	ND	1.0	ug/l	
108-95-2	Phenol	ND [a]	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND [a]	4.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND [a]	5.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND [a]	5.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND [a]	5.0	ug/l	
91-58-7	2-Chloronaphthalene	ND [a]	5.0	ug/l	
106-47-8	4-Chloroaniline	ND [a]	5.0	ug/l	
86-74-8	Carbazole	ND [a]	4.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND [a]	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	1.5	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND [a]	5.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND [a]	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND [a]	5.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND [a]	5.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND [a]	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND [a]	7.5	ug/l	
132-64-9	Dibenzofuran	ND [a]	5.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND [a]	5.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND [a]	5.0	ug/l	
84-66-2	Diethyl phthalate	ND [a]	5.0	ug/l	
131-11-3	Dimethyl phthalate	ND [a]	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND [a]	5.0	ug/l	
118-74-1	Hexachlorobenzene	ND	1.0	ug/l	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-DU01		
Lab Sample ID:	F4281-31	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001876.D	1	06/14/99	ME	06/14/99	OP847	SL117
Run #2	H004597.D	1	06/15/99	ME	06/14/99	OP846	SH227

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
87-68-3	Hexachlorobutadiene	ND [a]	5.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND [a]	5.0	ug/l	
67-72-1	Hexachloroethane	ND [a]	5.0	ug/l	
78-59-1	Isophorone	ND [a]	5.0	ug/l	
90-12-0	1-Methylnaphthalene	ND [a]	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND [a]	5.0	ug/l	
88-74-4	2-Nitroaniline	ND [a]	5.0	ug/l	
99-09-2	3-Nitroaniline	ND [a]	5.0	ug/l	
100-01-6	4-Nitroaniline	ND [a]	5.0	ug/l	
98-95-3	Nitrobenzene	ND [a]	4.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND [a]	4.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND [a]	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND [a]	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol		46%	21-100%
4165-62-2	Phenol-d5		32%	10-94%
118-79-6	2,4,6-Tribromophenol		82%	10-123%
4165-60-0	Nitrobenzene-d5		89%	35-114%
321-60-8	2-Fluorobiphenyl		81%	43-116%
1718-51-0	Terphenyl-d14		98%	33-141%

(a) Result is from Run# 2

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-002		
Lab Sample ID:	F4281-2	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	45.3
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001951.D	4	06/18/99	ME	06/17/99	OP853	SL121
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND	1500	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	2900	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	1300	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	2900	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	7400	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	2900	ug/kg	
95-48-7	2-Methylphenol	ND	1500	ug/kg	
	3&4-Methylphenol	ND	1500	ug/kg	
88-75-5	2-Nitrophenol	ND	1500	ug/kg	
100-02-7	4-Nitrophenol	ND	7400	ug/kg	
87-86-5	Pentachlorophenol	ND	7400	ug/kg	
108-95-2	Phenol	ND	1500	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	1500	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	1500	ug/kg	
83-32-9	Acenaphthene	ND	1500	ug/kg	
208-96-8	Acenaphthylene	ND	1500	ug/kg	
120-12-7	Anthracene	ND	1500	ug/kg	
56-55-3	Benzo(a)anthracene	ND	1500	ug/kg	
50-32-8	Benzo(a)pyrene	384	740	ug/kg	J
205-99-2	Benzo(b)fluoranthene	ND	1500	ug/kg	
191-24-2	Benzo(g,h,i)perylene	531	1500	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	1500	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	1500	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	1500	ug/kg	
91-58-7	2-Chloronaphthalene	ND	1500	ug/kg	
106-47-8	4-Chloroaniline	ND	1500	ug/kg	
86-74-8	Carbazole	ND	1500	ug/kg	
218-01-9	Chrysene	ND	1500	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	1500	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	1500	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	1500	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	1500	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1500	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1500	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1500	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	1500	ug/kg	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-002		
Lab Sample ID:	F4281-2	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	45.3
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001951.D	4	06/18/99	ME	06/17/99	OP853	SL121
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	1500	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	2900	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	740	ug/kg	
132-64-9	Dibenzofuran	ND	1500	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	1500	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	1500	ug/kg	
84-66-2	Diethyl phthalate	ND	1500	ug/kg	
131-11-3	Dimethyl phthalate	ND	1500	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	1500	ug/kg	
206-44-0	Fluoranthene	717	1500	ug/kg	J
86-73-7	Fluorene	ND	1500	ug/kg	
118-74-1	Hexachlorobenzene	ND	1500	ug/kg	
87-68-3	Hexachlorobutadiene	ND	1500	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	1500	ug/kg	
67-72-1	Hexachloroethane	ND	1500	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	1500	ug/kg	
78-59-1	Isophorone	ND	1500	ug/kg	
90-12-0	1-Methylnaphthalene	ND	1500	ug/kg	
91-57-6	2-Methylnaphthalene	ND	1500	ug/kg	
88-74-4	2-Nitroaniline	ND	1500	ug/kg	
99-09-2	3-Nitroaniline	ND	1500	ug/kg	
100-01-6	4-Nitroaniline	ND	1500	ug/kg	
91-20-3	Naphthalene	ND	1500	ug/kg	
98-95-3	Nitrobenzene	ND	1500	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	530	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	1500	ug/kg	
85-01-8	Phenanthrene	ND	1500	ug/kg	
129-00-0	Pyrene	630	1500	ug/kg	J
120-82-1	1,2,4-Trichlorobenzene	ND	1500	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	78%		25-121%
4165-62-2	Phenol-d5	87%		24-113%
118-79-6	2,4,6-Tribromophenol	93%		19-122%
4165-60-0	Nitrobenzene-d5	82%		23-120%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-002		
Lab Sample ID:	F4281-2	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	45.3
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001951.D	4	06/18/99	ME	06/17/99	OP853	SL121
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	91%		30-115%
1718-51-0	Terphenyl-d14	119%		18-137%

(a) Dilution required due to matrix interference; extract was viscous.

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-005		
Lab Sample ID:	F4281-6	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	68.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001971.D	4	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND	980	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	2000	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	880	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	2000	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	4900	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	2000	ug/kg	
95-48-7	2-Methylphenol	ND	980	ug/kg	
	3&4-Methylphenol	ND	980	ug/kg	
88-75-5	2-Nitrophenol	ND	980	ug/kg	
100-02-7	4-Nitrophenol	ND	4900	ug/kg	
87-86-5	Pentachlorophenol	ND	4900	ug/kg	
108-95-2	Phenol	ND	980	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	980	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	980	ug/kg	
83-32-9	Acenaphthene	ND	980	ug/kg	
208-96-8	Acenaphthylene	ND	980	ug/kg	
120-12-7	Anthracene	ND	980	ug/kg	
56-55-3	Benzo(a)anthracene	1150	980	ug/kg	
50-32-8	Benzo(a)pyrene	1060	490	ug/kg	
205-99-2	Benzo(b)fluoranthene	963	980	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	1030	980	ug/kg	
207-08-9	Benzo(k)fluoranthene	692	980	ug/kg	J
101-55-3	4-Bromophenyl phenyl ether	ND	980	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	980	ug/kg	
91-58-7	2-Chloronaphthalene	ND	980	ug/kg	
106-47-8	4-Chloroaniline	ND	980	ug/kg	
86-74-8	Carbazole	ND	980	ug/kg	
218-01-9	Chrysene	1130	980	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	980	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	980	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	980	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	980	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	980	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	980	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	980	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	980	ug/kg	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-005		
Lab Sample ID:	F4281-6	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	68.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001971.D	4	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	980	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	2000	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	490	ug/kg	
132-64-9	Dibenzofuran	ND	980	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	980	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	980	ug/kg	
84-66-2	Diethyl phthalate	ND	980	ug/kg	
131-11-3	Dimethyl phthalate	ND	980	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	1020	980	ug/kg	
206-44-0	Fluoranthene	1600	980	ug/kg	
86-73-7	Fluorene	ND	980	ug/kg	
118-74-1	Hexachlorobenzene	ND	980	ug/kg	
87-68-3	Hexachlorobutadiene	ND	980	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	980	ug/kg	
67-72-1	Hexachloroethane	ND	980	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	1110	980	ug/kg	
78-59-1	Isophorone	ND	980	ug/kg	
90-12-0	1-Methylnaphthalene	ND	980	ug/kg	
91-57-6	2-Methylnaphthalene	ND	980	ug/kg	
88-74-4	2-Nitroaniline	ND	980	ug/kg	
99-09-2	3-Nitroaniline	ND	980	ug/kg	
100-01-6	4-Nitroaniline	ND	980	ug/kg	
91-20-3	Naphthalene	ND	980	ug/kg	
98-95-3	Nitrobenzene	ND	980	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	350	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	980	ug/kg	
85-01-8	Phenanthrene	ND	980	ug/kg	
129-00-0	Pyrene	1350	980	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	980	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	72%		25-121%
4165-62-2	Phenol-d5	83%		24-113%
118-79-6	2,4,6-Tribromophenol	95%		19-122%
4165-60-0	Nitrobenzene-d5	82%		23-120%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-005		
Lab Sample ID:	F4281-6	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	68.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001971.D	4	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	92%		30-115%
1718-51-0	Terphenyl-d14	87%		18-137%

(a) Dilution required due to matrix interference; extract was viscous.

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-008		
Lab Sample ID:	F4281-9	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	62.5
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001972.D	100	06/19/99	ME	06/17/99	OP853	SL122
Run #2	.						

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND	27000	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	53000	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	24000	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	53000	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	130000	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	53000	ug/kg	
95-48-7	2-Methylphenol	ND	27000	ug/kg	
	3&4-Methylphenol	ND	27000	ug/kg	
88-75-5	2-Nitrophenol	ND	27000	ug/kg	
100-02-7	4-Nitrophenol	ND	130000	ug/kg	
87-86-5	Pentachlorophenol	ND	130000	ug/kg	
108-95-2	Phenol	ND	27000	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	27000	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	27000	ug/kg	
83-32-9	Acenaphthene	ND	27000	ug/kg	
208-96-8	Acenaphthylene	ND	27000	ug/kg	
120-12-7	Anthracene	ND	27000	ug/kg	
56-55-3	Benzo(a)anthracene	ND	27000	ug/kg	
50-32-8	Benzo(a)pyrene	ND	13000	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	27000	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	27000	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	27000	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	27000	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	27000	ug/kg	
91-58-7	2-Chloronaphthalene	ND	27000	ug/kg	
106-47-8	4-Chloroaniline	ND	27000	ug/kg	
86-74-8	Carbazole	ND	27000	ug/kg	
218-01-9	Chrysene	ND	27000	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	27000	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	27000	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	27000	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	27000	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	27000	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	27000	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	27000	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	27000	ug/kg	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-008		
Lab Sample ID:	F4281-9	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	62.5
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001972.D	100	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	27000	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	53000	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	13000	ug/kg	
132-64-9	Dibenzofuran	ND	27000	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	27000	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	27000	ug/kg	
84-66-2	Diethyl phthalate	ND	27000	ug/kg	
131-11-3	Dimethyl phthalate	ND	27000	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	27000	ug/kg	
206-44-0	Fluoranthene	ND	27000	ug/kg	
86-73-7	Fluorene	ND	27000	ug/kg	
118-74-1	Hexachlorobenzene	ND	27000	ug/kg	
87-68-3	Hexachlorobutadiene	ND	27000	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	27000	ug/kg	
67-72-1	Hexachloroethane	ND	27000	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	27000	ug/kg	
78-59-1	Isophorone	ND	27000	ug/kg	
90-12-0	1-Methylnaphthalene	ND	27000	ug/kg	
91-57-6	2-Methylnaphthalene	ND	27000	ug/kg	
88-74-4	2-Nitroaniline	ND	27000	ug/kg	
99-09-2	3-Nitroaniline	ND	27000	ug/kg	
100-01-6	4-Nitroaniline	ND	27000	ug/kg	
91-20-3	Naphthalene	ND	27000	ug/kg	
98-95-3	Nitrobenzene	ND	27000	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	9600	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	27000	ug/kg	
85-01-8	Phenanthrene	ND	27000	ug/kg	
129-00-0	Pyrene	ND	27000	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	27000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	0% [b]		25-121%
4165-62-2	Phenol-d5	0% [b]		24-113%
118-79-6	2,4,6-Tribromophenol	0% [b]		19-122%
4165-60-0	Nitrobenzene-d5	0% [b]		23-120%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-008		
Lab Sample ID:	F4281-9	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	62.5
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001972.D	100	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	0% [b]		30-115%
1718-51-0	Terphenyl-d14	0% [b]		18-137%

(a) Dilution required due to matrix interference; extract was viscous.
(b) Outside control limits due to dilution.

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-011		
Lab Sample ID:	F4281-13	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	65.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001973.D	4	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND	1000	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	2000	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	920	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	2000	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	5100	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	2000	ug/kg	
95-48-7	2-Methylphenol	ND	1000	ug/kg	
	3&4-Methylphenol	ND	1000	ug/kg	
88-75-5	2-Nitrophenol	ND	1000	ug/kg	
100-02-7	4-Nitrophenol	ND	5100	ug/kg	
87-86-5	Pentachlorophenol	ND	5100	ug/kg	
108-95-2	Phenol	ND	1000	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	1000	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	1000	ug/kg	
83-32-9	Acenaphthene	ND	1000	ug/kg	
208-96-8	Acenaphthylene	ND	1000	ug/kg	
120-12-7	Anthracene	ND	1000	ug/kg	
56-55-3	Benzo(a)anthracene	697	1000	ug/kg	J
50-32-8	Benzo(a)pyrene	691	510	ug/kg	
205-99-2	Benzo(b)fluoranthene	892	1000	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	1070	1000	ug/kg	
207-08-9	Benzo(k)fluoranthene	542	1000	ug/kg	J
101-55-3	4-Bromophenyl phenyl ether	ND	1000	ug/kg	
85-68-7	Butyl benzyl phthalate	946	1000	ug/kg	J
91-58-7	2-Chloronaphthalene	ND	1000	ug/kg	
106-47-8	4-Chloroaniline	ND	1000	ug/kg	
86-74-8	Carbazole	ND	1000	ug/kg	
218-01-9	Chrysene	1020	1000	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	1000	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	1000	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	1000	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	1000	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1000	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1000	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1000	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	1000	ug/kg	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-011		
Lab Sample ID:	F4281-13	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	65.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001973.D	4	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	1000	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	2000	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	510	ug/kg	
132-64-9	Dibenzofuran	ND	1000	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	1000	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	1000	ug/kg	
84-66-2	Diethyl phthalate	ND	1000	ug/kg	
131-11-3	Dimethyl phthalate	ND	1000	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	5750	1000	ug/kg	
206-44-0	Fluoranthene	1260	1000	ug/kg	
86-73-7	Fluorene	ND	1000	ug/kg	
118-74-1	Hexachlorobenzene	ND	1000	ug/kg	
87-68-3	Hexachlorobutadiene	ND	1000	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	1000	ug/kg	
67-72-1	Hexachloroethane	ND	1000	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	1160	1000	ug/kg	
78-59-1	Isophorone	ND	1000	ug/kg	
90-12-0	1-Methylnaphthalene	ND	1000	ug/kg	
91-57-6	2-Methylnaphthalene	ND	1000	ug/kg	
88-74-4	2-Nitroaniline	ND	1000	ug/kg	
99-09-2	3-Nitroaniline	ND	1000	ug/kg	
100-01-6	4-Nitroaniline	ND	1000	ug/kg	
91-20-3	Naphthalene	ND	1000	ug/kg	
98-95-3	Nitrobenzene	ND	1000	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	370	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	1000	ug/kg	
85-01-8	Phenanthrene	ND	1000	ug/kg	
129-00-0	Pyrene	1050	1000	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	1000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	52%		25-121%
4165-62-2	Phenol-d5	63%		24-113%
118-79-6	2,4,6-Tribromophenol	79%		19-122%
4165-60-0	Nitrobenzene-d5	61%		23-120%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-012		
Lab Sample ID:	F4281-22	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	71.7
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001976.D	4	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND	930	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	1900	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	840	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	1900	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	4600	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	1900	ug/kg	
95-48-7	2-Methylphenol	ND	930	ug/kg	
	3&4-Methylphenol	ND	930	ug/kg	
88-75-5	2-Nitrophenol	ND	930	ug/kg	
100-02-7	4-Nitrophenol	ND	4600	ug/kg	
87-86-5	Pentachlorophenol	ND	4600	ug/kg	
108-95-2	Phenol	ND	930	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	930	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	930	ug/kg	
83-32-9	Acenaphthene	ND	930	ug/kg	
208-96-8	Acenaphthylene	ND	930	ug/kg	
120-12-7	Anthracene	ND	930	ug/kg	
56-55-3	Benzo(a)anthracene	ND	930	ug/kg	
50-32-8	Benzo(a)pyrene	ND	460	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	930	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	930	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	930	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	930	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	930	ug/kg	
91-58-7	2-Chloronaphthalene	ND	930	ug/kg	
106-47-8	4-Chloroaniline	ND	930	ug/kg	
86-74-8	Carbazole	ND	930	ug/kg	
218-01-9	Chrysene	ND	930	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	930	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	930	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	930	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	930	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	930	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	930	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	930	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	930	ug/kg	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-012		
Lab Sample ID:	F4281-22	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	71.7
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001976.D	4	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	930	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	1900	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	460	ug/kg	
132-64-9	Dibenzofuran	ND	930	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	930	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	930	ug/kg	
84-66-2	Diethyl phthalate	ND	930	ug/kg	
131-11-3	Dimethyl phthalate	ND	930	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	649	930	ug/kg	J
206-44-0	Fluoranthene	ND	930	ug/kg	
86-73-7	Fluorene	ND	930	ug/kg	
118-74-1	Hexachlorobenzene	ND	930	ug/kg	
87-68-3	Hexachlorobutadiene	ND	930	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	930	ug/kg	
67-72-1	Hexachloroethane	ND	930	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	930	ug/kg	
78-59-1	Isophorone	ND	930	ug/kg	
90-12-0	1-Methylnaphthalene	ND	930	ug/kg	
91-57-6	2-Methylnaphthalene	ND	930	ug/kg	
88-74-4	2-Nitroaniline	ND	930	ug/kg	
99-09-2	3-Nitroaniline	ND	930	ug/kg	
100-01-6	4-Nitroaniline	ND	930	ug/kg	
91-20-3	Naphthalene	ND	930	ug/kg	
98-95-3	Nitrobenzene	ND	930	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	330	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	930	ug/kg	
85-01-8	Phenanthrene	ND	930	ug/kg	
129-00-0	Pyrene	ND	930	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	930	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	65%		25-121%
4165-62-2	Phenol-d5	72%		24-113%
118-79-6	2,4,6-Tribromophenol	83%		19-122%
4165-60-0	Nitrobenzene-d5	72%		23-120%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-012		
Lab Sample ID:	F4281-22	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	71.7
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001976.D	4	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	81%		30-115%
1718-51-0	Terphenyl-d14	74%		18-137%

(a) Dilution required due to matrix interference; extract was viscous.

266

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-014		
Lab Sample ID:	F4281-24	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	69.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001958.D	4	06/18/99	ME	06/17/99	OP853	SL121
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND	960	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	1900	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	860	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	1900	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	4800	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	1900	ug/kg	
95-48-7	2-Methylphenol	ND	960	ug/kg	
	3&4-Methylphenol	ND	960	ug/kg	
88-75-5	2-Nitrophenol	ND	960	ug/kg	
100-02-7	4-Nitrophenol	ND	4800	ug/kg	
87-86-5	Pentachlorophenol	ND	4800	ug/kg	
108-95-2	Phenol	ND	960	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	960	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	960	ug/kg	
83-32-9	Acenaphthene	ND	960	ug/kg	
208-96-8	Acenaphthylene	ND	960	ug/kg	
120-12-7	Anthracene	ND	960	ug/kg	
56-55-3	Benzo(a)anthracene	ND	960	ug/kg	
50-32-8	Benzo(a)pyrene	234	480	ug/kg	J
205-99-2	Benzo(b)fluoranthene	ND	960	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	960	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	960	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	960	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	960	ug/kg	
91-58-7	2-Chloronaphthalene	ND	960	ug/kg	
106-47-8	4-Chloroaniline	ND	960	ug/kg	
86-74-8	Carbazole	ND	960	ug/kg	
218-01-9	Chrysene	ND	960	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	960	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	960	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	960	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	960	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	960	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	960	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	960	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	960	ug/kg	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-014		
Lab Sample ID:	F4281-24	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	69.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001958.D	4	06/18/99	ME	06/17/99	OP853	SL121
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	960	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	1900	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	480	ug/kg	
132-64-9	Dibenzofuran	ND	960	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	960	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	960	ug/kg	
84-66-2	Diethyl phthalate	ND	960	ug/kg	
131-11-3	Dimethyl phthalate	ND	960	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	3490	960	ug/kg	
206-44-0	Fluoranthene	ND	960	ug/kg	
86-73-7	Fluorene	ND	960	ug/kg	
118-74-1	Hexachlorobenzene	ND	960	ug/kg	
87-68-3	Hexachlorobutadiene	ND	960	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	960	ug/kg	
67-72-1	Hexachloroethane	ND	960	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	960	ug/kg	
78-59-1	Isophorone	ND	960	ug/kg	
90-12-0	1-Methylnaphthalene	ND	960	ug/kg	
91-57-6	2-Methylnaphthalene	ND	960	ug/kg	
88-74-4	2-Nitroaniline	ND	960	ug/kg	
99-09-2	3-Nitroaniline	ND	960	ug/kg	
100-01-6	4-Nitroaniline	ND	960	ug/kg	
91-20-3	Naphthalene	ND	960	ug/kg	
98-95-3	Nitrobenzene	ND	960	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	340	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	960	ug/kg	
85-01-8	Phenanthrene	ND	960	ug/kg	
129-00-0	Pyrene	ND	960	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	960	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	65%		25-121%
4165-62-2	Phenol-d5	84%		24-113%
118-79-6	2,4,6-Tribromophenol	88%		19-122%
4165-60-0	Nitrobenzene-d5	75%		23-120%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-014		
Lab Sample ID:	F4281-24	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	69.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001958.D	4	06/18/99	ME	06/17/99	OP853	SL121
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	86%		30-115%
1718-51-0	Terphenyl-d14	122%		18-137%

(a) Dilution required due to matrix interference; extract was viscous.

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-017		
Lab Sample ID:	F4281-28	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	51.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001977.D	4	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND	1300	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	2600	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	1200	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	2600	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	6400	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	2600	ug/kg	
95-48-7	2-Methylphenol	ND	1300	ug/kg	
	3&4-Methylphenol	ND	1300	ug/kg	
88-75-5	2-Nitrophenol	ND	1300	ug/kg	
100-02-7	4-Nitrophenol	ND	6400	ug/kg	
87-86-5	Pentachlorophenol	ND	6400	ug/kg	
108-95-2	Phenol	ND	1300	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	1300	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	1300	ug/kg	
83-32-9	Acenaphthene	ND	1300	ug/kg	
208-96-8	Acenaphthylene	ND	1300	ug/kg	
120-12-7	Anthracene	ND	1300	ug/kg	
56-55-3	Benzo(a)anthracene	ND	1300	ug/kg	
50-32-8	Benzo(a)pyrene	390	640	ug/kg	J
205-99-2	Benzo(b)fluoranthene	ND	1300	ug/kg	
191-24-2	Benzo(g,h,i)perylene	642	1300	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	1300	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	1300	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	1300	ug/kg	
91-58-7	2-Chloronaphthalene	ND	1300	ug/kg	
106-47-8	4-Chloroaniline	ND	1300	ug/kg	
86-74-8	Carbazole	ND	1300	ug/kg	
218-01-9	Chrysene	ND	1300	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	1300	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	1300	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	1300	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	1300	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1300	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1300	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1300	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	1300	ug/kg	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-017		
Lab Sample ID:	F4281-28	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	51.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001977.D	4	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	1300	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	2600	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	640	ug/kg	
132-64-9	Dibenzofuran	ND	1300	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	1300	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	1300	ug/kg	
84-66-2	Diethyl phthalate	ND	1300	ug/kg	
131-11-3	Dimethyl phthalate	ND	1300	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	889	1300	ug/kg	J
206-44-0	Fluoranthene	ND	1300	ug/kg	
86-73-7	Fluorene	ND	1300	ug/kg	
118-74-1	Hexachlorobenzene	ND	1300	ug/kg	
87-68-3	Hexachlorobutadiene	ND	1300	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	1300	ug/kg	
67-72-1	Hexachloroethane	ND	1300	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	626	1300	ug/kg	J
78-59-1	Isophorone	ND	1300	ug/kg	
90-12-0	1-Methylnaphthalene	ND	1300	ug/kg	
91-57-6	2-Methylnaphthalene	ND	1300	ug/kg	
88-74-4	2-Nitroaniline	ND	1300	ug/kg	
99-09-2	3-Nitroaniline	ND	1300	ug/kg	
100-01-6	4-Nitroaniline	ND	1300	ug/kg	
91-20-3	Naphthalene	ND	1300	ug/kg	
98-95-3	Nitrobenzene	ND	1300	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	460	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	1300	ug/kg	
85-01-8	Phenanthrene	ND	1300	ug/kg	
129-00-0	Pyrene	ND	1300	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	1300	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	63%		25-121%
4165-62-2	Phenol-d5	74%		24-113%
118-79-6	2,4,6-Tribromophenol	89%		19-122%
4165-60-0	Nitrobenzene-d5	72%		23-120%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-017		
Lab Sample ID:	F4281-28	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	51.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001977.D	4	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	88%		30-115%
1718-51-0	Terphenyl-d14	83%		18-137%

(a) Dilution required due to matrix interference; extract was viscous.

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-023		
Lab Sample ID:	F4281-14	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	68.4
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001974.D	4	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND	980	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	2000	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	880	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	2000	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	4900	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	2000	ug/kg	
95-48-7	2-Methylphenol	ND	980	ug/kg	
	3&4-Methylphenol	ND	980	ug/kg	
88-75-5	2-Nitrophenol	ND	980	ug/kg	
100-02-7	4-Nitrophenol	ND	4900	ug/kg	
87-86-5	Pentachlorophenol	ND	4900	ug/kg	
108-95-2	Phenol	ND	980	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	980	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	980	ug/kg	
83-32-9	Acenaphthene	ND	980	ug/kg	
208-96-8	Acenaphthylene	ND	980	ug/kg	
120-12-7	Anthracene	ND	980	ug/kg	
56-55-3	Benzo(a)anthracene	ND	980	ug/kg	
50-32-8	Benzo(a)pyrene	353	490	ug/kg	J
205-99-2	Benzo(b)fluoranthene	ND	980	ug/kg	
191-24-2	Benzo(g,h,i)perylene	583	980	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	980	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	980	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	980	ug/kg	
91-58-7	2-Chloronaphthalene	ND	980	ug/kg	
106-47-8	4-Chloroaniline	ND	980	ug/kg	
86-74-8	Carbazole	ND	980	ug/kg	
218-01-9	Chrysene	ND	980	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	980	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	980	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	980	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	980	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	980	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	980	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	980	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	980	ug/kg	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-023		
Lab Sample ID:	F4281-14	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	68.4
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001974.D	4	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	980	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	2000	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	490	ug/kg	
132-64-9	Dibenzofuran	ND	980	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	980	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	980	ug/kg	
84-66-2	Diethyl phthalate	ND	980	ug/kg	
131-11-3	Dimethyl phthalate	ND	980	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	980	ug/kg	
206-44-0	Fluoranthene	632	980	ug/kg	J
86-73-7	Fluorene	ND	980	ug/kg	
118-74-1	Hexachlorobenzene	ND	980	ug/kg	
87-68-3	Hexachlorobutadiene	ND	980	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	980	ug/kg	
67-72-1	Hexachloroethane	ND	980	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	536	980	ug/kg	J
78-59-1	Isophorone	ND	980	ug/kg	
90-12-0	1-Methylnaphthalene	ND	980	ug/kg	
91-57-6	2-Methylnaphthalene	ND	980	ug/kg	
88-74-4	2-Nitroaniline	ND	980	ug/kg	
99-09-2	3-Nitroaniline	ND	980	ug/kg	
100-01-6	4-Nitroaniline	ND	980	ug/kg	
91-20-3	Naphthalene	ND	980	ug/kg	
98-95-3	Nitrobenzene	ND	980	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	350	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	980	ug/kg	
85-01-8	Phenanthrene	ND	980	ug/kg	
129-00-0	Pyrene	458	980	ug/kg	J
120-82-1	1,2,4-Trichlorobenzene	ND	980	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	65%		25-121%
4165-62-2	Phenol-d5	74%		24-113%
118-79-6	2,4,6-Tribromophenol	87%		19-122%
4165-60-0	Nitrobenzene-d5	72%		23-120%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-023		
Lab Sample ID:	F4281-14	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	68.4
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001974.D	4	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	81%		30-115%
1718-51-0	Terphenyl-d14	83%		18-137%

(a) Dilution required due to matrix interference; extract was viscous.

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-024		
Lab Sample ID:	F4281-16	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	64.8
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001975.D	4	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND	1000	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	2100	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	930	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	2100	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	5200	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	2100	ug/kg	
95-48-7	2-Methylphenol	ND	1000	ug/kg	
	3&4-Methylphenol	ND	1000	ug/kg	
88-75-5	2-Nitrophenol	ND	1000	ug/kg	
100-02-7	4-Nitrophenol	ND	5200	ug/kg	
87-86-5	Pentachlorophenol	ND	5200	ug/kg	
108-95-2	Phenol	ND	1000	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	1000	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	1000	ug/kg	
83-32-9	Acenaphthene	ND	1000	ug/kg	
208-96-8	Acenaphthylene	ND	1000	ug/kg	
120-12-7	Anthracene	ND	1000	ug/kg	
56-55-3	Benzo(a)anthracene	ND	1000	ug/kg	
50-32-8	Benzo(a)pyrene	339	520	ug/kg	J
205-99-2	Benzo(b)fluoranthene	ND	1000	ug/kg	
191-24-2	Benzo(g,h,i)perylene	547	1000	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	1000	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	1000	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	1000	ug/kg	
91-58-7	2-Chloronaphthalene	ND	1000	ug/kg	
106-47-8	4-Chloroaniline	ND	1000	ug/kg	
86-74-8	Carbazole	ND	1000	ug/kg	
218-01-9	Chrysene	ND	1000	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	1000	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	1000	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	1000	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	1000	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1000	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1000	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1000	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	1000	ug/kg	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-024		
Lab Sample ID:	F4281-16	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	64.8
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001975.D	4	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	1000	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	2100	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	520	ug/kg	
132-64-9	Dibenzofuran	ND	1000	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	1000	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	1000	ug/kg	
84-66-2	Diethyl phthalate	ND	1000	ug/kg	
131-11-3	Dimethyl phthalate	ND	1000	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	1000	ug/kg	
206-44-0	Fluoranthene	581	1000	ug/kg	J
86-73-7	Fluorene	ND	1000	ug/kg	
118-74-1	Hexachlorobenzene	ND	1000	ug/kg	
87-68-3	Hexachlorobutadiene	ND	1000	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	1000	ug/kg	
67-72-1	Hexachloroethane	ND	1000	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	466	1000	ug/kg	J
78-59-1	Isophorone	ND	1000	ug/kg	
90-12-0	1-Methylnaphthalene	ND	1000	ug/kg	
91-57-6	2-Methylnaphthalene	ND	1000	ug/kg	
88-74-4	2-Nitroaniline	ND	1000	ug/kg	
99-09-2	3-Nitroaniline	ND	1000	ug/kg	
100-01-6	4-Nitroaniline	ND	1000	ug/kg	
91-20-3	Naphthalene	ND	1000	ug/kg	
98-95-3	Nitrobenzene	ND	1000	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	370	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	1000	ug/kg	
85-01-8	Phenanthrene	ND	1000	ug/kg	
129-00-0	Pyrene	ND	1000	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	1000	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	70%		25-121%
4165-62-2	Phenol-d5	79%		24-113%
118-79-6	2,4,6-Tribromophenol	91%		19-122%
4165-60-0	Nitrobenzene-d5	77%		23-120%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-024		
Lab Sample ID:	F4281-16	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	64.8
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L001975.D	4	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	87%		30-115%
1718-51-0	Terphenyl-d14	86%		18-137%

(a) Dilution required due to matrix interference; extract was viscous.

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-026		
Lab Sample ID:	F4281-17	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	92.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001942.D	1	06/18/99	ME	06/17/99	OP853	SL121
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND	180	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	360	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	160	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	360	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	900	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	360	ug/kg	
95-48-7	2-Methylphenol	ND	180	ug/kg	
	3&4-Methylphenol	ND	180	ug/kg	
88-75-5	2-Nitrophenol	ND	180	ug/kg	
100-02-7	4-Nitrophenol	ND	900	ug/kg	
87-86-5	Pentachlorophenol	ND	900	ug/kg	
108-95-2	Phenol	ND	180	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	ug/kg	
83-32-9	Acenaphthene	ND	180	ug/kg	
208-96-8	Acenaphthylene	ND	180	ug/kg	
120-12-7	Anthracene	ND	180	ug/kg	
56-55-3	Benzo(a)anthracene	ND	180	ug/kg	
50-32-8	Benzo(a)pyrene	ND	90	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	180	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	180	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	180	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	180	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	180	ug/kg	
91-58-7	2-Chloronaphthalene	ND	180	ug/kg	
106-47-8	4-Chloroaniline	ND	180	ug/kg	
86-74-8	Carbazole	ND	180	ug/kg	
218-01-9	Chrysene	ND	180	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	180	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	180	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	180	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	180	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	180	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	180	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	180	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	180	ug/kg	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-026		
Lab Sample ID:	F4281-17	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	92.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001942.D	1	06/18/99	ME	06/17/99	OP853	SL121
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	180	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	360	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	90	ug/kg	
132-64-9	Dibenzofuran	ND	180	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	180	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	180	ug/kg	
84-66-2	Diethyl phthalate	ND	180	ug/kg	
131-11-3	Dimethyl phthalate	ND	180	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	180	ug/kg	
206-44-0	Fluoranthene	ND	180	ug/kg	
86-73-7	Fluorene	ND	180	ug/kg	
118-74-1	Hexachlorobenzene	ND	180	ug/kg	
87-68-3	Hexachlorobutadiene	ND	180	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	180	ug/kg	
67-72-1	Hexachloroethane	ND	180	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	180	ug/kg	
78-59-1	Isophorone	ND	180	ug/kg	
90-12-0	1-Methylnaphthalene	ND	180	ug/kg	
91-57-6	2-Methylnaphthalene	ND	180	ug/kg	
88-74-4	2-Nitroaniline	ND	180	ug/kg	
99-09-2	3-Nitroaniline	ND	180	ug/kg	
100-01-6	4-Nitroaniline	ND	180	ug/kg	
91-20-3	Naphthalene	ND	180	ug/kg	
98-95-3	Nitrobenzene	ND	180	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	65	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	ug/kg	
85-01-8	Phenanthrene	ND	180	ug/kg	
129-00-0	Pyrene	ND	180	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	180	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	94%		25-121%
4165-62-2	Phenol-d5	100%		24-113%
118-79-6	2,4,6-Tribromophenol	110%		19-122%
4165-60-0	Nitrobenzene-d5	100%		23-120%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-026		
Lab Sample ID:	F4281-17	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	92.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001942.D	1	06/18/99	ME	06/17/99	OP853	SL121
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	104%		30-115%
1718-51-0	Terphenyl-d14	105%		18-137%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-028		
Lab Sample ID:	F4281-19	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	94.7
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001941.D	1	06/18/99	ME	06/17/99	OP853	SL121
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND	180	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	350	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	160	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	350	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	880	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	350	ug/kg	
95-48-7	2-Methylphenol	ND	180	ug/kg	
	3&4-Methylphenol	ND	180	ug/kg	
88-75-5	2-Nitrophenol	ND	180	ug/kg	
100-02-7	4-Nitrophenol	ND	880	ug/kg	
87-86-5	Pentachlorophenol	ND	880	ug/kg	
108-95-2	Phenol	ND	180	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	180	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	180	ug/kg	
83-32-9	Acenaphthene	ND	180	ug/kg	
208-96-8	Acenaphthylene	ND	180	ug/kg	
120-12-7	Anthracene	ND	180	ug/kg	
56-55-3	Benzo(a)anthracene	ND	180	ug/kg	
50-32-8	Benzo(a)pyrene	140	88	ug/kg	
205-99-2	Benzo(b)fluoranthene	126	180	ug/kg	J
191-24-2	Benzo(g,h,i)perylene	156	180	ug/kg	J
207-08-9	Benzo(k)fluoranthene	83.4	180	ug/kg	J
101-55-3	4-Bromophenyl phenyl ether	ND	180	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	180	ug/kg	
91-58-7	2-Chloronaphthalene	ND	180	ug/kg	
106-47-8	4-Chloroaniline	ND	180	ug/kg	
86-74-8	Carbazole	ND	180	ug/kg	
218-01-9	Chrysene	ND	180	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	180	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	180	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	180	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	180	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	180	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	180	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	180	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	180	ug/kg	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-028		
Lab Sample ID:	F4281-19	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	94.7
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001941.D	1	06/18/99	ME	06/17/99	OP853	SL121
Run #2	.						

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	180	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	350	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	88	ug/kg	
132-64-9	Dibenzofuran	ND	180	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	180	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	180	ug/kg	
84-66-2	Diethyl phthalate	ND	180	ug/kg	
131-11-3	Dimethyl phthalate	ND	180	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	180	ug/kg	
206-44-0	Fluoranthene	ND	180	ug/kg	
86-73-7	Fluorene	ND	180	ug/kg	
118-74-1	Hexachlorobenzene	ND	180	ug/kg	
87-68-3	Hexachlorobutadiene	ND	180	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	180	ug/kg	
67-72-1	Hexachloroethane	ND	180	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	129	180	ug/kg	J
78-59-1	Isophorone	ND	180	ug/kg	
90-12-0	1-Methylnaphthalene	ND	180	ug/kg	
91-57-6	2-Methylnaphthalene	ND	180	ug/kg	
88-74-4	2-Nitroaniline	ND	180	ug/kg	
99-09-2	3-Nitroaniline	ND	180	ug/kg	
100-01-6	4-Nitroaniline	ND	180	ug/kg	
91-20-3	Naphthalene	ND	180	ug/kg	
98-95-3	Nitrobenzene	ND	180	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	63	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	180	ug/kg	
85-01-8	Phenanthrene	ND	180	ug/kg	
129-00-0	Pyrene	ND	180	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	180	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	92%		25-121%
4165-62-2	Phenol-d5	100%		24-113%
118-79-6	2,4,6-Tribromophenol	107%		19-122%
4165-60-0	Nitrobenzene-d5	98%		23-120%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-028		
Lab Sample ID:	F4281-19	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	94.7
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001941.D	1	06/18/99	ME	06/17/99	OP853	SL121
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	98%		30-115%
1718-51-0	Terphenyl-d14	110%		18-137%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-DU01		
Lab Sample ID:	F4281-32	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	71.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001978.D	1	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND	230	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	470	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	210	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	470	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1200	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	470	ug/kg	
95-48-7	2-Methylphenol	ND	230	ug/kg	
	3&4-Methylphenol	ND	230	ug/kg	
88-75-5	2-Nitrophenol	ND	230	ug/kg	
100-02-7	4-Nitrophenol	ND	1200	ug/kg	
87-86-5	Pentachlorophenol	ND	1200	ug/kg	
108-95-2	Phenol	ND	230	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	230	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	230	ug/kg	
83-32-9	Acenaphthene	ND	230	ug/kg	
208-96-8	Acenaphthylene	ND	230	ug/kg	
120-12-7	Anthracene	ND	230	ug/kg	
56-55-3	Benzo(a)anthracene	ND	230	ug/kg	
50-32-8	Benzo(a)pyrene	69.6	120	ug/kg	J
205-99-2	Benzo(b)fluoranthene	ND	230	ug/kg	
191-24-2	Benzo(g,h,i)perylene	128	230	ug/kg	J
207-08-9	Benzo(k)fluoranthene	ND	230	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	230	ug/kg	
85-68-7	Butyl benzyl phthalate	203	230	ug/kg	J
91-58-7	2-Chloronaphthalene	ND	230	ug/kg	
106-47-8	4-Chloroaniline	ND	230	ug/kg	
86-74-8	Carbazole	ND	230	ug/kg	
218-01-9	Chrysene	ND	230	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	230	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	230	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	230	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	230	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	230	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	230	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	230	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	230	ug/kg	

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-DU01		
Lab Sample ID:	F4281-32	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	71.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001978.D	1	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	230	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	470	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	120	ug/kg	
132-64-9	Dibenzofuran	ND	230	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	230	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	230	ug/kg	
84-66-2	Diethyl phthalate	ND	230	ug/kg	
131-11-3	Dimethyl phthalate	ND	230	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	1750	230	ug/kg	
206-44-0	Fluoranthene	ND	230	ug/kg	
86-73-7	Fluorene	ND	230	ug/kg	
118-74-1	Hexachlorobenzene	ND	230	ug/kg	
87-68-3	Hexachlorobutadiene	ND	230	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	230	ug/kg	
67-72-1	Hexachloroethane	ND	230	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	230	ug/kg	
78-59-1	Isophorone	ND	230	ug/kg	
90-12-0	1-Methylnaphthalene	ND	230	ug/kg	
91-57-6	2-Methylnaphthalene	ND	230	ug/kg	
88-74-4	2-Nitroaniline	ND	230	ug/kg	
99-09-2	3-Nitroaniline	ND	230	ug/kg	
100-01-6	4-Nitroaniline	ND	230	ug/kg	
91-20-3	Naphthalene	ND	230	ug/kg	
98-95-3	Nitrobenzene	ND	230	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	84	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	230	ug/kg	
85-01-8	Phenanthrene	ND	230	ug/kg	
129-00-0	Pyrene	ND	230	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	230	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	82%		25-121%
4165-62-2	Phenol-d5	91%		24-113%
118-79-6	2,4,6-Tribromophenol	116%		19-122%
4165-60-0	Nitrobenzene-d5	113%		23-120%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-DU01		
Lab Sample ID:	F4281-32	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8270C	**Percent Solids:**	71.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L001978.D	1	06/19/99	ME	06/17/99	OP853	SL122
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	110%		30-115%
1718-51-0	Terphenyl-d14	90%		18-137%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-001		
Lab Sample ID:	F4281-1	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	EPA 8310	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/16/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	0.15	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.15	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.15	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.15	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.15	ug/l	
218-01-9	Chrysene	ND	0.15	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.25	ug/l	
206-44-0	Fluoranthene	ND	0.20	ug/l	
86-73-7	Fluorene	ND	0.20	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.15	ug/l	
91-20-3	Naphthalene	ND	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	ug/l	
85-01-8	Phenanthrene	ND	0.15	ug/l	
129-00-0	Pyrene	ND	0.20	ug/l	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4281-1

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990696 SAS No.: _____ SDG No.: 9905468

Matrix: (soil/water) WATER Lab Sample ID: 9905468

Sample wt/vol: 975 (g/ml) ML Lab File ID: LA1R647U.D

% Moisture: _____ decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) _____ Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/16/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
91-20-3	NAPHTHALENE	1.0	U
208-96-8	ACENAPHTHYLENE	2.1	U
90-12-0	1-METHYL-NAPHTHALENE	1.0	U
91-57-6	2-METHYL-NAPHTHALENE	1.0	U
83-32-9	ACENAPHTHENE	1.0	U
86-73-7	FLUORENE	0.21	U
85-01-8	PHENANTHRENE	0.15	U
120-12-7	ANTHRACENE	0.15	U
206-44-0	FLUORANTHENE	0.21	U
129-00-0	PYRENE	0.21	U
56-55-3	BENZO[a]ANTHRACENE	0.15	U
218-01-9	CHRYSENE	0.15	U
205-99-2	BENZO[b]FLUORANTHENE	0.21	U
207-08-9	BENZO[k]FLUORANTHENE	0.15	U
50-32-8	BENZO[a]PYRENE	0.15	U
56-55-3	DIBENZO[a,h]ANTHRACENE	0.26	U
191-24-2	BENZO[g,h,i]PERYLENE	0.21	U
193-39-5	INDENO[1,2,3-cd]PYRENE	0.15	U

Report of Analysis

Client Sample ID:	CEF-P39-SW-004		
Lab Sample ID:	F4281-5	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	EPA 8310	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/16/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	0.15	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.15	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.15	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.15	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.15	ug/l	
218-01-9	Chrysene	ND	0.20	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.25	ug/l	
206-44-0	Fluoranthene	ND	0.20	ug/l	
86-73-7	Fluorene	ND	0.20	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.15	ug/l	
91-20-3	Naphthalene	ND	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	ug/l	
85-01-8	Phenanthrene	ND	0.15	ug/l	
129-00-0	Pyrene	ND	0.20	ug/l	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4281-5

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990696 SAS No.: _____ SDG No.: 9905468

Matrix: (soil/water) WATER Lab Sample ID: 9905470

Sample wt/vol: 995 (g/ml) ML Lab File ID: LA1R648U.D

% Moisture: _____ decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) _____ Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/16/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
91-20-3	NAPHTHALENE	1.0	U
208-96-8	ACENAPHTHYLENE	2.0	U
90-12-0	1-METHYL-NAPHTHALENE	1.0	U
91-57-6	2-METHYL-NAPHTHALENE	1.0	U
83-32-9	ACENAPHTHENE	1.0	U
86-73-7	FLUORENE	0.20	U
85-01-8	PHENANTHRENE	0.15	U
120-12-7	ANTHRACENE	0.15	U
206-44-0	FLUORANTHENE	0.20	U
129-00-0	PYRENE	0.20	U
56-55-3	BENZO[a]ANTHRACENE	0.15	U
218-01-9	CHRYSENE	0.15	U
205-99-2	BENZO[b]FLUORANTHENE	0.20	U
207-08-9	BENZO[k]FLUORANTHENE	0.15	U
50-32-8	BENZO[a]PYRENE	0.15	U
56-55-3	DIBENZO[a,h]ANTHRACENE	0.25	U
191-24-2	BENZO[g,h,i]PERYLENE	0.20	U
193-39-5	INDENO[1,2,3-cd]PYRENE	0.15	U

Report of Analysis

Client Sample ID:	CEF-P39-SW-007		
Lab Sample ID:	F4281-8	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	EPA 8310	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/16/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	0.15	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.15	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.15	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.15	ug/l	
218-01-9	Chrysene	ND	0.15	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.25	ug/l	
206-44-0	Fluoranthene	ND	0.20	ug/l	
86-73-7	Fluorene	ND	0.20	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.15	ug/l	
91-20-3	Naphthalene	ND	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	ug/l	
85-01-8	Phenanthrene	ND	0.15	ug/l	
129-00-0	Pyrene	ND	0.20	ug/l	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4281-8

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990696 SAS No.: _____ SDG No.: 9905468

Matrix: (soil/water) WATER Lab Sample ID: 9905472

Sample wt/vol: 990 (g/ml) ML Lab File ID: LA1R649U.D

% Moisture: _____ decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) _____ Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/16/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
91-20-3	NAPHTHALENE	1.0	U
208-96-8	ACENAPHTHYLENE	2.0	U
90-12-0	1-METHYL-NAPHTHALENE	1.0	U
91-57-6	2-METHYL-NAPHTHALENE	1.0	U
83-32-9	ACENAPHTHENE	1.0	U
86-73-7	FLUORENE	0.20	U
85-01-8	PHENANTHRENE	0.15	U
120-12-7	ANTHRACENE	0.15	U
206-44-0	FLUORANTHENE	0.20	U
129-00-0	PYRENE	0.20	U
56-55-3	BENZO[a]ANTHRACENE	0.15	U
218-01-9	CHRYSENE	0.15	U
205-99-2	BENZO[b]FLUORANTHENE	0.20	U
207-08-9	BENZO[k]FLUORANTHENE	0.15	U
50-32-8	BENZO[a]PYRENE	0.15	U
56-55-3	DIBENZO[a,h]ANTHRACENE	0.25	U
191-24-2	BENZO[g,h,i]PERYLENE	0.20	U
193-39-5	INDENO[1,2,3-cd]PYRENE	0.15	U

Report of Analysis

Client Sample ID:	CEF-P39-SW-010		
Lab Sample ID:	F4281-12	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	EPA 8310	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/16/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	0.15	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.15	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.15	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.15	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.15	ug/l	
218-01-9	Chrysene	ND	0.15	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.25	ug/l	
206-44-0	Fluoranthene	ND	0.15	ug/l	
86-73-7	Fluorene	ND	0.20	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.15	ug/l	
91-20-3	Naphthalene	ND	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	ug/l	
85-01-8	Phenanthrene	ND	0.15	ug/l	
129-00-0	Pyrene	ND	0.20	ug/l	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4281-12

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990696 SAS No.: _____ SDG No.: 9905468

Matrix: (soil/water) WATER Lab Sample ID: 9905474

Sample wt/vol: 1000 (g/ml) ML Lab File ID: LA1R650U.D

% Moisture: _____ decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) _____ Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/16/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
91-20-3	NAPHTHALENE	1.0	U
208-96-8	ACENAPHTHYLENE	2.0	U
90-12-0	1-METHYL-NAPHTHALENE	1.0	U
91-57-6	2-METHYL-NAPHTHALENE	1.0	U
83-32-9	ACENAPHTHENE	1.0	U
86-73-7	FLUORENE	0.20	U
85-01-8	PHENANTHRENE	0.15	U
120-12-7	ANTHRACENE	0.15	U
206-44-0	FLUORANTHENE	0.20	U
129-00-0	PYRENE	0.20	U
56-55-3	BENZO[a]ANTHRACENE	0.15	U
218-01-9	CHRYSENE	0.15	U
205-99-2	BENZO[b]FLUORANTHENE	0.20	U
207-08-9	BENZO[k]FLUORANTHENE	0.15	U
50-32-8	BENZO[a]PYRENE	0.15	U
56-55-3	DIBENZO[a,h]ANTHRACENE	0.25	U
191-24-2	BENZO[g,h,i]PERYLENE	0.20	U
193-39-5	INDENO[1,2,3-cd]PYRENE	0.15	U

Report of Analysis

Client Sample ID:	CEF-P39-SW-013		
Lab Sample ID:	F4281-23	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	EPA 8310	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/16/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	0.15	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.15	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.15	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.15	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.15	ug/l	
218-01-9	Chrysene	ND	0.15	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.25	ug/l	
206-44-0	Fluoranthene	ND	0.20	ug/l	
86-73-7	Fluorene	ND	0.20	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.15	ug/l	
91-20-3	Naphthalene	ND	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	ug/l	
85-01-8	Phenanthrene	ND	0.15	ug/l	
129-00-0	Pyrene	ND	0.20	ug/l	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4281-23

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990696 SAS No.: _____ SDG No.: 9905468

Matrix: (soil/water) WATER Lab Sample ID: 9905481

Sample wt/vol: 995 (g/ml) ML Lab File ID: LA1R652U.D

% Moisture: _____ decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) _____ Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/17/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
91-20-3	NAPHTHALENE	1.0	U
208-96-8	ACENAPHTHYLENE	2.0	U
90-12-0	1-METHYL-NAPHTHALENE	1.0	U
91-57-6	2-METHYL-NAPHTHALENE	1.0	U
83-32-9	ACENAPHTHENE	1.0	U
86-73-7	FLUORENE	0.20	U
85-01-8	PHENANTHRENE	0.15	U
120-12-7	ANTHRACENE	0.15	U
206-44-0	FLUORANTHENE	0.20	U
129-00-0	PYRENE	0.20	U
56-55-3	BENZO[a]ANTHRACENE	0.15	U
218-01-9	CHRYSENE	0.15	U
205-99-2	BENZO[b]FLUORANTHENE	0.20	U
207-08-9	BENZO[k]FLUORANTHENE	0.15	U
50-32-8	BENZO[a]PYRENE	0.15	U
56-55-3	DIBENZO[a,h]ANTHRACENE	0.25	U
191-24-2	BENZO[g,h,i]PERYLENE	0.20	U
193-39-5	INDENO[1,2,3-cd]PYRENE	0.15	U

Report of Analysis

Client Sample ID:	CEF-P39-SW-016		
Lab Sample ID:	F4281-27	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	EPA 8310	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/16/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	0.15	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.15	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.15	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.15	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.15	ug/l	
218-01-9	Chrysene	ND	0.15	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.25	ug/l	
206-44-0	Fluoranthene	ND	0.15	ug/l	
86-73-7	Fluorene	ND	0.20	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.15	ug/l	
91-20-3	Naphthalene	ND	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	ug/l	
85-01-8	Phenanthrene	ND	0.15	ug/l	
129-00-0	Pyrene	ND	0.20	ug/l	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4281-27

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990696 SAS No.: SDG No.: 9905468

Matrix: (soil/water) WATER Lab Sample ID: 9905483

Sample wt/vol: 990 (g/ml) ML Lab File ID: LA1R656U.D

% Moisture: decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/17/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
91-20-3	NAPHTHALENE	1.0	U
208-96-8	ACENAPHTHYLENE	2.0	U
90-12-0	1-METHYL-NAPHTHALENE	1.0	U
91-57-6	2-METHYL-NAPHTHALENE	1.0	U
83-32-9	ACENAPHTHENE	1.0	U
86-73-7	FLUORENE	0.20	U
85-01-8	PHENANTHRENE	0.15	U
120-12-7	ANTHRACENE	0.15	U
206-44-0	FLUORANTHENE	0.42	P
129-00-0	PYRENE	0.20	U
56-55-3	BENZO[a]ANTHRACENE	0.15	U
218-01-9	CHRYSENE	0.15	U
205-99-2	BENZO[b]FLUORANTHENE	0.20	U
207-08-9	BENZO[k]FLUORANTHENE	0.15	U
50-32-8	BENZO[a]PYRENE	0.15	U
56-55-3	DIBENZO[a,h]ANTHRACENE	0.25	U
191-24-2	BENZO[g,h,i]PERYLENE	0.20	U
193-39-5	INDENO[1,2,3-cd]PYRENE	0.15	U

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Report of Analysis

Client Sample ID:	CEF-P39-SW-023		
Lab Sample ID:	F4281-15	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	EPA 8310	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/16/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	0.15	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.15	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.15	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.15	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.15	ug/l	
218-01-9	Chrysene	ND	0.15	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.25	ug/l	
206-44-0	Fluoranthene	ND	0.15	ug/l	
86-73-7	Fluorene	ND	0.20	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.15	ug/l	
91-20-3	Naphthalene	ND	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	ug/l	
85-01-8	Phenanthrene	ND	0.15	ug/l	
129-00-0	Pyrene	ND	0.20	ug/l	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4281-15

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990696 SAS No.: _____ SDG No.: 9905468

Matrix: (soil/water) WATER Lab Sample ID: 9905477

Sample wt/vol: 985 (g/ml) ML Lab File ID: LA1R651U.D

% Moisture: _____ decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) _____ Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/16/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
91-20-3	NAPHTHALENE	1.0	U
208-96-8	ACENAPHTHYLENE	2.0	U
90-12-0	1-METHYL-NAPHTHALENE	1.0	U
91-57-6	2-METHYL-NAPHTHALENE	1.0	U
83-32-9	ACENAPHTHENE	1.0	U
86-73-7	FLUORENE	0.20	U
85-01-8	PHENANTHRENE	0.15	U
120-12-7	ANTHRACENE	0.15	U
206-44-0	FLUORANTHENE	0.20	U
129-00-0	PYRENE	0.20	U
56-55-3	BENZO[a]ANTHRACENE	0.15	U
218-01-9	CHRYSENE	0.15	U
205-99-2	BENZO[b]FLUORANTHENE	0.20	U
207-08-9	BENZO[k]FLUORANTHENE	0.15	U
50-32-8	BENZO[a]PYRENE	0.15	U
56-55-3	DIBENZO[a,h]ANTHRACENE	0.25	U
191-24-2	BENZO[g,h,i]PERYLENE	0.20	U
193-39-5	INDENO[1,2,3-cd]PYRENE	0.15	U

Report of Analysis

Client Sample ID:	CEF-P39-SW-DU01		
Lab Sample ID:	F4281-31	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	EPA 8310	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/16/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	ug/l	
208-96-8	Acenaphthylene	ND	2.0	ug/l	
120-12-7	Anthracene	ND	0.15	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.15	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.15	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.15	ug/l	
218-01-9	Chrysene	ND	0.15	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.25	ug/l	
206-44-0	Fluoranthene	0.23	0.20	ug/l	
86-73-7	Fluorene	ND	0.20	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.15	ug/l	
91-20-3	Naphthalene	ND	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	ug/l	
85-01-8	Phenanthrene	ND	0.15	ug/l	
129-00-0	Pyrene	ND	0.20	ug/l	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4281-31

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990696 SAS No.: SDG No.: 9905468

Matrix: (soil/water) WATER Lab Sample ID: 9905485

Sample wt/vol: 990 (g/ml) ML Lab File ID: LA1R657U.D

% Moisture: decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/17/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
91-20-3	NAPHTHALENE	1.0	U
208-96-8	ACENAPHTHYLENE	2.0	U
90-12-0	1-METHYL-NAPHTHALENE	1.0	U
91-57-6	2-METHYL-NAPHTHALENE	1.0	U
83-32-9	ACENAPHTHENE	1.0	U
86-73-7	FLUORENE	0.20	U
85-01-8	PHENANTHRENE	0.15	U
120-12-7	ANTHRACENE	0.15	U
206-44-0	FLUORANTHENE	0.23	
129-00-0	PYRENE	0.20	U
56-55-3	BENZO[a]ANTHRACENE	0.15	U
218-01-9	CHRYSENE	0.15	U
205-99-2	BENZO[b]FLUORANTHENE	0.20	U
207-08-9	BENZO[k]FLUORANTHENE	0.15	U
50-32-8	BENZO[a]PYRENE	0.15	U
56-55-3	DIBENZO[a,h]ANTHRACENE	0.25	U
191-24-2	BENZO[g,h,i]PERYLENE	0.20	U
193-39-5	INDENO[1,2,3-cd]PYRENE	0.15	U

Report of Analysis

Client Sample ID:	CEF-P39-SD-002		
Lab Sample ID:	F4281-2	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	EPA 8310	**Percent Solids:**	45.3
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/16/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	~~2700~~ 260	550	ug/kg	
208-96-8	Acenaphthylene	ND	1100	ug/kg	
120-12-7	Anthracene	490	83	ug/kg	
56-55-3	Benzo(a)anthracene	1200	83	ug/kg	
50-32-8	Benzo(a)pyrene	990	83	ug/kg	
205-99-2	Benzo(b)fluoranthene	1300	83	ug/kg	
191-24-2	Benzo(g,h,i)perylene	650	110	ug/kg	
207-08-9	Benzo(k)fluoranthene	570	83	ug/kg	
218-01-9	Chrysene	950	83	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	130	140	ug/kg	
206-44-0	Fluoranthene	2800	110	ug/kg	
86-73-7	Fluorene	110	110	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	570	83	ug/kg	
91-20-3	Naphthalene	86	550	ug/kg	
90-12-0	1-Methylnaphthalene	73	550	ug/kg	
91-57-6	2-Methylnaphthalene	1300	550	ug/kg	
85-01-8	Phenanthrene	1400	83	ug/kg	
129-00-0	Pyrene	2100	110	ug/kg	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4281-2 DL

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990696 SAS No.: SDG No.: 9905468

Matrix: (soil/water) SOIL Lab Sample ID: 9905469 DL

Sample wt/vol: 30.5 (g/ml) G Lab File ID: LA1R716U.D

% Moisture: 39 decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/19/99

Injection Volume: 1.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
91-20-3	NAPHTHALENE	530	U
208-96-8	ACENAPHTHYLENE	1100	U
90-12-0	1-METHYL-NAPHTHALENE	530	U
91-57-6	2-METHYL-NAPHTHALENE	1300	P D
83-32-9	ACENAPHTHENE	2700	P D
86-73-7	FLUORENE	110	P D
85-01-8	PHENANTHRENE	1400	D
120-12-7	ANTHRACENE	490	D
206-44-0	FLUORANTHENE	2800	D
129-00-0	PYRENE	2100	D
56-55-3	BENZO[a]ANTHRACENE	1200	D
218-01-9	CHRYSENE	950	P D
205-99-2	BENZO[b]FLUORANTHENE	1300	D
207-08-9	BENZO[k]FLUORANTHENE	570	D
50-32-8	BENZO[a]PYRENE	990	D
53-70-3	DIBENZO[a,h]ANTHRACENE	130	U
191-24-2	BENZO[g,h,i]PERYLENE	650	D
193-39-5	INDENO[1,2,3-cd]PYRENE	570	D

Report of Analysis

Client Sample ID:	CEF-P39-SD-005		
Lab Sample ID:	F4281-6	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	EPA 8310	**Percent Solids:**	68.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/16/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	44	ug/kg	
208-96-8	Acenaphthylene	ND	89	ug/kg	
120-12-7	Anthracene	ND	6.6	ug/kg	
56-55-3	Benzo(a)anthracene	ND	6.6	ug/kg	
50-32-8	Benzo(a)pyrene	13	6.6	ug/kg	
205-99-2	Benzo(b)fluoranthene	14	6.6	ug/kg	
191-24-2	Benzo(g,h,i)perylene	25	8.9	ug/kg	
207-08-9	Benzo(k)fluoranthene	7.5	6.6	ug/kg	
218-01-9	Chrysene	7.5	6.6	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	11	ug/kg	
206-44-0	Fluoranthene	24	8.9	ug/kg	
86-73-7	Fluorene	ND	8.9	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	21	6.6	ug/kg	
91-20-3	Naphthalene	ND	44	ug/kg	
90-12-0	1-Methylnaphthalene	ND	44	ug/kg	
91-57-6	2-Methylnaphthalene	ND	44	ug/kg	
85-01-8	Phenanthrene	ND	6.6	ug/kg	
129-00-0	Pyrene	18	8.9	ug/kg	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4281-6

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990696 SAS No.: SDG No.: 9905468

Matrix: (soil/water) SOIL Lab Sample ID: 9905471

Sample wt/vol: 30.6 (g/ml) G Lab File ID: LA1R673U.D

% Moisture: 26 decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/17/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
91-20-3	NAPHTHALENE	44	U
208-96-8	ACENAPHTHYLENE	89	U
90-12-0	1-METHYL-NAPHTHALENE	44	U
91-57-6	2-METHYL-NAPHTHALENE	44	U
83-32-9	ACENAPHTHENE	44	U
86-73-7	FLUORENE	8.9	U
85-01-8	PHENANTHRENE	6.6	U
120-12-7	ANTHRACENE	6.6	U
206-44-0	FLUORANTHENE	24	P
129-00-0	PYRENE	18	P
56-55-3	BENZO[a]ANTHRACENE	6.6	U
218-01-9	CHRYSENE	7.5	
205-99-2	BENZO[b]FLUORANTHENE	14	P
207-08-9	BENZO[k]FLUORANTHENE	7.5	P
50-32-8	BENZO[a]PYRENE	13	P
53-70-3	DIBENZO[a,h]ANTHRACENE	11	U
191-24-2	BENZO[g,h,i]PERYLENE	25	P
193-39-5	INDENO[1,2,3-cd]PYRENE	21	

Report of Analysis

Client Sample ID:	CEF-P39-SD-008		
Lab Sample ID:	F4281-9	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	EPA 8310	**Percent Solids:**	62.5
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/16/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	3200	43	ug/kg	
208-96-8	Acenaphthylene	450	86	ug/kg	
120-12-7	Anthracene	520	6.5	ug/kg	
56-55-3	Benzo(a)anthracene	1400	6.5	ug/kg	
50-32-8	Benzo(a)pyrene	1200	6.5	ug/kg	
205-99-2	Benzo(b)fluoranthene	1300	6.5	ug/kg	
191-24-2	Benzo(g,h,i)perylene	910	8.6	ug/kg	
207-08-9	Benzo(k)fluoranthene	680	6.5	ug/kg	
218-01-9	Chrysene	1400	6.5	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	39	220	ug/kg	
206-44-0	Fluoranthene	4700	8.6	ug/kg	
86-73-7	Fluorene	450	8.6	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	900	6.5	ug/kg	
91-20-3	Naphthalene	310	43	ug/kg	
90-12-0	1-Methylnaphthalene	ND	43	ug/kg	
91-57-6	2-Methylnaphthalene	2500	43	ug/kg	
85-01-8	Phenanthrene	3200	6.5	ug/kg	
129-00-0	Pyrene	3200	8.6	ug/kg	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4281-9 DL

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990696 SAS No.: _____ SDG No.: 9905468

Matrix: (soil/water) SOIL Lab Sample ID: 9905473 DL

Sample wt/vol: 30.4 (g/ml) G Lab File ID: LA1R717U.D

% Moisture: 25 decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) _____ Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/19/99

Injection Volume: 1.0 (uL) Dilution Factor: 20.0

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
91-20-3	NAPHTHALENE	870	U
208-96-8	ACENAPHTHYLENE	1800	U
90-12-0	1-METHYL-NAPHTHALENE	870	U
91-57-6	2-METHYL-NAPHTHALENE	2500	D
83-32-9	ACENAPHTHENE	3200	P D
86-73-7	FLUORENE	450	D
85-01-8	PHENANTHRENE	3200	D
120-12-7	ANTHRACENE	520	P D
206-44-0	FLUORANTHENE	4700	P D
129-00-0	PYRENE	3200	D
56-55-3	BENZO[a]ANTHRACENE	1400	D
218-01-9	CHRYSENE	1400	D
205-99-2	BENZO[b]FLUORANTHENE	1300	P D
207-08-9	BENZO[k]FLUORANTHENE	680	D
50-32-8	BENZO[a]PYRENE	1200	D
53-70-3	DIBENZO[a,h]ANTHRACENE	220	U
191-24-2	BENZO[g,h,i]PERYLENE	910	D
193-39-5	INDENO[1,2,3-cd]PYRENE	900	D

Report of Analysis

Client Sample ID:	CEF-P39-SD-011		
Lab Sample ID:	F4281-13	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	EPA 8310	**Percent Solids:**	65.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/16/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	280	43	ug/kg	
208-96-8	Acenaphthylene	ND	87	ug/kg	
120-12-7	Anthracene	ND	6.5	ug/kg	
56-55-3	Benzo(a)anthracene	63	6.5	ug/kg	
50-32-8	Benzo(a)pyrene	80	6.5	ug/kg	
205-99-2	Benzo(b)fluoranthene	130	6.5	ug/kg	
191-24-2	Benzo(g,h,i)perylene	81	8.7	ug/kg	
207-08-9	Benzo(k)fluoranthene	67	6.5	ug/kg	
218-01-9	Chrysene	98	6.5	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	11	ug/kg	
206-44-0	Fluoranthene	220	8.7	ug/kg	
86-73-7	Fluorene	ND	8.7	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	11	6.5	ug/kg	
91-20-3	Naphthalene	51	43	ug/kg	
90-12-0	1-Methylnaphthalene	ND	43	ug/kg	
91-57-6	2-Methylnaphthalene	350	43	ug/kg	
85-01-8	Phenanthrene	66	6.5	ug/kg	
129-00-0	Pyrene	120	8.7	ug/kg	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4281-13

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990696 SAS No.: SDG No.: 9905468

Matrix: (soil/water) SOIL Lab Sample ID: 9905475

Sample wt/vol: 30.3 (g/ml) G Lab File ID: LA1R675U.D

% Moisture: 24 decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/17/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
91-20-3	NAPHTHALENE	51	P
208-96-8	ACENAPHTHYLENE	87	U
90-12-0	1-METHYL-NAPHTHALENE	43	U
91-57-6	2-METHYL-NAPHTHALENE	350	P
83-32-9	ACENAPHTHENE	280	P
86-73-7	FLUORENE	8.7	U
85-01-8	PHENANTHRENE	66	
120-12-7	ANTHRACENE	6.5	U
206-44-0	FLUORANTHENE	220	P
129-00-0	PYRENE	120	P
56-55-3	BENZO[a]ANTHRACENE	63	P
218-01-9	CHRYSENE	98	P
205-99-2	BENZO[b]FLUORANTHENE	130	
207-08-9	BENZO[k]FLUORANTHENE	67	P
50-32-8	BENZO[a]PYRENE	80	P
53-70-3	DIBENZO[a,h]ANTHRACENE	11	U
191-24-2	BENZO[g,h,i]PERYLENE	81	P
193-39-5	INDENO[1,2,3-cd]PYRENE	11	P

Report of Analysis

Client Sample ID:	CEF-P39-SD-014		
Lab Sample ID:	F4281-24	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	EPA 8310	**Percent Solids:**	69.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/16/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	200	47	ug/kg	
208-96-8	Acenaphthylene	ND	96	ug/kg	
120-12-7	Anthracene	20	7.1	ug/kg	
56-55-3	Benzo(a)anthracene	110	7.1	ug/kg	
50-32-8	Benzo(a)pyrene	110	7.1	ug/kg	
205-99-2	Benzo(b)fluoranthene	160	7.1	ug/kg	
191-24-2	Benzo(g,h,i)perylene	110	9.4	ug/kg	
207-08-9	Benzo(k)fluoranthene	77	7.1	ug/kg	
218-01-9	Chrysene	250	7.1	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	12	ug/kg	
206-44-0	Fluoranthene	300	9.4	ug/kg	
86-73-7	Fluorene	19	9.4	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	95	7.1	ug/kg	
91-20-3	Naphthalene	ND	47	ug/kg	
90-12-0	1-Methylnaphthalene	ND	47	ug/kg	
91-57-6	2-Methylnaphthalene	170	47	ug/kg	
85-01-8	Phenanthrene	81	9.4	ug/kg	
129-00-0	Pyrene	240	7.1	ug/kg	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4281-24 DL

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990696 SAS No.: SDG No.: 9905468

Matrix: (soil/water) SOIL Lab Sample ID: 9905482 DL

Sample wt/vol: 30.4 (g/ml) G Lab File ID: LA1R720U.D

% Moisture: 31 decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/19/99

Injection Volume: 1.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
91-20-3	NAPHTHALENE	94	U
208-96-8	ACENAPHTHYLENE	190	U
90-12-0	1-METHYL-NAPHTHALENE	94	U
91-57-6	2-METHYL-NAPHTHALENE	170	P D
83-32-9	ACENAPHTHENE	200	P D
86-73-7	FLUORENE	19	U
85-01-8	PHENANTHRENE	81	D
120-12-7	ANTHRACENE	20	P D
206-44-0	FLUORANTHENE	300	P D
129-00-0	PYRENE	240	P D
56-55-3	BENZO[a]ANTHRACENE	110	D
218-01-9	CHRYSENE	250	D
205-99-2	BENZO[b]FLUORANTHENE	160	D
207-08-9	BENZO[k]FLUORANTHENE	77	P D
50-32-8	BENZO[a]PYRENE	110	D
53-70-3	DIBENZO[a,h]ANTHRACENE	24	U
191-24-2	BENZO[g,h,i]PERYLENE	110	D
193-39-5	INDENO[1,2,3-cd]PYRENE	95	D

Report of Analysis

Client Sample ID:	CEF-P39-SD-017		
Lab Sample ID:	F4281-28	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	EPA 8310	**Percent Solids:**	51.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/16/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	1100	220	ug/kg	
208-96-8	Acenaphthylene	ND	460	ug/kg	
120-12-7	Anthracene	65	33	ug/kg	
56-55-3	Benzo(a)anthracene	460	33	ug/kg	
50-32-8	Benzo(a)pyrene	460	33	ug/kg	
205-99-2	Benzo(b)fluoranthene	610	33	ug/kg	
191-24-2	Benzo(g,h,i)perylene	470	44	ug/kg	
207-08-9	Benzo(k)fluoranthene	310	33	ug/kg	
218-01-9	Chrysene	930	33	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	69	55	ug/kg	
206-44-0	Fluoranthene	1600	44	ug/kg	
86-73-7	Fluorene	25	33	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	370	33	ug/kg	
91-20-3	Naphthalene	130	220	ug/kg	
90-12-0	1-Methylnaphthalene	640	220	ug/kg	
91-57-6	2-Methylnaphthalene	810	220	ug/kg	
85-01-8	Phenanthrene	910	44	ug/kg	
129-00-0	Pyrene	1100	33	ug/kg	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4281-28 DL

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990696 SAS No.: _____ SDG No.: 9905468

Matrix: (soil/water) SOIL Lab Sample ID: 9905484 DL

Sample wt/vol: 30.6 (g/ml) G Lab File ID: LA1R721U.D

% Moisture: 28 decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) _____ Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/19/99

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
91-20-3	NAPHTHALENE	220	U
208-96-8	ACENAPHTHYLENE	460	U
90-12-0	1-METHYL-NAPHTHALENE	640	P D
91-57-6	2-METHYL-NAPHTHALENE	810	D
83-32-9	ACENAPHTHENE	1100	P D
86-73-7	FLUORENE	46	U
85-01-8	PHENANTHRENE	910	D
120-12-7	ANTHRACENE	65	P D
206-44-0	FLUORANTHENE	1600	D
129-00-0	PYRENE	1100	D
56-55-3	BENZO[a]ANTHRACENE	460	D
218-01-9	CHRYSENE	930	D
205-99-2	BENZO[b]FLUORANTHENE	610	D
207-08-9	BENZO[k]FLUORANTHENE	310	P D
50-32-8	BENZO[a]PYRENE	460	D
53-70-3	DIBENZO[a,h]ANTHRACENE	69	D
191-24-2	BENZO[g,h,i]PERYLENE	470	D
193-39-5	INDENO[1,2,3-cd]PYRENE	370	D

Report of Analysis

Client Sample ID:	CEF-P39-SD-023		
Lab Sample ID:	F4281-14	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	EPA 8310	**Percent Solids:**	68.4
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/16/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	700	50	ug/kg	
208-96-8	Acenaphthylene	ND	100	ug/kg	
120-12-7	Anthracene	19	7.5	ug/kg	
56-55-3	Benzo(a)anthracene	200	7.5	ug/kg	
50-32-8	Benzo(a)pyrene	280	7.5	ug/kg	
205-99-2	Benzo(b)fluoranthene	340	7.5	ug/kg	
191-24-2	Benzo(g,h,i)perylene	250	10	ug/kg	
207-08-9	Benzo(k)fluoranthene	170	7.5	ug/kg	
218-01-9	Chrysene	300	7.5	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	21	15	ug/kg	
206-44-0	Fluoranthene	680	10	ug/kg	
86-73-7	Fluorene	11	10	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	250	7.5	ug/kg	
91-20-3	Naphthalene	ND	50	ug/kg	
90-12-0	1-Methylnaphthalene	ND	50	ug/kg	
91-57-6	2-Methylnaphthalene	660	50	ug/kg	
85-01-8	Phenanthrene	300	7.5	ug/kg	
129-00-0	Pyrene	490	10	ug/kg	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4281-14 DL

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990696 SAS No.: SDG No.: 9905468

Matrix: (soil/water) SOIL Lab Sample ID: 9905476 DL

Sample wt/vol: 30.2 (g/ml) G Lab File ID: LA1R718U.D

% Moisture: 35 decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/19/99

Injection Volume: 1.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
91-20-3	NAPHTHALENE	100	U
208-96-8	ACENAPHTHYLENE	200	U
90-12-0	1-METHYL-NAPHTHALENE	100	U
91-57-6	2-METHYL-NAPHTHALENE	660	D
83-32-9	ACENAPHTHENE	700	P D
86-73-7	FLUORENE	20	U
85-01-8	PHENANTHRENE	300	D
120-12-7	ANTHRACENE	19	P D
206-44-0	FLUORANTHENE	680	P D
129-00-0	PYRENE	490	P D
56-55-3	BENZO[a]ANTHRACENE	200	D
218-01-9	CHRYSENE	300	D
205-99-2	BENZO[b]FLUORANTHENE	340	D
207-08-9	BENZO[k]FLUORANTHENE	170	D
50-32-8	BENZO[a]PYRENE	280	D
53-70-3	DIBENZO[a,h]ANTHRACENE	25	U
191-24-2	BENZO[g,h,i]PERYLENE	250	D
193-39-5	INDENO[1,2,3-cd]PYRENE	250	D

Report of Analysis

Client Sample ID:	CEF-P39-SD-024		
Lab Sample ID:	F4281-16	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	EPA 8310	**Percent Solids:**	64.8
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/16/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	690	47	ug/kg	
208-96-8	Acenaphthylene	ND	95	ug/kg	
120-12-7	Anthracene	23	7.1	ug/kg	
56-55-3	Benzo(a)anthracene	250	7.1	ug/kg	
50-32-8	Benzo(a)pyrene	350	7.1	ug/kg	
205-99-2	Benzo(b)fluoranthene	420	7.1	ug/kg	
191-24-2	Benzo(g,h,i)perylene	330	9.4	ug/kg	
207-08-9	Benzo(k)fluoranthene	210	7.1	ug/kg	
218-01-9	Chrysene	410	7.1	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	59	12	ug/kg	
206-44-0	Fluoranthene	880	9.4	ug/kg	
86-73-7	Fluorene	ND	9.4	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	320	7.1	ug/kg	
91-20-3	Naphthalene	ND	47	ug/kg	
90-12-0	1-Methylnaphthalene	ND	47	ug/kg	
91-57-6	2-Methylnaphthalene	580	47	ug/kg	
85-01-8	Phenanthrene	290	7.1	ug/kg	
129-00-0	Pyrene	590	9.4	ug/kg	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4281-16 DL

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990696 SAS No.: _____ SDG No.: 9905468

Matrix: (soil/water) SOIL Lab Sample ID: 9905478 DL

Sample wt/vol: 30.1 (g/ml) G Lab File ID: LA1R719U.D

% Moisture: 30 decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) _____ Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/19/99

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
91-20-3	NAPHTHALENE	230	U
208-96-8	ACENAPHTHYLENE	480	U
90-12-0	1-METHYL-NAPHTHALENE	230	U
91-57-6	2-METHYL-NAPHTHALENE	580	D
83-32-9	ACENAPHTHENE	690	P D
86-73-7	FLUORENE	48	U
85-01-8	PHENANTHRENE	290	D
120-12-7	ANTHRACENE	36	U
206-44-0	FLUORANTHENE	880	P D
129-00-0	PYRENE	590	P D
56-55-3	BENZO[a]ANTHRACENE	250	D
218-01-9	CHRYSENE	410	D
205-99-2	BENZO[b]FLUORANTHENE	420	D
207-08-9	BENZO[k]FLUORANTHENE	210	P D
50-32-8	BENZO[a]PYRENE	350	D
53-70-3	DIBENZO[a,h]ANTHRACENE	59	U
191-24-2	BENZO[g,h,i]PERYLENE	330	D
193-39-5	INDENO[1,2,3-cd]PYRENE	320	D

Report of Analysis

Client Sample ID:	CEF-P39-SD-026		
Lab Sample ID:	F4281-17	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	EPA 8310	**Percent Solids:**	92.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/16/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	35	ug/kg	
208-96-8	Acenaphthylene	ND	71	ug/kg	
120-12-7	Anthracene	ND	5.3	ug/kg	
56-55-3	Benzo(a)anthracene	ND	5.3	ug/kg	
50-32-8	Benzo(a)pyrene	5.4	5.3	ug/kg	
205-99-2	Benzo(b)fluoranthene	7.3	5.3	ug/kg	
191-24-2	Benzo(g,h,i)perylene	8.6	7.1	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	5.3	ug/kg	
218-01-9	Chrysene	7.3	5.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	8.8	ug/kg	
206-44-0	Fluoranthene	8.2	7.1	ug/kg	
86-73-7	Fluorene	ND	7.1	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	5.7	5.3	ug/kg	
91-20-3	Naphthalene	ND	35	ug/kg	
90-12-0	1-Methylnaphthalene	ND	35	ug/kg	
91-57-6	2-Methylnaphthalene	ND	35	ug/kg	
85-01-8	Phenanthrene	ND	5.3	ug/kg	
129-00-0	Pyrene	ND	7.1	ug/kg	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4281-17

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990696 SAS No.: _____ SDG No.: 9905468

Matrix: (soil/water) SOIL Lab Sample ID: 9905479

Sample wt/vol: 30.5 (g/ml) G Lab File ID: LA1R771U.D

% Moisture: 7 decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) _____ Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/22/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
91-20-3	NAPHTHALENE	35	U
208-96-8	ACENAPHTHYLENE	71	U
90-12-0	1-METHYL-NAPHTHALENE	35	U
91-57-6	2-METHYL-NAPHTHALENE	35	U
83-32-9	ACENAPHTHENE	35	U
86-73-7	FLUORENE	7.1	U
85-01-8	PHENANTHRENE	5.3	U
120-12-7	ANTHRACENE	5.3	U
206-44-0	FLUORANTHENE	8.2	
129-00-0	PYRENE	7.1	U
56-55-3	BENZO[a]ANTHRACENE	5.3	U
218-01-9	CHRYSENE	7.3	
205-99-2	BENZO[b]FLUORANTHENE	7.3	
207-08-9	BENZO[k]FLUORANTHENE	5.3	U
50-32-8	BENZO[a]PYRENE	5.4	
53-70-3	DIBENZO[a,h]ANTHRACENE	8.8	U
191-24-2	BENZO[g,h,i]PERYLENE	8.6	P
193-39-5	INDENO[1,2,3-cd]PYRENE	5.7	P

Report of Analysis

Client Sample ID:	CEF-P39-SD-028		
Lab Sample ID:	F4281-19	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	EPA 8310	**Percent Solids:**	94.7
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/16/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	35	ug/kg	
208-96-8	Acenaphthylene	ND	71	ug/kg	
120-12-7	Anthracene	ND	5.3	ug/kg	
56-55-3	Benzo(a)anthracene	6.1	5.3	ug/kg	
50-32-8	Benzo(a)pyrene	19	5.3	ug/kg	
205-99-2	Benzo(b)fluoranthene	23	5.3	ug/kg	
191-24-2	Benzo(g,h,i)perylene	17	7.1	ug/kg	
207-08-9	Benzo(k)fluoranthene	11	5.3	ug/kg	
218-01-9	Chrysene	10	7.1	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	8.7	ug/kg	
206-44-0	Fluoranthene	18	7.1	ug/kg	
86-73-7	Fluorene	ND	7.1	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	20	5.3	ug/kg	
91-20-3	Naphthalene	ND	35	ug/kg	
90-12-0	1-Methylnaphthalene	ND	35	ug/kg	
91-57-6	2-Methylnaphthalene	ND	35	ug/kg	
85-01-8	Phenanthrene	6.4	5.3	ug/kg	
129-00-0	Pyrene	17	7.1	ug/kg	

(a) Analyzed By Accutest Southeast Subcontract Lab.

501

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4281-19

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990696 SAS No.: SDG No.: 9905468

Matrix: (soil/water) SOIL Lab Sample ID: 9905480

Sample wt/vol: 30.3 (g/ml) G Lab File ID: LA1R679U.D

% Moisture: 6 decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/17/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
91-20-3	NAPHTHALENE	35	U
208-96-8	ACENAPHTHYLENE	71	U
90-12-0	1-METHYL-NAPHTHALENE	35	U
91-57-6	2-METHYL-NAPHTHALENE	35	U
83-32-9	ACENAPHTHENE	35	U
86-73-7	FLUORENE	7.1	U
85-01-8	PHENANTHRENE	6.4	
120-12-7	ANTHRACENE	5.3	U
206-44-0	FLUORANTHENE	18	
129-00-0	PYRENE	17	
56-55-3	BENZO[a]ANTHRACENE	6.1	P
218-01-9	CHRYSENE	10.0	P
205-99-2	BENZO[b]FLUORANTHENE	23	
207-08-9	BENZO[k]FLUORANTHENE	11	P
50-32-8	BENZO[a]PYRENE	19	
53-70-3	DIBENZO[a,h]ANTHRACENE	8.7	U
191-24-2	BENZO[g,h,i]PERYLENE	17	P
193-39-5	INDENO[1,2,3-cd]PYRENE	20	

Report of Analysis

Client Sample ID:	CEF-P39-SD-DU01		
Lab Sample ID:	F4281-32	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	EPA 8310	**Percent Solids:**	71.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]		1	06/16/99	SUB	n/a	n/a	R6876
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	42	ug/kg	
208-96-8	Acenaphthylene	ND	85	ug/kg	
120-12-7	Anthracene	52	6.3	ug/kg	
56-55-3	Benzo(a)anthracene	26	6.3	ug/kg	
50-32-8	Benzo(a)pyrene	57	6.3	ug/kg	
205-99-2	Benzo(b)fluoranthene	63	6.3	ug/kg	
191-24-2	Benzo(g,h,i)perylene	40	8.4	ug/kg	
207-08-9	Benzo(k)fluoranthene	29	6.3	ug/kg	
218-01-9	Chrysene	36	6.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	11	ug/kg	
206-44-0	Fluoranthene	46	8.4	ug/kg	
86-73-7	Fluorene	ND	8.4	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	37	6.3	ug/kg	
91-20-3	Naphthalene	ND	42	ug/kg	
90-12-0	1-Methylnaphthalene	ND	42	ug/kg	
91-57-6	2-Methylnaphthalene	ND	42	ug/kg	
85-01-8	Phenanthrene	ND	8.4	ug/kg	
129-00-0	Pyrene	48	6.3	ug/kg	

(a) Analyzed By Accutest Southeast Subcontract Lab.

ND = Not detected
RDL = Reported Detection 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

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

F4281-32

Lab Name: STL BALTIMORE Contract: ACCUTEST

Lab Code: STLB Case No.: 990696 SAS No.: SDG No.: 9905468

Matrix: (soil/water) SOIL Lab Sample ID: 9905486

Sample wt/vol: 30.7 (g/ml) G Lab File ID: LA1R685U.D

% Moisture: 23 decanted:(Y/N) N Date Received: 06/11/99

Extraction: (SepF/Cont/Sonc) Date Extracted: 06/14/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 06/18/99

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) N

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
91-20-3	NAPHTHALENE	42	U
208-96-8	ACENAPHTHYLENE	85	U
90-12-0	1-METHYL-NAPHTHALENE	42	U
91-57-6	2-METHYL-NAPHTHALENE	42	U
83-32-9	ACENAPHTHENE	52	P
86-73-7	FLUORENE	8.5	U
85-01-8	PHENANTHRENE	6.3	U
120-12-7	ANTHRACENE	6.3	U
206-44-0	FLUORANTHENE	46	P
129-00-0	PYRENE	48	P
56-55-3	BENZO[a]ANTHRACENE	26	
218-01-9	CHRYSENE	36	
205-99-2	BENZO[b]FLUORANTHENE	63	
207-08-9	BENZO[k]FLUORANTHENE	29	P
50-32-8	BENZO[a]PYRENE	57	
53-70-3	DIBENZO[a,h]ANTHRACENE	11	U
191-24-2	BENZO[g,h,i]PERYLENE	40	P
193-39-5	INDENO[1,2,3-cd]PYRENE	37	

Report of Analysis

Client Sample ID:	CEF-P39-SW-001		
Lab Sample ID:	F4281-1	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8081A	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN03923.D	1	06/16/99	SKW	06/15/99	OP844	GMN163
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	0.050	ug/l	
319-84-6	alpha-BHC	ND	0.050	ug/l	
319-85-7	beta-BHC	ND	0.050	ug/l	
319-86-8	delta-BHC	ND	0.050	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	ug/l	
5103-71-9	alpha-Chlordane	ND	0.10	ug/l	
5103-74-2	gamma-Chlordane	ND	0.10	ug/l	
60-57-1	Dieldrin	ND	0.050	ug/l	
72-54-8	4,4'-DDD	ND	0.10	ug/l	
72-55-9	4,4'-DDE	ND	0.10	ug/l	
50-29-3	4,4'-DDT	ND	0.10	ug/l	
72-20-8	Endrin	ND	0.10	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.10	ug/l	
7421-93-4	Endrin aldehyde	ND	0.10	ug/l	
53494-70-5	Endrin ketone	ND	0.10	ug/l	
959-98-8	Endosulfan-I	ND	0.050	ug/l	
33213-65-9	Endosulfan-II	ND	0.10	ug/l	
76-44-8	Heptachlor	ND	0.050	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.050	ug/l	
72-43-5	Methoxychlor	ND	0.20	ug/l	
8001-35-2	Toxaphene	ND	2.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	92%		30-160%
2051-24-3	Decachlorobiphenyl	60%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-004		
Lab Sample ID:	F4281-5	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8081A	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN03831.D	1	06/12/99	SKW	06/11/99	OP844	GMN160
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	0.050	ug/l	
319-84-6	alpha-BHC	ND	0.050	ug/l	
319-85-7	beta-BHC	ND	0.050	ug/l	
319-86-8	delta-BHC	ND	0.050	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	ug/l	
5103-71-9	alpha-Chlordane	ND	0.10	ug/l	
5103-74-2	gamma-Chlordane	ND	0.10	ug/l	
60-57-1	Dieldrin	ND	0.050	ug/l	
72-54-8	4,4'-DDD	ND	0.10	ug/l	
72-55-9	4,4'-DDE	ND	0.10	ug/l	
50-29-3	4,4'-DDT	ND	0.10	ug/l	
72-20-8	Endrin	ND	0.10	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.10	ug/l	
7421-93-4	Endrin aldehyde	ND	0.10	ug/l	
53494-70-5	Endrin ketone	ND	0.10	ug/l	
959-98-8	Endosulfan-I	ND	0.050	ug/l	
33213-65-9	Endosulfan-II	ND	0.10	ug/l	
76-44-8	Heptachlor	ND	0.050	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.050	ug/l	
72-43-5	Methoxychlor	ND	0.20	ug/l	
8001-35-2	Toxaphene	ND	2.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	80%		30-160%
2051-24-3	Decachlorobiphenyl	88%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-007		
Lab Sample ID:	F4281-8	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8081A	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN03832.D	1	06/12/99	SKW	06/11/99	OP844	GMN160
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	0.050	ug/l	
319-84-6	alpha-BHC	ND	0.050	ug/l	
319-85-7	beta-BHC	ND	0.050	ug/l	
319-86-8	delta-BHC	ND	0.050	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	ug/l	
5103-71-9	alpha-Chlordane	ND	0.10	ug/l	
5103-74-2	gamma-Chlordane	ND	0.10	ug/l	
60-57-1	Dieldrin	ND	0.050	ug/l	
72-54-8	4,4'-DDD	ND	0.10	ug/l	
72-55-9	4,4'-DDE	ND	0.10	ug/l	
50-29-3	4,4'-DDT	ND	0.10	ug/l	
72-20-8	Endrin	ND	0.10	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.10	ug/l	
7421-93-4	Endrin aldehyde	ND	0.10	ug/l	
53494-70-5	Endrin ketone	ND	0.10	ug/l	
959-98-8	Endosulfan-I	ND	0.050	ug/l	
33213-65-9	Endosulfan-II	ND	0.10	ug/l	
76-44-8	Heptachlor	ND	0.050	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.050	ug/l	
72-43-5	Methoxychlor	ND	0.20	ug/l	
8001-35-2	Toxaphene	ND	2.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	77%		30-160%
2051-24-3	Decachlorobiphenyl	78%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-010		
Lab Sample ID:	F4281-12	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8081A	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN03833.D	1	06/12/99	SKW	06/11/99	OP844	GMN160
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	0.050	ug/l	
319-84-6	alpha-BHC	ND	0.050	ug/l	
319-85-7	beta-BHC	ND	0.050	ug/l	
319-86-8	delta-BHC	ND	0.050	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	ug/l	
5103-71-9	alpha-Chlordane	ND	0.10	ug/l	
5103-74-2	gamma-Chlordane	ND	0.10	ug/l	
60-57-1	Dieldrin	ND	0.050	ug/l	
72-54-8	4,4'-DDD	ND	0.10	ug/l	
72-55-9	4,4'-DDE	ND	0.10	ug/l	
50-29-3	4,4'-DDT	ND	0.10	ug/l	
72-20-8	Endrin	ND	0.10	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.10	ug/l	
7421-93-4	Endrin aldehyde	ND	0.10	ug/l	
53494-70-5	Endrin ketone	ND	0.10	ug/l	
959-98-8	Endosulfan-I	ND	0.050	ug/l	
33213-65-9	Endosulfan-II	ND	0.10	ug/l	
76-44-8	Heptachlor	ND	0.050	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.050	ug/l	
72-43-5	Methoxychlor	ND	0.20	ug/l	
8001-35-2	Toxaphene	ND	2.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	86%		30-160%
2051-24-3	Decachlorobiphenyl	83%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-013		
Lab Sample ID:	F4281-23	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8081A	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN03945.D	1	06/17/99	SKW	06/11/99	OP844	GMN164
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	0.050	ug/l	
319-84-6	alpha-BHC	ND	0.050	ug/l	
319-85-7	beta-BHC	ND	0.050	ug/l	
319-86-8	delta-BHC	ND	0.050	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	ug/l	
5103-71-9	alpha-Chlordane	ND	0.10	ug/l	
5103-74-2	gamma-Chlordane	ND	0.10	ug/l	
60-57-1	Dieldrin	ND	0.050	ug/l	
72-54-8	4,4'-DDD	ND	0.10	ug/l	
72-55-9	4,4'-DDE	ND	0.10	ug/l	
50-29-3	4,4'-DDT	ND	0.10	ug/l	
72-20-8	Endrin	ND	0.10	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.10	ug/l	
7421-93-4	Endrin aldehyde	ND	0.10	ug/l	
53494-70-5	Endrin ketone	ND	0.10	ug/l	
959-98-8	Endosulfan-I	ND	0.050	ug/l	
33213-65-9	Endosulfan-II	ND	0.10	ug/l	
76-44-8	Heptachlor	ND	0.050	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.050	ug/l	
72-43-5	Methoxychlor	ND	0.20	ug/l	
8001-35-2	Toxaphene	ND	2.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	81%		30-160%
2051-24-3	Decachlorobiphenyl	65%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-016		
Lab Sample ID:	F4281-27	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8081A	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN03946.D	1	06/17/99	SKW	06/11/99	OP844	GMN164
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	0.050	ug/l	
319-84-6	alpha-BHC	ND	0.050	ug/l	
319-85-7	beta-BHC	ND	0.050	ug/l	
319-86-8	delta-BHC	ND	0.050	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	ug/l	
5103-71-9	alpha-Chlordane	ND	0.10	ug/l	
5103-74-2	gamma-Chlordane	ND	0.10	ug/l	
60-57-1	Dieldrin	ND	0.050	ug/l	
72-54-8	4,4'-DDD	ND	0.10	ug/l	
72-55-9	4,4'-DDE	ND	0.10	ug/l	
50-29-3	4,4'-DDT	ND	0.10	ug/l	
72-20-8	Endrin	ND	0.10	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.10	ug/l	
7421-93-4	Endrin aldehyde	ND	0.10	ug/l	
53494-70-5	Endrin ketone	ND	0.10	ug/l	
959-98-8	Endosulfan-I	ND	0.050	ug/l	
33213-65-9	Endosulfan-II	ND	0.10	ug/l	
76-44-8	Heptachlor	ND	0.050	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.050	ug/l	
72-43-5	Methoxychlor	ND	0.20	ug/l	
8001-35-2	Toxaphene	ND	2.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	75%		30-160%
2051-24-3	Decachlorobiphenyl	81%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-018		
Lab Sample ID:	F4281-29	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8081A	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	MN03955.D	4	06/17/99	SKW	06/11/99	OP844	GMN164
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	0.20	ug/l	
319-84-6	alpha-BHC	ND	0.20	ug/l	
319-85-7	beta-BHC	ND	0.20	ug/l	
319-86-8	delta-BHC	ND	0.20	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.20	ug/l	
5103-71-9	alpha-Chlordane	ND	0.40	ug/l	
5103-74-2	gamma-Chlordane	ND	0.40	ug/l	
60-57-1	Dieldrin	ND	0.20	ug/l	
72-54-8	4,4'-DDD	ND	0.40	ug/l	
72-55-9	4,4'-DDE	ND	0.40	ug/l	
50-29-3	4,4'-DDT	ND	0.40	ug/l	
72-20-8	Endrin	ND	0.40	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.40	ug/l	
7421-93-4	Endrin aldehyde	ND	0.40	ug/l	
53494-70-5	Endrin ketone	ND	0.40	ug/l	
959-98-8	Endosulfan-I	ND	0.20	ug/l	
33213-65-9	Endosulfan-II	ND	0.40	ug/l	
76-44-8	Heptachlor	ND	0.20	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.20	ug/l	
72-43-5	Methoxychlor	ND	0.80	ug/l	
8001-35-2	Toxaphene	ND	10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	67%		30-160%
2051-24-3	Decachlorobiphenyl	49%		30-160%

(a) Dilution required due to matrix interference.

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-023		
Lab Sample ID:	F4281-15	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8081A	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN03944.D	1	06/17/99	SKW	06/11/99	OP844	GMN164
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units, Q
309-00-2	Aldrin	ND	0.050	ug/l
319-84-6	alpha-BHC	ND	0.050	ug/l
319-85-7	beta-BHC	ND	0.050	ug/l
319-86-8	delta-BHC	ND	0.050	ug/l
58-89-9	gamma-BHC (Lindane)	ND	0.050	ug/l
5103-71-9	alpha-Chlordane	ND	0.10	ug/l
5103-74-2	gamma-Chlordane	ND	0.10	ug/l
60-57-1	Dieldrin	ND	0.050	ug/l
72-54-8	4,4'-DDD	ND	0.10	ug/l
72-55-9	4,4'-DDE	ND	0.10	ug/l
50-29-3	4,4'-DDT	ND	0.10	ug/l
72-20-8	Endrin	ND	0.10	ug/l
1031-07-8	Endosulfan sulfate	ND	0.10	ug/l
7421-93-4	Endrin aldehyde	ND	0.10	ug/l
53494-70-5	Endrin ketone	ND	0.10	ug/l
959-98-8	Endosulfan-I	ND	0.050	ug/l
33213-65-9	Endosulfan-II	ND	0.10	ug/l
76-44-8	Heptachlor	ND	0.050	ug/l
1024-57-3	Heptachlor epoxide	ND	0.050	ug/l
72-43-5	Methoxychlor	ND	0.20	ug/l
8001-35-2	Toxaphene	ND	2.5	ug/l

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	86%		30-160%
2051-24-3	Decachlorobiphenyl	88%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-DU01		
Lab Sample ID:	F4281-31	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 3510C/8081A	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN03947.D	1	06/17/99	SKW	06/11/99	OP844	GMN164
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	0.050	ug/l	
319-84-6	alpha-BHC	ND	0.050	ug/l	
319-85-7	beta-BHC	ND	0.050	ug/l	
319-86-8	delta-BHC	ND	0.050	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	ug/l	
5103-71-9	alpha-Chlordane	ND	0.10	ug/l	
5103-74-2	gamma-Chlordane	ND	0.10	ug/l	
60-57-1	Dieldrin	ND	0.050	ug/l	
72-54-8	4,4'-DDD	ND	0.10	ug/l	
72-55-9	4,4'-DDE	ND	0.10	ug/l	
50-29-3	4,4'-DDT	ND	0.10	ug/l	
72-20-8	Endrin	ND	0.10	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.10	ug/l	
7421-93-4	Endrin aldehyde	ND	0.10	ug/l	
53494-70-5	Endrin ketone	ND	0.10	ug/l	
959-98-8	Endosulfan-I	ND	0.050	ug/l	
33213-65-9	Endosulfan-II	ND	0.10	ug/l	
76-44-8	Heptachlor	ND	0.050	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.050	ug/l	
72-43-5	Methoxychlor	ND	0.20	ug/l	
8001-35-2	Toxaphene	ND	2.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	81%		30-160%
2051-24-3	Decachlorobiphenyl	69%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-002		
Lab Sample ID:	F4281-2	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8081A	**Percent Solids:**	45.3
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN03980.D	1	06/18/99	SKW	06/16/99	OP852	GMN165
Run #2 [a]	MN04018.D	5	06/21/99	SKW	06/16/99	OP852	GMN166

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	3.7	ug/kg	
319-84-6	alpha-BHC	ND	3.7	ug/kg	
319-85-7	beta-BHC	ND	3.7	ug/kg	
319-86-8	delta-BHC	ND	3.7	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	3.7	ug/kg	
5103-71-9	alpha-Chlordane	ND	7.4	ug/kg	
5103-74-2	gamma-Chlordane	ND	7.4	ug/kg	
60-57-1	Dieldrin	ND	3.7	ug/kg	
72-54-8	4,4'-DDD	ND	7.4	ug/kg	
72-55-9	4,4'-DDE	ND	7.4	ug/kg	
50-29-3	4,4'-DDT	ND [b]	37	ug/kg	
72-20-8	Endrin	ND	7.4	ug/kg	
1031-07-8	Endosulfan sulfate	ND	7.4	ug/kg	
7421-93-4	Endrin aldehyde	ND	7.4	ug/kg	
53494-70-5	Endrin ketone	ND	7.4	ug/kg	
959-98-8	Endosulfan-I	ND	3.7	ug/kg	
33213-65-9	Endosulfan-II	ND	7.4	ug/kg	
76-44-8	Heptachlor	ND	3.7	ug/kg	
1024-57-3	Heptachlor epoxide	ND	3.7	ug/kg	
72-43-5	Methoxychlor	ND [b]	74	ug/kg	
8001-35-2	Toxaphene	ND	370	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	83%	94%	40-150%
2051-24-3	Decachlorobiphenyl	74%	65%	30-160%

(a) Sample matrix caused CCV to fail low, sample was reanalyzed with similar results. All values are considered estimated.
(b) Result is from Run# 2

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-005		
Lab Sample ID:	F4281-6	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8081A	**Percent Solids:**	68.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	MN04020.D	5	06/21/99	SKW	06/16/99	OP852	GMN166
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	12	ug/kg	
319-84-6	alpha-BHC	ND	12	ug/kg	
319-85-7	beta-BHC	ND	12	ug/kg	
319-86-8	delta-BHC	ND	12	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	12	ug/kg	
5103-71-9	alpha-Chlordane	ND	24	ug/kg	
5103-74-2	gamma-Chlordane	ND	24	ug/kg	
60-57-1	Dieldrin	ND	12	ug/kg	
72-54-8	4,4'-DDD	ND	24	ug/kg	
72-55-9	4,4'-DDE	ND	24	ug/kg	
50-29-3	4,4'-DDT	ND	24	ug/kg	
72-20-8	Endrin	ND	24	ug/kg	
1031-07-8	Endosulfan sulfate	ND	24	ug/kg	
7421-93-4	Endrin aldehyde	ND	24	ug/kg	
53494-70-5	Endrin ketone	ND	24	ug/kg	
959-98-8	Endosulfan-I	ND	12	ug/kg	
33213-65-9	Endosulfan-II	ND	24	ug/kg	
76-44-8	Heptachlor	ND	12	ug/kg	
1024-57-3	Heptachlor epoxide	ND	12	ug/kg	
72-43-5	Methoxychlor	ND	49	ug/kg	
8001-35-2	Toxaphene	ND	1200	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	75%		40-150%
2051-24-3	Decachlorobiphenyl	71%		30-160%

(a) Sample matrix caused CCV to fail low, sample was reanalyzed with similar results. All values are considered estimated.

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-008		
Lab Sample ID:	F4281-9	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8081A	**Percent Solids:**	62.5
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	MN04026.D	10	06/21/99	SKW	06/16/99	OP852	GMN166
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	27	ug/kg	
319-84-6	alpha-BHC	ND	27	ug/kg	
319-85-7	beta-BHC	ND	27	ug/kg	
319-86-8	delta-BHC	ND	27	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	27	ug/kg	
5103-71-9	alpha-Chlordane	ND	53	ug/kg	
5103-74-2	gamma-Chlordane	ND	53	ug/kg	
60-57-1	Dieldrin	ND	27	ug/kg	
72-54-8	4,4'-DDD	ND	53	ug/kg	
72-55-9	4,4'-DDE	ND	53	ug/kg	
50-29-3	4,4'-DDT	ND	53	ug/kg	
72-20-8	Endrin	ND	53	ug/kg	
1031-07-8	Endosulfan sulfate	ND	53	ug/kg	
7421-93-4	Endrin aldehyde	ND	53	ug/kg	
53494-70-5	Endrin ketone	ND	53	ug/kg	
959-98-8	Endosulfan-I	ND	27	ug/kg	
33213-65-9	Endosulfan-II	ND	53	ug/kg	
76-44-8	Heptachlor	ND	27	ug/kg	
1024-57-3	Heptachlor epoxide	ND	27	ug/kg	
72-43-5	Methoxychlor	ND	110	ug/kg	
8001-35-2	Toxaphene	ND	2700	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	84%		40-150%
2051-24-3	Decachlorobiphenyl	66%		30-160%

(a) Sample matrix caused CCV to fail low, sample was reanalyzed with similar results. All values are considered estimated.

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-011		
Lab Sample ID:	F4281-13	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8081A	**Percent Solids:**	65.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	MN04042.D	10	06/22/99	SKW	06/16/99	OP852	GMN167
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	26	ug/kg	
319-84-6	alpha-BHC	ND	26	ug/kg	
319-85-7	beta-BHC	ND	26	ug/kg	
319-86-8	delta-BHC	ND	26	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	26	ug/kg	
5103-71-9	alpha-Chlordane	ND	51	ug/kg	
5103-74-2	gamma-Chlordane	ND	51	ug/kg	
60-57-1	Dieldrin	ND	26	ug/kg	
72-54-8	4,4'-DDD	ND	51	ug/kg	
72-55-9	4,4'-DDE	ND	51	ug/kg	
50-29-3	4,4'-DDT	ND	51	ug/kg	
72-20-8	Endrin	ND	51	ug/kg	
1031-07-8	Endosulfan sulfate	ND	51	ug/kg	
7421-93-4	Endrin aldehyde	ND	51	ug/kg	
53494-70-5	Endrin ketone	ND	51	ug/kg	
959-98-8	Endosulfan-I	ND	26	ug/kg	
33213-65-9	Endosulfan-II	ND	51	ug/kg	
76-44-8	Heptachlor	ND	26	ug/kg	
1024-57-3	Heptachlor epoxide	ND	26	ug/kg	
72-43-5	Methoxychlor	ND	100	ug/kg	
8001-35-2	Toxaphene	ND	2600	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	100%		40-150%
2051-24-3	Decachlorobiphenyl	157%		30-160%

(a) Dilution required due to matrix interference.

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-014		
Lab Sample ID:	F4281-24	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8081A	**Percent Solids:**	69.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	MN04024.D	10	06/21/99	SKW	06/16/99	OP852	GMN166
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	24	ug/kg	
319-84-6	alpha-BHC	ND	24	ug/kg	
319-85-7	beta-BHC	ND	24	ug/kg	
319-86-8	delta-BHC	ND	24	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	24	ug/kg	
5103-71-9	alpha-Chlordane	ND	48	ug/kg	
5103-74-2	gamma-Chlordane	ND	48	ug/kg	
60-57-1	Dieldrin	ND	24	ug/kg	
72-54-8	4,4'-DDD	ND	48	ug/kg	
72-55-9	4,4'-DDE	ND	48	ug/kg	
50-29-3	4,4'-DDT	ND	48	ug/kg	
72-20-8	Endrin	ND	48	ug/kg	
1031-07-8	Endosulfan sulfate	ND	48	ug/kg	
7421-93-4	Endrin aldehyde	ND	48	ug/kg	
53494-70-5	Endrin ketone	ND	48	ug/kg	
959-98-8	Endosulfan-I	ND	24	ug/kg	
33213-65-9	Endosulfan-II	ND	48	ug/kg	
76-44-8	Heptachlor	ND	24	ug/kg	
1024-57-3	Heptachlor epoxide	ND	24	ug/kg	
72-43-5	Methoxychlor	ND	96	ug/kg	
8001-35-2	Toxaphene	ND	2400	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	94%		40-150%
2051-24-3	Decachlorobiphenyl	97%		30-160%

(a) Sample matrix caused CCV to fail low, sample was reanalyzed with similar results. All values are considered estimated.

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-017		
Lab Sample ID:	F4281-28	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8081A	**Percent Solids:**	51.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	MN04025.D	10	06/21/99	SKW	06/16/99	OP852	GMN166
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	32	ug/kg	
319-84-6	alpha-BHC	ND	32	ug/kg	
319-85-7	beta-BHC	ND	32	ug/kg	
319-86-8	delta-BHC	ND	32	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	32	ug/kg	
5103-71-9	alpha-Chlordane	ND	64	ug/kg	
5103-74-2	gamma-Chlordane	ND	64	ug/kg	
60-57-1	Dieldrin	ND	32	ug/kg	
72-54-8	4,4'-DDD	ND	64	ug/kg	
72-55-9	4,4'-DDE	ND	64	ug/kg	
50-29-3	4,4'-DDT	ND	64	ug/kg	
72-20-8	Endrin	ND	64	ug/kg	
1031-07-8	Endosulfan sulfate	ND	64	ug/kg	
7421-93-4	Endrin aldehyde	ND	64	ug/kg	
53494-70-5	Endrin ketone	ND	64	ug/kg	
959-98-8	Endosulfan-I	ND	32	ug/kg	
33213-65-9	Endosulfan-II	ND	64	ug/kg	
76-44-8	Heptachlor	ND	32	ug/kg	
1024-57-3	Heptachlor epoxide	ND	32	ug/kg	
72-43-5	Methoxychlor	ND	130	ug/kg	
8001-35-2	Toxaphene	ND	3200	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	83%		40-150%
2051-24-3	Decachlorobiphenyl	63%		30-160%

(a) Sample matrix caused CCV to fail low, sample was reanalyzed with similar results. All values are considered estimated.

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-018		
Lab Sample ID:	F4281-30	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8081A	**Percent Solids:**	53.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	MN04027.D	20	06/21/99	SKW	06/16/99	OP852	GMN166
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	62	ug/kg	
319-84-6	alpha-BHC	ND	62	ug/kg	
319-85-7	beta-BHC	ND	62	ug/kg	
319-86-8	delta-BHC	ND	62	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	62	ug/kg	
5103-71-9	alpha-Chlordane	ND	120	ug/kg	
5103-74-2	gamma-Chlordane	ND	120	ug/kg	
60-57-1	Dieldrin	ND	62	ug/kg	
72-54-8	4,4'-DDD	ND	120	ug/kg	
72-55-9	4,4'-DDE	ND	120	ug/kg	
50-29-3	4,4'-DDT	ND	120	ug/kg	
72-20-8	Endrin	ND	120	ug/kg	
1031-07-8	Endosulfan sulfate	ND	120	ug/kg	
7421-93-4	Endrin aldehyde	ND	120	ug/kg	
53494-70-5	Endrin ketone	ND	120	ug/kg	
959-98-8	Endosulfan-I	ND	62	ug/kg	
33213-65-9	Endosulfan-II	ND	120	ug/kg	
76-44-8	Heptachlor	ND	62	ug/kg	
1024-57-3	Heptachlor epoxide	ND	62	ug/kg	
72-43-5	Methoxychlor	ND	250	ug/kg	
8001-35-2	Toxaphene	ND	6200	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	87%		40-150%
2051-24-3	Decachlorobiphenyl	38%		30-160%

(a) Sample matrix caused CCV to fail low, sample was reanalyzed with similar results. All values are considered estimated.

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-023		
Lab Sample ID:	F4281-14	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8081A	**Percent Solids:**	68.4
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	MN04022.D	5	06/21/99	SKW	06/16/99	OP852	GMN166
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	12	ug/kg	
319-84-6	alpha-BHC	ND	12	ug/kg	
319-85-7	beta-BHC	ND	12	ug/kg	
319-86-8	delta-BHC	ND	12	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	12	ug/kg	
5103-71-9	alpha-Chlordane	ND	24	ug/kg	
5103-74-2	gamma-Chlordane	ND	24	ug/kg	
60-57-1	Dieldrin	ND	12	ug/kg	
72-54-8	4,4'-DDD	ND	24	ug/kg	
72-55-9	4,4'-DDE	ND	24	ug/kg	
50-29-3	4,4'-DDT	ND	24	ug/kg	
72-20-8	Endrin	ND	24	ug/kg	
1031-07-8	Endosulfan sulfate	ND	24	ug/kg	
7421-93-4	Endrin aldehyde	ND	24	ug/kg	
53494-70-5	Endrin ketone	ND	24	ug/kg	
959-98-8	Endosulfan-I	ND	12	ug/kg	
33213-65-9	Endosulfan-II	ND	24	ug/kg	
76-44-8	Heptachlor	ND	12	ug/kg	
1024-57-3	Heptachlor epoxide	ND	12	ug/kg	
72-43-5	Methoxychlor	ND	49	ug/kg	
8001-35-2	Toxaphene	ND	1200	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	88%		40-150%
2051-24-3	Decachlorobiphenyl	72%		30-160%

(a) Sample matrix caused CCV to fail low, sample was reanalyzed with similar results. All values are considered estimated.

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-026		
Lab Sample ID:	F4281-17	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8081A	**Percent Solids:**	92.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	MN04016.D	5	06/21/99	SKW	06/16/99	OP852	GMN166
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	9.0	ug/kg	
319-84-6	alpha-BHC	ND	9.0	ug/kg	
319-85-7	beta-BHC	ND	9.0	ug/kg	
319-86-8	delta-BHC	ND	9.0	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	9.0	ug/kg	
5103-71-9	alpha-Chlordane	ND	18	ug/kg	
5103-74-2	gamma-Chlordane	ND	18	ug/kg	
60-57-1	Dieldrin	ND	9.0	ug/kg	
72-54-8	4,4'-DDD	ND	18	ug/kg	
72-55-9	4,4'-DDE	ND	18	ug/kg	
50-29-3	4,4'-DDT	ND	18	ug/kg	
72-20-8	Endrin	ND	18	ug/kg	
1031-07-8	Endosulfan sulfate	ND	18	ug/kg	
7421-93-4	Endrin aldehyde	ND	18	ug/kg	
53494-70-5	Endrin ketone	ND	18	ug/kg	
959-98-8	Endosulfan-I	ND	9.0	ug/kg	
33213-65-9	Endosulfan-II	ND	18	ug/kg	
76-44-8	Heptachlor	ND	9.0	ug/kg	
1024-57-3	Heptachlor epoxide	ND	9.0	ug/kg	
72-43-5	Methoxychlor	ND	36	ug/kg	
8001-35-2	Toxaphene	ND	900	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	92%		40-150%
2051-24-3	Decachlorobiphenyl	80%		30-160%

(a) Sample matrix caused CCV to fail low, sample was reanalyzed with similar results. All values are considered estimated.

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-027		
Lab Sample ID:	F4281-18	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8081A	**Percent Solids:**	85.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN04011.D	1	06/21/99	SKW	06/16/99	OP852	GMN166
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	2.0	ug/kg	
319-84-6	alpha-BHC	ND	2.0	ug/kg	
319-85-7	beta-BHC	ND	2.0	ug/kg	
319-86-8	delta-BHC	ND	2.0	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	2.0	ug/kg	
5103-71-9	alpha-Chlordane	ND	3.9	ug/kg	
5103-74-2	gamma-Chlordane	ND	3.9	ug/kg	
60-57-1	Dieldrin	ND	2.0	ug/kg	
72-54-8	4,4'-DDD	ND	3.9	ug/kg	
72-55-9	4,4'-DDE	ND	3.9	ug/kg	
50-29-3	4,4'-DDT	ND	3.9	ug/kg	
72-20-8	Endrin	ND	3.9	ug/kg	
1031-07-8	Endosulfan sulfate	ND	3.9	ug/kg	
7421-93-4	Endrin aldehyde	ND	3.9	ug/kg	
53494-70-5	Endrin ketone	ND	3.9	ug/kg	
959-98-8	Endosulfan-I	ND	2.0	ug/kg	
33213-65-9	Endosulfan-II	ND	3.9	ug/kg	
76-44-8	Heptachlor	ND	2.0	ug/kg	
1024-57-3	Heptachlor epoxide	ND	2.0	ug/kg	
72-43-5	Methoxychlor	ND	7.8	ug/kg	
8001-35-2	Toxaphene	ND	200	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	84%		40-150%
2051-24-3	Decachlorobiphenyl	69%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-028		
Lab Sample ID:	F4281-19	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8081A	**Percent Solids:**	94.7
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	MN04017.D	5	06/21/99	SKW	06/16/99	OP852	GMN166
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	8.8	ug/kg	
319-84-6	alpha-BHC	ND	8.8	ug/kg	
319-85-7	beta-BHC	ND	8.8	ug/kg	
319-86-8	delta-BHC	ND	8.8	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	8.8	ug/kg	
5103-71-9	alpha-Chlordane	ND	18	ug/kg	
5103-74-2	gamma-Chlordane	ND	18	ug/kg	
60-57-1	Dieldrin	ND	8.8	ug/kg	
72-54-8	4,4'-DDD	ND	18	ug/kg	
72-55-9	4,4'-DDE	ND	18	ug/kg	
50-29-3	4,4'-DDT	ND	18	ug/kg	
72-20-8	Endrin	ND	18	ug/kg	
1031-07-8	Endosulfan sulfate	ND	18	ug/kg	
7421-93-4	Endrin aldehyde	ND	18	ug/kg	
53494-70-5	Endrin ketone	ND	18	ug/kg	
959-98-8	Endosulfan-I	ND	8.8	ug/kg	
33213-65-9	Endosulfan-II	ND	18	ug/kg	
76-44-8	Heptachlor	ND	8.8	ug/kg	
1024-57-3	Heptachlor epoxide	ND	8.8	ug/kg	
72-43-5	Methoxychlor	ND	35	ug/kg	
8001-35-2	Toxaphene	ND	880	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	81%		40-150%
2051-24-3	Decachlorobiphenyl	71%		30-160%

(a) Sample matrix caused CCV to fail low, sample was reanalyzed with similar results. All values are considered estimated.

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-DU01		
Lab Sample ID:	F4281-32	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 3550B/8081A	**Percent Solids:**	71.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	MN04019.D	5	06/21/99	SKW	06/16/99	OP852	GMN166
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	12	ug/kg	
319-84-6	alpha-BHC	ND	12	ug/kg	
319-85-7	beta-BHC	ND	12	ug/kg	
319-86-8	delta-BHC	ND	12	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	12	ug/kg	
5103-71-9	alpha-Chlordane	ND	23	ug/kg	
5103-74-2	gamma-Chlordane	ND	23	ug/kg	
60-57-1	Dieldrin	ND	12	ug/kg	
72-54-8	4,4'-DDD	ND	23	ug/kg	
72-55-9	4,4'-DDE	ND	23	ug/kg	
50-29-3	4,4'-DDT	ND	23	ug/kg	
72-20-8	Endrin	ND	23	ug/kg	
1031-07-8	Endosulfan sulfate	ND	23	ug/kg	
7421-93-4	Endrin aldehyde	ND	23	ug/kg	
53494-70-5	Endrin ketone	ND	23	ug/kg	
959-98-8	Endosulfan-I	ND	12	ug/kg	
33213-65-9	Endosulfan-II	ND	23	ug/kg	
76-44-8	Heptachlor	ND	12	ug/kg	
1024-57-3	Heptachlor epoxide	ND	12	ug/kg	
72-43-5	Methoxychlor	ND	47	ug/kg	
8001-35-2	Toxaphene	ND	1200	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	93%		40-150%
2051-24-3	Decachlorobiphenyl	85%		30-160%

(a) Sample matrix caused CCV to fail low, sample was reanalyzed with similar results. All values are considered estimated.

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-001		
Lab Sample ID:	F4281-1	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 8082	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09179.D	1	06/15/99	SKW	06/15/99	OP843	GAB346
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	106%		30-160%
2051-24-3	Decachlorobiphenyl	104%		30-160%

0 930

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-004		
Lab Sample ID:	F4281-5	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 8082	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09152.D	1	06/14/99	SKW	06/11/99	OP843	GAB345
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	96%		30-160%
2051-24-3	Decachlorobiphenyl	112%		30-160%

0 936

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-007		
Lab Sample ID:	F4281-8	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 8082	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09153.D	1	06/14/99	SKW	06/11/99	OP843	GAB345
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	95%		30-160%
2051-24-3	Decachlorobiphenyl	94%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-010		
Lab Sample ID:	F4281-12	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 8082	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09154.D	1	06/14/99	SKW	06/11/99	OP843	GAB345
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	102%		30-160%
2051-24-3	Decachlorobiphenyl	109%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-013		
Lab Sample ID:	F4281-23	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 8082	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09157.D	1	06/14/99	SKW	06/11/99	OP843	GAB345
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	101%		30-160%
2051-24-3	Decachlorobiphenyl	106%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-016		
Lab Sample ID:	F4281-27	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 8082	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09158.D	1	06/14/99	SKW	06/11/99	OP843	GAB345
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	110%		30-160%
2051-24-3	Decachlorobiphenyl	130%		30-160%

0 931

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-023		
Lab Sample ID:	F4281-15	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 8082	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09155.D	1	06/14/99	SKW	06/11/99	OP843	GAB345
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	112%		30-160%
2051-24-3	Decachlorobiphenyl	123%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SW-DU01		
Lab Sample ID:	F4281-31	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
Method:	SW846 8082	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09159.D	1	06/14/99	SKW	06/11/99	OP843	GAB345
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	112%		30-160%
2051-24-3	Decachlorobiphenyl	120%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-002		
Lab Sample ID:	F4281-2	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 8082	**Percent Solids:**	45.3
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09214.D	1	06/16/99	SKW	06/16/99	OP851	GAB347
Run #2	.						

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	74	ug/kg	
11104-28-2	Aroclor 1221	ND	74	ug/kg	
11141-16-5	Aroclor 1232	ND	74	ug/kg	
53469-21-9	Aroclor 1242	ND	74	ug/kg	
12672-29-6	Aroclor 1248	ND	74	ug/kg	
11097-69-1	Aroclor 1254	ND	74	ug/kg	
11096-82-5	Aroclor 1260	ND	74	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	109%		40-150%
2051-24-3	Decachlorobiphenyl	100%		30-160%

ND = Not detected
RDL = Reported Detection 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

0 955

Report of Analysis

Client Sample ID:	CEF-P39-SD-005		
Lab Sample ID:	F4281-6	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 8082	**Percent Solids:**	68.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09215.D	1	06/16/99	SKW	06/16/99	OP851	GAB347
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	49	ug/kg	
11104-28-2	Aroclor 1221	ND	49	ug/kg	
11141-16-5	Aroclor 1232	ND	49	ug/kg	
53469-21-9	Aroclor 1242	ND	49	ug/kg	
12672-29-6	Aroclor 1248	ND	49	ug/kg	
11097-69-1	Aroclor 1254	ND	49	ug/kg	
11096-82-5	Aroclor 1260	ND	49	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	99%		40-150%
2051-24-3	Decachlorobiphenyl	80%		30-160%

0 939

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-008		
Lab Sample ID:	F4281-9	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 8082	**Percent Solids:**	62.5
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AB09219.D	1	06/16/99	SKW	06/16/99	OP851	GAB347
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	53	ug/kg	
11104-28-2	Aroclor 1221	ND	53	ug/kg	
11141-16-5	Aroclor 1232	ND	53	ug/kg	
53469-21-9	Aroclor 1242	ND	53	ug/kg	
12672-29-6	Aroclor 1248	ND	53	ug/kg	
11097-69-1	Aroclor 1254 [b]	54.4	53	ug/kg	J
11096-82-5	Aroclor 1260 [b]	178	53	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	104%		40-150%
2051-24-3	Decachlorobiphenyl	52%		30-160%

(a) All hits confirmed by dual column analysis.
(b) Estimated value due to the presence of multiple Arochlor patterns.

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-011		
Lab Sample ID:	F4281-13	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 8082	**Percent Solids:**	65.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09220.D	1	06/16/99	SKW	06/16/99	OP851	GAB347
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	51	ug/kg	
11104-28-2	Aroclor 1221	ND	51	ug/kg	
11141-16-5	Aroclor 1232	ND	51	ug/kg	
53469-21-9	Aroclor 1242	ND	51	ug/kg	
12672-29-6	Aroclor 1248	ND	51	ug/kg	
11097-69-1	Aroclor 1254	ND	51	ug/kg	
11096-82-5	Aroclor 1260	ND	51	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	110%		40-150%
2051-24-3	Decachlorobiphenyl	60%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-014		
Lab Sample ID:	F4281-24	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 8082	**Percent Solids:**	69.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09225.D	1	06/17/99	SKW	06/16/99	OP851	GAB347
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	48	ug/kg	
11104-28-2	Aroclor 1221	ND	48	ug/kg	
11141-16-5	Aroclor 1232	ND	48	ug/kg	
53469-21-9	Aroclor 1242	ND	48	ug/kg	
12672-29-6	Aroclor 1248	ND	48	ug/kg	
11097-69-1	Aroclor 1254	ND	48	ug/kg	
11096-82-5	Aroclor 1260	ND	48	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	99%		40-150%
2051-24-3	Decachlorobiphenyl	54%		30-160%

0 976

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-017		
Lab Sample ID:	F4281-28	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 8082	**Percent Solids:**	51.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09226.D	1	06/17/99	SKW	06/16/99	OP851	GAB347
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	64	ug/kg	
11104-28-2	Aroclor 1221	ND	64	ug/kg	
11141-16-5	Aroclor 1232	ND	64	ug/kg	
53469-21-9	Aroclor 1242	ND	64	ug/kg	
12672-29-6	Aroclor 1248	ND	64	ug/kg	
11097-69-1	Aroclor 1254	ND	64	ug/kg	
11096-82-5	Aroclor 1260	ND	64	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	99%		40-150%
2051-24-3	Decachlorobiphenyl	44%		30-160%

0 984

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-023		
Lab Sample ID:	F4281-14	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 8082	**Percent Solids:**	68.4
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AB09237.D	2	06/17/99	SKW	06/16/99	OP851	GAB348
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	97	ug/kg	
11104-28-2	Aroclor 1221	ND	97	ug/kg	
11141-16-5	Aroclor 1232	ND	97	ug/kg	
53469-21-9	Aroclor 1242	ND	97	ug/kg	
12672-29-6	Aroclor 1248	ND	97	ug/kg	
11097-69-1	Aroclor 1254	ND	97	ug/kg	
11096-82-5	Aroclor 1260	470	97	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	96%		40-150%
2051-24-3	Decachlorobiphenyl	85%		30-160%

(a) All hits confirmed by dual column analysis.

0 955

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-024		
Lab Sample ID:	F4281-16	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 8082	**Percent Solids:**	64.8
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AB09238.D	2	06/17/99	SKW	06/16/99	OP851	GAB348
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	100	ug/kg	
11104-28-2	Aroclor 1221	ND	100	ug/kg	
11141-16-5	Aroclor 1232	ND	100	ug/kg	
53469-21-9	Aroclor 1242	ND	100	ug/kg	
12672-29-6	Aroclor 1248	ND	100	ug/kg	
11097-69-1	Aroclor 1254	ND	100	ug/kg	
11096-82-5	Aroclor 1260	907	100	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	98%		40-150%
2051-24-3	Decachlorobiphenyl	95%		30-160%

(a) All hits confirmed by dual column analysis.

0 063

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-026		
Lab Sample ID:	F4281-17	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 8082	**Percent Solids:**	92.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09223.D	1	06/16/99	SKW	06/16/99	OP851	GAB347
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	36	ug/kg	
11104-28-2	Aroclor 1221	ND	36	ug/kg	
11141-16-5	Aroclor 1232	ND	36	ug/kg	
53469-21-9	Aroclor 1242	ND	36	ug/kg	
12672-29-6	Aroclor 1248	ND	36	ug/kg	
11097-69-1	Aroclor 1254	ND	36	ug/kg	
11096-82-5	Aroclor 1260	ND	36	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	108%		40-150%
2051-24-3	Decachlorobiphenyl	92%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-028		
Lab Sample ID:	F4281-19	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 8082	**Percent Solids:**	94.7
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09224.D	1	06/16/99	SKW	06/16/99	OP851	GAB347
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	35	ug/kg	
11104-28-2	Aroclor 1221	ND	35	ug/kg	
11141-16-5	Aroclor 1232	ND	35	ug/kg	
53469-21-9	Aroclor 1242	ND	35	ug/kg	
12672-29-6	Aroclor 1248	ND	35	ug/kg	
11097-69-1	Aroclor 1254	ND	35	ug/kg	
11096-82-5	Aroclor 1260	ND	35	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	107%		40-150%
2051-24-3	Decachlorobiphenyl	95%		30-160%

ND = Not detected
RDL = Reported Detection 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

Report of Analysis

Client Sample ID:	CEF-P39-SD-DU01		
Lab Sample ID:	F4281-32	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
Method:	SW846 8082	**Percent Solids:**	71.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB09227.D	1	06/17/99	SKW	06/16/99	OP851	GAB347
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	47	ug/kg	
11104-28-2	Aroclor 1221	ND	47	ug/kg	
11141-16-5	Aroclor 1232	ND	47	ug/kg	
53469-21-9	Aroclor 1242	ND	47	ug/kg	
12672-29-6	Aroclor 1248	ND	47	ug/kg	
11097-69-1	Aroclor 1254	ND	47	ug/kg	
11096-82-5	Aroclor 1260	ND	47	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	107%		40-150%
2051-24-3	Decachlorobiphenyl	72%		30-160%

ND = Not detected
RDL = Reported Detection 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

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

PITT-07-9-019

TO:	**M. SPERANZA**	**DATE:**	**JULY 22, 1999**
FROM:	**GRETCHEN PHIPPS**	**COPIES:**	**DV FILE / REV 1**

SUBJECT: **INORGANIC DATA VALIDATION – TAL METALS**
CTO 078 - CECIL FIELD
SDG – F4281

SAMPLES: 14/Aqueous/

CEF-P39-SW-001	CEF-P39-SW-003	CEF-P39-SW-004
CEF-P39-SW-006	CEF-P39-SW-007	CEF-P39-SW-009
CEF-P39-SW-010	CEF-P39-SW-013	CEF-P39-SW-015
CEF-P39-SW-016	CEF-P39-SW-018	CEF-P39-SW-023
CEF-P39-SW-DU01	CEF-P39-SW-012	

17/Sediments/

CEF-P39-SD-002	CEF-P39-SD-003	CEF-P39-SD-005
CEF-P39-SD-008	CEF-P39-SD-009	CEF-P39-SD-011
CEF-P39-SD-012	CEF-P39-SD-014	CEF-P39-SD-015
CEF-P39-SD-017	CEF-P39-SD-018	CEF-P39-SD-023
CEF-P39-SD-024	CEF-P39-SD-026	CEF-P39-SD-028
CEF-P39-SD-029	CEF-P39-SD-DU01	

Overview

The sample set for CTO 078, Cecil Field, SDG F4281, consists of fourteen (14) aqueous environmental samples and seventeen (17) sediment environmental samples. Two (2) field duplicate pairs (CEF-P39-SW-003 / CEF-P39-SW-DU01 and CEF-P39-SD-003 / CEF-P39-SD-DU01) were included within this SDG.

The samples were analyzed for target analyte list (TAL) metals. The samples were collected by Tetra Tech NUS on June 8, 9 and 10, 1999 and analyzed by Accutest Laboratory under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA / QC) criteria. Metals analyses, with the exception of mercury, were conducted using SW 846 method 6010B. Mercury analyses were conducted using SW 846 method 7470A.

The data was evaluated based on the following parameters:

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

- Field Duplicate Imprecision

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

Laboratory Blank Analyses

The following contaminant was present in a laboratory method / preparation blanks at the following maximum concentration:

Affected samples: All samples except CEF-P39-SW-012

Analyte	Maximum Concentration	Action Level(soil)	Action Level(aqueous)
Aluminum	75.9µg/L	37.95 mg/kg	379.5µg/L
Antimony	5.2µg/L	2.6 mg/kg	26.0µg/L
Barium	1.2µg/L	NA	6.0µg/L
Barium(1)	2.4 mg/kg	12 mg/kg	NA
Beryllium	2.7µg/L	1.35 mg/kg	13.5µg/L
Cadmium	0.77µg/L	0.385 mg/kg	3.85µg/L
Calcium	32.5µg/L	16.25 mg/kg	NA
Calcium(2)	34.1µg/L	NA	170.5µg/L
Chromium(1)	0.39 mg/kg	1.95 mg/kg	NA
Chromium	1.9µg/L	NA	9.5µg/L
Copper	1.5µg/L	0.75 mg/kg	7.5µg/L
Iron(1)	8.3 mg/kg	41.5 mg/kg	NA
Iron	34.5µg/L	NA	172.5µg/L
Lead	8.0µg/L	4.0 mg/kg	40µg/L
Magnesium	41.6µg/L	20.8 mg/kg	208µg/L
Manganese	0.8µg/L	0.4 mg/kg	4.0µg/L
Nickel(1)	0.26 mg/kg	1.3 mg/kg	NA
Nickel(2)	1.4µg/L	NA	7.0µg/L
Potassium	119µg/L	59.5 mg/kg	595µg/L
Selenium	3.4µg/L	1.7 mg/kg	17.0µg/L
Silver	1.3µg/L	0.65 mg/kg	6.5µg/L
Thallium	14.6µg/L	7.3 mg/kg	73.0µg/L
Vanadium	0.90µg/L	0.45 mg/kg	4.5µg/L
Zinc(1)	0.28 mg/kg	1.4 mg/kg	NA
Zinc	1.6µg/L	NA	8.0µg/L

(1) Maximum concentration present in a soil preparation blank
(2) Maximum concentration present in an aqueous preparation blank.

An action level of 5X the maximum concentration has been used to evaluate the sample data for blank contamination. Sample aliquot, percent solids and dilution factors were taken into consideration when determining blank contamination. Positive result less than the blank action level for aluminum, antimony, barium, beryllium, cadmium, chromium, lead, manganese, nickel, potassium, selenium, silver, vanadium and zinc were qualified, "U", as a result of blank contamination. No action was required for the remaining analytes as either the results were greater than the action level or were nondetects.

Affected samples: CEF-P39-SW-012

Analyte	Maximum Concentration	Action Level(aqueous)
Aluminum	37.8µg/L	189µg/L
Antimony	4.8µg/L	24.0µg/L
Barium	0.90µg/L	4.5µg/L
Beryllium	2.3µg/L	11.5µg/L
Cadmium	1.0µg/L	5.0µg/L
Calcium (1)	98.0µg/L	490µg/L
Chromium	3.4µg/L	17.0µg/L
Cobalt	1.5µg/L	7.5µg/L
Copper	6.0µg/L	30.0µg/L
Iron	35.6µg/L	178µg/L
Magnesium	31.5µg/L	157.5µg/L
Manganese	1.0µg/L	5.0µg/L
Nickel	1.6µg/L	8.0µg/L
Potassium	116µg/L	580µg/L
Thallium	7.3µg/L	36.5µg/L
Vanadium	1.0µg/L	5.0µg/L
Zinc (1)	5.5µg/L	27.5µg/L

(1) Maximum concentration present in an aqueous preparation blank.

An action level of 5X the maximum concentration has been used to evaluate the sample data for blank contamination. Sample aliquot and dilution factors were taken into consideration when determining blank contamination. Positive result less than the blank action level for beryllium, cadmium, chromium, copper, nickel and vanadium were qualified, "U", as a result of blank contamination. No action was required for the remaining analytes as either the results were greater than the action level or were nondetects.

Field Duplicate Imprecision

Field duplicate imprecision was noted for aluminum and calcium, iron affecting the aqueous matrix. The positive results reported for the aluminum and calcium in the affected samples were qualified as estimated, "J".

Field duplicate imprecision was noted for aluminum, chromium, copper, lead and zinc affecting the soil matrix. The positive results reported for the above listed analytes in the affected samples were qualified as estimated, "J".

Notes

The Contract Required Detection Limit (CRDL) Percent Recoveries (%Rs) for beryllium, chromium, lead, manganese, selenium and thallium were >120% quality control limit. The CRDL %Rs for arsenic and zinc were <80% quality control limit. However, no validation action is required per regional guidance.

A comparison of field duplicate pairs (CEF-P39-SW-003 / CEF-P39-SW-DU01 and CEF-P39-SD-003 / CEF-P39-SD-DU01) is included in Appendix C.

Sample CEF-P39-SW-012 was not delivered to the laboratory with the SDG. The sample was resample and sent to the laboratory.

Executive Summary

Laboratory Performance: Several analytes were present in the laboratory method / preparation blanks.

Other Factors Affecting Data Quality: Field duplicate imprecision was noted for aluminum and calcium, iron affecting the aqueous matrix. Field duplicate imprecision was noted for aluminum, chromium, copper, lead and zinc affecting the soil matrix.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic 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

APPENIDX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
N = Internal Standard Noncompliance
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCB D% between columns for positive results
V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = % Solid content is less than 30%

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SD-002			CEF-P39-SD-003			CEF-P39-SD-005			CEF-P39-SD-008		
SAMPLE DATE:	06/08/99			06/08/99			06/08/99			06/08/99		
LABORATORY ID:	F4281-2			F4281-4			F4281-6			F4281-9		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	45.3 %			69.8 %			68.1 %			62.5 %		
UNITS:	MG/KG			MG/KG			MG/KG			MG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ALUMINUM	1660	J	G	1290	J	G	1760	J	G	1490	J	G
ANTIMONY	0.53	U		0.34	U		3.2	U	A	0.40	U	A
ARSENIC	0.76	U		0.49	U		0.51	U		0.55	U	
BARIUM	9.1	U	A	5.1	U	A	4.3	U	A	5.9	U	A
BERYLLIUM	0.51	U	A	0.26	U	A	0.21	U	A	0.45	U	A
CADMIUM	0.08	U	A	0.05	U		1.3			2.6		
CALCIUM	1210			605			265			894		
CHROMIUM	2.8	U	A	1.9	U	A	7.8	J	G	18.3	J	G
COBALT	0.22			0.19			0.29			0.53		
COPPER	3.0	J	G	1.4	J	G	5.8	J	G	10.9	J	G
IRON	631			575			373			580		
LEAD	8.5	U	A	3.6	U	A	41.2	J	G	57.4	J	G
MAGNESIUM	155			87.2			89.4			134		
MANGANESE	3.9			2.4			1.6			3.6		
MERCURY	0.09	U		0.01	U		0.06	U		0.07	U	
NICKEL	0.98	U	A	0.55	U	A	1.8	U	A	2.5		
POTASSIUM	54.6	U	A	36.5	U	A	40.3	U	A	40.7	U	A
SELENIUM	0.45	U		0.29	U		0.30	U		0.33	U	
SILVER	0.21	U		0.14	U		0.15	U	A	0.19	U	A
SODIUM	34.0			21.9	U		22.5	U		24.5	U	
THALLIUM	0.59	U		0.39	U		0.40	U		0.43	U	
VANADIUM	3.0			2.0			2.1			3.1		
ZINC	15.3	J	G	10.4	J	G	36.6	J	G	99.6	J	G

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SD-009			CEF-P39-SD-011			CEF-P39-SD-012			CEF-P39-SD-014		
SAMPLE DATE:	06/08/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4281-11			F4281-13			F4281-22			F4281-24		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	69.2 %			65.1 %			71.7 %			69.6 %		
UNITS:	MG/KG			MG/KG			MG/KG			MG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ALUMINUM	1340	J	G	2530	J	G	4420	J	G	1520	J	G
ANTIMONY	0.35	U		4.0			0.33	U		0.34	U	
ARSENIC	0.50	U		10.9			0.51			0.50	U	
BARIUM	5.9	U	A	12.9	U	A	10.1	U	A	13.2	U	A
BERYLLIUM	0.33	U	A	0.40	U	A	0.33	U	A	0.29	U	A
CADMIUM	1.4			6.5			2.3			2.2		
CALCIUM	291			910			1120			872		
CHROMIUM	23.6	J	G	62.4	J	G	8.4	J	G	20.4	J	G
COBALT	0.43			1.2			0.40			0.53		
COPPER	6.0	J	G	34.2	J	G	8.6	J	G	9.7	J	G
IRON	366			1110			729			527		
LEAD	16.7	J	G	198	J	G	24.8	J	G	52.1	J	G
MAGNESIUM	99.5			288			188			163		
MANGANESE	4.5			12.1			4.5			4.9		
MERCURY	0.01			0.06	U		0.06	U		0.06	U	
NICKEL	1.7	U	A	5.3			2.1			3.5		
POTASSIUM	40.4	U	A	87.2	U	A	58.3	U	A	52.1	U	A
SELENIUM	0.29	U		0.31	U		0.35	U	A	0.29	U	
SILVER	0.15	U	A	0.15	U		0.13	U		0.14	U	
SODIUM	24.5			40.2			30.7			41.0		
THALLIUM	0.39	U		0.41	U		0.38	U		0.39	U	
VANADIUM	1.9			5.9			5.6			4.0		
ZINC	96.3	J	G	178	J	G	72.2	J	G	136	J	G

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SD-015			CEF-P39-SD-017			CEF-P39-SD-018			CEF-P39-SD-023		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4281-26			F4281-28			F4281-30			F4281-14		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	69.9 %			51.6 %			53.1 %			68.4 %		
UNITS:	MG/KG			MG/KG			MG/KG			MG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ALUMINUM	2240	J	G	2330	J	G	3790	J	G	1710	J	G
ANTIMONY	0.35	U	A	0.46	U		0.83	U	A	0.35	U	
ARSENIC	0.55			0.88			1.4			0.50	U	
BARIUM	10.0	U	A	8.8	U	A	20.8	U	A	4.5	U	A
BERYLLIUM	0.32	U	A	0.36	U	A	0.52	U	A	0.27	U	A
CADMIUM	1.8			1.1			1.3			0.46	U	A
CALCIUM	1020			3140			525			622		
CHROMIUM	10.3	J	G	4.9	J	G	7.9	J	G	2.4	U	A
COBALT	0.48			0.54			0.65			0.26		
COPPER	8.6	J	G	6.8	J	G	7.3	J	G	3.4	J	G
IRON	642			1010			873			577		
LEAD	35.5	J	G	12.6	J	G	24.3	J	G	9.4	J	G
MAGNESIUM	186			183			116			139		
MANGANESE	5.4			4.4			4.3			2.4		
MERCURY	0.06	U		0.08	U		0.08	U		0.06	U	
NICKEL	5.7			2.7			2.7			1.3	U	A
POTASSIUM	53.1	U	A	67.4	U	A	60.2	U	A	45.9	U	A
SELENIUM	0.29	U		0.40	U		0.69	U	A	0.30	U	
SILVER	0.14	U		0.19	U		0.18	U		0.14	U	
SODIUM	41.9			62.1			525			43.2		
THALLIUM	0.38	U		0.52	U		0.51	U		0.39	U	
VANADIUM	4.5			6.2			10.0			2.6		
ZINC	131	J	G	62.6	J	G	87.1	J	G	51.6	J	G

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SD-024			CEF-P39-SD-026			CEF-P39-SD-028			CEF-P39-SD-029		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4281-16			F4281-17			F4281-19			F4281-20		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	64.8 %			92.1 %			94.7 %			97.9 %		
UNITS:	MG/KG			MG/KG			MG/KG			MG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ALUMINUM	1960	J	G	3880	J	G	6560	J	G	1260	J	G
ANTIMONY	0.37	U		0.26	U		0.25	U		0.24	U	
ARSENIC	0.53	U		0.37	U		0.36	U		0.35	U	
BARIUM	5.5	U	A	7.8	U	A	5.6	U	A	2.2	U	A
BERYLLIUM	0.28	U	A	0.25	U	A	0.25	U	A	0.28	U	A
CADMIUM	0.63			0.13	U	A	0.08	U	A	0.03	U	
CALCIUM	795			23100			2170			218		
CHROMIUM	4.2	J	G	6.0	J	G	7.6	J	G	1.9	U	A
COBALT	0.31			0.25			0.33			0.10		
COPPER	5.3	J	G	1.7	J	G	2.1	J	G	0.55	U	A
IRON	526			574			830			180		
LEAD	12.8	J	G	4.6	J	G	6.3	J	G	1.4	U	A
MAGNESIUM	158			215			124			54.0		
MANGANESE	3.1			7.6			6.9			0.78		
MERCURY	0.06	U		0.05	U		0.04	U		0.04	U	
NICKEL	1.6	U	A	1.1	U	A	1.9			0.43	U	A
POTASSIUM	56.6	U	A	33.8	U	A	50.2	U	A	20.6	U	A
SELENIUM	0.31	U		0.22	U		0.22	U		0.21	U	
SILVER	0.17	U	A	0.10	U		0.10	U		0.10	U	
SODIUM	46.3			33.3			31.6			15.6	U	
THALLIUM	0.42	U		0.29	U		0.28	U		0.27	U	
VANADIUM	3.3			3.4			4.3			1.2		
ZINC	44.3	J	G	5.1	J	G	7.0	J	G	0.08	U	

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SD-DU01											
SAMPLE DATE:	06/08/99			/ /			/ /			/ /		
LABORATORY ID:	F4281-32											
QC_TYPE:	NORMAL											
% SOLIDS:	71.1 %			100.0 %			100.0 %			100.0 %		
UNITS:	MG/KG											
FIELD DUPLICATE OF:	CEF-P39-SD-003											
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ALUMINUM	2710	J	G									
ANTIMONY	0.41	U	A									
ARSENIC	0.51											
BARIUM	53.4											
BERYLLIUM	0.33	U	A									
CADMIUM	2.9											
CALCIUM	178											
CHROMIUM	16.2	J	G									
COBALT	0.51											
COPPER	15.3	J	G									
IRON	513											
LEAD	144	J	G									
MAGNESIUM	95.4											
MANGANESE	2.5											
MERCURY	0.06	U										
NICKEL	4.8											
POTASSIUM	45.3	U	A									
SELENIUM	0.29	U										
SILVER	0.20	U	A									
SODIUM	397											
THALLIUM	0.38	U										
VANADIUM	3.7											
ZINC	90.2	J	G									

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SW-001			CEF-P39-SW-003			CEF-P39-SW-004			CEF-P39-SW-006		
SAMPLE DATE:	06/08/99			06/08/99			06/08/99			06/08/99		
LABORATORY ID:	F4281-1			F4281-3			F4281-5			F4281-7		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/L			UG/L			UG/L			UG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ALUMINUM	146	U	A	621	J	G	762	J	G	2710	J	G
ANTIMONY	2.4	U		2.4	U		2.4	U		4.6	U	A
ARSENIC	3.4	U		3.4	U		3.4	U		3.4	U	
BARIUM	16.0			19.1			14.4			34.2		
BERYLLIUM	0.83	U	A	0.90	U	A	0.97	U	A	2.7	U	A
CADMIUM	0.33	U		0.33	U		1.3	U	A	4.2		
CALCIUM	49200	J	G	49200	J	G	2330	J	G	3490	J	G
CHROMIUM	1.2	U	A	1.5	U	A	10.4			9.7		
COBALT	0.80	U		0.80	U		0.80	U		1.1		
COPPER	0.75	U		0.75	U		0.75	U		8.9		
IRON	562	J	G	3530	J	G	1160	J	G	5900	J	G
LEAD	1.8	U	A	3.4	U	A	10.2	U	A	45.0		
MAGNESIUM	890			915			677			950		
MANGANESE	7.7			27.1			5.5			30.0		
MERCURY	0.25	U		0.25	U		0.25	U		0.25	U	
NICKEL	1.0	U		1.0	U		8.4			6.0	U	A
POTASSIUM	627			421	U	A	402	U	A	1030		
SELENIUM	3.1	U	A	2.0	U		2.0	U		2.0	U	
SILVER	0.96	U		0.96	U		0.96	U		0.96	U	
SODIUM	2140			2130			2400			2380		
THALLIUM	2.7	U		2.7	U		2.7	U		2.7	U	
VANADIUM	1.1	U	A	3.4	U	A	1.7	U	A	7.8		
ZINC	3.4	U	A	10.1			90.9			151		

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SW-007			CEF-P39-SW-009			CEF-P39-SW-010			CEF-P39-SW-013		
SAMPLE DATE:	06/08/99			06/08/99			06/09/99			06/09/99		
LABORATORY ID:	F4281-8			F4281-10			F4281-12			F4281-23		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/L			UG/L			UG/L			UG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ALUMINUM	103	U	A	142	U	A	89.9	U	A	900	J	G
ANTIMONY	2.4	U		2.4	U		2.4	U		2.4	U	
ARSENIC	3.4	U		3.4	U		3.4	U		3.4	U	
BARIUM	15.6			15.6			14.2			90.4		
BERYLLIUM	2.7	U	A	2.6	U	A	1.9	U	A	2.0	U	A
CADMIUM	0.33	U		0.33	U		0.34	U	A	3.4	U	A
CALCIUM	19300	J	G	19300	J	G	25600	J	G	39400	J	G
CHROMIUM	0.68	U	A	1.0	U	A	0.94	U	A	4.6	U	A
COBALT	0.80	U		0.80	U		0.80	U		0.80	U	
COPPER	7.9			7.8			0.75	U		9.0		
IRON	348	J	G	543	J	G	344	J	G	3140	J	G
LEAD	1.6	U		1.6	U		1.6	U		23.8	U	A
MAGNESIUM	7140			7070			7640			8760		
MANGANESE	26.0			3.5	U	A	4.8			43.5		
MERCURY	0.25	U		0.25	U		0.25	U		0.25	U	
NICKEL	1.0	U		1.0	U		1.0	U		2.4	U	A
POTASSIUM	1020			878			962			1370		
SELENIUM	2.2	U	A	2.0	U		2.0	U		2.0	U	
SILVER	0.96	U		0.96	U		0.96	U		0.96	U	
SODIUM	4700			4490			4290			4760		
THALLIUM	2.7	U		2.7	U		2.7	U		2.7	U	
VANADIUM	0.82	U	A	1.0	U	A	0.95	U	A	6.7		
ZINC	19.6			8.0	U	A	5.0	U	A	316		

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SW-015			CEF-P39-SW-016			CEF-P39-SW-018			CEF-P39-SW-023		
SAMPLE DATE:	06/09/99			06/09/99			06/09/99			06/09/99		
LABORATORY ID:	F4281-25			F4281-27			F4281-29			F4281-15		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/L			UG/L			UG/L			UG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ALUMINUM	8440	J	G	679	J	G	33000	J	G	1000	J	G
ANTIMONY	4.5	U	A	2.4	U		5.4	U	A	2.4	U	
ARSENIC	3.6			4.1			51.2			3.4	U	
BARIUM	94.5			20.0			126			22.0		
BERYLLIUM	2.7	U	A	2.0	U	A	4.4	U	A	2.0	U	A
CADMIUM	24.2			1.0	U	A	26.2			0.84	U	A
CALCIUM	49200	J	G	34600	J	G	50100	J	G	12100	J	G
CHROMIUM	45.0			2.4	U	A	58.7			2.2	U	A
COBALT	3.6			0.80	U		9.2			0.80	U	
COPPER	93.4			0.75	U		85.3			0.75	U	
IRON	19600	J	G	5790	J	G	83400	J	G	1950	J	G
LEAD	205			4.9	U	A	177			9.7	U	A
MAGNESIUM	10300			1030			2860			1280		
MANGANESE	106			23.7			119			20.4		
MERCURY	0.25	U		0.25	U		0.25	U		0.25	U	
NICKEL	21.7			1.6	U	A	37.9			1.0	U	
POTASSIUM	3810			814			2040			1020		
SELENIUM	4.3	U	A	2.0	U		8.1	U	A	2.8	U	A
SILVER	0.96	U		0.97	U	A	1.1	U	A	0.96	U	
SODIUM	5530			2680			3240			2380		
THALLIUM	2.7	U		2.7	U		2.7	U		2.7	U	
VANADIUM	49.5			5.3			146			4.8		
ZINC	1690			43.2			1190			52.5		

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SW-DU01											
SAMPLE DATE:	06/08/99			/ /			/ /			/ /		
LABORATORY ID:	F4281-31											
QC_TYPE:	NORMAL											
% SOLIDS:	0.0 %			100.0 %			100.0 %			100.0 %		
UNITS:	UG/L											
FIELD DUPLICATE OF:	CEF-P39-SW-003											
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ALUMINUM	399	J	G									
ANTIMONY	2.4	U										
ARSENIC	3.4	U										
BARIUM	12.1											
BERYLLIUM	1.2	U	A									
CADMIUM	0.60	U	A									
CALCIUM	2250	J	G									
CHROMIUM	1.4	U	A									
COBALT	0.80	U										
COPPER	0.75	U										
IRON	957	J	G									
LEAD	3.7	U	A									
MAGNESIUM	644											
MANGANESE	4.7											
MERCURY	0.25	U										
NICKEL	1.0	U										
POTASSIUM	364	U	A									
SELENIUM	2.0	U										
SILVER	0.96	U										
SODIUM	2170											
THALLIUM	4.0	U	A									
VANADIUM	1.2	U	A									
ZINC	40.1											

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4281

SAMPLE NUMBER:	CEF-P39-SW-012											
SAMPLE DATE:	06/10/99			/ /			/ /			/ /		
LABORATORY ID:	F4281-21											
QC_TYPE:	NORMAL											
% SOLIDS:	0.0 %			100.0 %			100.0 %			100.0 %		
UNITS:	UG/L											
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ALUMINUM	422	J	I									
ANTIMONY	2.4	U										
ARSENIC	3.4	U										
BARIUM	24.6											
BERYLLIUM	1.1	U	A									
CADMIUM	2.0	U	A									
CALCIUM	28900	J	I									
CHROMIUM	8.2	U	A									
COBALT	0.80	U										
COPPER	8.3	U	A									
IRON	1650	J	I									
LEAD	10.3											
MAGNESIUM	8310											
MANGANESE	37.0											
MERCURY	0.06	U										
NICKEL	3.0	U	A									
POTASSIUM	1300											
SELENIUM	2.0	U										
SILVER	0.96	U										
SODIUM	5070											
THALLIUM	2.7	U										
VANADIUM	1.7	U	A									
ZINC	82.7											

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

Report of Analysis

Client Sample ID:	CEF-P39-SW-001		
Lab Sample ID:	F4281-1	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	146 B	200	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Antimony	2.4 U	5.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Arsenic	3.4 U	5.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Barium	16.0 B	200	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Beryllium	0.83 B	5.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Cadmium	0.33 U	4.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Calcium	49200	5000	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Chromium	1.2 B	10.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Cobalt	0.80 U	50.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Copper	0.75 U	25.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Iron	562	100	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Lead	1.8 B	3.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Magnesium	890 B	5000	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Manganese	7.7 B	15.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Mercury	0.25 U	1.0	ug/l	1	06/17/99	06/18/99	JK	SW846 7470A
Nickel	1.0 U	40.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Potassium	627 B	5000	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Selenium	3.1 B	5.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Silver	0.96 U	10.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Sodium	2140 B	5000	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Thallium	2.7 U	5.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Vanadium	1.1 B	50.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Zinc	3.4 B	20.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A

01174

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SW-003		
Lab Sample ID:	F4281-3	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	621	200	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Antimony	2.4 U	5.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Arsenic	3.4 U	5.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Barium	19.1 B	200	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Beryllium	0.90 B	5.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Cadmium	0.33 U	4.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Calcium	49200	5000	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Chromium	1.5 B	10.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Cobalt	0.80 U	50.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Copper	0.75 U	25.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Iron	3530	100	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Lead	3.4	3.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Magnesium	915 B	5000	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Manganese	27.1	15.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Mercury	0.25 U	1.0	ug/l	1	06/17/99	06/18/99	JK	SW846 7470A
Nickel	1.0 U	40.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Potassium	421 B	5000	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Selenium	2.0 U	5.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Silver	0.96 U	10.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Sodium	2130 B	5000	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Thallium	2.7 U	5.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Vanadium	3.4 B	50.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Zinc	10.1 B	20.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A

RDL = Reported Detection Limit

01176

Report of Analysis

Client Sample ID:	CEF-P39-SW-004		
Lab Sample ID:	F4281-5	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	762	200	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Antimony	2.4 U	5.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Arsenic	3.4 U	5.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Barium	14.4 B	200	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Beryllium	0.97 B	5.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Cadmium	1.3 B	4.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Calcium	2330 B	5000	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Chromium	10.4	10.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Cobalt	0.80 U	50.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Copper	0.75 U	25.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Iron	1160	100	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Lead	10.2	3.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Magnesium	677 B	5000	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Manganese	5.5 B	15.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Mercury	0.25 U	1.0	ug/l	1	06/17/99	06/18/99	JK	SW846 7470A
Nickel	8.4 B	40.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Potassium	402 B	5000	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Selenium	2.0 U	5.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Silver	0.96 U	10.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Sodium	2400 B	5000	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Thallium	2.7 U	5.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Vanadium	1.7 B	50.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A
Zinc	90.9	20.0	ug/l	1	06/14/99	06/16/99	JK	SW846 6010A

01175

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SW-006		
Lab Sample ID:	F4281-7	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	2710	200	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Antimony	4.6 B	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Arsenic	3.4 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Barium	34.2 B	200	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Beryllium	2.7 B	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Cadmium	4.2	4.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Calcium	3490 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Chromium	9.7 B	10.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Cobalt	1.1 B	50.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Copper	8.9 B	25.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Iron	5900	100	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Lead	45.0	3.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Magnesium	950 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Manganese	30.0	15.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Mercury	0.25 U	1.0	ug/l	1	06/15/99	06/16/99	JK	SW846 7470A
Nickel	6.0 B	40.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Potassium	1030 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Selenium	2.0 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Silver	0.96 U	10.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Sodium	2380 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Thallium	2.7 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Vanadium	7.8 B	50.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Zinc	151	20.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A

01150

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SW-007		
Lab Sample ID:	F4281-8	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	103 B	200	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Antimony	2.4 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Arsenic	3.4 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Barium	15.6 B	200	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Beryllium	2.7 B	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Cadmium	0.33 U	4.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Calcium	19300	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Chromium	0.68 B	10.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Cobalt	0.80 U	50.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Copper	7.9 B	25.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Iron	348	100	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Lead	1.6 U	3.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Magnesium	7140	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Manganese	26.0	15.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Mercury	0.25 U	1.0	ug/l	1	06/15/99	06/16/99	JK	SW846 7470A
Nickel	1.0 U	40.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Potassium	1020 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Selenium	2.2 B	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Silver	0.96 U	10.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Sodium	4700 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Thallium	2.7 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Vanadium	0.82 B	50.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Zinc	19.6 B	20.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SW-009		
Lab Sample ID:	F4281-10	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	142 B	200	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Antimony	2.4 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Arsenic	3.4 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Barium	15.6 B	200	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Beryllium	2.6 B	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Cadmium	0.33 U	4.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Calcium	19300	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Chromium	1.0 B	10.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Cobalt	0.80 U	50.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Copper	7.8 B	25.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Iron	543	100	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Lead	1.6 U	3.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Magnesium	7070	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Manganese	3.5 B	15.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Mercury	0.25 U	1.0	ug/l	1	06/15/99	06/16/99	JK	SW846 7470A
Nickel	1.0 U	40.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Potassium	878 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Selenium	2.0 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Silver	0.96 U	10.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Sodium	4490 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Thallium	2.7 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Vanadium	1.0 B	50.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Zinc	8.0 B	20.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SW-010		
Lab Sample ID:	F4281-12	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	89.9 B	200	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Antimony	2.4 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Arsenic	3.4 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Barium	14.2 B	200	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Beryllium	1.9 B	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Cadmium	0.34 B	4.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Calcium	25600	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Chromium	0.94 B	10.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Cobalt	0.80 U	50.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Copper	0.75 U	25.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Iron	344	100	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Lead	1.6 U	3.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Magnesium	7640	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Manganese	4.8 B	15.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Mercury	0.25 U	1.0	ug/l	1	06/15/99	06/16/99	JK	SW846 7470A
Nickel	1.0 U	40.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Potassium	962 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Selenium	2.0 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Silver	0.96 U	10.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Sodium	4290 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Thallium	2.7 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Vanadium	0.95 B	50.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Zinc	5.0 B	20.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SW-013		
Lab Sample ID:	F4281-23	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	900	200	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Antimony	2.4 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Arsenic	3.4 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Barium	90.4 B	200	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Beryllium	2.0 B	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Cadmium	3.4 B	4.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Calcium	39400	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Chromium	4.6 B	10.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Cobalt	0.80 U	50.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Copper	9.0 B	25.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Iron	3140	100	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Lead	23.8	3.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Magnesium	8760	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Manganese	43.5	15.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Mercury	0.25 U	1.0	ug/l	1	06/15/99	06/16/99	JK	SW846 7470A
Nickel	2.4 B	40.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Potassium	1370 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Selenium	2.0 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Silver	0.96 U	10.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Sodium	4760 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Thallium	2.7 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Vanadium	6.7 B	50.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Zinc	316	20.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SW-015		
Lab Sample ID:	F4281-25	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	8440	200	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Antimony	4.5 B	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Arsenic	3.6 B	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Barium	94.5 B	200	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Beryllium	2.7 B	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Cadmium	24.2	4.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Calcium	49200	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Chromium	45.0	10.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Cobalt	3.6 B	50.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Copper	93.4	25.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Iron	19600	100	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Lead	205	3.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Magnesium	10300	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Manganese	106	15.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Mercury	0.25 U	1.0	ug/l	1	06/15/99	06/16/99	JK	SW846 7470A
Nickel	21.7 B	40.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Potassium	3810 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Selenium	4.3 B	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Silver	0.96 U	10.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Sodium	5530	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Thallium	2.7 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Vanadium	49.5 B	50.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Zinc	1690	20.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SW-016		
Lab Sample ID:	F4281-27	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	679	200	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Antimony	2.4 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Arsenic	4.1 B	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Barium	20.0 B	200	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Beryllium	2.0 B	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Cadmium	1.0 B	4.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Calcium	34600	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Chromium	2.4 B	10.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Cobalt	0.80 U	50.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Copper	0.75 U	25.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Iron	5790	100	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Lead	4.9	3.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Magnesium	1030 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Manganese	23.7	15.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Mercury	0.25 U	1.0	ug/l	1	06/16/99	06/17/99	JK	SW846 7470A
Nickel	1.6 B	40.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Potassium	814 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Selenium	2.0 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Silver	0.97 B	10.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Sodium	2680 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Thallium	2.7 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Vanadium	5.3 B	50.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Zinc	43.2	20.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A

01198

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SW-018		
Lab Sample ID:	F4281-29	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	33000	200	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Antimony	5.4	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Arsenic	51.2	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Barium	126 B	200	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Beryllium	4.4 B	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Cadmium	26.2	4.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Calcium	50100	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Chromium	58.7	10.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Cobalt	9.2 B	50.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Copper	85.3	25.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Iron	83400	100	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Lead	177	3.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Magnesium	2860 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Manganese	119	15.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Mercury	0.25 U	1.0	ug/l	1	06/16/99	06/17/99	JK	SW846 7470A
Nickel	37.9 B	40.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Potassium	2040 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Selenium	8.1	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Silver	1.1 B	10.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Sodium	3240 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Thallium	2.7 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Vanadium	146	50.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Zinc	1190	20.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SW-023		
Lab Sample ID:	F4281-15	**Date Sampled:**	06/09/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	1000	200	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Antimony	2.4 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Arsenic	3.4 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Barium	22.0 B	200	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Beryllium	2.0 B	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Cadmium	0.84 B	4.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Calcium	12100	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Chromium	2.2 B	10.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Cobalt	0.80 U	50.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Copper	0.75 U	25.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Iron	1950	100	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Lead	9.7	3.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Magnesium	1280 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Manganese	20.4	15.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Mercury	0.25 U	1.0	ug/l	1	06/15/99	06/16/99	JK	SW846 7470A
Nickel	1.0 U	40.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Potassium	1020 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Selenium	2.8 B	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Silver	0.96 U	10.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Sodium	2380 B	5000	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Thallium	2.7 U	5.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Vanadium	4.8 B	50.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A
Zinc	52.5	20.0	ug/l	1	06/16/99	06/16/99	JK	SW846 6010A

01185

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SW-DU01		
Lab Sample ID:	F4281-31	**Date Sampled:**	06/08/99
Matrix:	AQ - Ground Water	**Date Received:**	06/09/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	399	200	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Antimony	2.4 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Arsenic	3.4 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Barium	12.1 B	200	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Beryllium	1.2 B	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Cadmium	0.60 B	4.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Calcium	2250 B	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Chromium	1.4 B	10.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Cobalt	0.80 U	50.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Copper	0.75 U	25.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Iron	957	100	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Lead	3.7	3.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Magnesium	644 B	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Manganese	4.7 B	15.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Mercury	0.25 U	1.0	ug/l	1	06/16/99	06/17/99	JK	SW846 7470A
Nickel	1.0 U	40.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Potassium	364 B	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Selenium	2.0 U	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Silver	0.96 U	10.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Sodium	2170 B	5000	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Thallium	4.0 B	5.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Vanadium	1.2 B	50.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A
Zinc	40.1	20.0	ug/l	1	06/16/99	06/17/99	JK	SW846 6010A

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SD-002		
Lab Sample ID:	F4281-2	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
		Percent Solids:	45.3
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	1660	44.2	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Antimony	0.53 U	13.2	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Arsenic	0.76 U	2.2	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Barium	9.1 B	44.2	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Beryllium	0.51 B	1.1	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Cadmium	0.08 B	0.88	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Calcium	1210	1100	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Chromium	2.8	2.2	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Cobalt	0.22 B	11.0	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Copper	3.0 B	5.5	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Iron	631	22.1	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Lead	8.5 B	22.1	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Magnesium	155 B	1100	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Manganese	3.9	3.3	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Mercury	0.09 U	0.37	mg/kg	1	06/14/99	06/15/99	JK	SW846 7471A
Nickel	0.98 B	8.8	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Potassium	54.6 B	1100	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Selenium	0.45 U	22.1	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Silver	0.21 U	2.2	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Sodium	34.0 B	1100	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Thallium	0.59 U	2.2	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Vanadium	3.0 B	11.0	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Zinc	15.3	4.4	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A

RDL = Reported Detection Limit

01175

Report of Analysis

Client Sample ID:	CEF-P39-SD-003		
Lab Sample ID:	F4281-4	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
		Percent Solids:	69.8
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	1290	28.7	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Antimony	0.34 U	8.6	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Arsenic	0.49 U	1.4	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Barium	5.1 B	28.7	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Beryllium	0.26 B	0.72	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Cadmium	0.05 U	0.57	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Calcium	605 B	716	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Chromium	1.9	1.4	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Cobalt	0.19 B	7.2	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Copper	1.4 B	3.6	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Iron	575	14.3	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Lead	3.6 B	14.3	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Magnesium	87.2 B	716	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Manganese	2.4	2.1	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Mercury	0.01 U	0.24	mg/kg	1	06/22/99	06/24/99	JK	SW846 7471A
Nickel	0.55 B	5.7	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Potassium	36.5 B	716	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Selenium	0.29 U	14.3	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Silver	0.14 U	1.4	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Sodium	21.9 U	716	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Thallium	0.39 U	1.4	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Vanadium	2.0 B	7.2	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Zinc	10.4	2.9	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A

01177

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SD-005		
Lab Sample ID:	F4281-6	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
		Percent Solids:	68.1
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	1760	29.4	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Antimony	3.2 B	8.8	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Arsenic	0.51 U	1.5	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Barium	4.3 B	29.4	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Beryllium	0.21 B	0.73	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Cadmium	1.3	0.59	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Calcium	265 B	734	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Chromium	7.8	1.5	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Cobalt	0.29 B	7.3	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Copper	5.8	3.7	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Iron	373	14.7	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Lead	41.2	14.7	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Magnesium	89.4 B	734	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Manganese	1.6 B	2.2	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Mercury	0.06 U	0.24	mg/kg	1	06/14/99	06/15/99	JK	SW846 7471A
Nickel	1.8 B	5.9	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Potassium	40.3 B	734	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Selenium	0.30 U	14.7	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Silver	0.15 B	1.5	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Sodium	22.5 U	734	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Thallium	0.40 U	1.5	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Vanadium	2.1 B	7.3	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Zinc	36.6	2.9	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A

01176

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SD-008		
Lab Sample ID:	F4281-9	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
		Percent Solids:	62.5
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	1490	32.0	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Antimony	0.40 B	9.6	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Arsenic	0.55 U	1.6	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Barium	5.9 B	32.0	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Beryllium	0.45 B	0.80	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Cadmium	2.6	0.64	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Calcium	894	800	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Chromium	18.3	1.6	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Cobalt	0.53 B	8.0	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Copper	10.9	4.0	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Iron	580	16.0	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Lead	57.4	16.0	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Magnesium	134 B	800	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Manganese	3.6	2.4	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Mercury	0.07 U	0.27	mg/kg	1	06/14/99	06/15/99	JK	SW846 7471A
Nickel	2.5 B	6.4	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Potassium	40.7 B	800	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Selenium	0.33 U	16.0	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Silver	0.19 B	1.6	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Sodium	24.5 U	800	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Thallium	0.43 U	1.6	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Vanadium	3.1 B	8.0	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Zinc	99.6	3.2	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A

01182

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SD-009		
Lab Sample ID:	F4281-11	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
		Percent Solids:	69.2
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	1340	28.9	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Antimony	0.35 U	8.7	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Arsenic	0.50 U	1.4	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Barium	5.9 B	28.9	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Beryllium	0.33 B	0.72	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Cadmium	1.4	0.58	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Calcium	291 B	723	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Chromium	23.6	1.4	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Cobalt	0.43 B	7.2	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Copper	6.0	3.6	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Iron	366	14.5	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Lead	16.7	14.5	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Magnesium	99.5 B	723	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Manganese	4.5	2.2	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Mercury	0.01 B	0.24	mg/kg	1	06/22/99	06/24/99	JK	SW846 7471A
Nickel	1.7 B	5.8	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Potassium	40.4 B	723	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Selenium	0.29 U	14.5	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Silver	0.15 B	1.4	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Sodium	24.5 B	723	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Thallium	0.39 U	1.4	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Vanadium	1.9 B	7.2	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A
Zinc	96.3	2.9	mg/kg	1	06/14/99	06/15/99	JK	SW846 6010A

01184

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SD-011		
Lab Sample ID:	F4281-13	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
		Percent Solids:	65.1
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	2530	30.7	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Antimony	4.0 B	9.2	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Arsenic	10.9	1.5	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Barium	12.9 B	30.7	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Beryllium	0.40 B	0.77	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Cadmium	6.5	0.61	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Calcium	910	768	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Chromium	62.4	1.5	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Cobalt	1.2 B	7.7	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Copper	34.2	3.8	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Iron	1110	15.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Lead	198	15.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Magnesium	288 B	768	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Manganese	12.1	2.3	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Mercury	0.06 U	0.26	mg/kg	1	06/16/99	06/17/99	JK	SW846 7471A
Nickel	5.3 B	6.1	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Potassium	87.2 B	768	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Selenium	0.31 U	15.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Silver	0.15 U	1.5	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Sodium	40.2 B	768	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Thallium	0.41 U	1.5	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Vanadium	5.9 B	7.7	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Zinc	178	3.1	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SD-012		
Lab Sample ID:	F4281-22	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
		Percent Solids:	71.7
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	4420	27.9	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Antimony	0.33 U	8.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Arsenic	0.51 B	1.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Barium	10.1 B	27.9	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Beryllium	0.33 B	0.70	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Cadmium	2.3	0.56	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Calcium	1120	697	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Chromium	8.4	1.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Cobalt	0.40 B	7.0	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Copper	8.6	3.5	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Iron	729	13.9	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Lead	24.8	13.9	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Magnesium	188 B	697	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Manganese	4.5	2.1	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Mercury	0.06 U	0.23	mg/kg	1	06/16/99	06/17/99	JK	SW846 7471A
Nickel	2.1 B	5.6	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Potassium	58.3 B	697	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Selenium	0.35 B	13.9	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Silver	0.13 U	1.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Sodium	30.7 B	697	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Thallium	0.38 U	1.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Vanadium	5.6 B	7.0	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Zinc	72.2	2.8	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A

01183

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SD-014		
Lab Sample ID:	F4281-24	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
		Percent Solids:	69.6
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	1520	28.7	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Antimony	0.34 U	8.6	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Arsenic	0.50 U	1.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Barium	13.2 B	28.7	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Beryllium	0.29 B	0.72	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Cadmium	2.2	0.57	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Calcium	872	718	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Chromium	20.4	1.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Cobalt	0.53 B	7.2	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Copper	9.7	3.6	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Iron	527	14.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Lead	52.1	14.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Magnesium	163 B	718	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Manganese	4.9	2.2	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Mercury	0.06 U	0.24	mg/kg	1	06/16/99	06/17/99	JK	SW846 7471A
Nickel	3.5 B	5.7	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Potassium	52.1 B	718	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Selenium	0.29 U	14.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Silver	0.14 U	1.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Sodium	41.0 B	718	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Thallium	0.39 U	1.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Vanadium	4.0 B	7.2	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Zinc	136	2.9	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SD-015		
Lab Sample ID:	F4281-26	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
		Percent Solids:	69.9
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	2240	28.6	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Antimony	0.35 B	8.6	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Arsenic	0.55 B	1.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Barium	10.0 B	28.6	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Beryllium	0.32 B	0.72	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Cadmium	1.8	0.57	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Calcium	1020	715	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Chromium	10.3	1.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Cobalt	0.48 B	7.2	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Copper	8.6	3.6	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Iron	642	14.3	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Lead	35.5	14.3	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Magnesium	186 B	715	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Manganese	5.4	2.1	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Mercury	0.06 U	0.24	mg/kg	1	06/16/99	06/17/99	JK	SW846 7471A
Nickel	5.7 B	5.7	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Potassium	53.1 B	715	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Selenium	0.29 U	14.3	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Silver	0.14 U	1.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Sodium	41.9 B	715	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Thallium	0.38 U	1.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Vanadium	4.5 B	7.2	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Zinc	131	2.9	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SD-017		
Lab Sample ID:	F4281-28	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
		Percent Solids:	51.6
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	2330	38.8	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Antimony	0.46 U	11.6	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Arsenic	0.88 B	1.9	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Barium	8.8 B	38.8	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Beryllium	0.36 B	0.97	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Cadmium	1.1	0.78	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Calcium	3140	969	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Chromium	4.9	1.9	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Cobalt	0.54 B	9.7	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Copper	6.8	4.8	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Iron	1010	19.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Lead	12.6 B	19.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Magnesium	183 B	969	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Manganese	4.4	2.9	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Mercury	0.08 U	0.32	mg/kg	1	06/16/99	06/17/99	JK	SW846 7471A
Nickel	2.7 B	7.8	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Potassium	67.4 B	969	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Selenium	0.40 U	19.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Silver	0.19 U	1.9	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Sodium	62.1 B	969	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Thallium	0.52 U	1.9	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Vanadium	6.2 B	9.7	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Zinc	62.6	3.9	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SD-018		
Lab Sample ID:	F4281-30	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
		Percent Solids:	53.1
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	3790	37.7	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Antimony	0.83 B	11.3	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Arsenic	1.4 B	1.9	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Barium	20.8 B	37.7	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Beryllium	0.52 B	0.94	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Cadmium	1.3	0.75	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Calcium	525 B	942	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Chromium	7.9	1.9	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Cobalt	0.65 B	9.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Copper	7.3	4.7	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Iron	873	18.8	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Lead	24.3	18.8	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Magnesium	116 B	942	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Manganese	4.3	2.8	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Mercury	0.08 U	0.31	mg/kg	1	06/16/99	06/17/99	JK	SW846 7471A
Nickel	2.7 B	7.5	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Potassium	60.2 B	942	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Selenium	0.69 B	18.8	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Silver	0.18 U	1.9	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Sodium	525 B	942	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Thallium	0.51 U	1.9	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Vanadium	10	9.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Zinc	87.1	3.8	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A

01201

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SD-023		
Lab Sample ID:	F4281-14	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
		Percent Solids:	68.4
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	1710	29.2	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Antimony	0.35 U	8.8	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Arsenic	0.50 U	1.5	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Barium	4.5 B	29.2	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Beryllium	0.27 B	0.73	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Cadmium	0.46 B	0.58	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Calcium	622 B	731	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Chromium	2.4	1.5	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Cobalt	0.26 B	7.3	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Copper	3.4 B	3.7	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Iron	577	14.6	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Lead	9.4 B	14.6	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Magnesium	139 B	731	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Manganese	2.4	2.2	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Mercury	0.06 U	0.24	mg/kg	1	06/16/99	06/17/99	JK	SW846 7471A
Nickel	1.3 B	5.8	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Potassium	45.9 B	731	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Selenium	0.30 U	14.6	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Silver	0.14 U	1.5	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Sodium	43.2 B	731	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Thallium	0.39 U	1.5	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Vanadium	2.6 B	7.3	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Zinc	51.6	2.9	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SD-024		
Lab Sample ID:	F4281-16	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
		Percent Solids:	64.8
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	1960	30.9	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Antimony	0.37 U	9.3	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Arsenic	0.53 U	1.5	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Barium	5.5 B	30.9	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Beryllium	0.28 B	0.77	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Cadmium	0.63	0.62	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Calcium	795	772	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Chromium	4.2	1.5	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Cobalt	0.31 B	7.7	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Copper	5.3	3.9	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Iron	526	15.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Lead	12.8 B	15.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Magnesium	158 B	772	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Manganese	3.1	2.3	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Mercury	0.06 U	0.26	mg/kg	1	06/16/99	06/17/99	JK	SW846 7471A
Nickel	1.6 B	6.2	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Potassium	56.6 B	772	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Selenium	0.31 U	15.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Silver	0.17 B	1.5	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Sodium	46.3 B	772	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Thallium	0.42 U	1.5	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Vanadium	3.3 B	7.7	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Zinc	44.3	3.1	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A

01180

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SD-026		
Lab Sample ID:	F4281-17	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
		Percent Solids:	92.1
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	3880	21.7	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Antimony	0.26 U	6.5	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Arsenic	0.37 U	1.1	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Barium	7.8 B	21.7	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Beryllium	0.25 B	0.54	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Cadmium	0.13 B	0.43	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Calcium	23100	543	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Chromium	6.0	1.1	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Cobalt	0.25 B	5.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Copper	1.7 B	2.7	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Iron	574	10.9	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Lead	4.6 B	10.9	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Magnesium	215 B	543	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Manganese	7.6	1.6	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Mercury	0.05 U	0.18	mg/kg	1	06/16/99	06/17/99	JK	SW846 7471A
Nickel	1.1 B	4.3	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Potassium	33.8 B	543	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Selenium	0.22 U	10.9	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Silver	0.10 U	1.1	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Sodium	33.3 B	543	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Thallium	0.29 U	1.1	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Vanadium	3.4 B	5.4	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Zinc	5.1	2.2	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A

01130

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SD-028		
Lab Sample ID:	F4281-19	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
		Percent Solids:	94.7
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	6560	21.1	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Antimony	0.25 U	6.3	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Arsenic	0.36 U	1.1	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Barium	5.6 B	21.1	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Beryllium	0.25 B	0.53	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Cadmium	0.08 B	0.42	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Calcium	2170	528	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Chromium	7.6	1.1	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Cobalt	0.33 B	5.3	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Copper	2.1 B	2.6	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Iron	830	10.6	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Lead	6.3 B	10.6	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Magnesium	124 B	528	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Manganese	6.9	1.6	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Mercury	0.04 U	0.18	mg/kg	1	06/16/99	06/17/99	JK	SW846 7471A
Nickel	1.9 B	4.2	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Potassium	50.2 B	528	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Selenium	0.22 U	10.6	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Silver	0.10 U	1.1	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Sodium	31.6 B	528	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Thallium	0.28 U	1.1	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Vanadium	4.3 B	5.3	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A
Zinc	7.0	2.1	mg/kg	1	06/17/99	06/18/99	JK	SW846 6010A

01191

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SD-029		
Lab Sample ID:	F4281-20	**Date Sampled:**	06/09/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
		Percent Solids:	97.9
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	1260	20.4	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Antimony	0.24 U	6.1	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Arsenic	0.35 U	1.0	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Barium	2.2 B	20.4	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Beryllium	0.28 B	0.51	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Cadmium	0.03 U	0.41	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Calcium	218 B	511	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Chromium	1.9	1.0	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Cobalt	0.10 B	5.1	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Copper	0.55 B	2.6	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Iron	180	10.2	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Lead	1.4 B	10.2	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Magnesium	54.0 B	511	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Manganese	0.78 B	1.5	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Mercury	0.04 U	0.17	mg/kg	1	06/16/99	06/17/99	JK	SW846 7471A
Nickel	0.43 B	4.1	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Potassium	20.6 B	511	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Selenium	0.21 U	10.2	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Silver	0.1 U	1.0	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Sodium	15.6 U	511	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Thallium	0.27 U	1.0	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Vanadium	1.2 B	5.1	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A
Zinc	0.08 U	2.0	mg/kg	1	06/17/99	06/17/99	JK	SW846 6010A

RDL = Reported Detection Limit

Report of Analysis

Client Sample ID:	CEF-P39-SD-DU01		
Lab Sample ID:	F4281-32	**Date Sampled:**	06/08/99
Matrix:	SO - Soil	**Date Received:**	06/09/99
		Percent Solids:	71.1
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	2710	28.1	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Antimony	0.41 B	8.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Arsenic	0.51 B	1.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Barium	53.4	28.1	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Beryllium	0.33 B	0.70	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Cadmium	2.9	0.56	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Calcium	178 B	703	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Chromium	16.2	1.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Cobalt	0.51 B	7.0	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Copper	15.3	3.5	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Iron	513	14.1	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Lead	144	14.1	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Magnesium	95.4 B	703	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Manganese	2.5	2.1	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Mercury	0.06 U	0.23	mg/kg	1	06/16/99	06/17/99	JK	SW846 7471A
Nickel	4.8 B	5.6	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Potassium	45.3 B	703	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Selenium	0.29 U	14.1	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Silver	0.20 B	1.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Sodium	397 B	703	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Thallium	0.38 U	1.4	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Vanadium	3.7 B	7.0	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A
Zinc	90.2	2.8	mg/kg	1	06/18/99	06/18/99	JK	SW846 6010A

01203

RDL = Reported Detection Limit

ACCUTEST.

Report of Analysis

Client Sample ID: CEF-P39-SW-012
Lab Sample ID: F4281-21
Matrix: AQ - Ground Water
Project: NAS Cecil Field

Date Sampled: 06/09/99
Date Received: 06/09/99
Percent Solids: n/a

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	422	200	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Antimony	2.4 U	5.0	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Arsenic	3.4 U	10.0	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Barium	24.6 B	200	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Beryllium	1.1 B	5.0	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Cadmium	2.0 B	5.0	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Calcium	28900	1000	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Chromium	8.2 B	10.0	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Cobalt	0.80 U	50.0	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Copper	8.3 B	25.0	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Iron	1650	300	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Lead	10.3	5.0	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Magnesium	8310	5000	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Manganese	37.0	15.0	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Mercury	0.06 U	1.0	ug/l	1	07/15/99	07/16/99	JK	SW846 7470A
Nickel	3.0 B	40.0	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Potassium	1300 B	5000	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Selenium	2.0 U	10.0	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Silver	0.96 U	10.0	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Sodium	5070	5000	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Thallium	2.7 U	10.0	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Vanadium	1.7 B	50.0	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A
Zinc	82.7	20.0	ug/l	1	07/14/99	07/14/99	JK	SW846 6010A

RDL = Reported Detection Limit

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

PITT-10-9-029

TO: **MR. M. SPERANZA** **DATE: OCTOBER 22, 1999**

FROM: **JUSTIN ORBICH** **CC: DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – SVOA/PAH/PEST/PCB**
CTO 078 – NAS CECIL FIELD
SDG F4856

SAMPLES: 1/Aqueous

CEF-P39-SW-020A

1/Solid

CEF-P39-SD-020A

OVERVIEW

The sample set for CTO 078, SDG F4856 Naval Air Station (NAS) Cecil Field; Florida consists of one (1) aqueous environmental sample and one (1) sediment environmental samples. The samples were analyzed for Target Compound List (TCL) semivolatile, Polynuclear Aromatic Hydrocarbon (PAH), and pesticide/PCB organic compounds. No field duplicate pairs were included within this SDG.

The samples were collected by Tetra Tech, NUS on September 3rd 1999 and analyzed by Accutest Laboratories. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW 846 Method 8270C, 8310, 8081A, and 8082 analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Initial/continuing calibrations
* • Laboratory method/field quality control blank results
• Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified analytical results are presented in Appendix A.

SEMIVOLATILE FRACTION

All quality control limits were met for this fraction.

MEMO TO: MR. M. SPERANZA
DATE: OCTOBER 22, 1999 – PAGE 2

PAH FRACTION

The reporting limit, 0.18 ug/L, for benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene exceeded the requested reporting limit, 0.15 ug/L, in the laboratory specification for the aqueous sample. 10-22-99 JAI

PESTICIDE/PCB FRACTION

The reporting limits, 0.05 ug/L, for beta-BHC and Dieldrin exceeded the requested reporting limits, 0.02 and 0.005 ug/L, respectively, in the laboratory specification for the aqueous sample.

The reporting limits, 2.5 ug/kg, for the alpha-BHC exceeded the requested reporting limits, 0.5 ug/kg, in the laboratory specification for the sediment sample.

ADDITIONAL COMMENTS

The laboratory analyzed for PAH organic compounds plus 2-methylnaphthalene via Method 8270C and 8310. The reviewer used the PAH organic compounds via Method 8310 for validation purposes due to the lower detection limits.

EXECUTIVE SUMMARY

Laboratory performance: Several reporting limits exceeded the requested reporting limits by the laboratory specification in the semivolatile and pesticide fractions.

Other Factors Affecting Data Quality: None.

MEMO TO: MR. M. SPERANZA
DATE: OCTOBER 22, 1999 – PAGE 3

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1994), and the NFESC "Navy Installation Restoration Program Laboratory Quality Assurance Guide" (February, 1996). The text of this report has been formulated to address only those problems affecting data quality.

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

Justin Orbich

Chemist/Data Validator
Tetra Tech, NUS

Joseph A. Samchuck

Data Validation Quality Assurance Officer
Tetra Tech, NUS

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

DATA QUALIFIER DEFINITIONS:

U - Value is a nondetected result as reported by the laboratory and should not be considered present.

J - Positive result is estimated as a result of a value below the CRQL or a technical noncompliance.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
N = Internal Standard Noncompliance
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCB D% between columns for positive results
V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = % Solid content is less than 30%

APPENDIX A

Qualified Analytical Results

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4856

SAMPLE NUMBER:	CEF-P39-SW-020A			
SAMPLE DATE:	09/03/99	/ /	/ /	/ /
LABORATORY ID:	F4856-1			
QC_TYPE:	NORMAL			
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/L			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
1,2,4-TRICHLOROBENZENE	5	U										
1,2-DICHLOROBENZENE	5	U										
1,3-DICHLOROBENZENE	5	U										
1,4-DICHLOROBENZENE	5	U										
2,4,5-TRICHLOROPHENOL	4	U										
2,4,6-TRICHLOROPHENOL	5	U										
2,4-DICHLOROPHENOL	4	U										
2,4-DIMETHYLPHENOL	10	U										
2,4-DINITROPHENOL	25	U										
2,4-DINITROTOLUENE	5	U										
2,6-DINITROTOLUENE	5	U										
2-CHLORONAPHTHALENE	5	U										
2-CHLOROPHENOL	5	U										
2-METHYLPHENOL	5	U										
2-NITROANILINE	5	U										
2-NITROPHENOL	5	U										
3&4-METHYLPHENOL	4	U										
3,3'-DICHLOROBENZIDINE	7.5	U										
3-NITROANILINE	5	U										
4,6-DINITRO-2-METHYLPHENOL	25	U										
4-BROMOPHENYL PHENYL ETHER	5	U										
4-CHLORO-3-METHYLPHENOL	10	U										
4-CHLOROANILINE	5	U										
4-CHLOROPHENYL PHENYL ETHER	5	U										
4-NITROANILINE	5	U										
4-NITROPHENOL	15	U										
BENZOIC ACID	5	U										
BENZYL ALCOHOL	5	U										
BIS(2-CHLOROETHOXY)METHANE	5	U										
BIS(2-CHLOROETHYL)ETHER	5	U										
BIS(2-CHLOROISOPROPYL) ETHER	5	U										
BIS(2-ETHYLHEXYL)PHTHALATE	5	U										
BUTYLBENZYL PHTHALATE	5	U										
CARBAZOLE	4	U										

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4856

SAMPLE NUMBER:	CEF-P39-SW-020A			
SAMPLE DATE:	09/03/99	/ /	/ /	/ /
LABORATORY ID:	F4856-1			
QC_TYPE:	NORMAL			
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/L			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
DI-N-BUTYL PHTHALATE	5	U										
DI-N-OCTYL PHTHALATE	5	U										
DIBENZOFURAN	5	U										
DIETHYL PHTHALATE	5	U										
DIMETHYL PHTHALATE	5	U										
HEXACHLOROBENZENE	5	U										
HEXACHLOROBUTADIENE	5	U										
HEXACHLOROCYCLOPENTADIENE	5	U										
HEXACHLOROETHANE	5	U										
ISOPHORONE	5	U										
N-NITROSO-DI-N-PROPYLAMINE	4	U										
N-NITROSODIPHENYLAMINE	5	U										
NITROBENZENE	4	U										
PENTACHLOROPHENOL	5	U										
PHENOL	5	U										

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4856

SAMPLE NUMBER:	CEF-P39-SD-020A			
SAMPLE DATE:	09/03/99	/ /	/ /	/ /
LABORATORY ID:	F4856-2			
QC_TYPE:	NORMAL			
% SOLIDS:	70.6 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/KG			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
1,2,4-TRICHLOROBENZENE	250	U										
1,2-DICHLOROBENZENE	250	U										
1,3-DICHLOROBENZENE	250	U										
1,4-DICHLOROBENZENE	250	U										
2,4,5-TRICHLOROPHENOL	250	U										
2,4,6-TRICHLOROPHENOL	250	U										
2,4-DICHLOROPHENOL	230	U										
2,4-DIMETHYLPHENOL	500	U										
2,4-DINITROPHENOL	1200	U										
2,4-DINITROTOLUENE	250	U										
2,6-DINITROTOLUENE	250	U										
2-CHLORONAPHTHALENE	250	U										
2-CHLOROPHENOL	250	U										
2-METHYLPHENOL	250	U										
2-NITROANILINE	250	U										
2-NITROPHENOL	250	U										
3&4-METHYLPHENOL	250	U										
3,3'-DICHLOROBENZIDINE	500	U										
3-NITROANILINE	250	U										
4,6-DINITRO-2-METHYLPHENOL	500	U										
4-BROMOPHENYL PHENYL ETHER	250	U										
4-CHLORO-3-METHYLPHENOL	500	U										
4-CHLOROANILINE	250	U										
4-CHLOROPHENYL PHENYL ETHER	250	U										
4-NITROANILINE	250	U										
4-NITROPHENOL	1200	U										
BENZOIC ACID	1200	U										
BENZYL ALCOHOL	250	U										
BIS(2-CHLOROETHOXY)METHANE	250	U										
BIS(2-CHLOROETHYL)ETHER	250	U										
BIS(2-CHLOROISOPROPYL) ETHER	250	U										
BIS(2-ETHYLHEXYL)PHTHALATE	250	U										
BUTYLBENZYL PHTHALATE	250	U										
CARBAZOLE	250	U										

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4856

SAMPLE NUMBER:	CEF-P39-SD-020A			
SAMPLE DATE:	09/03/99	/ /	/ /	/ /
LABORATORY ID:	F4856-2			
QC_TYPE:	NORMAL			
% SOLIDS:	70.6 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/KG			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
DI-N-BUTYL PHTHALATE	250	U										
DI-N-OCTYL PHTHALATE	250	U										
DIBENZOFURAN	250	U										
DIETHYL PHTHALATE	250	U										
DIMETHYL PHTHALATE	250	U										
HEXACHLOROBENZENE	250	U										
HEXACHLOROBUTADIENE	250	U										
HEXACHLOROCYCLOPENTADIENE	250	U										
HEXACHLOROETHANE	250	U										
ISOPHORONE	250	U										
N-NITROSO-DI-N-PROPYLAMINE	250	U										
N-NITROSODIPHENYLAMINE	250	U										
NITROBENZENE	250	U										
PENTACHLOROPHENOL	1200	U										
PHENOL	250	U										

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4856

SAMPLE NUMBER:	CEF-P39-SW-020A			
SAMPLE DATE:	09/03/99	/ /	/ /	/ /
LABORATORY ID:	F4856-1			
QC_TYPE:	NORMAL			
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/L			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	1.2	U										
2-METHYLNAPHTHALENE	1.2	U										
ACENAPHTHENE	1.2	U										
ACENAPHTHYLENE	1.2	U										
ANTHRACENE	1.2	U										
BENZO(A)ANTHRACENE	0.18	U										
BENZO(A)PYRENE	0.18	U										
BENZO(B)FLUORANTHENE	0.18	U										
BENZO(G,H,I)PERYLENE	0.18	U										
BENZO(K)FLUORANTHENE	0.18	U										
CHRYSENE	0.18	U										
DIBENZO(A,H)ANTHRACENE	0.18	U										
FLUORANTHENE	1.2	U										
FLUORENE	1.2	U										
INDENO(1,2,3-CD)PYRENE	0.18	U										
NAPHTHALENE	1.2	U										
PHENANTHRENE	1.2	U										
PYRENE	1.2	U										

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4856

SAMPLE NUMBER:	CEF-P39-SD-020A			
SAMPLE DATE:	09/03/99	/ /	/ /	/ /
LABORATORY ID:	F4856-2			
QC_TYPE:	NORMAL			
% SOLIDS:	70.6 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/KG			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	93	U										
2-METHYLNAPHTHALENE	93	U										
ACENAPHTHENE	93	U										
ACENAPHTHYLENE	93	U										
ANTHRACENE	93	U										
BENZO(A)ANTHRACENE	14	U										
BENZO(A)PYRENE	14	U										
BENZO(B)FLUORANTHENE	14	U										
BENZO(G,H,I)PERYLENE	14	U										
BENZO(K)FLUORANTHENE	14	U										
CHRYSENE	14	U										
DIBENZO(A,H)ANTHRACENE	14	U										
FLUORANTHENE	14	U										
FLUORENE	93	U										
INDENO(1,2,3-CD)PYRENE	14	U										
NAPHTHALENE	93	U										
PHENANTHRENE	93	U										
PYRENE	14	U										

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4856

SAMPLE NUMBER:	CEF-P39-SW-020A			
SAMPLE DATE:	09/03/99	/ /	/ /	/ /
LABORATORY ID:	F4856-1			
QC_TYPE:	NORMAL			
% SOLIDS:	0.0 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/L			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
4,4'-DDD	0.10	U										
4,4'-DDE	0.10	U										
4,4'-DDT	0.10	U										
ALDRIN	0.050	U										
ALPHA-BHC	0.050	U										
ALPHA-CHLORDANE	0.10	U										
AROCLOR-1016	0.50	U										
AROCLOR-1221	0.50	U										
AROCLOR-1232	0.50	U										
AROCLOR-1242	0.50	U										
AROCLOR-1248	0.50	U										
AROCLOR-1254	0.50	U										
AROCLOR-1260	0.50	U										
BETA-BHC	0.050	U										
DELTA-BHC	0.050	U										
DIELDRIN	0.050	U										
ENDOSULFAN I	0.050	U										
ENDOSULFAN II	0.10	U										
ENDOSULFAN SULFATE	0.10	U										
ENDRIN	0.10	U										
ENDRIN ALDEHYDE	0.10	U										
ENDRIN KETONE	0.10	U										
GAMMA-BHC (LINDANE)	0.050	U										
GAMMA-CHLORDANE	0.10	U										
HEPTACHLOR	0.050	U										
HEPTACHLOR EPOXIDE	0.050	U										
METHOXYCHLOR	0.20	U										
TOXAPHENE	2.5	U										

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4856

SAMPLE NUMBER:	CEF-P39-SD-020A			
SAMPLE DATE:	09/03/99	/ /	/ /	/ /
LABORATORY ID:	F4856-2			
QC_TYPE:	NORMAL			
% SOLIDS:	70.6 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/KG			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
4,4'-DDD	5.0	U										
4,4'-DDE	5.0	U										
4,4'-DDT	5.0	U										
ALDRIN	2.5	U										
ALPHA-BHC	2.5	U										
ALPHA-CHLORDANE	5.0	U										
AROCLOR-1016	50	U										
AROCLOR-1221	50	U										
AROCLOR-1232	50	U										
AROCLOR-1242	50	U										
AROCLOR-1248	50	U										
AROCLOR-1254	50	U										
AROCLOR-1260	50	U										
BETA-BHC	2.5	U										
DELTA-BHC	2.5	U										
DIELDRIN	2.5	U										
ENDOSULFAN I	2.5	U										
ENDOSULFAN II	5.0	U										
ENDOSULFAN SULFATE	5.0	U										
ENDRIN	5.0	U										
ENDRIN ALDEHYDE	5.0	U										
ENDRIN KETONE	5.0	U										
GAMMA-BHC (LINDANE)	2.5	U										
GAMMA-CHLORDANE	5.0	U										
HEPTACHLOR	2.5	U										
HEPTACHLOR EPOXIDE	2.5	U										
METHOXYCHLOR	10	U										
TOXAPHENE	250	U										

APPENDIX B

Results as Reported by the Laboratory

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SW-020A		
Lab Sample ID:	F4856-1	**Date Sampled:**	09/03/99
Matrix:	AQ - Ground Water	**Date Received:**	09/04/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W000307.D	1	09/13/99	ME	09/10/99	OP932	SW17
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
65-85-0	Benzoic Acid	ND	5.0	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	ug/l	
120-83-2	2,4-Dichlorophenol	ND	4.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	25	ug/l	
95-48-7	2-Methylphenol	ND	5.0	ug/l	
	3&4-Methylphenol	ND	4.0	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	ug/l	
100-02-7	4-Nitrophenol	ND	15	ug/l	
87-86-5	Pentachlorophenol	ND	5.0	ug/l	
108-95-2	Phenol	ND	5.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	4.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	ug/l	
83-32-9	Acenaphthene	ND	5.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	ug/l	
120-12-7	Anthracene	ND	5.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	ug/l	
100-51-6	Benzyl Alcohol	ND	5.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	ug/l	
86-74-8	Carbazole	ND	4.0	ug/l	
218-01-9	Chrysene	ND	5.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	ug/l	

ND = Not detected
RDL = Reported Detection 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SW-020A		
Lab Sample ID:	F4856-1	**Date Sampled:**	09/03/99
Matrix:	AQ - Ground Water	**Date Received:**	09/04/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W000307.D	1	09/13/99	ME	09/10/99	OP932	SW17
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	5.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.0	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.0	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	7.5	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	ug/l	
132-64-9	Dibenzofuran	ND	5.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.0	ug/l	
206-44-0	Fluoranthene	ND	5.0	ug/l	
86-73-7	Fluorene	ND	5.0	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	5.0	ug/l	
67-72-1	Hexachloroethane	ND	5.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	ug/l	
78-59-1	Isophorone	ND	5.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
98-95-3	Nitrobenzene	ND	4.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	4.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	ug/l	
129-00-0	Pyrene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	58%		21-100%
4165-62-2	Phenol-d5	38%		10-94%
118-79-6	2,4,6-Tribromophenol	92%		10-123%

ND = Not detected
RDL = Reported Detection 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SW-020A		
Lab Sample ID:	F4856-1	**Date Sampled:**	09/03/99
Matrix:	AQ - Ground Water	**Date Received:**	09/04/99
Method:	SW846 3510C/8270C	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W000307.D	1	09/13/99	ME	09/10/99	OP932	SW17
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	90%		35-114%
321-60-8	2-Fluorobiphenyl	88%		43-116%
1718-51-0	Terphenyl-d14	107%		33-141%

ND = Not detected
RDL = Reported Detection 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-020A		
Lab Sample ID:	F4856-2	**Date Sampled:**	09/03/99
Matrix:	SO - Soil	**Date Received:**	09/04/99
Method:	SW846 3550B/8270C	**Percent Solids:**	70.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W000316.D	1	09/16/99	ME	09/14/99	OP969	SW18
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
65-85-0	Benzoic acid	ND	1200	ug/kg	
95-57-8	2-Chlorophenol	ND	250	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	500	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	230	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	500	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1200	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	500	ug/kg	
95-48-7	2-Methylphenol	ND	250	ug/kg	
	3&4-Methylphenol	ND	250	ug/kg	
88-75-5	2-Nitrophenol	ND	250	ug/kg	
100-02-7	4-Nitrophenol	ND	1200	ug/kg	
87-86-5	Pentachlorophenol	ND	1200	ug/kg	
108-95-2	Phenol	ND	250	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	250	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	250	ug/kg	
83-32-9	Acenaphthene	ND	250	ug/kg	
208-96-8	Acenaphthylene	ND	250	ug/kg	
120-12-7	Anthracene	ND	250	ug/kg	
56-55-3	Benzo(a)anthracene	ND	250	ug/kg	
50-32-8	Benzo(a)pyrene	ND	250	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	250	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	250	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	250	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	250	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	250	ug/kg	
100-51-6	Benzyl Alcohol	ND	250	ug/kg	
91-58-7	2-Chloronaphthalene	ND	250	ug/kg	
106-47-8	4-Chloroaniline	ND	250	ug/kg	
86-74-8	Carbazole	ND	250	ug/kg	
218-01-9	Chrysene	ND	250	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	250	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	250	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	250	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	250	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	250	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	250	ug/kg	

ND = Not detected
RDL = Reported Detection 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-020A		
Lab Sample ID:	F4856-2	**Date Sampled:**	09/03/99
Matrix:	SO - Soil	**Date Received:**	09/04/99
Method:	SW846 3550B/8270C	**Percent Solids:**	70.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W000316.D	1	09/16/99	ME	09/14/99	OP969	SW18
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	250	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	250	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	250	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	500	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	250	ug/kg	
132-64-9	Dibenzofuran	ND	250	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	250	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	250	ug/kg	
84-66-2	Diethyl phthalate	ND	250	ug/kg	
131-11-3	Dimethyl phthalate	ND	250	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	250	ug/kg	
206-44-0	Fluoranthene	ND	250	ug/kg	
86-73-7	Fluorene	ND	250	ug/kg	
118-74-1	Hexachlorobenzene	ND	250	ug/kg	
87-68-3	Hexachlorobutadiene	ND	250	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	250	ug/kg	
67-72-1	Hexachloroethane	ND	250	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	250	ug/kg	
78-59-1	Isophorone	ND	250	ug/kg	
91-57-6	2-Methylnaphthalene	ND	250	ug/kg	
88-74-4	2-Nitroaniline	ND	250	ug/kg	
99-09-2	3-Nitroaniline	ND	250	ug/kg	
100-01-6	4-Nitroaniline	ND	250	ug/kg	
91-20-3	Naphthalene	ND	250	ug/kg	
98-95-3	Nitrobenzene	ND	250	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	250	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	250	ug/kg	
85-01-8	Phenanthrene	ND	250	ug/kg	
129-00-0	Pyrene	ND	250	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	250	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	94%		25-121%
4165-62-2	Phenol-d5	97%		24-113%
118-79-6	2,4,6-Tribromophenol	100%		19-122%

ND = Not detected
RDL = Reported Detection 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-020A		
Lab Sample ID:	F4856-2	**Date Sampled:**	09/03/99
Matrix:	SO - Soil	**Date Received:**	09/04/99
Method:	SW846 3550B/8270C	**Percent Solids:**	70.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W000316.D	1	09/16/99	ME	09/14/99	OP969	SW18
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	96%		23-120%
321-60-8	2-Fluorobiphenyl	96%		30-115%
1718-51-0	Terphenyl-d14	113%		18-137%

ND = Not detected
RDL = Reported Detection 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SW-020A		
Lab Sample ID:	F4856-1	**Date Sampled:**	09/03/99
Matrix:	AQ - Ground Water	**Date Received:**	09/04/99
Method:	SW846 8310	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LC5873.D	1	09/16/99	AMA	09/08/99	M:OP1427	M:GLC31
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	1.2	ug/l	
208-96-8	Acenaphthylene	ND	1.2	ug/l	
120-12-7	Anthracene	ND	1.2	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.18	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.18	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.18	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.18	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.18	ug/l	
218-01-9	Chrysene	ND	0.18	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.18	ug/l	
206-44-0	Fluoranthene	ND	1.2	ug/l	
86-73-7	Fluorene	ND	1.2	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.18	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.2	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.2	ug/l	
91-20-3	Naphthalene	ND	1.2	ug/l	
85-01-8	Phenanthrene	ND	1.2	ug/l	
129-00-0	Pyrene	ND	1.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	72%		20-160%

ND = Not detected
RDL = Reported Detection 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-020A		
Lab Sample ID:	F4856-2	**Date Sampled:**	09/03/99
Matrix:	SO - Soil	**Date Received:**	09/04/99
Method:	SW846 8310	**Percent Solids:**	70.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LC5715E.D	1	09/09/99	AMA	09/09/99	M:OP1413	M:GLC28
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	93	ug/kg	
208-96-8	Acenaphthylene	ND	93	ug/kg	
120-12-7	Anthracene	ND	93	ug/kg	
56-55-3	Benzo (a) anthracene	ND	14	ug/kg	
50-32-8	Benzo (a) pyrene	ND	14	ug/kg	
205-99-2	Benzo (b) fluoranthene	ND	14	ug/kg	
191-24-2	Benzo (g,h,i) perylene	ND	14	ug/kg	
207-08-9	Benzo (k) fluoranthene	ND	14	ug/kg	
218-01-9	Chrysene	ND	14	ug/kg	
53-70-3	Dibenz(a,h)anthracene	ND	14	ug/kg	
206-44-0	Fluoranthene	ND	14	ug/kg	
86-73-7	Fluorene	ND	93	ug/kg	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	14	ug/kg	
90-12-0	1-Methylnaphthalene	ND	93	ug/kg	
91-57-6	2-Methylnaphthalene	ND	93	ug/kg	
91-20-3	Naphthalene	ND	93	ug/kg	
85-01-8	Phenanthrene	ND	93	ug/kg	
129-00-0	Pyrene	ND	14	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	50%		20-130%

300014

ND = Not detected
RDL = Reported Detection 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SW-020A		
Lab Sample ID:	F4856-1	**Date Sampled:**	09/03/99
Matrix:	AQ - Ground Water	**Date Received:**	09/04/99
Method:	SW846 3510C/8081A	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ST00532.D	1	09/16/99	SKW	09/10/99	OP956	GST21
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	0.050	ug/l	
319-84-6	alpha-BHC	ND	0.050	ug/l	
319-85-7	beta-BHC	ND	0.050	ug/l	
319-86-8	delta-BHC	ND	0.050	ug/l	
58-89-9	gamma-BHC (Lindane)	ND	0.050	ug/l	
5103-71-9	alpha-Chlordane	ND	0.10	ug/l	
5103-74-2	gamma-Chlordane	ND	0.10	ug/l	
60-57-1	Dieldrin	ND	0.050	ug/l	
72-54-8	4,4'-DDD	ND	0.10	ug/l	
72-55-9	4,4'-DDE	ND	0.10	ug/l	
50-29-3	4,4'-DDT	ND	0.10	ug/l	
72-20-8	Endrin	ND	0.10	ug/l	
1031-07-8	Endosulfan sulfate	ND	0.10	ug/l	
7421-93-4	Endrin aldehyde	ND	0.10	ug/l	
53494-70-5	Endrin ketone	ND	0.10	ug/l	
959-98-8	Endosulfan-I	ND	0.050	ug/l	
33213-65-9	Endosulfan-II	ND	0.10	ug/l	
76-44-8	Heptachlor	ND	0.050	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.050	ug/l	
72-43-5	Methoxychlor	ND	0.20	ug/l	
8001-35-2	Toxaphene	ND	2.5	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	76%		30-160%
2051-24-3	Decachlorobiphenyl	60%		30-160%

ND = Not detected
RDL = Reported Detection 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SW-020A		
Lab Sample ID:	F4856-1	**Date Sampled:**	09/03/99
Matrix:	AQ - Ground Water	**Date Received:**	09/04/99
Method:	SW846 8082	**Percent Solids:**	n/a
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB10614.D	1	09/10/99	SKW	09/10/99	OP950	GAB396
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	0.50	ug/l	
11104-28-2	Aroclor 1221	ND	0.50	ug/l	
11141-16-5	Aroclor 1232	ND	0.50	ug/l	
53469-21-9	Aroclor 1242	ND	0.50	ug/l	
12672-29-6	Aroclor 1248	ND	0.50	ug/l	
11097-69-1	Aroclor 1254	ND	0.50	ug/l	
11096-82-5	Aroclor 1260	ND	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	78%		30-160%
2051-24-3	Decachlorobiphenyl	106%		30-160%

ND = Not detected
RDL = Reported Detection 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-020A		
Lab Sample ID:	F4856-2	**Date Sampled:**	09/03/99
Matrix:	SO - Soil	**Date Received:**	09/04/99
Method:	SW846 3550B/8081A	**Percent Solids:**	70.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ST00576.D	1	09/17/99	SKW	09/13/99	OP982	GST22
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	2.5	ug/kg	
319-84-6	alpha-BHC	ND	2.5	ug/kg	
319-85-7	beta-BHC	ND	2.5	ug/kg	
319-86-8	delta-BHC	ND	2.5	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	2.5	ug/kg	
5103-71-9	alpha-Chlordane	ND	5.0	ug/kg	
5103-74-2	gamma-Chlordane	ND	5.0	ug/kg	
60-57-1	Dieldrin	ND	2.5	ug/kg	
72-54-8	4,4'-DDD	ND	5.0	ug/kg	
72-55-9	4,4'-DDE	ND	5.0	ug/kg	
50-29-3	4,4'-DDT	ND	5.0	ug/kg	
72-20-8	Endrin	ND	5.0	ug/kg	
1031-07-8	Endosulfan sulfate	ND	5.0	ug/kg	
7421-93-4	Endrin aldehyde	ND	5.0	ug/kg	
53494-70-5	Endrin ketone	ND	5.0	ug/kg	
959-98-8	Endosulfan-I	ND	2.5	ug/kg	
33213-65-9	Endosulfan-II	ND	5.0	ug/kg	
76-44-8	Heptachlor	ND	2.5	ug/kg	
1024-57-3	Heptachlor epoxide	ND	2.5	ug/kg	
72-43-5	Methoxychlor	ND	10	ug/kg	
8001-35-2	Toxaphene	ND	250	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	78%		40-150%
2051-24-3	Decachlorobiphenyl	86%		30-160%

000015

ND = Not detected
RDL = Reported Detection 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-020A		
Lab Sample ID:	F4856-2	**Date Sampled:**	09/03/99
Matrix:	SO - Soil	**Date Received:**	09/04/99
Method:	SW846 8082	**Percent Solids:**	70.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN04702.D	1	09/16/99	SKW	09/13/99	OP971	GMN196
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	50	ug/kg	
11104-28-2	Aroclor 1221	ND	50	ug/kg	
11141-16-5	Aroclor 1232	ND	50	ug/kg	
53469-21-9	Aroclor 1242	ND	50	ug/kg	
12672-29-6	Aroclor 1248	ND	50	ug/kg	
11097-69-1	Aroclor 1254	ND	50	ug/kg	
11096-82-5	Aroclor 1260	ND	50	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	89%		40-150%
2051-24-3	Decachlorobiphenyl	105%		30-160%

ND = Not detected
RDL = Reported Detection 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

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

PITT-09-9-281

TO:	**M. SPERANZA**	**DATE:**	**OCTOBER 22, 1999**
FROM:	**GRETCHEN PHIPPS**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – TAL METALS**
CTO 078 - CECIL FIELD
SDG – F4856

SAMPLES: 1/Aqueous/

CEF-P39-SW-020A

1/Sediment/

CEF-P39-SD-020A

Overview

The sample set for CTO 078, Cecil Field, SDG F4856 consists of one (1) aqueous environmental sample and one (1) sediment environmental sample.

The samples were analyzed for target analyte list (TAL) metals. The samples were collected by Tetra Tech NUS on September 3, 1999 and analyzed by Accutest Laboratory under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA / QC) criteria. Metals analyses, with the exception of mercury, were analyzed using SW 846 method 6010B. Mercury analyses were conducted using SW 846 method 7471A.

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.

Laboratory Blank Analyses

The following contaminants were present in a laboratory method / preparation blanks at the following maximum concentration:

Affected samples: All

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic Review", February 1994 and the NFESC document entitled "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

APPENIDX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
N = Internal Standard Noncompliance
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCB D% between columns for positive results
V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = % Solid content is less than 30%

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4856

SAMPLE NUMBER:	CEF-P39-SW-020A											
SAMPLE DATE:	09/03/99			/ /			/ /			/ /		
LABORATORY ID:	F4856-1											
QC_TYPE:	NORMAL											
% SOLIDS:	0.0 %			100.0 %			100.0 %			100.0 %		
UNITS:	UG/L											
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ALUMINUM	227	U	A									
ANTIMONY	2.4	U										
ARSENIC	4.2	U	A									
BARIUM	8.3	U	A									
BERYLLIUM	0.87	U	A									
CADMIUM	0.33	U										
CALCIUM	1650											
CHROMIUM	6.0	U	A									
COBALT	0.80	U										
COPPER	0.75	U										
IRON	1220											
LEAD	3.6	U	A									
MAGNESIUM	880											
MANGANESE	2.6	U	A									
MERCURY	0.06	U										
NICKEL	1.6	U	A									
POTASSIUM	94.2											
SELENIUM	2.0	U										
SILVER	0.96	U										
SODIUM	2290											
THALLIUM	2.7	U										
VANADIUM	0.72	U										
ZINC	9.4											

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4856

SAMPLE NUMBER:	CEF-P39-SD-020A											
SAMPLE DATE:	09/03/99			/ /			/ /			/ /		
LABORATORY ID:	F4856-2											
QC_TYPE:	NORMAL											
% SOLIDS:	70.6 %			100.0 %			100.0 %			100.0 %		
UNITS:	MG/KG											
FIELD DUPLICATE OF:												
INORGANICS	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**	**RESULT**	**QUAL**	**CODE**
ALUMINUM	2100											
ANTIMONY	0.37	U										
ARSENIC	0.54	U										
BARIUM	7.2											
BERYLLIUM	0.23	U	A									
CADMIUM	0.05	U										
CALCIUM	123	U	A									
CHROMIUM	3.3	U	A									
COBALT	0.12	U										
COPPER	2.6											
IRON	351											
LEAD	3.0											
MAGNESIUM	46.1											
MANGANESE	4.4	U	A									
MERCURY	0.01	U										
NICKEL	0.80	U	A									
POTASSIUM	48.8											
SELENIUM	0.73	U	A									
SILVER	0.15	U										
SODIUM	427											
THALLIUM	0.42	U										
VANADIUM	2.4											
ZINC	6.0											

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-020A		
Lab Sample ID:	F4856-2	**Date Sampled:**	09/03/99
Matrix:	SO - Soil	**Date Received:**	09/04/99
		Percent Solids:	70.6
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	2100	31.1	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Antimony	0.37 U	9.3	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Arsenic	0.54 U	1.6	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Barium	7.2 B	31.1	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Beryllium	0.23 B	0.78	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Cadmium	0.05 U	0.62	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Calcium	123 B	779	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Chromium	3.3	1.6	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Cobalt	0.12 U	7.8	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Copper	2.6 B	3.9	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Iron	351	15.6	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Lead	3.0 B	15.6	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Magnesium	46.1 B	779	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Manganese	4.4	2.3	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Mercury	0.01 U	0.24	mg/kg	1	09/20/99	09/21/99	SJL	SW846 7471A
Nickel	0.80 B	6.2	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Potassium	48.8 B	779	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Selenium	0.73 B	15.6	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Silver	0.15 U	1.6	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Sodium	427 B	779	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Thallium	0.42 U	1.6	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Vanadium	2.4 B	7.8	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A
Zinc	6.0	3.1	mg/kg	1	09/13/99	09/17/99	JK	SW846 6010A

RDL = Reported Detection Limit

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SW-020A		
Lab Sample ID:	F4856-1	**Date Sampled:**	09/03/99
Matrix:	AQ - Ground Water	**Date Received:**	09/04/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	227	200	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Antimony	2.4 U	5.0	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Arsenic	4.2 B	10.0	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Barium	8.3 B	200	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Beryllium	0.87 B	5.0	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Cadmium	0.33 U	5.0	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Calcium	1650	1000	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Chromium	6.0 B	10.0	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Cobalt	0.80 U	50.0	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Copper	0.75 U	25.0	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Iron	1220	300	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Lead	3.6 B	5.0	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Magnesium	880 B	5000	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Manganese	2.6 B	15.0	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Mercury	~~<1.00~~ 0.06 U	1.0	ug/l	1	09/16/99	09/17/99	JK	EPA 245.1
Nickel	1.6 B	40.0	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Potassium	94.2 B	5000	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Selenium	2.0 U	10.0	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Silver	0.96 U	10.0	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Sodium	2290 B	5000	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Thallium	2.7 U	10.0	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Vanadium	0.72 U	50.0	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A
Zinc	9.4 B	20.0	ug/l	1	09/13/99	09/17/99	JK	SW846 6010A

GAP 9-30-99

RDL = Reported Detection Limit

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

PITT-09-9-114

TO: **MR. M. SPERANZA** **DATE: OCTOBER 8, 1999**

FROM: **JUSTIN ORBICH** **CC: DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION –SVOA/PEST/PCB/PAH**
CTO 078 – NAS CECIL FIELD
SDG F4740

SAMPLES: 5/Solid

CEF-P39-SD-021*
CEF-P39-SD-106
CEF-P39-SD-DU03
CEF-P39-SD-105
CEF-P39-SD-107

OVERVIEW

The sample set for CTO 078, SDG F4740, Naval Air Station (NAS) Cecil Field; Florida consists of five (5) solid environmental samples. The samples were analyzed for Target Compound List (TCL) pesticide/PCB organic compounds. Two samples CEF-P39-SD-021 and CEF-P39-SD-107 were analyzed for Polychlorinated Biphenyls (PCBs). The sample designated (*) was analyzed for TCL semivolatile and Polynuclear Aromatic Hydrocarbon (PAH) organic compounds. One (1) field duplicate pair (CEF-P39-SD-105-05/CEF-P39-SD-DU03) was included within this SDG.

The samples were collected by Tetra Tech, NUS on August 18th, 1999 and analyzed by Accutest Laboratories. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW 846 Method 8270C, 8310, and 8081A, and 8082 analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Initial/continuing calibrations
* • Laboratory method/field quality control blank results
* • Detection Limits
* • Field Duplicate Precision

The symbol (*) indicates that all quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified analytical results are presented in Appendix A.

SEMIVOLATILE FRACTION

All quality control parameters were met for this fraction.

MEMO TO: MR. M. SPERANZA
DATE: OCTOBER 8, 1999 – PAGE 2

PESTICIDE/PCB FRACTION

All quality control parameters were met for this fraction.

PAH FRACTION

All quality control parameters were met for this fraction.

ADDITIONAL COMMENTS

Positive results reported below the CRQL are qualified as estimated (J).

EXECUTIVE SUMMARY

Laboratory performance: None.

Other Factors Affecting Data Quality: None.

MEMO TO: MR. M. SPERANZA
DATE: OCTOBER 8, 1999 – PAGE 3

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1994), and the NFESC guidelines "Navy Installation Restoration Program Laboratory Quality Assurance Guide" (February, 1996). The text of this report has been formulated to address only those problems affecting data quality.

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

Justin Orbich

Chemist/Data Validator
Tetra Tech, NUS

Joseph A. Samchuck

Data Validation Quality Assurance Officer
Tetra Tech, NUS

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

DATA QUALIFIER DEFINITIONS:

U - Value is a nondetected result as reported by the laboratory and should not be considered present.

J - Positive result is estimated as a result of a value below the CRQL or a technical noncompliance.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
N = Internal Standard Noncompliance
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCB D% between columns for positive results
V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = % Solid content is less than 30%

APPENDIX A

Qualified Analytical Results

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4740

SAMPLE NUMBER:	CEF-P39-SD-021											
SAMPLE DATE:	08/18/99			/ /			/ /			/ /		
LABORATORY ID:	F4740-10											
QC_TYPE:	NORMAL											
% SOLIDS:	75.1 %			100.0 %			100.0 %			100.0 %		
UNITS:	UG/KG											
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
1,2,4-TRICHLOROBENZENE	220	U										
1,2-DICHLOROBENZENE	220	U										
1,3-DICHLOROBENZENE	220	U										
1,4-DICHLOROBENZENE	220	U										
2,4,5-TRICHLOROPHENOL	220	U										
2,4,6-TRICHLOROPHENOL	220	U										
2,4-DICHLOROPHENOL	200	U										
2,4-DIMETHYLPHENOL	440	U										
2,4-DINITROPHENOL	1100	U										
2,4-DINITROTOLUENE	220	U										
2,6-DINITROTOLUENE	220	U										
2-CHLORONAPHTHALENE	220	U										
2-CHLOROPHENOL	220	U										
2-METHYLPHENOL	220	U										
2-NITROANILINE	220	U										
2-NITROPHENOL	220	U										
3,3'-DICHLOROBENZIDINE	440	U										
3-NITROANILINE	220	U										
4,6-DINITRO-2-METHYLPHENOL	440	U										
4-BROMOPHENYL PHENYL ETHER	220	U										
4-CHLORO-3-METHYLPHENOL	440	U										
4-CHLOROANILINE	220	U										
4-CHLOROPHENYL PHENYL ETHER	220	U										
4-METHYLPHENOL	220	U										
4-NITROANILINE	220	U										
4-NITROPHENOL	1100	U										
BIS(2-CHLOROETHOXY)METHANE	220	U										
BIS(2-CHLOROETHYL)ETHER	220	U										
BIS(2-CHLOROISOPROPYL) ETHER	220	U										
BIS(2-ETHYLHEXYL)PHTHALATE	220	U										
BUTYLBENZYL PHTHALATE	220	U										
CARBAZOLE	220	U										
DI-N-BUTYL PHTHALATE	220	U										
DI-N-OCTYL PHTHALATE	220	U										

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4740

SAMPLE NUMBER:	CEF-P39-SD-021			
SAMPLE DATE:	08/18/99	/ /	/ /	/ /
LABORATORY ID:	F4740-10			
QC_TYPE:	NORMAL			
% SOLIDS:	75.1 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/KG			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
SEMIVOLATILES												
DIBENZOFURAN	220	U										
DIETHYL PHTHALATE	220	U										
DIMETHYL PHTHALATE	220	U										
HEXACHLOROBENZENE	220	U										
HEXACHLOROBUTADIENE	220	U										
HEXACHLOROCYCLOPENTADIENE	220	U										
HEXACHLOROETHANE	220	U										
ISOPHORONE	220	U										
N-NITROSO-DI-N-PROPYLAMINE	80	U										
N-NITROSODIPHENYLAMINE	220	U										
NITROBENZENE	220	U										
PENTACHLOROPHENOL	1100	U										
PHENOL	220	U										

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4740

SAMPLE NUMBER:	CEF-P39-SD-021			
SAMPLE DATE:	08/18/99	/ /	/ /	/ /
LABORATORY ID:	F4740-10			
QC_TYPE:	NORMAL			
% SOLIDS:	75.1 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/KG			
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
POLYNUCLEAR AROMATIC HYDROCARBONS												
1-METHYLNAPHTHALENE	87	U										
2-METHYLNAPHTHALENE	87	U										
ACENAPHTHENE	87	U										
ACENAPHTHYLENE	87	U										
ANTHRACENE	87	U										
BENZO(A)ANTHRACENE	13	U										
BENZO(A)PYRENE	13	U										
BENZO(B)FLUORANTHENE	13	U										
BENZO(G,H,I)PERYLENE	13	U										
BENZO(K)FLUORANTHENE	13	U										
CHRYSENE	13	U										
DIBENZO(A,H)ANTHRACENE	13	U										
FLUORANTHENE	13	U										
FLUORENE	87	U										
INDENO(1,2,3-CD)PYRENE	13	U										
NAPHTHALENE	87	U										
PHENANTHRENE	87	U										
PYRENE	13	U										

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4740

SAMPLE NUMBER:	CEF-P39-SD-021	CEF-P39-SD-105	CEF-P39-SD-106	CEF-P39-SD-107
SAMPLE DATE:	08/18/99	08/18/99	08/18/99	08/18/99
LABORATORY ID:	F4740-10	F4740-5	F4740-6	F4740-7
QC_TYPE:	NORMAL	NORMAL	NORMAL	NORMAL
% SOLIDS:	75.1 %	61.0 %	78.3 %	68.6 %
UNITS:	UG/KG	UG/KG	UG/KG	UG/KG
FIELD DUPLICATE OF:				

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
4,4'-DDD	4.4	U		11	U		4.2	U				
4,4'-DDE	4.4	U		11	U		4.2	U				
4,4'-DDT	4.4	U		22	U		4.2	U				
ALDRIN	2.2	U		5.4	U		2.1	U				
ALPHA-BHC	2.2	U		5.4	U		2.1	U				
ALPHA-CHLORDANE	4.4	U		11	U		4.2	U				
AROCLOR-1016	44	U								97	U	
AROCLOR-1221	44	U								97	U	
AROCLOR-1232	44	U								97	U	
AROCLOR-1242	44	U								97	U	
AROCLOR-1248	44	U								97	U	
AROCLOR-1254	44	U								239	J	P
AROCLOR-1260	44	U								558	J	P
BETA-BHC	2.2	U		5.4	U		2.1	U				
DELTA-BHC	2.2	U		5.4	U		2.1	U				
DIELDRIN	2.2	U		5.4	U		2.1	U				
ENDOSULFAN I	2.2	U		5.4	U		2.1	U				
ENDOSULFAN II	4.4	U		11	U		4.2	U				
ENDOSULFAN SULFATE	4.4	U		11	U		4.2	U				
ENDRIN	4.4	U		11	U		4.2	U				
ENDRIN ALDEHYDE	4.4	U		11	U		4.2	U				
ENDRIN KETONE	4.4	U		11	U		4.2	U				
GAMMA-BHC (LINDANE)	2.2	U		5.4	U		2.1	U				
GAMMA-CHLORDANE	4.4	U		11	U		4.2	U				
HEPTACHLOR	2.2	U		5.4	U		2.1	U				
HEPTACHLOR EPOXIDE	2.2	U		5.4	U		2.1	U				
METHOXYCHLOR	8.9	U		44	U		8.5	U				
TOXAPHENE	220	U		540	U		210	U				

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4740

SAMPLE NUMBER:	CEF-P39-SD-DU03			
SAMPLE DATE:	08/18/99	/ /	/ /	/ /
LABORATORY ID:	F4740-8			
QC_TYPE:	NORMAL			
% SOLIDS:	55.5 %	100.0 %	100.0 %	100.0 %
UNITS:	UG/KG			
FIELD DUPLICATE OF:	CEF-P39-SD-105			

	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
4,4'-DDD	12	U										
4,4'-DDE	12	U										
4,4'-DDT	24	U										
ALDRIN	6.0	U										
ALPHA-BHC	6.0	U										
ALPHA-CHLORDANE	12	U										
BETA-BHC	6.0	U										
DELTA-BHC	6.0	U										
DIELDRIN	6.0	U										
ENDOSULFAN I	6.0	U										
ENDOSULFAN II	12	U										
ENDOSULFAN SULFATE	12	U										
ENDRIN	12	U										
ENDRIN ALDEHYDE	12	U										
ENDRIN KETONE	12	U										
GAMMA-BHC (LINDANE)	6.0	U										
GAMMA-CHLORDANE	12	U										
HEPTACHLOR	6.0	U										
HEPTACHLOR EPOXIDE	6.0	U										
METHOXYCHLOR	48	U										
TOXAPHENE	600	U										

APPENDIX B

Results as Reported by the Laboratory

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-021		
Lab Sample ID:	F4740-10	**Date Sampled:**	08/18/99
Matrix:	SO - Soil	**Date Received:**	08/19/99
Method:	SW846 3550B/8270C	**Percent Solids:**	75.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W000187.D	1	08/26/99	ME	08/25/99	OP942	SW10
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
95-57-8	2-Chlorophenol	ND	220	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	440	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	200	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	440	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1100	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	440	ug/kg	
95-48-7	2-Methylphenol	ND	220	ug/kg	
	3&4-Methylphenol	ND	220	ug/kg	
88-75-5	2-Nitrophenol	ND	220	ug/kg	
100-02-7	4-Nitrophenol	ND	1100	ug/kg	
87-86-5	Pentachlorophenol	ND	1100	ug/kg	
108-95-2	Phenol	ND	220	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	220	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	220	ug/kg	
83-32-9	Acenaphthene	ND	220	ug/kg	
208-96-8	Acenaphthylene	ND	220	ug/kg	
120-12-7	Anthracene	ND	220	ug/kg	
56-55-3	Benzo(a)anthracene	ND	220	ug/kg	
50-32-8	Benzo(a)pyrene	ND	220	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	220	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	220	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	220	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	220	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	220	ug/kg	
91-58-7	2-Chloronaphthalene	ND	220	ug/kg	
106-47-8	4-Chloroaniline	ND	220	ug/kg	
86-74-8	Carbazole	ND	220	ug/kg	
218-01-9	Chrysene	ND	220	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	220	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	220	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	220	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	220	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	220	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	220	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	220	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	220	ug/kg	

000014

ND = Not detected
RDL = Reported Detection 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-021		
Lab Sample ID:	F4740-10	**Date Sampled:**	08/18/99
Matrix:	SO - Soil	**Date Received:**	08/19/99
Method:	SW846 3550B/8270C	**Percent Solids:**	75.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W000187.D	1	08/26/99	ME	08/25/99	OP942	SW10
Run #2							

ABN TCL List

CAS No.	Compound	Result	RDL	Units	Q
606-20-2	2,6-Dinitrotoluene	ND	220	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	440	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	220	ug/kg	
132-64-9	Dibenzofuran	ND	220	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	220	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	220	ug/kg	
84-66-2	Diethyl phthalate	ND	220	ug/kg	
131-11-3	Dimethyl phthalate	ND	220	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	220	ug/kg	
206-44-0	Fluoranthene	ND	220	ug/kg	
86-73-7	Fluorene	ND	220	ug/kg	
118-74-1	Hexachlorobenzene	ND	220	ug/kg	
87-68-3	Hexachlorobutadiene	ND	220	ug/kg	
77-47-4	Hexachlorocyclopentadiene	ND	220	ug/kg	
67-72-1	Hexachloroethane	ND	220	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	220	ug/kg	
78-59-1	Isophorone	ND	220	ug/kg	
90-12-0	1-Methylnaphthalene	ND	220	ug/kg	
91-57-6	2-Methylnaphthalene	ND	220	ug/kg	
88-74-4	2-Nitroaniline	ND	220	ug/kg	
99-09-2	3-Nitroaniline	ND	220	ug/kg	
100-01-6	4-Nitroaniline	ND	220	ug/kg	
91-20-3	Naphthalene	ND	220	ug/kg	
98-95-3	Nitrobenzene	ND	220	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	80	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	220	ug/kg	
85-01-8	Phenanthrene	ND	220	ug/kg	
129-00-0	Pyrene	ND	220	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	220	ug/kg	

000015

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	73%		25-121%
4165-62-2	Phenol-d5	72%		24-113%
118-79-6	2,4,6-Tribromophenol	84%		19-122%
4165-60-0	Nitrobenzene-d5	74%		23-120%

ND = Not detected
RDL = Reported Detection 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-021		
Lab Sample ID:	F4740-10	**Date Sampled:**	08/18/99
Matrix:	SO - Soil	**Date Received:**	08/19/99
Method:	SW846 3550B/8270C	**Percent Solids:**	75.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W000187.D	1	08/26/99	ME	08/25/99	OP942	SW10
Run #2							

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
321-60-8	2-Fluorobiphenyl	77%		30-115%
1718-51-0	Terphenyl-d14	81%		18-137%

000016

ND = Not detected
RDL = Reported Detection 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-021		
Lab Sample ID:	F4740-10	**Date Sampled:**	08/18/99
Matrix:	SO - Soil	**Date Received:**	08/19/99
Method:	SW846 3550B/8081A	**Percent Solids:**	75.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ST00220.D	1	08/27/99	NF	08/24/99	OP938	GST10
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	2.2	ug/kg	
319-84-6	alpha-BHC	ND	2.2	ug/kg	
319-85-7	beta-BHC	ND	2.2	ug/kg	
319-86-8	delta-BHC	ND	2.2	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	2.2	ug/kg	
5103-71-9	alpha-Chlordane	ND	4.4	ug/kg	
5103-74-2	gamma-Chlordane	ND	4.4	ug/kg	
60-57-1	Dieldrin	ND	2.2	ug/kg	
72-54-8	4,4'-DDD	ND	4.4	ug/kg	
72-55-9	4,4'-DDE	ND	4.4	ug/kg	
50-29-3	4,4'-DDT	ND	4.4	ug/kg	
72-20-8	Endrin	ND	4.4	ug/kg	
1031-07-8	Endosulfan sulfate	ND	4.4	ug/kg	
7421-93-4	Endrin aldehyde	ND	4.4	ug/kg	
53494-70-5	Endrin ketone	ND	4.4	ug/kg	
959-98-8	Endosulfan-I	ND	2.2	ug/kg	
33213-65-9	Endosulfan-II	ND	4.4	ug/kg	
76-44-8	Heptachlor	ND	2.2	ug/kg	
1024-57-3	Heptachlor epoxide	ND	2.2	ug/kg	
72-43-5	Methoxychlor	ND	8.9	ug/kg	
8001-35-2	Toxaphene	ND	220	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	102%		40-150%
2051-24-3	Decachlorobiphenyl	101%		30-160%

000013

ND = Not detected
RDL = Reported Detection 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-105		
Lab Sample ID:	F4740-5	**Date Sampled:**	08/18/99
Matrix:	SO - Soil	**Date Received:**	08/19/99
Method:	SW846 3550B/8081A	**Percent Solids:**	61.0
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	ST00223.D	2	08/27/99	NF	08/24/99	OP938	GST10
Run #2 [a]	ST00217.D	4	08/27/99	NF	08/24/99	OP938	GST10

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	5.4	ug/kg	
319-84-6	alpha-BHC	ND	5.4	ug/kg	
319-85-7	beta-BHC	ND	5.4	ug/kg	
319-86-8	delta-BHC	ND	5.4	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	5.4	ug/kg	
5103-71-9	alpha-Chlordane	ND	11	ug/kg	
5103-74-2	gamma-Chlordane	ND	11	ug/kg	
60-57-1	Dieldrin	ND	5.4	ug/kg	
72-54-8	4,4'-DDD	ND	11	ug/kg	
72-55-9	4,4'-DDE	ND	11	ug/kg	
50-29-3	4,4'-DDT	ND [b]	22	ug/kg	
72-20-8	Endrin	ND	11	ug/kg	
1031-07-8	Endosulfan sulfate	ND	11	ug/kg	
7421-93-4	Endrin aldehyde	ND	11	ug/kg	
53494-70-5	Endrin ketone	ND	11	ug/kg	
959-98-8	Endosulfan-I	ND	5.4	ug/kg	
33213-65-9	Endosulfan-II	ND	11	ug/kg	
76-44-8	Heptachlor	ND	5.4	ug/kg	
1024-57-3	Heptachlor epoxide	ND	5.4	ug/kg	
72-43-5	Methoxychlor	ND [b]	44	ug/kg	
8001-35-2	Toxaphene	ND	540	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	87%	89%	40-150%
2051-24-3	Decachlorobiphenyl	82%	101%	30-160%

(a) Dilution required due to matrix interference.
(b) Result is from Run# 2

000009

ND = Not detected
RDL = Reported Detection 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-106		
Lab Sample ID:	F4740-6	**Date Sampled:**	08/18/99
Matrix:	SO - Soil	**Date Received:**	08/19/99
Method:	SW846 3550B/8081A	**Percent Solids:**	78.3
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	ST00218.D	1	08/27/99	NF	08/24/99	OP938	GST10
Run #2							

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	2.1	ug/kg	
319-84-6	alpha-BHC	ND	2.1	ug/kg	
319-85-7	beta-BHC	ND	2.1	ug/kg	
319-86-8	delta-BHC	ND	2.1	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	2.1	ug/kg	
5103-71-9	alpha-Chlordane	ND	4.2	ug/kg	
5103-74-2	gamma-Chlordane	ND	4.2	ug/kg	
60-57-1	Dieldrin	ND	2.1	ug/kg	
72-54-8	4,4'-DDD	ND	4.2	ug/kg	
72-55-9	4,4'-DDE	ND	4.2	ug/kg	
50-29-3	4,4'-DDT	ND	4.2	ug/kg	
72-20-8	Endrin	ND	4.2	ug/kg	
1031-07-8	Endosulfan sulfate	ND	4.2	ug/kg	
7421-93-4	Endrin aldehyde	ND	4.2	ug/kg	
53494-70-5	Endrin ketone	ND	4.2	ug/kg	
959-98-8	Endosulfan-I	ND	2.1	ug/kg	
33213-65-9	Endosulfan-II	ND	4.2	ug/kg	
76-44-8	Heptachlor	ND	2.1	ug/kg	
1024-57-3	Heptachlor epoxide	ND	2.1	ug/kg	
72-43-5	Methoxychlor	ND	8.5	ug/kg	
8001-35-2	Toxaphene	ND	210	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	102%		40-150%
2051-24-3	Decachlorobiphenyl	100%		30-160%

000010

ND = Not detected
RDL = Reported Detection 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-DU03		
Lab Sample ID:	F4740-8	**Date Sampled:**	08/18/99
Matrix:	SO - Soil	**Date Received:**	08/19/99
Method:	SW846 3550B/8081A	**Percent Solids:**	55.5
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	ST00224.D	2	08/27/99	NF	08/24/99	OP938	GST10
Run #2 [a]	ST00219.D	4	08/27/99	NF	08/24/99	OP938	GST10

Pesticide TCL List

CAS No.	Compound	Result	RDL	Units	Q
309-00-2	Aldrin	ND	6.0	ug/kg	
319-84-6	alpha-BHC	ND	6.0	ug/kg	
319-85-7	beta-BHC	ND	6.0	ug/kg	
319-86-8	delta-BHC	ND	6.0	ug/kg	
58-89-9	gamma-BHC (Lindane)	ND	6.0	ug/kg	
5103-71-9	alpha-Chlordane	ND	12	ug/kg	
5103-74-2	gamma-Chlordane	ND	12	ug/kg	
60-57-1	Dieldrin	ND	6.0	ug/kg	
72-54-8	4,4'-DDD	ND	12	ug/kg	
72-55-9	4,4'-DDE	ND	12	ug/kg	
50-29-3	4,4'-DDT	ND [b]	24	ug/kg	
72-20-8	Endrin	ND	12	ug/kg	
1031-07-8	Endosulfan sulfate	ND	12	ug/kg	
7421-93-4	Endrin aldehyde	ND	12	ug/kg	
53494-70-5	Endrin ketone	ND	12	ug/kg	
959-98-8	Endosulfan-I	ND	6.0	ug/kg	
33213-65-9	Endosulfan-II	ND	12	ug/kg	
76-44-8	Heptachlor	ND	6.0	ug/kg	
1024-57-3	Heptachlor epoxide	ND	6.0	ug/kg	
72-43-5	Methoxychlor	ND [b]	48	ug/kg	
8001-35-2	Toxaphene	ND	600	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	82%	85%	40-150%
2051-24-3	Decachlorobiphenyl	82%	101%	30-160%

(a) Dilution required due to matrix interference.
(b) Result is from Run# 2

000012

ND = Not detected
RDL = Reported Detection 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-107		
Lab Sample ID:	F4740-7	**Date Sampled:**	08/18/99
Matrix:	SO - Soil	**Date Received:**	08/19/99
Method:	SW846 8082	**Percent Solids:**	68.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	MN04563.D	2	08/25/99	NF	08/24/99	OP939	GMN190
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	97	ug/kg	
11104-28-2	Aroclor 1221	ND	97	ug/kg	
11141-16-5	Aroclor 1232	ND	97	ug/kg	
53469-21-9	Aroclor 1242	ND	97	ug/kg	
12672-29-6	Aroclor 1248	ND	97	ug/kg	
11097-69-1	Aroclor 1254 [b]	239	97	ug/kg	J
11096-82-5	Aroclor 1260 [b]	558	97	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	83%		40-150%
2051-24-3	Decachlorobiphenyl	104%		30-160%

(a) All hits confirmed by dual column analysis.
(b) Estimated value due to the presence of multiple Arochlor patterns.

000011

ND = Not detected
RDL = Reported Detection 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-021		
Lab Sample ID:	F4740-10	**Date Sampled:**	08/18/99
Matrix:	SO - Soil	**Date Received:**	08/19/99
Method:	SW846 8082	**Percent Solids:**	75.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	MN04564.D	1	08/26/99	NF	08/24/99	OP939	GMN190
Run #2							

PCB List

CAS No.	Compound	Result	RDL	Units	Q
12674-11-2	Aroclor 1016	ND	44	ug/kg	
11104-28-2	Aroclor 1221	ND	44	ug/kg	
11141-16-5	Aroclor 1232	ND	44	ug/kg	
53469-21-9	Aroclor 1242	ND	44	ug/kg	
12672-29-6	Aroclor 1248	ND	44	ug/kg	
11097-69-1	Aroclor 1254	ND	44	ug/kg	
11096-82-5	Aroclor 1260	ND	44	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	90%		40-150%
2051-24-3	Decachlorobiphenyl	104%		30-160%

000013

ND = Not detected
RDL = Reported Detection 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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-021		
Lab Sample ID:	F4740-10	**Date Sampled:**	08/18/99
Matrix:	SO - Soil	**Date Received:**	08/19/99
Method:	SW846 8310	**Percent Solids:**	75.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LC5530.D	1	08/27/99	AMA	08/23/99	M:OP1402	M:GLC23
Run #2							

CAS No.	Compound	Result	RDL	Units	Q
83-32-9	Acenaphthene	ND	87	ug/kg	
208-96-8	Acenaphthylene	ND	87	ug/kg	
120-12-7	Anthracene	ND	87	ug/kg	
56-55-3	Benzo (a) anthracene	ND	13	ug/kg	
50-32-8	Benzo (a) pyrene	ND	13	ug/kg	
205-99-2	Benzo (b) fluoranthene	ND	13	ug/kg	
191-24-2	Benzo (g,h,i) perylene	ND	13	ug/kg	
207-08-9	Benzo (k) fluoranthene	ND	13	ug/kg	
218-01-9	Chrysene	ND	13	ug/kg	
53-70-3	Dibenz(a,h)anthracene	ND	13	ug/kg	
206-44-0	Fluoranthene	ND	13	ug/kg	
86-73-7	Fluorene	ND	87	ug/kg	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	13	ug/kg	
90-12-0	1-Methylnaphthalene	ND	87	ug/kg	
91-57-6	2-Methylnaphthalene	ND	87	ug/kg	
91-20-3	Naphthalene	ND	87	ug/kg	
85-01-8	Phenanthrene	ND	87	ug/kg	
129-00-0	Pyrene	ND	13	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	46%		20-130%

000017

ND = Not detected
RDL = Reported Detection 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

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

PITT-09-9-101

TO:	**M. SPERANZA**	**DATE:**	**SEPTEMBER 12, 1999**
FROM:	**GRETCHEN PHIPPS**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – TOTAL AND DISSOLVED CADMIUM AND LEAD, TAL METALS**
CTO 078 - CECIL FIELD
SDG – F4740

SAMPLES: 8/Aqueous/

CEF-P39-SW-102	CEF-P39-SW-102-F
CEF-P39-SW-103	CEF-P39-SW-103-F
CEF-P39-SW-104	CEF-P39-SW-104-F
CEF-939-SW-DU03	CEF-P39-SW-DU03-F

2/Sediments/

CEF-P39-SD-021	CEF-P39-SD-101

Overview

The sample set for CTO 078, Cecil Field, SDG F4740 consists of eight (8) aqueous environmental samples and two (2) sediment environmental samples. Two (2) field duplicate pairs (CEF-P39-SW-103 / CEF-939-SW-DU03 and CEF-P39-SW-103-F / CEF-P39-SW-DU03-F) were included within this SDG.

All aqueous sample, with exception to those designated –F, were analyzed for total cadmium and total lead. The aqueous samples designated –F were analyzed for dissolved cadmium and dissolved lead. Sample CEF-P39-SD-021 was analyzed for target analyte list (TAL) metals. Sample CEF-P39-SD-101 was analyzed for total lead. The samples were collected by Tetra Tech NUS on August 18, 1999 and analyzed by Accutest Laboratory under Naval Facilities Engineering Service Center (NFESC) Quality Assurance / Quality Control (QA / QC) criteria. Metals analyses, with the exception of mercury, were analyzed using SW 846 method 6010B. Mercury analyses were conducted using SW 846 method 7471A.

The data was evaluated based on the following parameters:

- * Data Completeness
- * Holding Times
- * Calibration Verifications
- Laboratory Blank Analyses
- Field Duplicate Imprecision
- * Detection Limits

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

Laboratory Blank Analyses

The following contaminants were present in a laboratory method / preparation blanks at the following maximum concentration:

Affected samples: All

Analyte	Maximum Concentration	Action Level(soil)	Action Level(aqueous)
Aluminum	51.6µg/L	25.8 mg/kg	NA
Antimony	6.4µg/L	3.2 mg/kg	NA
Arsenic(1)	0.40 mg/kg	2.0 mg/kg	NA
Barium(1)	0.73 mg/kg	3.65 mg/kg	NA
Beryllium	2.3µg/L	1.15 mg/kg	NA
Cadmium	0.80µg/L	0.40 mg/kg	4.0µg/L
Calcium(1)	14.0 mg/kg	70.0 mg/kg	NA
Chromium	12.1µg/L	6.05 mg/kg	NA
Cobalt	0.12µg/L	0.60 mg/kg	NA
Copper(1)	0.19 mg/kg	0.95 mg/kg	NA
Iron	38.6µg/L	19.3 mg/kg	NA
Lead(1)	2.1 mg/kg	10.5 mg/kg	NA
Lead	2.3µg/L	NA	11.5 µg/L
Magnesium(1)	2.7 mg/kg	13.5 mg/kg	NA
Manganese	3.0µg/L	1.5 mg/kg	NA
Nickel	11.4µg/L	5.7 mg/kg	NA
Potassium(1)	10.7 mg/kg	53.5 mg/kg	NA
Selenium	2.1µg/L	1.05 mg/kg	NA
Silver	2.0µg/L	1.0 mg/kg	NA
Sodium(1)	74.8 mg/kg	374 mg/kg	NA
Thallium(1)	0.82 mg/kg	4.1 mg/kg	NA
Vanadium	1.3µg/L	0.65 mg/kg	NA
Zinc(1)	0.98 mg/kg	4.9 mg/kg	NA

(1) Maximum concentration present in a soil preparation blank.

An action level of 5X the maximum concentration has been used to evaluate the sample data for blank contamination. Sample aliquot, percent solids and dilution factors were taken into consideration when determining blank contamination. Positive results less than the blank action level for antimony, beryllium, cadmium, chromium, cobalt, lead, nickel, potassium, sodium and zinc were qualified, "U", as a result of blank contamination. No action was taken for the remaining analytes as either the results were greater than the blank action level or were nondetected.

Field Duplicate Imprecision

Field duplicate imprecision (>50%) was noted for total lead affecting the aqueous matrix. ~~The~~ positive results reported for total lead in the affected samples was qualified as estimated, "J".

Executive Summary

Laboratory Performance: Several analytes were present in the laboratory method / preparation blanks.

Other Factors Affecting Data Quality: Field duplicate imprecision was noted for lead.

The data for these analyses were reviewed with reference to the "National Functional Guidelines for Inorganic 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)."

_____
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

APPENIDX A
QUALIFIED ANALYTICAL RESULTS

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4740

SAMPLE NUMBER:	CEF-P39-SW-102			CEF-P39-SW-102-F			CEF-P39-SW-103			CEF-P39-SW-103-F		
SAMPLE DATE:	08/18/99			08/18/99			08/18/99			08/18/99		
LABORATORY ID:	F4740-2			F4740-2A			F4740-3			F4740-3A		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/L			UG/L			UG/L			UG/L		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
CADMIUM	4.0	U	A	0.33	U		3.2	U	A	0.33	U	
LEAD	35.5	J	G	2.5	U	A	22.7	J	G	2.1	U	A

CTO078 - NAS CECIL FIELD
WATER DATA
Accutest, NJ
SDG: F4740

SAMPLE NUMBER:	CEF-P39-SW-104			CEF-P39-SW-104-F			CEF-P39-SW-DU03			CEF-P39-SW-DU03-F		
SAMPLE DATE:	08/18/99			08/18/99			08/18/99			08/18/99		
LABORATORY ID:	F4740-4			F4740-4A			F4740-9			F4740-9A		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	0.0 %			0.0 %			0.0 %			0.0 %		
UNITS:	UG/L			UG/L			UG/L			UG/L		
FIELD DUPLICATE OF:							CEF-P39-SW-103			CEF-P39-SW-103-F		
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
CADMIUM	0.33	U	A	0.33	U		0.71	U	A	0.33	U	
LEAD	5.0	U	A	1.6	U		5.8	U	A	3.4	U	A

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F4740

SAMPLE NUMBER:	CEF-P39-SD-021			CEF-P39-SD-101								
SAMPLE DATE:	08/18/99			08/18/99			/ /			/ /		
LABORATORY ID:	F4740-10			F4740-1								
QC_TYPE:	NORMAL			NORMAL								
% SOLIDS:	75.1 %			65.7 %			100.0 %			100.0 %		
UNITS:	MG/KG			MG/KG								
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
INORGANICS												
ALUMINUM	742											
ANTIMONY	0.44	U	A									
ARSENIC	0.45	U										
BARIUM	5.1											
BERYLLIUM	0.13	U	A									
CADMIUM	0.04	U										
CALCIUM	198											
CHROMIUM	1.1	U	A									
COBALT	0.13	U	A									
COPPER	1.7											
IRON	247											
LEAD	0.84	U	A	2.4	U	A						
MAGNESIUM	24.6											
MANGANESE	2.4											
MERCURY	0.01	U										
NICKEL	0.71	U	A									
POTASSIUM	28.6	U	A									
SELENIUM	0.27	U										
SILVER	0.13	U										
SODIUM	327	U	A									
THALLIUM	0.35	U										
VANADIUM	1.1											
ZINC	3.2	U	A									

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
N = Internal Standard Noncompliance
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCB D% between columns for positive results
V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = % Solid content is less than 30%

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SW-102		
Lab Sample ID:	F4740-2	**Date Sampled:**	08/18/99
Matrix:	AQ - Water	**Date Received:**	08/19/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Cadmium	4.0 B	5.0	ug/l	1	08/23/99	08/24/99	JK	SW846 6010A
Lead	35.5	5.0	ug/l	1	08/23/99	08/24/99	JK	SW846 6010A

000006

RDL = Reported Detection Limit

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SW-102		
Lab Sample ID:	F4740-2A	**Date Sampled:**	08/18/99
Matrix:	AQ - Water Filtered	**Date Received:**	08/19/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Cadmium	0.33 U	5.0	ug/l	1	08/23/99	08/24/99 JK	SW846 6010A
Lead	2.5 B	5.0	ug/l	1	08/23/99	08/24/99 JK	SW846 6010A

000021

RDL = Reported Detection Limit

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SW-103		
Lab Sample ID:	F4740-3	**Date Sampled:**	08/18/99
Matrix:	AQ - Water	**Date Received:**	08/19/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Cadmium	3.2 B	5.0	ug/l	1	08/23/99	08/24/99	JK	SW846 6010A
Lead	22.7	5.0	ug/l	1	08/23/99	08/24/99	JK	SW846 6010A

000007

RDL = Reported Detection Limit

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SW-103		
Lab Sample ID:	F4740-3A	**Date Sampled:**	08/18/99
Matrix:	AQ - Water Filtered	**Date Received:**	08/19/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By		Method
Cadmium	0.33 U	5.0	ug/l	1	08/23/99	08/24/99	JK	SW846 6010A
Lead	2.1 B	5.0	ug/l	1	08/23/99	08/24/99	JK	SW846 6010A

000022

RDL = Reported Detection Limit

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SW-104		
Lab Sample ID:	F4740-4	**Date Sampled:**	08/18/99
Matrix:	AQ - Water	**Date Received:**	08/19/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Cadmium	0.33 B	5.0	ug/l	1	08/23/99	08/24/99	JK	SW846 6010A
Lead	5.0	5.0	ug/l	1	08/23/99	08/24/99	JK	SW846 6010A

000008

RDL = Reported Detection Limit

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SW-104		
Lab Sample ID:	F4740-4A	**Date Sampled:**	08/18/99
Matrix:	AQ - Water Filtered	**Date Received:**	08/19/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Cadmium	0.33 U	5.0	ug/l	1	08/23/99	08/24/99	JK	SW846 6010A
Lead	1.6 U	5.0	ug/l	1	08/23/99	08/24/99	JK	SW846 6010A

000023

RDL = Reported Detection Limit

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SW-DU03		
Lab Sample ID:	F4740-9	**Date Sampled:**	08/18/99
Matrix:	AQ - Water	**Date Received:**	08/19/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By		Method
Cadmium	0.71 B	5.0	ug/l	1	08/23/99	08/24/99	JK	SW846 6010A
Lead	5.8	5.0	ug/l	1	08/23/99	08/24/99	JK	SW846 6010A

000013

RDL = Reported Detection Limit

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SW-DU03		
Lab Sample ID:	F4740-9A	**Date Sampled:**	08/18/99
Matrix:	AQ - Water Filtered	**Date Received:**	08/19/99
		Percent Solids:	n/a
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Cadmium	0.33 U	5.0	ug/l	1	08/23/99	08/24/99 JK	SW846 6010A
Lead	3.4 B	5.0	ug/l	1	08/23/99	08/24/99 JK	SW846 6010A

000024

RDL = Reported Detection Limit

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-021		
Lab Sample ID:	F4740-10	**Date Sampled:**	08/18/99
Matrix:	SO - Soil	**Date Received:**	08/19/99
		Percent Solids:	75.1
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Aluminum	742	26.4	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Antimony	0.44 B	7.9	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Arsenic	0.45 U	1.3	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Barium	5.1 B	26.4	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Beryllium	0.13 B	0.66	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Cadmium	0.04 U	0.53	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Calcium	198 B	659	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Chromium	1.1 B	1.3	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Cobalt	0.13 B	6.6	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Copper	1.7 B	3.3	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Iron	247	13.2	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Lead	0.84 B	13.2	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Magnesium	24.6 B	659	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Manganese	2.4	2.0	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Mercury	0.01 U	0.22	mg/kg	1	08/25/99	08/27/99	JK	SW846 7471A
Nickel	0.71 B	5.3	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Potassium	28.6 B	659	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Selenium	0.27 U	13.2	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Silver	0.13 U	1.3	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Sodium	327 B	659	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Thallium	0.35 U	1.3	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Vanadium	1.1 B	6.6	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A
Zinc	3.2	2.6	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A

000020

RDL = Reported Detection Limit

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-101		
Lab Sample ID:	F4740-1	**Date Sampled:**	08/18/99
Matrix:	SO - Soil	**Date Received:**	08/19/99
		Percent Solids:	65.7
Project:	NAS Cecil Field		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed	By	Method
Lead	2.4 B	14.8	mg/kg	1	08/20/99	08/23/99	JK	SW846 6010A

000005

RDL = Reported Detection Limit

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

PITT-11-9-032

TO: **MR. M. SPERANZA** **DATE: NOVEMBER 3, 1999**

FROM: **JUSTIN ORBICH** **CC: DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION –PCB**
CTO 078 – NAS CECIL FIELD
SDG F5072

SAMPLES: 2/Sediment

CEF-P39-SD-201 CEF-P39-SD-202

OVERVIEW

The sample set for CTO 078, SDG F5072 Naval Air Station (NAS) Cecil Field; Florida consists of two (2) sediment environmental samples. The samples were analyzed for Polychlorinated Biphenyl (PCB) organic compounds. No field duplicate pairs were included within this SDG.

The samples were collected by Tetra Tech, NUS on and October 12th, 1999 and analyzed by Accutest Laboratories. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW 846 Method 8082 analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Initial/continuing calibrations
* • Laboratory method/field quality control blank results
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified analytical results are presented in Appendix A.

PCB FRACTION

It should be noted the laboratory analyzed samples CEF-P39-SD-201 at a 5X dilution.

It should be noted the laboratory analyzed samples CEF-P39-SD-202 at a 2X dilution.

ADDITIONAL COMMENTS

Positive results reported below the CRQL are qualified as estimated (J).

MEMO TO: MR. M. SPERANZA
DATE: NOVEMBER 3, 1999 – PAGE 2

EXECUTIVE SUMMARY

Laboratory performance: None.

Other Factors Affecting Data Quality: Several samples were analyzed at a dilution.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1994), and the NFESC "Navy Installation Restoration Program Laboratory Quality Assurance Guide" (February, 1996). The text of this report has been formulated to address only those problems affecting data quality.

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

Justin Orbich

Chemist/Data Validator
Tetra Tech, NUS

Joseph A. Samchuck

Data Validation Quality Assurance Officer
Tetra Tech, NUS

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

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
N = Internal Standard Noncompliance
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCB D% between columns for positive results
V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = % Solid content is less than 30%

DATA QUALIFIER DEFINITIONS:

U	-	Value is a nondetected result as reported by the laboratory and should not be considered present.
J	-	Positive result is estimated as a result of a value below the CRQL or a technical noncompliance.

APPENDIX A

Qualified Analytical Results

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F5072

5X 2X

SAMPLE NUMBER:	CEF-P39-SD-201			CEF-P39-SD-202								
SAMPLE DATE:	10/12/99			10/12/99			/ /			/ /		
LABORATORY ID:	F5072-1			F5072-2								
QC_TYPE:	NORMAL			NORMAL								
% SOLIDS:	70.4 %			74.4 %			100.0 %			100.0 %		
UNITS:	UG/KG			UG/KG								
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
AROCLOR-1016	240	U		90	U							
AROCLOR-1221	240	U		90	U							
AROCLOR-1232	240	U		90	U							
AROCLOR-1242	240	U		90	U							
AROCLOR-1248	240	U		90	U							
AROCLOR-1254	240	U		90	U							
AROCLOR-1260	1030			553								

APPENDIX B

Results as Reported by the Laboratory

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-201		
Lab Sample ID:	F5072-1	**Date Sampled:**	10/12/99
Matrix:	SO - Soil	**Date Received:**	10/14/99
Method:	SW846 8082	**Percent Solids:**	70.4
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AB11001.D	5	10/19/99	SKW	10/18/99	OP1031	GAB415
Run #2							

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	240	ug/kg	
11104-28-2	Aroclor 1221	ND	240	ug/kg	
11141-16-5	Aroclor 1232	ND	240	ug/kg	
53469-21-9	Aroclor 1242	ND	240	ug/kg	
12672-29-6	Aroclor 1248	ND	240	ug/kg	
11097-69-1	Aroclor 1254	ND	240	ug/kg	
11096-82-5	Aroclor 1260	1030	240	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	95%		40-150%
2051-24-3	Decachlorobiphenyl	90%		30-160%

(a) All hits confirmed by dual column analysis.

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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-202		
Lab Sample ID:	F5072-2	**Date Sampled:**	10/12/99
Matrix:	SO - Soil	**Date Received:**	10/14/99
Method:	SW846 8082	**Percent Solids:**	74.4
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AB11002.D	2	10/19/99	SKW	10/18/99	OP1031	GAB415
Run #2							

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	90	ug/kg	
11104-28-2	Aroclor 1221	ND	90	ug/kg	
11141-16-5	Aroclor 1232	ND	90	ug/kg	
53469-21-9	Aroclor 1242	ND	90	ug/kg	
12672-29-6	Aroclor 1248	ND	90	ug/kg	
11097-69-1	Aroclor 1254	ND	90	ug/kg	
11096-82-5	Aroclor 1260	553	90	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	103%		40-150%
2051-24-3	Decachlorobiphenyl	86%		30-160%

(a) All hits confirmed by dual column analysis.

00004

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

Tetra Tech NUS

INTERNAL CORRESPONDENCE

PITT-11-9-210

TO: MR. M. SPERANZA

DATE: NOVEMBER 23, 1999

FROM: JUSTIN ORBICH

CC: DV FILE

SUBJECT: ORGANIC DATA VALIDATION – PCB
CTO 078 – NAS CECIL FIELD
SDG F5261

SAMPLES: 6/Sediment

CEF-P39-SD-301	CEF-P39-SD-302
CEF-P39-SD-303	CEF-P39-SD-304
CEF-P39-SD-305	CEF-P39-SD-DU04

OVERVIEW

The sample set for CTO 078, SDG F5261 Naval Air Station (NAS) Cecil Field; Florida consists of six (6) sediment environmental samples. The samples were analyzed for Polychlorinated Biphenyl (PCB) organic compounds. One (1) field duplicate pair (CEF-P39-SD-304/CEF-P39-DU04) was included within this SDG.

The samples were collected by Tetra Tech, NUS on and November 11th, 1999 and analyzed by Accutest Laboratories. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW 846 Method 8082 analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Initial/continuing calibrations
* • Laboratory method/field quality control blank results
* • Detection Limits
* • Field Duplicate Precision

The symbol (*) indicates that all quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified analytical results are presented in Appendix A.

PCB FRACTION

All quality control parameters were met for this fraction.

ADDITIONAL COMMENTS

Positive results reported below the CRQL are qualified as estimated (J).

MEMO TO: **MR. M. SPERANZA**
DATE: **NOVEMBER 23, 1999 – PAGE 2**

EXECUTIVE SUMMARY

Laboratory performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (February, 1994), and the NFESC "Navy Installation Restoration Program Laboratory Quality Assurance Guide" (February, 1996). The text of this report has been formulated to address only those problems affecting data quality.

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

Justin Orbich

Chemist/Data Validator
Tetra Tech, NUS

Joseph A. Samchuck

Data Validation Quality Assurance Officer
Tetra Tech, NUS

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

DATA QUALIFIER DEFINITIONS:

U - Value is a nondetected result as reported by the laboratory and should not be considered present.

J - Positive result is estimated as a result of a value below the CRQL or a technical noncompliance.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
N = Internal Standard Noncompliance
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCB D% between columns for positive results
V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = % Solid content is less than 30%

APPENDIX A

Qualified Analytical Results

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F5261

SAMPLE NUMBER:	CEF-P39-SD-301			CEF-P39-SD-302			CEF-P39-SD-303			CEF-P39-SD-304		
SAMPLE DATE:	11/11/99			11/11/99			11/11/99			11/11/99		
LABORATORY ID:	F5261-1			F5261-2			F5261-3			F5261-4		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	76.9 %			77.0 %			76.7 %			65.2 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
AROCLOR-1016	43	U		43	U		43	U		51	U	
AROCLOR-1221	43	U		43	U		43	U		51	U	
AROCLOR-1232	43	U		43	U		43	U		51	U	
AROCLOR-1242	43	U		43	U		43	U		51	U	
AROCLOR-1248	43	U		43	U		43	U		51	U	
AROCLOR-1254	43	U		43	U		43	U		51	U	
AROCLOR-1260	173			76.4			45.6			333		

CTO078 - NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F5261

SAMPLE NUMBER:	CEF-P39-SD-305			CEF-P39-SD-DU04			/ /			/ /		
SAMPLE DATE:	11/11/99			11/11/99								
LABORATORY ID:	F5261-5			F5261-6								
QC_TYPE:	NORMAL			NORMAL								
% SOLIDS:	70.1 %			64.5 %			100.0 %			100.0 %		
UNITS:	UG/KG			UG/KG								
FIELD DUPLICATE OF:				CEF-P39-SD-304								
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
AROCLOR-1016	48	U		52	U							
AROCLOR-1221	48	U		52	U							
AROCLOR-1232	48	U		52	U							
AROCLOR-1242	48	U		52	U							
AROCLOR-1248	48	U		52	U							
AROCLOR-1254	48	U		52	U							
AROCLOR-1260	95.4			323								

APPENDIX B

Results as Reported by the Laboratory

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-301		
Lab Sample ID:	F5261-1	**Date Sampled:**	11/11/99
Matrix:	SO - Soil	**Date Received:**	11/12/99
Method:	SW846 8082	**Percent Solids:**	76.9
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AB11171.D	1	11/15/99	SKW	11/15/99	OP1082	GAB423
Run #2							

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	43	ug/kg	
11104-28-2	Aroclor 1221	ND	43	ug/kg	
11141-16-5	Aroclor 1232	ND	43	ug/kg	
53469-21-9	Aroclor 1242	ND	43	ug/kg	
12672-29-6	Aroclor 1248	ND	43	ug/kg	
11097-69-1	Aroclor 1254	ND	43	ug/kg	
11096-82-5	Aroclor 1260	173	43	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	111%		40-150%
2051-24-3	Decachlorobiphenyl	141%		30-160%

(a) All hits confirmed by dual column analysis.

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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-302		
Lab Sample ID:	F5261-2	**Date Sampled:**	11/11/99
Matrix:	SO - Soil	**Date Received:**	11/12/99
Method:	SW846 8082	**Percent Solids:**	77.0
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AB11172.D	1	11/15/99	SKW	11/15/99	OP1082	GAB423
Run #2							

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	43	ug/kg	
11104-28-2	Aroclor 1221	ND	43	ug/kg	
11141-16-5	Aroclor 1232	ND	43	ug/kg	
53469-21-9	Aroclor 1242	ND	43	ug/kg	
12672-29-6	Aroclor 1248	ND	43	ug/kg	
11097-69-1	Aroclor 1254	ND	43	ug/kg	
11096-82-5	Aroclor 1260	76.4	43	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	106%		40-150%
2051-24-3	Decachlorobiphenyl	140%		30-160%

(a) All hits confirmed by dual column analysis.

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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-303		
Lab Sample ID:	F5261-3	**Date Sampled:**	11/11/99
Matrix:	SO - Soil	**Date Received:**	11/12/99
Method:	SW846 8082	**Percent Solids:**	76.7
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AB11173.D	1	11/15/99	SKW	11/15/99	OP1082	GAB423
Run #2							

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	43	ug/kg	
11104-28-2	Aroclor 1221	ND	43	ug/kg	
11141-16-5	Aroclor 1232	ND	43	ug/kg	
53469-21-9	Aroclor 1242	ND	43	ug/kg	
12672-29-6	Aroclor 1248	ND	43	ug/kg	
11097-69-1	Aroclor 1254	ND	43	ug/kg	
11096-82-5	Aroclor 1260	45.6	43	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	107%		40-150%
2051-24-3	Decachlorobiphenyl	141%		30-160%

(a) All hits confirmed by dual column analysis.

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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-304		
Lab Sample ID:	F5261-4	**Date Sampled:**	11/11/99
Matrix:	SO - Soil	**Date Received:**	11/12/99
Method:	SW846 8082	**Percent Solids:**	65.2
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AB11174.D	1	11/15/99	SKW	11/15/99	OP1082	GAB423
Run #2							

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	51	ug/kg	
11104-28-2	Aroclor 1221	ND	51	ug/kg	
11141-16-5	Aroclor 1232	ND	51	ug/kg	
53469-21-9	Aroclor 1242	ND	51	ug/kg	
12672-29-6	Aroclor 1248	ND	51	ug/kg	
11097-69-1	Aroclor 1254	ND	51	ug/kg	
11096-82-5	Aroclor 1260	333	51	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	106%		40-150%
2051-24-3	Decachlorobiphenyl	136%		30-160%

(a) All hits confirmed by dual column analysis.

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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-305		
Lab Sample ID:	F5261-5	**Date Sampled:**	11/11/99
Matrix:	SO - Soil	**Date Received:**	11/12/99
Method:	SW846 8082	**Percent Solids:**	70.1
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AB11178.D	1	11/15/99	SKW	11/15/99	OP1082	GAB423
Run #2							

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	48	ug/kg	
11104-28-2	Aroclor 1221	ND	48	ug/kg	
11141-16-5	Aroclor 1232	ND	48	ug/kg	
53469-21-9	Aroclor 1242	ND	48	ug/kg	
12672-29-6	Aroclor 1248	ND	48	ug/kg	
11097-69-1	Aroclor 1254	ND	48	ug/kg	
11096-82-5	Aroclor 1260	95.4	48	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	113%		40-150%
2051-24-3	Decachlorobiphenyl	146%		30-160%

(a) All hits confirmed by dual column analysis.

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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-DU04		
Lab Sample ID:	F5261-6	**Date Sampled:**	11/11/99
Matrix:	SO - Soil	**Date Received:**	11/12/99
Method:	SW846 8082	**Percent Solids:**	64.5
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AB11179.D	1	11/15/99	SKW	11/15/99	OP1082	GAB423
Run #2							

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	52	ug/kg	
11104-28-2	Aroclor 1221	ND	52	ug/kg	
11141-16-5	Aroclor 1232	ND	52	ug/kg	
53469-21-9	Aroclor 1242	ND	52	ug/kg	
12672-29-6	Aroclor 1248	ND	52	ug/kg	
11097-69-1	Aroclor 1254	ND	52	ug/kg	
11096-82-5	Aroclor 1260	323	52	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	108%		40-150%
2051-24-3	Decachlorobiphenyl	140%		30-160%

(a) All hits confirmed by dual column analysis.

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

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

PITT-03-0-103

TO:	**MR. M. SPERANZA**	**DATE:**	**MAY 15, 2000**
FROM:	**JUSTIN ORBICH**	**CC:**	**DV FILE**
SUBJECT:	**ORGANIC DATA VALIDATION – PCB CTO 078 – NAS CECIL FIELD SDG F6025**		
SAMPLES:	2/Sediment		
	CEF-P39-SD-501	CEF-P38-SD-503	
	3/Soil		
	CEF-P39-SS-502 CEF-P39-SS-DU06	CEF-P39-SS-504	

OVERVIEW

The sample set for CTO 078, SDG F6025 Naval Air Station (NAS) Cecil Field; Florida consists of two (2) sediment and three (3) soil environmental samples. The samples were analyzed for Polychlorinated Biphenyl (PCB) organic compounds. One (1) field duplicate pair (CEF-P39-SD-501/CEF-P39-SS-DU06) was included within this SDG.

The samples were collected by Tetra Tech, NUS on March 9th, 2000 and analyzed by Accutest Laboratories. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW 846 Method 8082 analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

- * Data Completeness
- * Holding Times
- * Initial/continuing calibrations
- * Laboratory method/field quality control blank results
- Field Duplicate Precision
- * Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified analytical results are presented in Appendix A.

PCB FRACTION

The field duplicate pair (CEF-P39-SD-501/CEF-P39-SS-DU06) Relative Percent Difference (RPD) exceeded the 30% quality control limit for AROCLOR-1260. The positive results were qualified as estimated (J).

Sample CEF-P39-SD-502 was analyzed at a 5X dilution thus causing elevated reporting limits.

Samples CEF-P39-SD-503 and CEF-P39-SS-504 were analyzed at a 10X dilution thus causing elevated reporting limits.

EXECUTIVE SUMMARY

Laboratory performance: None.

Other Factors Affecting Data Quality: Several samples were analyzed at a dilution. The field duplicate pair exceeded the 30% quality control limit for AROCLOR-1260.

MEMO TO: MR. M. SPERANZA
DATE: MAY 15, 2000 – PAGE 3

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (October, 1999), and the NFESC guidelines "Navy Installation Restoration Program Laboratory Quality Assurance Guide" (February, 1996). The text of this report has been formulated to address only those problems affecting data quality.

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

Justin Orbich

Chemist/Data Validator
Tetra Tech, NUS

Joseph A. Samchuck

Data Validation Quality Assurance Officer
Tetra Tech, NUS

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

DATA QUALIFIER DEFINITIONS:

U - Value is a nondetected result as reported by the laboratory and should not be considered present.

J - Positive result is estimated as a result of a value below the CRQL or a technical noncompliance.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
N = Internal Standard Noncompliance
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCB D% between columns for positive results
V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = % Solid content is less than 30%

APPENDIX A

Qualified Analytical Results

CTO078 -NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F6025

SAMPLE NUMBER:	CEF-P39-SD-501			CEF-P39-SD-503			CEF-P39-SS-502			CEF-P39-SS-504		
SAMPLE DATE:	03/09/00			03/09/00			03/09/00			03/09/00		
LABORATORY ID:	F6025-1			F6025-3			F6025-2			F6025-4		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	73.9 %			65.7 %			77.7 %			70.6 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
AROCLOR-1016	45	U		510	U		210	U		470	U	
AROCLOR-1221	45	U		510	U		210	U		470	U	
AROCLOR-1232	45	U		510	U		210	U		470	U	
AROCLOR-1242	45	U		510	U		210	U		470	U	
AROCLOR-1248	45	U		510	U		210	U		470	U	
AROCLOR-1254	45	U		510	U		210	U		470	U	
AROCLOR-1260	69	J	G	1590			1460			990		

CTO078 -NAS CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F6025

SAMPLE NUMBER:	CEF-P39-SS-DU06											
SAMPLE DATE:	03/09/00			/ /			/ /			/ /		
LABORATORY ID:	F6025-5											
QC_TYPE:	NORMAL											
% SOLIDS:	74.7 %			100.0 %			100.0 %			100.0 %		
UNITS:	UG/KG											
FIELD DUPLICATE OF:	CEF-P39-SD-501											
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
AROCLOR-1016	45	U										
AROCLOR-1221	45	U										
AROCLOR-1232	45	U										
AROCLOR-1242	45	U										
AROCLOR-1248	45	U										
AROCLOR-1254	45	U										
AROCLOR-1260	167	J	G									

APPENDIX B

Results as Reported by the Laboratory

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-501		
Lab Sample ID:	F6025-1	**Date Sampled:**	03/09/00
Matrix:	SO - Soil	**Date Received:**	03/10/00
Method:	SW846 8082	**Percent Solids:**	73.9
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	MN06557.D	1	03/13/00	SKW	03/11/00	OP1367	GMN267
Run #2							

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	45	ug/kg	
11104-28-2	Aroclor 1221	ND	45	ug/kg	
11141-16-5	Aroclor 1232	ND	45	ug/kg	
53469-21-9	Aroclor 1242	ND	45	ug/kg	
12672-29-6	Aroclor 1248	ND	45	ug/kg	
11097-69-1	Aroclor 1254	ND	45	ug/kg	
11096-82-5	Aroclor 1260	69.0	45	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	101%		50-144%
2051-24-3	Decachlorobiphenyl	130%		10-180%

(a) All hits confirmed by dual column analysis.

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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ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SD-503		
Lab Sample ID:	F6025-3	**Date Sampled:**	03/09/00
Matrix:	SO - Soil	**Date Received:**	03/10/00
Method:	SW846 8082	**Percent Solids:**	65.7
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	MN06561.D	10	03/13/00	SKW	03/11/00	OP1367	GMN267
Run #2							

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	510	ug/kg	
11104-28-2	Aroclor 1221	ND	510	ug/kg	
11141-16-5	Aroclor 1232	ND	510	ug/kg	
53469-21-9	Aroclor 1242	ND	510	ug/kg	
12672-29-6	Aroclor 1248	ND	510	ug/kg	
11097-69-1	Aroclor 1254	ND	510	ug/kg	
11096-82-5	Aroclor 1260 [b]	1590	510	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	107%		50-144%
2051-24-3	Decachlorobiphenyl	155%		10-180%

(a) All hits confirmed by dual column analysis.
(b) PCB pattern appears to be weathered.

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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SS-502		
Lab Sample ID:	F6025-2	**Date Sampled:**	03/09/00
Matrix:	SO - Soil	**Date Received:**	03/10/00
Method:	SW846 8082	**Percent Solids:**	77.7
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	MN06564.D	5	03/13/00	SKW	03/11/00	OP1367	GMN267
Run #2							

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	210	ug/kg	
11104-28-2	Aroclor 1221	ND	210	ug/kg	
11141-16-5	Aroclor 1232	ND	210	ug/kg	
53469-21-9	Aroclor 1242	ND	210	ug/kg	
12672-29-6	Aroclor 1248	ND	210	ug/kg	
11097-69-1	Aroclor 1254	ND	210	ug/kg	
11096-82-5	Aroclor 1260 [b]	1460	210	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	104%		50-144%
2051-24-3	Decachlorobiphenyl	135%		10-180%

(a) All hits confirmed by dual column analysis.
(b) PCB pattern appears to be weathered.

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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ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SS-504		
Lab Sample ID:	F6025-4	**Date Sampled:**	03/09/00
Matrix:	SO - Soil	**Date Received:**	03/10/00
Method:	SW846 8082	**Percent Solids:**	70.6
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	MN06562.D	10	03/13/00	SKW	03/11/00	OP1367	GMN267
Run #2							

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	470	ug/kg	
11104-28-2	Aroclor 1221	ND	470	ug/kg	
11141-16-5	Aroclor 1232	ND	470	ug/kg	
53469-21-9	Aroclor 1242	ND	470	ug/kg	
12672-29-6	Aroclor 1248	ND	470	ug/kg	
11097-69-1	Aroclor 1254	ND	470	ug/kg	
11096-82-5	Aroclor 1260	990	470	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	112%		50-144%
2051-24-3	Decachlorobiphenyl	159%		10-180%

(a) All hits confirmed by dual column analysis.

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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SS-DU06		
Lab Sample ID:	F6025-5	**Date Sampled:**	03/09/00
Matrix:	SO - Soil	**Date Received:**	03/10/00
Method:	SW846 8082	**Percent Solids:**	74.7
Project:	NAS Cecil Field		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	MN06565.D	1	03/13/00	SKW	03/11/00	OP1367	GMN267
Run #2							

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	45	ug/kg	
11104-28-2	Aroclor 1221	ND	45	ug/kg	
11141-16-5	Aroclor 1232	ND	45	ug/kg	
53469-21-9	Aroclor 1242	ND	45	ug/kg	
12672-29-6	Aroclor 1248	ND	45	ug/kg	
11097-69-1	Aroclor 1254	ND	45	ug/kg	
11096-82-5	Aroclor 1260	167	45	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	101%		50-144%
2051-24-3	Decachlorobiphenyl	121%		10-180%

(a) All hits confirmed by dual column analysis.

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

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

PITT-04-0-054

TO: **MARK SPERANZA** **DATE: MAY 15, 2000**

FROM: **JUSTIN ORBICH** **CC: DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – PCB**
CTO 078 – NAS CECIL FIELD
SDG F6216

SAMPLES: 6/Surface Soil

CEF-P39-SS-601-01	CEF-P39-SS-602-01
CEF-P39-SS-603-01	CEF-P39-SS-604-01
CEF-P39-SS-605-01	CEF-P39-SS-DUP07

OVERVIEW

The sample set for CTO 078, SDG F6216 Naval Air Station (NAS) Cecil Field; Florida consists of six (6) surface soil environmental sample. The sample was analyzed for Target Compound List (TCL) Polychlorinated Biphenyl (PCB) organic compounds. One (1) field duplicate pair (CEF-P39-SS-602-01/CEF-P39-SS-DU07) was included within this SDG.

The samples were collected by Tetra Tech, NUS on April 5th, 2000 and analyzed by Accutest Laboratories. All analyses were performed in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria and analyzed according to SW 846 Method 8082 analytical and reporting protocols. The data in this SDG was validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Initial/continuing calibrations
* • Laboratory method/field quality control blank results
* • Field Duplicate Precision
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified analytical results are presented in Appendix A.

PCB FRACTION

Samples CEF-P39-SS-603-01 and CEF-P39-SS-604-01 were analyzed at a 4X dilution thus causing elevated reporting limits.

MEMO TO: MARK SPERANZA
DATE: MAY 15, 2000 – PAGE 2

EXECUTIVE SUMMARY

Laboratory performance: None.

Other Factors Affecting Data Quality: Several samples were analyzed at a 4X dilution.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (October, 1999), and the NFESC guidelines "Navy Installation Restoration Program Laboratory Quality Assurance Guide" (February, 1996). The text of this report has been formulated to address only those problems affecting data quality.

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

Justin Orbich

Chemist/Data Validator
Tetra Tech, NUS

Joseph A. Samchuck

Data Validation Quality Assurance Officer
Tetra Tech, NUS

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

DATA QUALIFIER DEFINITIONS:

U - Value is a nondetected result as reported by the laboratory and should not be considered present.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration (i.e., % RSDs, %Ds, ICVs, CCVs, RPDs, RRFs, etc.) Noncompliance
D = MS/MSD Noncompliance
E = LCS/LCSD Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - include ICSAB % R's
L = Instrument Calibration Range Exceedance
M = Sample Preservation
N = Internal Standard Noncompliance
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = Pest/PCB D% between columns for positive results
V = Non-linear calibrations, tuning $r < 0.995$ (correlation coefficient)
W = EMPC result
X = Signal to noise response drop
Y = % Solid content is less than 30%

APPENDIX A

Qualified Analytical Results

CTO078-CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F6216

SAMPLE NUMBER:	CEF-P39-SS-601-01			CEF-P39-SS-602-01			CEF-P39-SS-603-01			CEF-P39-SS-604-01		
SAMPLE DATE:	04/05/00			04/05/00			04/05/00			04/05/00		
LABORATORY ID:	F6216-1			F6216-2			F6216-3			F6216-4		
QC_TYPE:	NORMAL			NORMAL			NORMAL			NORMAL		
% SOLIDS:	90.5 %			81.6 %			74.5 %			76.7 %		
UNITS:	UG/KG			UG/KG			UG/KG			UG/KG		
FIELD DUPLICATE OF:												
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
AROCLOR-1016	37	U		41	U		180	U		170	U	
AROCLOR-1221	37	U		41	U		180	U		170	U	
AROCLOR-1232	37	U		41	U		180	U		170	U	
AROCLOR-1242	37	U		41	U		180	U		170	U	
AROCLOR-1248	37	U		41	U		180	U		170	U	
AROCLOR-1254	37	U		41	U		180	U		170	U	
AROCLOR-1260	95.2			41	U		431			618		

CTO078-CECIL FIELD
SOIL DATA
Accutest, NJ
SDG: F6216

SAMPLE NUMBER:	CEF-P39-SS-605-03			CEF-P39-SS-DUP07								
SAMPLE DATE:	04/05/00			04/05/00			/ /			/ /		
LABORATORY ID:	F6216-5			F6216-6								
QC_TYPE:	NORMAL			NORMAL								
% SOLIDS:	81.1 %			82.2 %			100.0 %			100.0 %		
UNITS:	UG/KG			UG/KG								
FIELD DUPLICATE OF:				CEF-P39-SS-602-01								
	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE	RESULT	QUAL	CODE
PESTICIDES/PCBs												
AROCLOR-1016	41	U		40	U							
AROCLOR-1221	41	U		40	U							
AROCLOR-1232	41	U		40	U							
AROCLOR-1242	41	U		40	U							
AROCLOR-1248	41	U		40	U							
AROCLOR-1254	41	U		40	U							
AROCLOR-1260	41	U		40	U							

APPENDIX B

Results as Reported by the Laboratory

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SS-601-01		
Lab Sample ID:	F6216-1	**Date Sampled:**	04/05/00
Matrix:	SO - Soil	**Date Received:**	04/06/00
Method:	SW846 8082	**Percent Solids:**	90.5
Project:	NAS Cecil Field 0039		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AB12983.D	1	04/10/00	SKW	04/09/00	OP1436	GAB493
Run #2							

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	37	ug/kg	
11104-28-2	Aroclor 1221	ND	37	ug/kg	
11141-16-5	Aroclor 1232	ND	37	ug/kg	
53469-21-9	Aroclor 1242	ND	37	ug/kg	
12672-29-6	Aroclor 1248	ND	37	ug/kg	
11097-69-1	Aroclor 1254	ND	37	ug/kg	
11096-82-5	Aroclor 1260	95.2	37	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	89%		50-144%
2051-24-3	Decachlorobiphenyl	104%		10-180%

(a) All hits confirmed by dual column analysis.

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-P39-SS-602-01		
Lab Sample ID:	F6216-2	**Date Sampled:**	04/05/00
Matrix:	SO - Soil	**Date Received:**	04/06/00
Method:	SW846 8082	**Percent Solids:**	81.6
Project:	NAS Cecil Field 0039		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB12984.D	1	04/10/00	SKW	04/09/00	OP1436	GAB493
Run #2							

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	41	ug/kg	
11104-28-2	Aroclor 1221	ND	41	ug/kg	
11141-16-5	Aroclor 1232	ND	41	ug/kg	
53469-21-9	Aroclor 1242	ND	41	ug/kg	
12672-29-6	Aroclor 1248	ND	41	ug/kg	
11097-69-1	Aroclor 1254	ND	41	ug/kg	
11096-82-5	Aroclor 1260	ND	41	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	90%		50-144%
2051-24-3	Decachlorobiphenyl	112%		10-180%

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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SS-603-01		
Lab Sample ID:	F6216-3	**Date Sampled:**	04/05/00
Matrix:	SO - Soil	**Date Received:**	04/06/00
Method:	SW846 8082	**Percent Solids:**	74.5
Project:	NAS Cecil Field 0039		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AB12985.D	4	04/10/00	SKW	04/09/00	OP1436	GAB493
Run #2							

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	180	ug/kg	
11104-28-2	Aroclor 1221	ND	180	ug/kg	
11141-16-5	Aroclor 1232	ND	180	ug/kg	
53469-21-9	Aroclor 1242	ND	180	ug/kg	
12672-29-6	Aroclor 1248	ND	180	ug/kg	
11097-69-1	Aroclor 1254	ND	180	ug/kg	
11096-82-5	Aroclor 1260	431	180	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	84%		50-144%
2051-24-3	Decachlorobiphenyl	114%		10-180%

(a) All hits confirmed by dual column analysis.

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

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SS-604-01		
Lab Sample ID:	F6216-4	**Date Sampled:**	04/05/00
Matrix:	SO - Soil	**Date Received:**	04/06/00
Method:	SW846 8082	**Percent Solids:**	76.7
Project:	NAS Cecil Field 0039		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	AB12986.D	4	04/10/00	SKW	04/09/00	OP1436	GAB493
Run #2							

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	170	ug/kg	
11104-28-2	Aroclor 1221	ND	170	ug/kg	
11141-16-5	Aroclor 1232	ND	170	ug/kg	
53469-21-9	Aroclor 1242	ND	170	ug/kg	
12672-29-6	Aroclor 1248	ND	170	ug/kg	
11097-69-1	Aroclor 1254	ND	170	ug/kg	
11096-82-5	Aroclor 1260	618	170	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	78%		50-144%
2051-24-3	Decachlorobiphenyl	104%		10-180%

(a) All hits confirmed by dual column analysis.

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

000006

ACCUTEST

Report of Analysis

Client Sample ID:	CEF-P39-SS-605-03		
Lab Sample ID:	F6216-5	**Date Sampled:**	04/05/00
Matrix:	SO - Soil	**Date Received:**	04/06/00
Method:	SW846 8082	**Percent Solids:**	81.1
Project:	NAS Cecil Field 0039		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB12989.D	1	04/10/00	SKW	04/09/00	OP1436	GAB493
Run #2							

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	41	ug/kg	
11104-28-2	Aroclor 1221	ND	41	ug/kg	
11141-16-5	Aroclor 1232	ND	41	ug/kg	
53469-21-9	Aroclor 1242	ND	41	ug/kg	
12672-29-6	Aroclor 1248	ND	41	ug/kg	
11097-69-1	Aroclor 1254	ND	41	ug/kg	
11096-82-5	Aroclor 1260	ND	41	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	92%		50-144%
2051-24-3	Decachlorobiphenyl	128%		10-180%

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-P39-SS-DUP07		
Lab Sample ID:	F6216-6	**Date Sampled:**	04/05/00
Matrix:	SO - Soil	**Date Received:**	04/06/00
Method:	SW846 8082	**Percent Solids:**	82.2
Project:	NAS Cecil Field 0039		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	AB12990.D	1	04/10/00	SKW	04/09/00	OP1436	GAB493
Run #2							

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	40	ug/kg	
11104-28-2	Aroclor 1221	ND	40	ug/kg	
11141-16-5	Aroclor 1232	ND	40	ug/kg	
53469-21-9	Aroclor 1242	ND	40	ug/kg	
12672-29-6	Aroclor 1248	ND	40	ug/kg	
11097-69-1	Aroclor 1254	ND	40	ug/kg	
11096-82-5	Aroclor 1260	ND	40	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	91%		50-144%
2051-24-3	Decachlorobiphenyl	120%		10-180%

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

APPENDIX B

HAZARD QUOTIENT CALCULATION TABLES

OUTFALLS 1 – 12: RACCOON & KINGFISHER
OUTFALLS 13 & 14: MOUSE, SHREW, ROBIN, HAWK, WOODCOCK, & FOX

PSC 39
OUTFALL 1

Kingfisher

Body Weight	0.1360000 kg	
Food Ingestion Rate	0.0680000 kg/day	100% fish
Water Ingestion Rate	0.0150000 kg/day	
Sediment Ingestion Rate	0.0000000 kg/day	

Mean Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Fish Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
CADMIUM	0.8663	0.0000	0.8663	0.4332	1.45	20	2.99E-01	2.17E-02
COPPER	5.6750	0.0145	5.6750	2.8391	47	61.7	6.04E-02	4.60E-02
LEAD	49.5800	0.0024	49.5800	24.7903	1.13	11.3	2.19E+01	2.19E+00

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 1

Kingfisher

Body Weight	0.1360000 kg	
Food Ingestion Rate	0.0680000 kg/day	100%fish
Water Ingestion Rate	0.0150000 kg/day	
Sediment Ingestion Rate	0.0000000 kg/day	

Maximum Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Fish Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
CADMIUM	2.9000	0.0000	2.9000	1.4500	1.45	20	1.00E+00	7.25E-02
COPPER	15.3000	0.0570	15.3000	7.6563	47	61.7	1.63E-01	1.24E-01
LEAD	144.0000	0.0050	144.0000	72.0006	1.13	11.3	6.37E+01	6.37E+00

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 1

Raccoon

Body Weight	3.9900 kg		
Food Ingestion Rate	0.8560 kg/day	% prey	0.906
Water Ingestion Rate	0.3310 kg/day		
Sed Ingestion Rate	0.8560 kg/day	% sed	0.094

Mean Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Crustacean Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
CADMIUM	0.8663	0.0000	0.8663	0.1859	1	10	1.86E-01	1.86E-02
COPPER	5.6750	0.0145	5.6750	1.2187	11.7	15.14	1.04E-01	8.05E-02
LEAD	49.5800	0.0024	49.5800	10.6369	8	80	1.33E+00	1.33E-01

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 1

Raccoon

Body Weight	3.9900 kg		
Food Ingestion Rate	0.8560 kg/day	% prey	0.9060
Water Ingestion Rate	0.3310 kg/day		
Sed Ingestion Rate	0.8560 kg/day	% sed	0.0940

Maximum Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Crustacean Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
CADMIUM	2.9000	0.0000	2.9000	0.6222	1	10	6.22E-01	6.22E-02
COPPER	15.3000	0.0570	15.3000	3.2871	11.7	15.14	2.81E-01	2.17E-01
LEAD	144.0000	0.0050	144.0000	30.8936	8	80	3.86E+00	3.86E-01

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 2

Raccoon

Body Weight	3.9900 kg		
Food Ingestion Rate	0.8560 kg/day	% prey	0.906
Water Ingestion Rate	0.3310 kg/day		
Sed Ingestion Rate	0.8560 kg/day	% sed	0.094

Mean Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Crustacean Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
Cadmium	0.9000	0.0000	0.9000	0.1931	1	10	1.93E-01	1.93E-02
Copper	4.4000	0.0114	4.4000	0.9449	11.7	15.14	8.08E-02	6.24E-02
Lead	38.6000	0.0220	38.6000	8.2829	8	80	1.04E+00	1.04E-01
Zinc	27.8000	0.0973	27.8000	5.9722	160	320	3.73E-02	1.87E-02

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 2

Raccoon

Body Weight	3.9900 kg		
Food Ingestion Rate	0.8560 kg/day	% prey	0.9060
Water Ingestion Rate	0.3310 kg/day		
Sed Ingestion Rate	0.8560 kg/day	% sed	0.0940

Maximum Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Crustacean Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
Cadmium	1.3000	0.0000	1.3000	0.2789	1	10	2.79E-01	2.79E-02
Copper	5.8000	0.0089	5.8000	1.2450	11.7	15.14	1.06E-01	8.22E-02
Lead	41.2000	0.0450	41.2000	8.8426	8	80	1.11E+00	1.11E-01
Zinc	36.6000	0.1510	36.6000	7.8646	160	320	4.92E-02	2.46E-02

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 2

Kingfisher

Body Weight	0.1360000 kg	
Food Ingestion Rate	0.0680000 kg/day	100% fish
Water Ingestion Rate	0.0150000 kg/day	
Sediment Ingestion Rate	0.0000000 kg/day	

Mean Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Fish Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
Cadmium	0.9000	0.0000	0.9000	0.4500	1.45	20	3.10E-01	2.25E-02
Copper	4.4000	0.0114	4.4000	2.2013	47	61.7	4.68E-02	3.57E-02
Lead	38.6000	0.0220	38.6000	19.3024	1.13	11.3	1.71E+01	1.71E+00
Zinc	27.8000	0.0973	27.8000	13.9107	14.5	131	9.59E-01	1.06E-01

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 2

Kingfisher

Body Weight	0.1360000 kg	
Food Ingestion Rate	0.0680000 kg/day	100%fish
Water Ingestion Rate	0.0150000 kg/day	
Sediment Ingestion Rate	0.0000000 kg/day	

Maximum Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Fish Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
Cadmium	1.3000	0.0000	1.3000	0.6500	1.45	20	4.48E-01	3.25E-02
Copper	5.8000	0.0089	5.8000	2.9010	47	61.7	6.17E-02	4.70E-02
Lead	41.2000	0.0450	41.2000	20.6050	1.13	11.3	1.82E+01	1.82E+00
Zinc	36.6000	0.1510	36.6000	18.3167	14.5	131	1.26E+00	1.40E-01

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 3

Raccoon

Body Weight	3.9900000 kg		
Food Ingestion Rate	0.8560000 kg/day	% prey	0.9060
Water Ingestion Rate	0.3310000 kg/day		
Sed Ingestion Rate	0.8560000 kg/day	% sed	0.0940

Mean Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Crustacean Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
Aroclor-1254	0.0372	0.0000	0.1376	0.0275	0.068	0.68	4.04E-01	4.04E-02
Aroclor-1260	0.0990	0.0000	0.3663	0.0732	0.068	0.68	1.08E+00	1.08E-01
Inorganics								
Cadmium	1.50	0.0000	1.5	0.3218	1	10	3.22E-01	3.22E-02
Copper	12.97	0.0232	12.9667	2.7838	11.7	15.14	2.38E-01	1.84E-01
Lead	29.03	0.0000	29.0333	6.2287	8	80	7.79E-01	7.79E-02

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 3

Raccoon

Body Weight	3.990	kg		
Food Ingestion Rate	0.856	kg/day	% prey	0.906
Water Ingestion Rate	0.3310000	kg/day		
Sed Ingestion Rate	0.856	kg/day	% sed	0.094

Maximum Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Crustacean Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
Aroclor-1254	0.054	0.0000	0.2013	0.04021983	0.068	0.68	5.91E-01	5.91E-02
Aroclor-1260	0.178	0.0000	0.6586	0.13160165	0.068	0.68	1.94E+00	1.94E-01
Inorganics								
Cadmium	2.600	0.0000	2.6000	0.55779449	1	10	5.58E-01	5.58E-02
Copper	22.000	0.0540	22.0000	4.7242792	11.7	15.14	4.04E-01	3.12E-01
Lead	57.400	0.0000	57.4000	12.314386	8	80	1.54E+00	1.54E-01

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 3

Kingfisher

Body Weight	0.1360	kg	
Food Ingestion Rate	0.0680	kg/day	100% fish
Water Ingestion Rate	0.0150	kg/day	
Sediment Ingestion Rate	0.0000	kg/day	

Mean Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Fish Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
Aroclor-1254	0.0372	0.0000	0.1877	0.0938	0.18	1.8	5.21E-01	5.21E-02
Aroclor-1260	0.0990	0.0000	0.4995	0.2498	0.18	1.8	1.39E+00	1.39E-01
Inorganics								
Cadmium	1.5000	0.0000	1.5000	0.7500	1.45	20	5.17E-01	3.75E-02
Copper	12.9667	0.0232	12.9667	6.4859	47	61.7	1.38E-01	1.05E-01
Lead	29.0333	0.0000	29.0333	14.5167	1.13	11.3	1.28E+01	1.28E+00

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 3

Kingfisher

Body Weight	0.1360 kg		
Food Ingestion Rate	0.0680 kg/day	% fish	1.0000
Water Ingestion Rate	0.0150 kg/day		
Sediment Ingestion Rate	0.0000 kg/day		

Maximum Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Fish Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
Aroclor-1254	0.0544	0.0000	0.0544	0.0272	0.18	1.8	1.51E-01	1.51E-02
Aroclor-1260	0.1780	0.0000	0.1780	0.0890	0.18	1.8	4.94E-01	4.94E-02
Inorganics								
Cadmium	2.6000	0.0000	2.6000	1.3000	1.45	20	8.97E-01	6.50E-02
Copper	22.0000	0.0540	22.0000	11.0060	47	61.7	2.34E-01	1.78E-01
Lead	57.4000	0.0000	57.4000	28.7000	1.13	11.3	2.54E+01	2.54E+00

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 4

Raccoon

Body Weight	3.9900 kg		
Food Ingestion Rate	0.8560 kg/day	% prey	0.906
Water Ingestion Rate	0.3310 kg/day		
Sed Ingestion Rate	0.8560 kg/day	% sed	0.094

Mean Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Crustacean Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
ARSENIC	3.9700	0.0000	3.9700	0.8517	0.126	1.26	6.76E+00	6.76E-01
CADMIUM	3.9333	0.0000	3.9333	0.8438	1	10	8.44E-01	8.44E-02
CHROMIUM	123.6000	0.0000	123.6000	26.5167	3.28	32.8	8.08E+00	8.08E-01
COPPER	22.9333	0.0195	22.9333	4.9216	11.7	15.14	4.21E-01	3.25E-01
LEAD	507.6000	0.0045	507.6000	108.8990	8	80	1.36E+01	1.36E+00
ZINC	108.7333	0.0451	108.7333	23.3310	160	320	1.46E-01	7.29E-02

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 4

Raccoon

Body Weight	3.9900 kg		
Food Ingestion Rate	0.8560 kg/day	% prey	0.9060
Water Ingestion Rate	0.3310 kg/day		
Sed Ingestion Rate	0.8560 kg/day	% sed	0.0940

Maximum Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Crustacean Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics (mg/kg)								
ARSENIC	10.9000	0.0000	10.9000	2.3384	0.126	1.26	1.86E+01	1.86E+00
CADMIUM	6.5000	0.0000	6.5000	1.3945	1	10	1.39E+00	1.39E-01
CHROMIUM	300.0000	0.0000	300.0000	64.3609	3.28	32.8	1.96E+01	1.96E+00
COPPER	34.2000	0.0540	34.2000	7.3416	11.7	15.14	6.27E-01	4.85E-01
LEAD	1300.0000	0.0103	1300.0000	278.8981	8	80	3.49E+01	3.49E+00
ZINC	178.0000	0.0827	178.0000	38.1943	160	320	2.39E-01	1.19E-01

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 4

Kingfisher

Body Weight	0.1360000 kg	
Food Ingestion Rate	0.0680000 kg/day	100% fish
Water Ingestion Rate	0.0150000 kg/day	
Sediment Ingestion Rate	0.0000000 kg/day	

Mean Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Fish Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
ARSENIC	3.9700	0.0000	3.9700	1.9850	2.46	7.38	8.07E-01	2.69E-01
CADMIUM	3.9333	0.0000	3.9333	1.9667	1.45	20	1.36E+00	9.83E-02
CHROMIUM	123.6000	0.0000	123.6000	61.8000	1	5	6.18E+01	1.24E+01
COPPER	22.9333	0.0195	22.9333	11.4688	47	61.7	2.44E-01	1.86E-01
LEAD	507.6000	0.0045	507.6000	253.8005	1.13	11.3	2.25E+02	2.25E+01
ZINC	108.7333	0.0451	108.7333	54.3716	14.5	131	3.75E+00	4.15E-01

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 4

Kingfisher

Body Weight	0.1360000 kg	
Food Ingestion Rate	0.0680000 kg/day	100%fish
Water Ingestion Rate	0.0150000 kg/day	
Sediment Ingestion Rate	0.0000000 kg/day	

Maximum Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Fish Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
ARSENIC	10.9000	0.0000	10.9000	5.4500	2.46	7.38	2.22E+00	7.38E-01
CADMIUM	6.5000	0.0000	6.5000	3.2500	1.45	20	2.24E+00	1.63E-01
CHROMIUM	300.0000	0.0000	300.0000	150.0000	1	5	1.50E+02	3.00E+01
COPPER	34.2000	0.0540	34.2000	17.1060	47	61.7	3.64E-01	2.77E-01
LEAD	1300.0000	0.0103	1300.0000	650.0011	1.13	11.3	5.75E+02	5.75E+01
ZINC	178.0000	0.0827	178.0000	89.0091	14.5	131	6.14E+00	6.79E-01

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 5

Raccoon

Body Weight	3.9900 kg		
Food Ingestion Rate	0.8560 kg/day	% prey	0.906
Water Ingestion Rate	0.3310 kg/day		
Sed Ingestion Rate	0.8560 kg/day	% sed	0.094

Mean Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Crustacean Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
Cadmium	1.5000	0.0057	1.5000	0.3223	1	10	3.22E-01	3.22E-02
Chromium	10.8333	0.0174	10.8333	2.3256	3.28	32.8	7.09E-01	7.09E-02
Copper	372.7667	0.0425	372.7667	79.9755	11.7	15.14	6.84E+00	5.28E+00
Lead	33.8667	0.0507	33.8667	7.2698	8	80	9.09E-01	9.09E-02
Zinc	100.3333	0.6853	100.3333	21.5820	160	320	1.35E-01	6.74E-02

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 5

Raccoon

Body Weight	3.9900 kg		
Food Ingestion Rate	0.8560 kg/day	% prey	0.9060
Water Ingestion Rate	0.3310 kg/day		
Sed Ingestion Rate	0.8560 kg/day	% sed	0.0940

Maximum Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Crustacean Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
Cadmium	2.2000	0.0242	2.2000	0.4740	1	10	4.74E-01	4.74E-02
Chromium	20.4000	0.0450	20.4000	4.3803	3.28	32.8	1.34E+00	1.34E-01
Copper	1100.0000	0.0934	1100.0000	235.9977	11.7	15.14	2.02E+01	1.56E+01
Lead	52.1000	0.2050	52.1000	11.1943	8	80	1.40E+00	1.40E-01
Zinc	136.0000	1.6900	136.0000	29.3171	160	320	1.83E-01	9.16E-02

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 5

Kingfisher

Body Weight	0.1360000 kg	
Food Ingestion Rate	0.0680000 kg/day	100% fish
Water Ingestion Rate	0.0150000 kg/day	
Sediment Ingestion Rate	0.0000000 kg/day	

Mean Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Fish Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
Cadmium	1.5000	0.0057	1.5000	0.7506	1.45	20	5.18E-01	3.75E-02
Chromium	10.8333	0.0174	10.8333	5.4186	1	5	5.42E+00	1.08E+00
Copper	372.7667	0.0425	372.7667	186.3880	47	61.7	3.97E+00	3.02E+00
Lead	33.8667	0.0507	33.8667	16.9389	1.13	11.3	1.50E+01	1.50E+00
Zinc	100.3333	0.6853	100.3333	50.2422	14.5	131	3.46E+00	3.84E-01

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 5

Kingfisher

Body Weight	0.1360000 kg	
Food Ingestion Rate	0.0680000 kg/day	100%fish
Water Ingestion Rate	0.0150000 kg/day	
Sediment Ingestion Rate	0.0000000 kg/day	

Maximum Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Fish Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
Cadmium	2.2000	0.0242	2.2000	1.1027	1.45	20	7.60E-01	5.51E-02
Chromium	20.4000	0.0450	20.4000	10.2050	1	5	1.02E+01	2.04E+00
Copper	1100.0000	0.0934	1100.0000	550.0103	47	61.7	1.17E+01	8.91E+00
Lead	52.1000	0.2050	52.1000	26.0726	1.13	11.3	2.31E+01	2.31E+00
Zinc	136.0000	1.6900	136.0000	68.1864	14.5	131	4.70E+00	5.21E-01

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 6

Raccoon

Body Weight	3.9900 kg		
Food Ingestion Rate	0.8560 kg/day	% prey	0.906
Water Ingestion Rate	0.3310 kg/day		
Sed Ingestion Rate	0.8560 kg/day	% sed	0.094

Mean Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Crustacean Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
4,4'-DDD	0.0204	0.0000	0.0114	0.0026	0.8	4	3.30E-03	6.59E-04
4,4'-DDE	0.0186	0.0000	0.2862	0.0560	20	4	2.80E-03	1.40E-02
4,4'-DDT	0.0205	0.0000	0.0685	0.0137	0.8	4	1.72E-02	3.43E-03
Inorganics								
Arsenic	0.8600	0.0201	0.8600	0.1862	0.126	1.26	1.48E+00	1.48E-01
Cadmium	0.9667	0.0068	0.9667	0.2080	1	10	2.08E-01	2.08E-02
Chromium	5.0000	0.0216	5.0000	1.0745	3.28	32.8	3.28E-01	3.28E-02
Copper	5.7000	0.0456	5.7000	1.2266	11.7	15.14	1.05E-01	8.10E-02
Lead	13.9667	0.0475	13.9667	3.0003	8	80	3.75E-01	3.75E-02
Zinc	54.9000	0.4277	54.9000	11.8135	160	320	7.38E-02	3.69E-02

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 6

Raccoon

Body Weight	3.9900 kg		
Food Ingestion Rate	0.8560 kg/day	% prey	0.9060
Water Ingestion Rate	0.3310 kg/day		
Sed Ingestion Rate	0.8560 kg/day	% sed	0.0940

Maximum Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Crustacean Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
4,4'-DDD	0.0170	0.0000	0.0095	0.0022	0.8	4	2.74E-03	5.48E-04
4,4'-DDE	0.0059	0.0000	0.0909	0.0178	20	4	8.89E-04	4.44E-03
4,4'-DDT	0.0060	0.0000	0.0200	0.0040	0.8	4	5.02E-03	1.00E-03
Inorganics								
Arsenic	1.4000	0.0512	1.4000	0.3046	0.126	1.26	2.42E+00	2.42E-01
Cadmium	1.3000	0.0262	1.3000	0.2811	1	10	2.81E-01	2.81E-02
Chromium	7.9000	0.0587	7.9000	1.6997	3.28	32.8	5.18E-01	5.18E-02
Copper	7.3000	0.0853	7.3000	1.5732	11.7	15.14	1.34E-01	1.04E-01
Lead	24.3000	0.1770	24.3000	5.2279	8	80	6.53E-01	6.53E-02
Zinc	87.1000	1.1900	87.1000	18.7848	160	320	1.17E-01	5.87E-02

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 6

Kingfisher

Body Weight	0.1360000 kg	
Food Ingestion Rate	0.0680000 kg/day	100% fish
Water Ingestion Rate	0.0150000 kg/day	
Sediment Ingestion Rate	0.0000000 kg/day	

Mean Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Fish Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
4,4'-DDD	0.0204	0.0000	0.0156	0.0078	0.0028	0.028	2.79E+00	2.79E-01
4,4'-DDE	0.0186	0.0000	0.3902	0.1951	0.0028	0.028	6.97E+01	6.97E+00
4,4'-DDT	0.0205	0.0000	0.0934	0.0467	0.0028	0.028	1.67E+01	1.67E+00
Inorganics								
Arsenic	0.8600	0.0201	0.8600	0.4322	2.46	7.38	1.76E-01	5.86E-02
Cadmium	0.9667	0.0068	0.9667	0.4841	1.45	20	3.34E-01	2.42E-02
Chromium	5.0000	0.0216	5.0000	2.5024	1	5	2.50E+00	5.00E-01
Copper	5.7000	0.0456	5.7000	2.8550	47	61.7	6.07E-02	4.63E-02
Lead	13.9667	0.0475	13.9667	6.9886	1.13	11.3	6.18E+00	6.18E-01
Zinc	54.9000	0.4277	54.9000	27.4972	14.5	131	1.90E+00	2.10E-01

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 6

Kingfisher

Body Weight	0.1360000 kg	
Food Ingestion Rate	0.0680000 kg/day	100%fish
Water Ingestion Rate	0.0150000 kg/day	
Sediment Ingestion Rate	0.0000000 kg/day	

Maximum Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Fish Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
4,4'-DDD	0.0170	0.0000	0.0130	0.0065	0.0028	0.028	2.32E+00	2.32E-01
4,4'-DDE	0.0059	0.0000	0.1239	0.0620	0.0028	0.028	2.21E+01	2.21E+00
4,4'-DDT	0.0060	0.0000	0.0273	0.0137	0.0028	0.028	4.88E+00	4.88E-01
Inorganics								
Arsenic	1.4000	0.0512	1.4000	0.7056	2.46	7.38	2.87E-01	9.56E-02
Cadmium	1.3000	0.0262	1.3000	0.6529	1.45	20	4.50E-01	3.26E-02
Chromium	7.9000	0.0587	7.9000	3.9565	1	5	3.96E+00	7.91E-01
Copper	7.3000	0.0853	7.3000	3.6594	47	61.7	7.79E-02	5.93E-02
Lead	24.3000	0.1770	24.3000	12.1695	1.13	11.3	1.08E+01	1.08E+00
Zinc	87.1000	1.1900	87.1000	43.6813	14.5	131	3.01E+00	3.33E-01

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 9

Raccoon

Body Weight	3.9900 kg		
Food Ingestion Rate	0.8560 kg/day	% prey	0.906
Water Ingestion Rate	0.3310 kg/day		
Sed Ingestion Rate	0.8560 kg/day	% sed	0.094

Mean Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Crustacean Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
4,4'-DDT	0.0036	0.0000	0.0120	0.0024	0.8	4	3.01E-03	6.02E-04

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 9

Raccoon

Body Weight	3.9900 kg		
Food Ingestion Rate	0.8560 kg/day	% prey	0.9060
Water Ingestion Rate	0.3310 kg/day		
Sed Ingestion Rate	0.8560 kg/day	% sed	0.0940

Maximum Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Crustacean Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
4,4'-DDT	0.0050	0.0000	0.0167	0.0033	0.8	4	4.18E-03	8.37E-04

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 9

Kingfisher

Body Weight	0.1360000 kg	
Food Ingestion Rate	0.0680000 kg/day	100% fish
Water Ingestion Rate	0.0150000 kg/day	
Sediment Ingestion Rate	0.0000000 kg/day	

Mean Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Fish Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
4,4'-DDT	0.0036	0.0000	0.0164	0.0082	0.0028	0.028	2.93E+00	2.93E-01

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 9

Kingfisher

Body Weight	0.1360000 kg	
Food Ingestion Rate	0.0680000 kg/day	100%fish
Water Ingestion Rate	0.0150000 kg/day	
Sediment Ingestion Rate	0.0000000 kg/day	

Maximum Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Fish Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
4,4'-DDT	0.0050	0.0000	0.0228	0.0114	0.0028	0.028	4.07E+00	4.07E-01

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 10

Raccoon

Body Weight	3.9900 kg		
Food Ingestion Rate	0.8560 kg/day	% prey	0.906
Water Ingestion Rate	0.3310 kg/day		
Sed Ingestion Rate	0.8560 kg/day	% sed	0.094

Mean Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Crustacean Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
SELENIUM	1.4000	0.0000	1.4000	0.3004	0.2	0.33	1.50E+00	9.10E-01

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 10

Raccoon

Body Weight	3.9900 kg		
Food Ingestion Rate	0.8560 kg/day	% prey	0.9060
Water Ingestion Rate	0.3310 kg/day		
Sed Ingestion Rate	0.8560 kg/day	% sed	0.0940

Maximum Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Crustacean Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
SELENIUM	1.3000	0.0000	1.3000	0.2789	0.2	0.33	1.39E+00	8.45E-01

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 10

Kingfisher

Body Weight	0.1360000 kg	
Food Ingestion Rate	0.0680000 kg/day	100% fish
Water Ingestion Rate	0.0150000 kg/day	
Sediment Ingestion Rate	0.0000000 kg/day	

Mean Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Fish Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
SELENIUM	1.4000	0.0000	1.4000	0.7000	0.4	0.8	1.75E+00	8.75E-01

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 10

Kingfisher

Body Weight	0.1360000 kg	
Food Ingestion Rate	0.0680000 kg/day	100%fish
Water Ingestion Rate	0.0150000 kg/day	
Sediment Ingestion Rate	0.0000000 kg/day	

Maximum Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Fish Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
SELENIUM	1.3000	0.0000	1.3000	0.6500	0.4	0.8	1.63E+00	8.13E-01

Note: prey concentration equals sediment concentration in only the inorganics

PSC 39
OUTFALL 11

Raccoon

Body Weight	3.9900 kg		
Food Ingestion Rate	0.8560 kg/day	% prey	0.906
Water Ingestion Rate	0.3310 kg/day		
Sed Ingestion Rate	0.8560 kg/day	% sed	0.094

Mean Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Crustacean Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
AROCLOR-1260	0.1232	0.0000	0.4557	0.0910	0.068	0.68	1.34E+00	1.34E-01

PSC 39
OUTFALL 11

Raccoon

Body Weight	3.9900 kg		
Food Ingestion Rate	0.8560 kg/day	% prey	0.9060
Water Ingestion Rate	0.3310 kg/day		
Sed Ingestion Rate	0.8560 kg/day	% sed	0.0940

Maximum Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Crustacean Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
AROCLOR-1260	0.3330	0.0000	1.2321	0.2462	0.068	0.68	3.62E+00	3.62E-01

PSC 39
OUTFALL 11

Kingfisher

Body Weight	0.1360000 kg	
Food Ingestion Rate	0.0680000 kg/day	100% fish
Water Ingestion Rate	0.0150000 kg/day	
Sediment Ingestion Rate	0.0000000 kg/day	

Mean Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Fish Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
AROCLOR-1260	0.1232	0.0000	0.6213	0.3107	0.18	1.8	1.73E+00	1.73E-01

PSC 39
OUTFALL 11

Kingfisher

Body Weight	0.1360000 kg	
Food Ingestion Rate	0.0680000 kg/day	100%fish
Water Ingestion Rate	0.0150000 kg/day	
Sediment Ingestion Rate	0.0000000 kg/day	

Maximum Concentrations

ECOC	Sediment Concentration (mg/kg)	Water Concentration (mg/L)	Fish Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
AROCLOR-1260	0.3330	0.0000	1.6801	0.8401	0.18	1.8	4.67E+00	4.67E-01

PSC 39 OUTFALL 13

Cotton Mouse

Body Weight	0.0310000 kg		
Food Ingestion Rate	0.0086000 kg/day	% Veg	0.98
Water Ingestion Rate	0.0000000 L/day		
Soil Ingestion Rate	0.0086000 kg/day	% SS	0.02

Mean Concentrations

ECOC	Soil Concentration (mg/kg)	Water Concentration (mg/L)	Vegetation Concentration (mg/kg)	Invertebrate Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs									
Endrin	0.0051	0.0000	0.0002	0.0343	0.0001	0.09	0.92	7.62E-04	7.62E-05
Inorganics									
Chromium	7.90	0.00	0.01	2.42	0.05	3.28	32.80	1.43E-02	1.43E-03

PSC 39 OUTFALL 13

Cotton Mouse

Body Weight	0.0310000 kg		
Food Ingestion Rate	0.0086000 kg/day	% Veg	0.98
Water Ingestion Rate	0.0000000 L/day		
Soil Ingestion Rate	0.0086000 kg/day	% SS	0.02

Maximum Concentrations

ECOC	Soil Concentration (mg/kg)	Water Concentration (mg/L)	Vegetation Concentration (mg/kg)	Invertebrate Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs									
Endrin	0.0044	0.0000	0.0001	0.0295	0.0001	0.09	0.92	6.55E-04	6.55E-05
Inorganics									
Chromium	9.80	0.00	0.01	3.00	0.06	3.28	32.80	1.78E-02	1.78E-03

PSC 39 OUTFALL 13

Short-Tailed Shrew

Body Weight	0.0097000 kg		
Food Ingestion Rate	0.0052000 kg/day	% EW	0.9
Water Ingestion Rate	0.0000000 L/day		
Soil Ingestion Rate	0.0052000 kg/day	% SS	0.1

Mean Concentrations

ECOC	Soil Concentration (mg/kg)	Water Concentration (mg/L)	Invertebrate Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
Endrin	0.0051	0.0000	0.0343	0.0168	0.09	0.92	1.83E-01	1.83E-02
Inorganics								
Chromium	7.90	0.00	2.42	1.59	3.28	32.80	4.85E-01	4.85E-02

PSC 39 OUTFALL 13

Short-Tailed Shrew

Body Weight	0.0097000 kg		
Food Ingestion Rate	0.0052000 kg/day	% EW	0.9
Water Ingestion Rate	0.0000000 L/day		
Soil Ingestion Rate	0.0052000 kg/day	% SS	0.1

Maximum Concentrations

ECOC	Soil Concentration (mg/kg)	Water Concentration (mg/L)	Invertebrate Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
Endrin	0.0044	0.0000	0.0295	0.0145	0.09	0.92	1.57E-01	1.57E-02
Inorganics								
Chromium	9.80	0.00	3.00	1.97	3.28	32.80	6.01E-01	6.01E-02

PSC 39 OUTFALL 13

American Robin

Body Weight	0.0773000 kg		
Food Ingestion Rate	0.0690000 kg/day	% Veg	0.6
Water Ingestion Rate	0.0000000 L/day	% EW	0.35
Soil Ingestion Rate	0.0690000 kg/day	% SS	0.05

Mean Concentrations

ECOC	Soil Concentration (mg/kg)	Vegetation Concentration (mg/L)	Invertebrate Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
Endrin	0.0051	0.0002	0.0343	0.0110	0.01	0.10	1.10E+00	1.10E-01
Inorganics								
Chromium	7.90	0.01	2.42	1.11	1.00	5.00	1.11E+00	2.23E-01

PSC 39 OUTFALL 13

American Robin

Body Weight	0.0773000 kg		
Food Ingestion Rate	0.0690000 kg/day	% Veg	0.6
Water Ingestion Rate	0.0000000 L/day	% EW	0.35
Soil Ingestion Rate	0.0690000 kg/day	% SS	0.05

Maximum Concentrations

ECOC	Soil Concentration (mg/kg)	Vegetation Concentration (mg/L)	Invertebrate Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
Endrin	0.0044	0.0001	0.0295	0.0095	0.01	0.10	9.48E-01	9.48E-02
Inorganics								
Chromium	9.80	0.01	3.00	1.38	1.00	5.00	1.38E+00	2.76E-01

PSC 39 OUTFALL 13

Red-Tailed Hawk

Body Weight	1.1260000 kg	
Food Ingestion Rate	0.1260000 kg/day	100% prey
Water Ingestion Rate	0.0000000 L/day	
Soil Ingestion Rate	0.0000000 kg/day	

Mean Concentrations

ECOC	Soil Concentration (mg/kg)	Water Concentration (mg/L)	Prey Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
Endrin	0.0051	0.0000	0.0017	0.0002	0.01	0.10	1.93E-02	1.93E-03
Inorganics								
Chromium	7.90	0.00	0.34	0.04	1.00	5.00	3.81E-02	7.61E-03

PSC 39 OUTFALL 13

Red-Tailed Hawk

Body Weight	1.1260000 kg	
Food Ingestion Rate	0.1260000 kg/day	100% prey
Water Ingestion Rate	0.0000000 L/day	
Soil Ingestion Rate	0.0000000 kg/day	

Maximum Concentrations

ECOC	Soil Concentration (mg/kg)	Water Concentration (mg/L)	Prey Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
Endrin	0.0044	0.0000	0.0015	0.0002	0.01	0.10	1.66E-02	1.66E-03
Inorganics								
Chromium	9.80	0.00	0.42	0.05	1.00	5.00	4.72E-02	9.44E-03

PSC 39 OUTFALL 13

American Woodcock

Body Weight	0.1970000 kg		
Food Ingestion Rate	0.1520000 kg/day	% EW	0.896
Water Ingestion Rate	0.0000000 L/day		
Soil Ingestion Rate	0.1520000 kg/day	% SS	0.104

Mean Concentrations

ECOC	Soil Concentration (mg/kg)	Water Concentration (mg/L)	Earthworm Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
Endrin	0.0051	0.0000	0.0343	0.0241	0.01	0.10	2.41E+00	2.41E-01
Inorganics								
Chromium	7.90	0.00	2.42	2.31	1.00	5.00	2.31E+00	4.61E-01

PSC 39 OUTFALL 13

American Woodcock

Body Weight	0.1970000 kg		
Food Ingestion Rate	0.1520000 kg/day	% EW	0.896
Water Ingestion Rate	0.0000000 L/day		
Soil Ingestion Rate	0.1520000 kg/day	% SS	0.104

Maximum Concentrations

ECOC	Soil Concentration (mg/kg)	Water Concentration (mg/L)	Earthworm Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
Endrin	0.0044	0.0000	0.0295	0.0207	0.01	0.10	2.07E+00	2.07E-01
Inorganics								
Chromium	9.80	0.00	3.00	2.86	1.00	5.00	2.86E+00	5.72E-01

PSC 39 OUTFALL 13

Red Fox

Body Weight	4.5300000 kg		
Food Ingestion Rate	0.4980000 kg/day	% prey	0.972
Water Ingestion Rate	0.0000000 L/day		
Soil Ingestion Rate	0.4980000 kg/day	% SS	0.028

Mean Concentrations

ECOC	Soil Concentration (mg/kg)	Water Concentration (mg/L)	Small Mammal Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
Endrin	0.0051	0.0000	0.0017	0.0002	0.09	0.92	2.17E-03	2.17E-04
Inorganics								
Chromium	7.90	0.00	0.34	0.06	3.28	32.80	1.85E-02	1.85E-03

PSC 39 OUTFALL 13

Red Fox

Body Weight	4.5300000 kg		
Food Ingestion Rate	0.4980000 kg/day	% prey	0.972
Water Ingestion Rate	0.0000000 L/day		
Soil Ingestion Rate	0.4980000 kg/day	% SS	0.028

Maximum Concentrations

ECOC	Soil Concentration (mg/kg)	Water Concentration (mg/L)	Small Mammal Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Pesticides/PCBs								
Endrin	0.0044	0.0000	0.0015	0.0002	0.09	0.92	1.87E-03	1.87E-04
Inorganics								
Chromium	9.80	0.00	0.42	0.08	3.28	32.80	2.29E-02	2.29E-03

PSC 39 OUTFALL 14

Cotton Mouse

Body Weight	0.0310000 kg		
Food Ingestion Rate	0.0086000 kg/day	% Veg	0.98
Water Ingestion Rate	0.0000000 L/day		
Soil Ingestion Rate	0.0086000 kg/day	% SS	0.02

Mean Concentrations

ECOC	Soil Concentration (mg/kg)	Water Concentration (mg/L)	Vegetation Concentration (mg/kg)	Invertebrate Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics									
Chromium	6.18	0.00	0.01	1.89	0.04	3.28	32.80	1.12E-02	1.12E-03

PSC 39 OUTFALL 14

Cotton Mouse

Body Weight	0.0310000 kg		
Food Ingestion Rate	0.0086000 kg/day	% Veg	0.98
Water Ingestion Rate	0.0000000 L/day		
Soil Ingestion Rate	0.0086000 kg/day	% SS	0.02

Maximum Concentrations

ECOC	Soil Concentration (mg/kg)	Water Concentration (mg/L)	Vegetation Concentration (mg/kg)	Invertebrate Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics									
Chromium	10.00	0.00	0.02	3.06	0.06	3.28	32.80	1.82E-02	1.82E-03

PSC 39 OUTFALL 14

Short-Tailed Shrew

Body Weight	0.0097000 kg		
Food Ingestion Rate	0.0052000 kg/day	% EW	0.9
Water Ingestion Rate	0.0000000 L/day		
Soil Ingestion Rate	0.0052000 kg/day	% SS	0.1

Mean Concentrations

ECOC	Soil Concentration (mg/kg)	Water Concentration (mg/L)	Invertebrate Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
Chromium	6.18	0.00	1.89	1.24	3.28	32.80	3.79E-01	3.79E-02

PSC 39 OUTFALL 14

Short-Tailed Shrew

Body Weight	0.0097000 kg		
Food Ingestion Rate	0.0052000 kg/day	% EW	0.9
Water Ingestion Rate	0.0000000 L/day		
Soil Ingestion Rate	0.0052000 kg/day	% SS	0.1

Maximum Concentrations

ECOC	Soil Concentration (mg/kg)	Water Concentration (mg/L)	Invertebrate Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
Chromium	10.00	0.00	3.06	2.01	3.28	32.80	6.14E-01	6.14E-02

PSC 39 OUTFALL 14

American Robin

Body Weight	0.0773000 kg		
Food Ingestion Rate	0.0690000 kg/day	% Veg	0.6
Water Ingestion Rate	0.0000000 L/day	% EW	0.35
Soil Ingestion Rate	0.0690000 kg/day	% SS	0.05

Mean Concentrations

ECOC	Soil Concentration (mg/kg)	Vegetation Concentration (mg/L)	Invertebrate Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
Chromium	6.18	0.01	1.89	0.87	1.00	5.00	8.72E-01	1.74E-01

PSC 39 OUTFALL 14

American Robin

Body Weight	0.0773000 kg		
Food Ingestion Rate	0.0690000 kg/day	% Veg	0.6
Water Ingestion Rate	0.0000000 L/day	% EW	0.35
Soil Ingestion Rate	0.0690000 kg/day	% SS	0.05

Maximum Concentrations

ECOC	Soil Concentration (mg/kg)	Vegetation Concentration (mg/L)	Invertebrate Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
Chromium	10.00	0.02	3.06	1.41	1.00	5.00	1.41E+00	2.82E-01

PSC 39 OUTFALL 14

Red-Tailed Hawk

Body Weight	1.1260000 kg	
Food Ingestion Rate	0.1260000 kg/day	100% prey
Water Ingestion Rate	0.0000000 L/day	
Soil Ingestion Rate	0.0000000 kg/day	

Mean Concentrations

ECOC	Soil Concentration (mg/kg)	Water Concentration (mg/L)	Prey Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
Chromium	6.18	0.00	0.27	0.03	1.00	5.00	2.98E-02	5.96E-03

PSC 39 OUTFALL 14

Red-Tailed Hawk

Body Weight	1.1260000 kg	
Food Ingestion Rate	0.1260000 kg/day	100% prey
Water Ingestion Rate	0.0000000 L/day	
Soil Ingestion Rate	0.0000000 kg/day	

Maximum Concentrations

ECOC	Soil Concentration (mg/kg)	Water Concentration (mg/L)	Prey Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
Chromium	10.00	0.00	0.43	0.05	1.00	5.00	4.82E-02	9.63E-03

PSC 39 OUTFALL 14

American Woodcock

Body Weight	0.1970000 kg		
Food Ingestion Rate	0.1520000 kg/day	% EW	0.896
Water Ingestion Rate	0.0000000 L/day		
Soil Ingestion Rate	0.1520000 kg/day	% SS	0.104

Mean Concentrations

ECOC	Soil Concentration (mg/kg)	Water Concentration (mg/L)	Earthworm Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
Chromium	6.18	0.00	1.89	1.80	1.00	5.00	1.80E+00	3.61E-01

PSC 39 OUTFALL 14

American Woodcock

Body Weight	0.1970000 kg		
Food Ingestion Rate	0.1520000 kg/day	% EW	0.896
Water Ingestion Rate	0.0000000 L/day		
Soil Ingestion Rate	0.1520000 kg/day	% SS	0.104

Maximum Concentrations

ECOC	Soil Concentration (mg/kg)	Water Concentration (mg/L)	Earthworm Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
Chromium	10.00	0.00	3.06	2.92	1.00	5.00	2.92E+00	5.84E-01

PSC 39 OUTFALL 14

Red Fox

Body Weight	4.5300000 kg		
Food Ingestion Rate	0.4980000 kg/day	% prey	0.972
Water Ingestion Rate	0.0000000 L/day		
Soil Ingestion Rate	0.4980000 kg/day	% SS	0.028

Mean Concentrations

ECOC	Soil Concentration (mg/kg)	Water Concentration (mg/L)	Small Mammal Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
Chromium	6.18	0.00	0.27	0.05	3.28	32.80	1.45E-02	1.45E-03

PSC 39 OUTFALL 14

Red Fox

Body Weight	4.5300000 kg		
Food Ingestion Rate	0.4980000 kg/day	% prey	0.972
Water Ingestion Rate	0.0000000 L/day		
Soil Ingestion Rate	0.4980000 kg/day	% SS	0.028

Maximum Concentrations

ECOC	Soil Concentration (mg/kg)	Water Concentration (mg/L)	Small Mammal Concentration (mg/kg)	Dose (mg/kg/day)	NOAEL (mg/kg/day)	LOAEL (mg/kg/day)	NOAEL HQ	LOAEL HQ
Inorganics								
Chromium	10.00	0.00	0.43	0.08	3.28	32.80	2.34E-02	2.34E-03

APPENDIX C

FILL DATA

PEL Laboratories, Inc.

Customer Name:	CH2MHILL
Date & Time Received:	1-27-01, 10:10 AM
Date Reported:	2-9-01
PEL Submission Number:	2101235
Project:	NAS Cecil Field

Samples: The submission consisted of 5 sample with sample identification shown in the attached data tables.

Tests: The sample was analyzed for EPA method:
TCLP 8260, TCLP 8270, TCLP Pest., TCLP Herb., TCLP Metals, PRO, 8082, 8081, Ignitability, Corrosivity, and Reactivity.

Results: See the attached data tables for results.

Distribution of Reports:

1-CH2MHILL
Attn: Jennifer Zimmerman
Phone: (904) 777-4812

2-CH2M HILL
Attn: Jeff Wilmoth
Phone: (770) 604-9182

Respectfully Submitted,

Brian Spann
Laboratory Manager
PEL Laboratories, Inc.

Note: Submitted material will be retained for 30 days unless otherwise requested by client or consumed in analysis. PEL letters and reports are for the exclusive use of the client to whom they are addressed. Our letters and reports apply to the sample tested and are not necessarily indicative of the qualitities of apparently identical or similar materials.

4420 Pendola Point Road • Tampa, Florida 33619
(813) 247-2805 • FAX: (813) 248-1537

VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Cecil Field
			00539WC01S0126
Lab Code :	PEL	Case No.	
SAS No:		SDG No.:	2101235
Matrix:	WATER	Lab Sample ID	210123501
Lab File ID	23501.D		
Sample wt/vol:	5	Units:	ML
Date Received:	1/27/01		
Concentrated Extract Volume:		Date Extracted:	
Level:(low/med)	LOW	Date Analyzed:	1/30/01
Time:	5:28 AM		
PercentSolids:	0	decanted :	
Dilution Factor:	10		
Extraction:	PURGETRAP	Station ID	PSC 39
Method:	8260_TCLP		
GPC Cleanup : (Y/N)		pH:	
GC Column:	DB-624	ID:	0.18 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
75-01-4	Vinyl chloride	0.5	U
75-35-4	1,1-Dichloroethene	1	U
78-93-3	2-Butanone (MEK)	200	U
67-66-3	Chloroform	10	U
56-23-5	Carbon tetrachloride	1	U
71-43-2	Benzene	1	U
107-06-2	1,2-Dichloroethane	1	U
79-01-6	Trichloroethene	1	U
127-18-4	Tetrachloroethylene	7	U
108-90-7	Chlorobenzene	200	U

SEMI-VOLATILE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

00539WC01S0126

Lab Name: PEL Laboratories, Inc.
Contract: Cecil Field
Lab Code : PEL
Case No.
SAS No:
SDG No.: 2101235
Matrix: WATER
Lab Sample ID 210123501
Lab File ID 235-01.D
Sample wt/vol: 500
Units: ML
Date Received: 1/27/01
Concentrated Extract Volume: 1
Date Extracted: 1/30/01
Level:(low/med) LOW
Date Analyzed: 1/31/01
Time: 6:10 PM
PercentSolids: 0
decanted :
Dilution Factor: 1
Extraction: SEPF
Station ID PSC 39
Method: 8270_TCLP
GPC Cleanup : (Y/N) N
pH:
GC Column: HPMS-5
ID: 0.25 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
110-86-1	Pyridine	0.01	U
106-46-7	1,4-Dichlorobenzene	0.01	U
95-48-7	2-Methylphenol	0.01	U
67-72-1	Hexachloroethane	0.01	U
782-06-0	3/4-Methylphenol	0.01	U
98-95-3	Nitrobenzene	0.01	U
87-68-3	Hexachlorobutadiene	0.01	U
88-06-2	2,4,6-Trichlorophenol	0.01	U
95-95-4	2,4,5-Trichlorophenol	0.01	U
121-14-2	2,4-Dinitrotoluene	0.02	U
118-74-1	Hexachlorobenzene	0.01	U
87-86-5	Pentachlorophenol	0.04	U

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Cecil Field
			00539WC01S0126
Lab Code :	PEL	Case No.	
SAS No:		SDG No.:	2101235
Matrix:	WATER	Lab Sample ID	210123501
Lab File ID	235-01T.D		
Sample wt/vol:	500	Units:	ML
Date Received:	1/27/01		
Concentrated Extract Volume:	10	Date Extracted:	1/31/01
Level:(low/med)	LOW	Date Analyzed:	2/5/01
Time:	6:25 PM		
PercentSolids:	0	decanted :	
Dilution Factor:	1		
Extraction:	SEPF	Station ID	PSC 39
Method:	8081_TCLP		
GPC Cleanup : (Y/N)	N	pH:	
GC Column:	XTI-5 & RTX-1701	ID:	0.53 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
58-89-9	Gamma-BHC (Lindane)	0.0001	U
76-44-8	Heptachlor	0.0001	U
1024-57-3	Heptachlor epoxide	0.0001	U
72-20-8	Endrin	0.0001	U
72-43-5	Methoxychlor	0.0001	U
57-74-9	Chlordane	0.02	U
8001-35-2	Toxaphene	0.02	U

HERBICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

Lab Name:	PEL Laboratories, Inc.	Contract:	Cecil Field
			00539WC01S0126
Lab Code :	PEL	Case No.	
SAS No:		SDG No.:	2101235
Matrix:	WATER	Lab Sample ID	210123501
Lab File ID	23501.D		
Sample wt/vol:	500	Units:	ML
Date Received:	1/27/01		
Concentrated Extract Volume:	10	Date Extracted:	1/30/01
Level:(low/med)	LOW	Date Analyzed:	2/2/01
Time:	2:40 AM		
PercentSolids:	0	decanted :	
Dilution Factor:	1		
Extraction:	SEPF	Station ID	PSC 39
Method:	8151_TCLP		
GPC Cleanup : (Y/N)	N	pH:	
GC Column:	XTI-5 & RTX-1701	ID:	0.53 (mm)

CONCENTRATION UNITS: MG/L

TCLP Analysis

CAS NO.	*ANALYTE*	*RESULT*	*Q*
94-75-7	2,4-D	0.0005	U
93-72-1	2,4,5-TP (Silvex)	0.0005	U

PESTICIDE ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

00539WC01S0126

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field

Lab Code: PEL Case No. SAS No: SDG No.: 2101235

Matrix: SOIL Lab Sample ID 210123501 Lab File ID 235-01.D

Sample wt/vol: 33.19 Units: G Date Received: 1/27/01

Concentrated Extract Volume: 10 Date Extracted: 1/31/01

Level:(low/med) LOW Date Analyzed: 2/5/01 Time: 1:31 PM

PercentSolids: 81 decanted: Dilution Factor: 1

Extraction: SONC Station ID PSC 39 Method: 8081

GPC Cleanup: (Y/N) N pH:

GC Column: XTI-5 & RTX-1701 ID: 0.53 (mm)

CONCENTRATION UNITS: ug/Kg

CAS NO.	*ANALYTE*	*RESULT*	*Q*
319-84-6	Alpha-BHC	1.9	U
319-85-7	Beta-BHC	1.9	U
319-86-8	Delta-BHC	1.9	U
58-89-9	Gamma-BHC (Lindane)	1.9	U
76-44-8	Heptachlor	1.9	U
309-00-2	Aldrin	1.9	U
1024-57-3	Heptachlor epoxide	1.9	U
959-98-8	Endosulfan I	1.9	U
60-57-1	Dieldrin	1.9	U
72-55-9	4,4'-DDE	1.9	U
72-20-8	Endrin	1.9	U
33213-65-9	Endosulfan II	1.9	U
72-54-8	4,4'-DDD	1.9	U
1031-07-8	Endosulfan sulfate	1.9	U
50-29-3	4,4'-DDT	1.9	U
72-43-5	Methoxychlor	1.9	U
7421-93-4	Endrin aldehyde	1.9	U
5103-71-9	Alpha-Chlordane	1.9	U
5103-74-2	Gamma-Chlordane	1.9	U
53494-70-5	Endrin Ketone	1.9	U
8001-35-2	Toxaphene	373	U

PCB ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

00539WC01S0126

Lab Name: PEL Laboratories, Inc.

Contract: Cecil Field

Lab Code : PEL Case No.

SAS No:

SDG No.: 2101235

Matrix: SOIL

Lab Sample ID 210123501

Lab File ID 23501.D

Sample wt/vol: 33.19 Units: G

Date Received: 1/27/01

Concentrated Extract Volume: 10

Date Extracted: 1/31/01

Level:(low/med) LOW

Date Analyzed: 2/3/01 Time: 4:12 AM

PercentSolids: 81 decanted :

Dilution Factor: 1

Extraction: SONC

Station ID PSC 39 Method: 8082

GPC Cleanup : (Y/N) N pH:

GC Column: XTI-5 & RTX-1701 ID: 0.53 (mm)

CONCENTRATION UNITS: ug/Kg

CAS NO.	*ANALYTE*	*RESULT*	*Q*
12674-11-2	Aroclor 1016	37	U
11096-82-5	Aroclor 1260	71 .071	
11104-28-2	Aroclor 1221	37	U
11141-16-5	Aroclor 1232	37	U
53469-21-9	Aroclor 1242	37	U
12672-29-6	Aroclor 1248	37	U
11097-69-1	Aroclor 1254	37	U

FL-PRO ORGANIC ANALYSIS DATA SHEET

EPA Sample No.

00539WC01S0126

Lab Name: PEL Laboratories, Inc.

Contract: Cecil Field

Lab Code : PEL Case No.

SAS No: SDG No.: 2101235

Matrix: SOIL

Lab Sample ID 210123501 Lab File ID 235-01.D

Sample wt/vol:- 25.22 Units: G

Date Received: 1/27/01

Concentrated Extract Volume: 2

Date Extracted: 1/30/01

Level:(low/med) LOW

Date Analyzed: 2/2/01 Time: 8:58 AM

PercentSolids: 81 decanted :

Dilution Factor: 1

Extraction: SONC

Station ID PSC 39 Method: FL-PRO

GPC Cleanup : (Y/N) N pH:

GC Column: RTX-5 ID: 0.53 (mm)

CONCENTRATION UNITS: mg/Kg

CAS NO.	*ANALYTE*	*RESULT*	*Q*
5289290-40-0	Total Petroleum Hydrocarbons	11	U

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA Sample No.

00539WC01S0126

Lab Name: PEL Laboratories, Inc. Contract: Cecil Field

Lab Code : PEL Case No. SAS No: SDG No.: 2101235

Matrix: SOIL Lab Sample ID 210123501

Level:(low/med) LOW Date Received: 1/27/01

PercentSolids: 0

TCLP Analysis

CONCENTRATION UNITS: mg/L

CAS NO.	ANALYTE	Concentration	C	Q	M
7440-38-2	Arsenic	1	U		P
7440-39-3	Barium	3.36	J		P
7440-43-9	Cadmium	0.2	U		P
7440-47-3	Chromium	1	U		P
7439-92-1	Lead	1	U		P
7439-97-6	Mercury	0.04	U		CV
7782-49-2	Selenium	0.2	U		P
7440-22-4	Silver	1	U		P

Color Before: _____ Clarity Before: _____ Texture :_____

Color After : _____ Clarity After: _____ Artifacts:_____

Comments:

Lab ID	Client ID	Instrument	pH	RPD
pH 4.00 HACH A0144	pH 4.00 HACH A0144	ORION	3.93	
pH 7.00 HACH A0291	pH 7.00 HACH A0291	ORION	6.97	
pH 10.00 HACH A0124	pH 10.00 HACH A0124	ORION	9.97	
RICCA LCS IS1120	RICCA LCS IS1120	ORION	7.04	
210123501	00539WC01S0126	ORION	6.36	
210123502	00537WC01S0126	ORION	7.17	
210123503	00537WC02S0126	ORION	6.26	
210123504	00537WC03S0126	ORION	7.26	
210123506	00537WC04S0126	ORION	6.71	
210123506 DUP	00537WC04S0126 DUP	ORION	6.67	0.64
pH 7.00 HACH A0291	pH 7.00 HACH A0291	ORION	7.02	
RICCA LCS IS1120	RICCA LCS IS1120	ORION	7.00	

EPA 1010 Flash Point

Date:1/30/01 *Time:16:30:00* *Tech.: JEM*

Room Temperature: 75F *Pressure: 760mm HG*

Sample	Matrix	Initial Temp. (F)	Final Temp. (F)	Result	Comment	RPD
P-XYLENE	WATER	73	79	FLASH	99% RECOVERY	
210123501	SOIL	72	>200	NA	Sample didn't flash	
210123502	SOIL	80	170	FLASH	VAPOR IGNITED	
210123502Dup	SOIL	82	180	FLASH	VAPOR IGNITED	5.71
210123503	SOIL	85	>200	NA	Sample didn't flash	
210123504	SOIL	84	>200	NA	Sample didn't flash	
210123506	SOIL	80	>200	NA	Sample didn't flash	
NA: Sample did not flash						

QC: P-XYLENE IS1286 TV=81F +/- 2

Thermometer HB96822

TestAmerica
INCORPORATED

ANALYTICAL REPORT

PEL 8809
JORGE ALWOOOD
4420 PENDOLA POINT ROAD
TAMPA, FL 33619

Project: 2101-235
Project Name:
Sampler:

Lab Number: 01-A12042
Sample ID: 005-39-WC-01-S-0126-01
Sample Type: Soil
Site ID:

Date Collected: 1/26/01
Time Collected: 11:30
Date Received: 1/30/01
Time Received: 9:00

Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Date	Time	Analyst	Method	Batch
GENERAL CHEMISTRY PARAMETERS										
% Dry Weight	81.	%			1	1/30/01	8:35	D.Yeager	CLP	
Reactive Cyanide	ND	mg/kg	25.0	25.0	1	1/31/01	10:15	Hardcastle	SW-846	2904
Reactive Sulfide	ND	mg/kg	50.0	50.0	1	1/31/01	10:15	Hardcastle	SW-846	2904
	Comment					1/31/01		P.Lane		3674

Reactivity results determined from total determination Methods 9012 & 9034.

ND - Not detected at the report limit.
- Recovery outside Laboratory historical limits.

All metal and organic results have been corrected for dry weight.

Sample report continued . . .

2960 FOSTER CREIGHTON DRIVE / NASHVILLE,TN 37204 / 615-726-0177 / FAX: 615-726-0954 / 800-765-0980

TestAmerica
INCORPORATED

ANALYTICAL REPORT

Laboratory Number: 01-A12042
Sample ID: 005-39-WC-01-S-0126-01
Project: 2101-235
Page 2

These results relate only to the items tested.
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Report Approved By: _____ Report Date: 1/31/01

Paul E. Lane, Jr., Lab Director
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Serv.
Eric S. Smith, Assistant Technical Director
Gail A. Lage, Technical Serv.
Glenn L. Norton, Technical Serv.
Kelly S. Comstock, Technical Serv.
Pamela A. Langford, Technical Serv.

Laboratory Certification Number: HRS-E87358

End of Sample Report.

CH2M Hill C[illegible]ctors, Inc.
115 Perimeter Center Place, Suite 700
Atlanta, GA 30346-1278
Tel No (770) 604-9182 ; Fax No (770) 604-9282

CHAIN-OF-CUSTODY RECORD

2101-2335 8P

C[illegible]JMBER 148799-9

PROJECT NAME:	PROJECT NUMBER:	LAB NAME AND CONTACT:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 1 (Name and Company)	RECIPIENT 1 (Address, Tel No., and Fax No.):
NAS Cecil Field	148799	PEL Laboratories, Inc. Darcy Weisman	Jennifer Zimmerman, CCI/J.A. Jones	6219 Authority Avenue, Jacksonville, FL 32215 PH: 904 777-4812 Fax: 904-777-4262
PROJECT PHASE/SITE/TASK:	CTO OR DO NUMBER:	LAB PO NUMBER:	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 2 (Name and Company)	RECIPIENT 2 (Address, Tel No., and Fax No.):
Grey Sites III Soil Waste Characterization	CTO 005	2533	Jeff Wilmoth, CCI	115 Perimeter Center Place, N.E. Suite 700 Atlanta, GA 30346 (770)604-9182 Ext.561 FAX:604-9282
PROJECT CONTACT:	PROJECT TEL NO AND FAX NO:	PH (813) 247-2805 FAX (813)-248-1537	FAX AND MAIL REPORTS/EDD TO:: RECIPIENT 3 (Name and Company)	RECIPIENT 3 (Address, Tel No., and Fax No.):
Bill Canelos	PH (904) 777-4812 FAX (904) 777-4262			

ANALYSES REQUIRED (Include Method Numbers)

ITEM	SAMPLE IDENTIFIER	SAMPLE DESCRIPTION/LOCATION	MATRIX (See codes on back)	DATE COLLECTED	TIME COLLECTED	DATA PKG LEVEL (See codes on back)	TAT (calendar days)	1311/8260B TCLP Volatiles	1311/8270C TCLP SemiVols	1311/8081A TCLP Pest.	1311/8151A TCLP Herb.	1311/6010A TCLP Metals	FL PRO	Method 8082 PCBs	Method 1030 Ignitability	Method 9045A Corrosivity	Chapter 7.3 Reactivity	SAMPLE TYPE (see codes on back)	COMMENTS/ SCREENING READINGS	LAB ID
1	005-39\WC01-S-0126-01	PSC 39	soil	01/26/01	11:30	III/A	7 Day	x	x	x	x	x	x	x	x	x	x	Composite	sample is very wet note below	01
2	005-37\WC01-S-0126-01	Site 37	soil	01/26/01	13:30	III/A	7 Day	x	x	x	x	x	x	x	x	x	x	Composite		02
3	005-37\WC02-S-0126-01	Site 37	soil	01/26/01	14:00	III/A	7 Day	x	x	x	x	x	x	x	x	x	x	Composite		03
4	005-37\WC03-S-0126-01	Site 37	soil	01/26/01	14:45	III/A	7 Day	x	x	x	x	x	x	x	x	x	x	Composite		04
5	005-37\WC04-S-0126-01	Site 37	soil	01/26/01	15:20	III/A	7 Day	x	x	x	x	x	x	x	x	x	x	Composite		05
6																				
7																			Temp upon Rec'd 4°C Nonconforming	
8																				
9																	*		add total pest. to all samples 1/29/01	
10																				

SAMPLER(S) AND COMPANY: (please print)	COURIER AND SHIPPING NUMBER:	SAMPLES TEMPERATURE AND CONDITION UPON RECEIPT:
Dave Keul, Scott Sloan, CCI/JAJES	FedEx Tracking No. 7919-5661-2001 & 7926-5601-3514	For sample 005-39WC01-S-0126-01 Contact Jeff Wilmoth for Instructions

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
Printed Name and Signature:			Printed Name and Signature:		
Bill Canelos, CCI/JAJES W. Canelos	1/26/01	17:00	FedEx Tracking No. 7919-5661-2001 & 7926-5601-3514	1/26/01	17:00
Printed Name and Signature:			Printed Name and Signature:		
			[illegible]	[illegible]	[illegible]

Distribution: [ ] Original - Laboratory (To be returned with Analytical Report); [ ] Copy 1 - Project File; [ ] Copy 2 - PMO

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